PLANNING AND ZONING BOARD/LOCAL PLANNING AGENCY

REGULAR MEETING AGENDA

THURSDAY, AUGUST 7, 2025 - 5:30 PM

CITY HALL - COMMISSION CHAMBERS

1126 EAST STATE ROAD 434, WINTER SPRINGS, FLORIDA

CALL TO ORDER

Roll Call
Invocation
Pledge of Allegiance
Agenda Changes

AWARDS AND PRESENTATIONS

INFORMATIONAL AGENDA

PUBLIC INPUT

Anyone who wishes to speak during Public Input on any Agenda Item or subject matter will need to fill out a "Public Input" form. Individuals will limit their comments to three (3) minutes, and representatives of groups or homeowners' associations shall limit their comments to five (5) minutes, unless otherwise determined by the City Commission.

CONSENT AGENDA

300. Approval of the Thursday, June 5, 2025 Planning and Zoning Board/Local Planning Agency Regular Meeting Minutes.
2025 06 05 Planning and ZoningLPA Regular Meeting Minutes.pdf

PUBLIC HEARINGS AGENDA

400. The Learning Experience, SR 434/419 and Michael Blake Boulevard – Conditional Use Application, Site Plan/Final Engineering, Aesthetic Review, Waivers, and Development Agreement.
Learning Experience Staff Report PZB 08.07.25 FINAL.pdf
FEDP-2024-0010 - Community Workshop Flyer.pdf
FEDP-2024-0010 - Sign-In Sheet.pdf
FEDP-2024-0010 - Site Plan.pdf
FEDP-2024-0010 - Environmental Report.PDF
FEDP-2024-0010 - Geotechnical Report.PDF
FEDP-2024-0010 - TIA Report.PDF
FEDP-2024-0010 - Parking Letter.PDF
FEDP-2024-0010 - Fiscal Impact.PDF
AERV-2025-0004 - Elevations.PDF
AERV-2025-0004 - Renderings.PDF
WAIV-2024-0003 - Setback Reasoning.pdf
WAIV-2025-0010 - Waiver Description.PDF
WAIV-2025-0012 - Waiver Description.pdf
CONU-2024-0002 - Justification.pdf
DVAG-2025-0008 - Development Agreement.pdf
FEDP-2024-0010 - Application.PDF

AERV-2025-0004 - Application.PDF
DVAG-2025-0008 - Application.PDF
WAIV-2024-0003 - Application.pdf
WAIV-2025-0010 - Application.PDF
WAIV-2025-0012 - Application.pdf
CONU-2024-0002 - Application.pdf

401. Wawa at Winter Springs Marketplace, SR 434 and Tuskawilla Road – Conditional Use Application, Site Plan/Final Engineering, Aesthetic Review, Waivers, and Development Agreement.

Wawa Staff Report PZB 08.07.2025 FINAL.pdf
Second Modification Winter Springs Marketplace Development Agreement - Wawa - 7-31-25.pdf
Fig 1 Community Workshop Flyer.pdf
Fig 2 Community Workshop SignIn.pdf
Fig 3 Wawa Civil Site 07.30.2025.pdf
Fig 4 Landscape Plan 07.29.2025.pdf
Fig 5 Master Sign Plan.pdf
Fig 6 Parking Analysis.pdf
Fig 7a Elevations Building.pdf
Fig 7b Elevations Canopy.pdf
Fig 8 Renderings.pdf
Fig 9 Setback Waiv Justificatio.PDF
Fig 10 Monument Sign Waiv Justi.pdf
Fig 11 Streetscape Waiver Justi.pdf
Fig 12 Conditional Use Justific.PDF
Fig 13 Site Plan Review App.pdf
Fig 14 Aesthetic Review App.PDF
Fig 15 Dev Agreement App.PDF
Fig 16a Setback Waiver App.PDF
Fig 16b Setback Waiver App.PDF
Fig 17a Monument Sign Waiv App.pdf
Fig 17b Monument Sign Waiv App.PDF
Fig 18a Streetscape Waiver App.pdf
Fig 18b Streetscape Waiver App.pdf
Fig 19a Conditional Use App.PDF
Fig 19b Conditional Use App.pdf
Fig 20 Drainage Report.pdf
Fig 21 Potable Water Analysis.pdf
Fig 22 Listed Wildlife Species Survey.pdf
Fig 23 Preliminary Geotechnical Engineering Report.pdf
Fig 24 Wawa Winter Springs TIA.pdf

402. Winter Springs Marketplace Additional Parking – Site/Final Engineering and Development Agreement.

Wawa Add'l Parking Staff Report PZB 08.07.25 FINAL.pdf
FEDP-2025-0017 - CW Flyer.pdf
FEDP-2025-0017 - CW Sign-In Sheet.pdf
FEDP-2025-0017 - WSMP Add'l Parking Site Plan.pdf
FEDP-2025-0017 - Parking Study.pdf
FEDP-2025-0017 - Eco Report.pdf
FEDP-2025-0017 - Geotechnical Report.pdf
Winter Springs Add'l Parking - WS Net and Thistlewood Apps.pdf
DVAG-2025-0011 - Draft DA.pdf

REGULAR AGENDA

REPORTS

PUBLIC INPUT

Anyone who wishes to speak during Public Input on any Agenda Item or subject matter will need to fill out a "Public Input" form. Individuals will limit their comments to three (3) minutes, and representatives of groups or homeowners' associations shall limit their comments to five (5) minutes, unless otherwise determined by the City Commission.

ADJOURNMENT

PUBLIC NOTICE

This is a Public Meeting, and the public is invited to attend and this Agenda is subject to change. Please be advised that one (1) or more Members of any of the City's Advisory Boards and Committees may be in attendance at this Meeting, and may participate in discussions.

Persons with disabilities needing assistance to participate in any of these proceedings should contact the City of Winter Springs at (407) 327-1800 "at least 48 hours prior to meeting, a written request by a physically handicapped person to attend the meeting, directed to the chairperson or director of such board, commission, agency, or authority" - per Section 286.26 *Florida Statutes*.

"If a person decides to appeal any decision made by the board, agency, or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she 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" - per Section 286.0105 Florida Statutes.

CONSENT AGENDA ITEM 300

PLANNING AND ZONING BOARD/LOCAL PLANNING AGENCY AGENDA | AUGUST 7, 2025 REGULAR MEETING

TITLE

Approval of the Thursday, June 5, 2025 Planning and Zoning Board/Local Planning Agency Regular Meeting Minutes.

SUMMARY

FUNDING SOURCE

RECOMMENDATION

Staff recommends approval of the Thursday, June 5, 2025 Planning and Zoning Board/Local Planning Agency Regular Meeting Minutes as presented.

PLANNING AND ZONING BOARD/ LOCAL PLANNING AGENCY

REGULAR MEETING MINUTES
JUNE 5, 2025

CITY HALL – COMMISSION CHAMBERS
CITY OF WINTER SPRINGS, FLORIDA

UNAPPROVED

CALL TO ORDER
Chairperson Kok Wan Mah called the Thursday, June 5, 2025, Planning and Zoning Board/Local Planning Agency Regular Meeting to Order at 5:30 p.m., in the Commission Chambers of the Municipal Building (City Hall, 1126 East State Road 434, Winter Springs, Florida 32708.)

Roll Call:
Chairperson Kok Wan Mah, present
Vice-Chairperson Michael Ferrante, present
Board Member Louie Hilal, present
Board Member Rachel Hood, present
Board Member David Mahnken, absent
Assistant City Attorney Kristin Eick, present
Assistant City Clerk Tristin Tarrant, present

Also present:
Ms. Terrilyn Rolle, Director, Community Development Department
Mr. John Rabon, Senior Planner, Community Development Department

A moment of silence was held, followed by the Pledge of Allegiance.

Chairperson Mah relayed the staff requested order change of the Public hearing items. They will be presented as follows: Item 400, Item 403, Item 402 and Item 401. There was no objection and the agenda was adopted.

AWARDS AND PRESENTATIONS
100. Not Used

INFORMATIONAL AGENDA
200. Not Used

PUBLIC INPUT
Chairperson Mah opened Public Input.
No one addressed the Board.
Chairperson Mah closed Public Input.

CONSENT AGENDA

300) Approval of the Thursday, April 3, 2025 Planning and Zoning Board/Local Planning Agency Regular Meeting Minutes.

"I WILL MAKE A MOTION THAT WE APPROVE THE MINUTES." MOTION BY VICE CHAIRPERSON FERRANTE. SECONDED BY BOARD MEMBER HOOD. DISCUSSION.

VOTE: MAH (AYE); FERRANTE (AYE); HOOD (AYE); MAHNKEN (AYE); HILAL (AYE)
MOTION CARRIED 5-0.

301) Approval of the Thursday, April 24, 2025 Planning and Zoning Board/Local Planning Agency Special Meeting Minutes.

"I WOULD LIKE TO MAKE A MOTION TO APPROVE THE MINUTES FROM APRIL 24, 2025." MOTION BY BOARD MEMBER HILAL. SECONDED BY BOARD MEMBER HOOD. DISCUSSION.

VOTE: MAH (AYE); FERRANTE (AYE); HOOD (AYE); MAHNKEN (AYE); HILAL (AYE)
MOTION CARRIED 5-0.

***The below was the order in which the items were approved and discussed. ***

PUBLIC HEARINGS AGENDA

400) First reading of Ordinance 2025-04, Small-Scale Future Land Use Map Amendment of one (1) parcel of land located at 1333 N US HWY 17-92

Ms. Rolle opened the item, introduced the proposed ordinance and gave a background while presentation the "Staff Presentation". Clarification was given on the process and status of the property by *Mr. Matt Foley, Shutts & Bowen, LLP, 300 South Orange Ave. Ste. 1600, Orlando, Florida 32801* since the parcel is an EPA Superfund site.

Discussion regarding the recommended uses compared to the adjacent parcel and concerns for the potential density impact were expressed. Questions regarding clarification of the timeline, this was presented to the Board and additional access to the site were asked. Staff and the representative responded, answering the questions. The staff's recommendation was the Planning and Zoning Board recommend adoption of Ordinance 2025-04 to the City Commission.

Chairperson Mah opened the Public Hearing for Item 400.
No one addressed the Board.
Chairperson Mah closed the Public Hearing for Item 400.

"I MOVE THAT WE RECOMMEND APPROVAL TO THE CITY COMMISSION FOR THE CHAGNE FROM THE INDUSTRIAL COUNTY DESIGNATION TO THE CITY COMMERCIAL PENDING THE ACCEPTENCE OF THE STAFF RECOMMENDATION." MOTION BY BOARD MEMBER HOOD. SECONDED BY VICE-CHIARPERSON FERRANTE. DISCUSSION.

UNAPPROVED

VOTE: MAH (AYE); FERRANTE (AYE); HOOD (AYE); MAHNKEN (AYE); HILAL (AYE)
MOTION CARRIED 5-0.

403) First Reading of Ordinance 2025-05, to assign the General Commercial Zoning District to one (1) parcel of land located at 1333 N US HWY 17-92

Ms. Rolle opened the item, introduced the proposed ordinance and recommended changes while presentation the "Staff Presentation". No further questions were asked.

Chairperson Mah opened the Public Hearing for Item 403.
No one addressed the Board.
Chairperson Mah closed the Public Hearing for Item 403.

"I WILL MAKE A MOTION THAT WE APPROVE THE ORDINANCE 2025-05 TO ZONE THIS PROPERTY C-2 WITH THE RECOMMENDATION OF THE CITY PLANNING." MOTION BY VICE-CHAIRPERSON FERRANTE. SECONDED BY BOARD MEMBER HOOD. DISCUSSION.

VOTE: MAH (AYE); FERRANTE (AYE); HOOD (AYE); MAHNKEN (AYE); HILAL (AYE)
MOTION CARRIED 5-0.

402) Sutton Crossings Final Plat Approval

Ms. Rolle opened the item and gave the staff a recommendation that the Planning and Zoning Board recommend approval with the two (2) conditions listed for the final Plat for the Sutton Crossing parcel. Staff relayed to the board the timeline of other items related to the parcel that will be presented to the City Commission. Brief discussion and review were given on the layout and development that will be taking place on the parcel.

Chairperson Mah opened the Public Hearing for Item 402.
No one addressed the Board.
Chairperson Mah closed the Public Hearing for Item 402.

"I MOVE THAT WE RECOMMEND APPROVAL TO THE CITY COMMISSION FOR THE FINAL PLAT APPROVAL PROVIDED THAT THE CONDITIONS, LISTED BY THE CITY STAFF, IS MET. AS WELL AS THE ADDITIONAL PROVISIONS OF MEETING ALL REVISIONS FROM THE CITY SURVEYOR AND HAVING THOSE COMPLETED BY THE MEETING IN JUNE." MOTION BY BOARD MEMBER HOOD. SECONDED BY VICE-CHAIRPERSON FERRANTE. DISCUSSION.

VOTE: MAH (AYE); FERRANTE (AYE); HOOD (AYE); MAHNKEN (AYE); HILAL (AYE)
MOTION CARRIED 5-0.

UNAPPROVED

401) Sea Hawk Cove Extension, SR 434/419 and Michael Blake Boulevard – Final Engineering and Site Plan, Final Plat, Waivers, Removal of Three (3) Specimen Trees, and Development Agreement

Mr. Rolle introduced Mr. Rabon, one of the city's new Planners, to the board. Mr. Rabon opened the item and gave a presentation with staff's recommendation of approval with seven (7) stated conditions and two (2) requested waivers. Discussion ensued on future development, parking, the timeline of the project, and an eagle nest on the property.

Board Member Mahnken suggested the Board recommend to the Commission that the developer needs an updated eagle nest survey conducted before development. Further clarification was given of the reason for the recommendation. Clarification was given by *Mr. Frank Porter, Civil Engineer, NV5, Inc, 6500 Lee Vista Blvd. Orlando, Florida* that the eagle nest in discussion was the nest located on the Sutton Crossing parcel that was permitted.

Brief discussion ensued on draining and the preservation of a tree on the site. Board Member Hood requested the tree preservation be listed as a condition and Mr. Porter addressed the drainage questions relaying that underground drainage was incorporated and would match up to the Dreamfinders homes.

Chairperson Mah opened the Public Hearing for Item 401.

Mr. Paul Partiki, 1693 Wingspan Way, Winter Springs thanked the Board for their work, expressed that he is in-favor of this development and the good filling out the town center will be for the city.

Chairperson Mah closed the Public Hearing for Item 401.

"I MOVE THE WE RECOMMEND APPROVAL TO THE CITY COMMISSION OF THE FINAL ENGINEERING PLANS FOR SEA HAWK COVE EXTENTION WITH THE RECOMMENDATIONS PRESENTED BY STAFF LESS NUMBER SIX AS STATED IN THEIR AMENDED REPORT AND TO ALSO INCLUDE THE FINAL PLAT, WAIVERS, SPECIMAN TREE REMOVAL AND DEVELOPMENT AGREEMENT." MOTION BY BOARD MEMBER HOOD. SECONDED BY VICE-CHAIRPERSON FERRANTE. DISCUSSION.

VOTE: MAH (AYE); FERRANTE (AYE); HOOD (AYE); MAHNKEN (AYE); HILAL (AYE)
MOTION CARRIED 5-0.

REGULAR AGENDA
500. Not Used

REPORTS

PUBLIC INPUT
Chairperson Mah opened Public Input.
No one addressed the Board.
Chairperson Mah closed Public Input

UNAPPROVED

ADJOURNMENT

Chairperson Mah adjourned the Regular Meeting at 6:37 p.m.

RESPECTFULLY SUBMITTED:

_____
TRISTIN TARRANT
ASSISTANCE CITY CLERK

UNAPPROVED

NOTE: These Minutes were approved at the _____, *2025* Planning and Zoning Board/Local Planning Agency Regular Meeting.

PUBLIC HEARINGS AGENDA ITEM 400

PLANNING AND ZONING BOARD/LOCAL PLANNING AGENCY AGENDA | AUGUST 7, 2025 REGULAR MEETING

TITLE

The Learning Experience, SR 434/419 and Michael Blake Boulevard – Conditional Use Application, Site Plan/Final Engineering, Aesthetic Review, Waivers, and Development Agreement.

SUMMARY

The Community Development Department requests that the Planning & Zoning Board hold a Public Hearing to consider Site Plan/Final Engineering, Aesthetic Review, Waivers, Conditional Use Application, and Development Agreement regarding the applicant's request to establish a day care in the Town Center District, T5 Transect.

FUNDING SOURCE

RECOMMENDATION

Staff recommends that the Planning & Zoning Board recommend approval of the Site Plan/Final Engineering, Aesthetic Review, Waivers, Conditional Use Application, and Development Agreement, subject to the following conditions of approval:

1. Execution of the Development Agreement.
2. Construction on the site shall not began until the site preparation work is substantially complete.
3. Illuminated wall signage located above the entrance to the building and facing Lot 4 of the Blake Commons plat must be turned off when the daycare facility is closed.
4. All grass on the Property shall be Bahia grass. No St. Augustine grass or grass types with low drought tolerance shall be permitted.
5. Economic Impact analysis required before City Commission Public Hearing.

PUBLIC HEARINGS AGENDA ITEM

PLANNING & ZONING BOARD
THURSDAY, AUGUST 7, 2025
REGULAR MEETING

TITLE

The Learning Experience, SR 434/419 and Michael Blake Boulevard – Site/Final Engineering, Aesthetic Review, Waivers, Conditional Use Application, and Development Agreement.

SUMMARY

The Community Development Department requests that the Planning & Zoning Board hold a Public Hearing to consider a Conditional Use Application, Site/Final Engineering, Aesthetic Review, Waivers, and Development Agreement regarding the applicant's request to establish a day care in the Town Center District, T5 Transect.

General Information			
Applicant	James Herbert, E.I. \ NV5		
Property Owner(s)	Tuskawilla Retail Partners II, LLC		
Location	East/Northeast of the intersection of State Road 434 and Michael Blake Blvd		
Tract Size	±1.02 Acres (subdivided from 8.11 Acres parent lot)		
Parcel ID Number	26-20-30-5AR-0A00-007L		
Zoning Designation	Town Center District, T-5 Transect		
FLUM Designation	Town Center District		
Adjacent Land Use	North: Seminole Crossing Townhomes East: Cross Seminole Trail		South: State Road 434 West: Vacant
Height	23'4", 1 story		
Setbacks	Front: 25 ft, minimum, 50 ft. maximum	Rear: 15 ft. minimum	Side: 5 ft. minimum, 100 ft. maximum
Development Standards	Lot Coverage 100%		
Development Permits	Not applicable		
Development Agreement	Pending; prior Development Agreements were with predecessor in interest, Winter Springs Holdings, Inc.,		

	recorded at ORB 8446, Page 1131, and First Modification at ORB 8852, Page 1719.
Code Enforcement	Not applicable
City Liens	Not applicable

Background Data:

The development site consists of one lot, totaling 1.02 acres. The City Commission recently approved The Blake Commons plat, subject to conditions, which proposes to subdivide the 8.11-acre parent parcel. The Learning Experience is proposed to be located on Lot 3 of the Blake Commons plat. The Blake Commons plat has not yet been recorded as some minor comments from the surveyor remain to be addressed and the appropriate security letter (letter of credit) has not yet been received. However, it is anticipated that these items will be satisfied and the plat recorded prior to the City Commission hearing on this application. The development site is located at the northeast corner of S.R. 434 and Michael Blake Boulevard. The applicant is proposing an early-childhood day care center. Day cares are a conditional use in the Town Center District, Transect 5 (T5). The Learning Experience is proposing a 10,000 sf day care facility to address the child care needs of the City of Winter Springs and specifically the Town Center, which includes several residential developments. Tuskawilla Retail Partners II is responsible for constructing and installing all supporting infrastructure for this development, including grading, utility extensions, stormwater collection facilities, and the Sea Hawk Cove extension to serve the 1.02 acre development site for The Learning Experience, in accordance with the Final Engineering Plans approved by the City Commission for the Sea Hawk Cove Extension/The Blake Commons.

Public Notices:

Notices were mailed to all owners of real property adjacent to and within approximately five-hundred (500) feet of the subject property and all Homeowner's Associations on file with the City of Winter on June 10, 2025.

A Community Workshop was held on June 18, 2025 at 7:00 PM at The Foundry Church. There were no objections raised at the Community Workshop regarding the proposed development. Please see (Figure "1") Community Workshop Flyer and (Figure "2") Community Workshop Attendance.

Analysis of Conditional Use (Sec. 20-33) Criteria:

All conditional use recommendations and final decisions shall be based on the following criteria to the extent applicable:

(1) Whether the applicant has demonstrated the conditional use, including its proposed density, height, scale and intensity, hours of operation, building and lighting design, setbacks, buffers, noise, refuse, odor, particulates, smoke, fumes

and other emissions, parking and traffic-generating characteristics, number of persons anticipated using, residing or working under the conditional use, and other off-site impacts, is compatible and harmonious with adjacent land uses, and will not adversely impact land use activities in the immediate vicinity.

Analysis: Staff have found that the applicant's proposed day care use will be within the requirements of the Code. The proposed day care use will only operate during daytime hours and has sufficient landscape buffers to be aesthetically pleasing, provide safety to students, and block noise, odor, and other emissions. The Transportation Impact Analysis (Figure "7") estimates that the day care use will generate 476 daily trips, well below the 1500 threshold for providing public transportation accommodations. Additionally, the outdoor playground area is not adjacent to any future residential development, which will reduce potential noise impacts. The use is also compatible and harmonious with adjacent land uses as a commercial day care facility, providing child care services to Town Center residents and employees.

(2) Whether the applicant has demonstrated the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale and intensity of the conditional use requested. The site shall be of sufficient size to accommodate design amenities such as screening, buffers, landscaping, open space, off-street parking, safe and convenient automobile, bicycle, and pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.

Analysis: Staff have found that the applicant demonstrated the size and shape of the site, access and internal circulation, and the design enhancements to be adequate to accommodate the proposed day care use. The site is able to accommodate the 10,000 sf building, landscape buffering and screening, off-street parking, and other improvements that will mitigate any adverse impacts of the day care use.

(3) Whether the proposed use will have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values.

Analysis: Staff have found that the proposed day care use will have a beneficial impact on the local economy, providing day care services to local residents and workers, while also providing employment at the facility. Staff find that these impacts will improve property values by continuing to make Town Center a desirable place to live and work.

(4) Whether the proposed use will have an adverse impact on the natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards.

Analysis: Staff have found that the proposed use will have no adverse impact on the natural environment.

(5) Whether the proposed use will have an adverse impact on historic, scenic, and cultural resources, including views and vistas, and loss or degradation of cultural and historic resources.

Analysis: Staff have found that the proposed use will have no adverse impact on historic, scenic, and cultural resources.

(6) Whether the proposed use will have an adverse impact on public services, including water, sewer, stormwater and surface water management, police, fire, parks and recreation, streets, public transportation, marina and waterways, and bicycle and pedestrian facilities.

Analysis: Staff have found that the proposed use will have no adverse impact on public services.

(7) Whether the traffic report and plan provided by the applicant details safe and efficient means of ingress and egress into and out of the neighborhood and adequately addresses the impact of projected traffic on the immediate neighborhood, traffic circulation pattern for the neighborhood, and traffic flow through immediate intersections and arterials.

Analysis: Staff have found that the Traffic Impact Analysis (Figure "7") provides a safe and efficient means of ingress and egress into and out of the neighborhood while adequately addressing the traffic flow from parents picking up and dropping off students.

(8) Whether the proposed use will have an adverse impact on housing and social conditions, including variety of housing unit types and prices, and neighborhood quality.

Analysis: Staff have found that the use will have no impact on housing but will provide a positive impact on social conditions, improving the neighborhood quality by providing child care services convenient to neighborhoods in and adjoining the Town Center.

(9) Whether the proposed use avoids significant adverse odor, emission, noise, glare, and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other sire elements.

Analysis: Staff have found that the proposed use avoids significant adverse impacts on the parcel and the surrounding neighborhood. Lights are either focused inward to the parcel or have the ability to turn off when the daycare is not in operation.

(10) Whether the applicant has provided an acceptable security plan for the proposed establishment that addresses the safety and security needs of the

establishment and its users and employees and minimizes impacts on the neighborhood, if applicable.

Analysis: Staff have found that the applicant has provided an acceptable security plan as part of the Emergency Plan that addresses the safety and security needs of the establishment, including the staff and students, and minimizes impact on the surrounding neighborhood. The Emergency Plan is confidential and exempt from public disclosure pursuant to Section 119.071(3)(a)2. of Florida Statutes.

(11) Whether the applicant has provided an acceptable plan for the mass delivery of merchandise for new large footprint buildings (greater than twenty thousand (20,000) square feet) including the hours of operation for delivery trucks to come into and exit the property and surrounding neighborhood, if applicable.

Analysis: There will be no mass delivery of merchandise for this facility.

(12) Whether the applicant has demonstrated that the conditional use and associated site plan have been designed to incorporate mitigative techniques and plans needed to prevent adverse impacts addressed in the criteria stated herein or to adjacent and surrounding uses and properties.

Analysis: Staff have found that the proposed day care use will utilize mitigative techniques including walls, landscape buffers, and more to reduce and prevent adverse impacts on adjacent and surrounding properties.

(13) If the proposed conditional use is a residential use, whether the elementary, middle and high schools (K—12) that will be initially assigned to the residential project by the school district at the time the city commission considers final approval of the conditional use have both sufficient capacity, are in close proximity to the project so as to make each of the assigned schools accessible and convenient (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the school population that will be drawn from the project, and promote and support the integration of future residents of the project into the existing city of Winter Springs community in a sustainable manner.

Analysis: The proposed use is not a residential use.

(14) Whether the applicant has agreed to execute a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code.

Analysis: The applicant has agreed to and is working on a binding development agreement with the City addressing terms and conditions deemed necessary by the City Commission.

Analysis of Final Engineering Plans (Sec. 20-33.1) Criteria:
The criteria for Final Engineering Plans are provided and analyzed below:

(a) Site and final engineering plans and the subdivision of land shall also be subject to the technical requirements set forth in Chapter 9 of the City Code. It is the intent of this section to apply to applications for site and final engineering plans and to any subdivision of land requiring a plat, if applicable, and does not include review and approval of a lot split application.

Please see the discussion below regarding technical requirements of Chapter 9. The Final Engineering Plans have been reviewed by the City's contract engineer, who concluded that the Plans satisfy the technical requirements. provided the conditions of approval set forth below are met.

(b) Except in situations involving one (1) single-family home, the Planning and Zoning Board shall be required to review all site and final engineering plan and subdivision of land applications and make a written recommendation to the city commission. Such recommendation shall include the reasons for the board's recommendation and show the board has considered the applicable criteria set forth in this section.

(c) Upon receipt of the planning and zoning board's recommendation, the city commission shall make a final decision on the application. If the city commission determines that the planning and zoning board has not made a recommendation on an application within a reasonable period of time, the city commission may, at its discretion, consider an application without the planning and zoning board's recommendation.

Except in situations involving one (1) single-family home, all site and final engineering plan and subdivision recommendations and final decisions shall be based on whether the site and final engineering plan and subdivision of land comply with all the technical requirements set forth in chapter 9 of the City Code and the following criteria to the extent applicable:

(1) Whether the applicant has demonstrated the site and final engineering plan and subdivision of land, including its proposed density, height, scale and intensity, hours of operation, building and lighting design, setbacks, buffers, noise, refuse, odor, particulates, smoke, fumes and other emissions, parking and traffic-generating characteristics, number of persons anticipated using, residing or working under the plan, and other off-site impacts, is compatible and harmonious with adjacent land uses, and will not adversely impact land use activities in the immediate vicinity.

Analysis: Subject to the Conditions of Approval, Staff finds that the proposed Development is compatible and harmonious with adjacent land uses and will not adversely impact land use activities in the immediate vicinity. The height is within the limits of the Town Center District, T5 Transect as it does not exceed two stories.

(2) Whether the applicant has demonstrated the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale and intensity of the site and final engineering plan requested. The site shall be of sufficient size to accommodate design amenities such as screening, buffers, landscaping, open space, off-street parking, safe and convenient automobile, bicycle, and pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.

Analysis: Staff finds that the Applicant has demonstrated that the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale, and intensity of the site and final engineering plan requested. The passage of the subdivision for Sea Hawk Cove, SUBD-2024-0009, has allowed for a site that will accommodate the 10,000 sf day care building and design amenities.

(3) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values.

Analysis: Staff finds that the proposed site and final engineering plan and subdivision of land will not have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values. Rather, the construction of a day care facility so close to Town Center will help to meet the child care needs of families who live and work in the neighborhood. The applicant estimates that the construction of the day care will provide roughly 20 jobs and annual tax revenue of $30,000 (“Figure 9”).

(4) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on the natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards.

Analysis: Staff finds that the proposed site and final engineering plan will not have an adverse impact on the natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards. The project is located outside of the special flood hazard area.

(5) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on historic, scenic, and cultural resources, including views and vistas, and loss or degradation of cultural and historic resources.

Analysis: The proposed site and final engineering plan will have no impact on historical resources. No additional scenic or cultural resources. Including scenic views or vistas, will be impacted by this site and final engineering plan.

(6) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on public services, including water, sewer, stormwater and surface water management, police, fire, parks and recreation, streets, public transportation, marina and waterways, and bicycle and pedestrian facilities.

Analysis: City Staff have reviewed this project from a planning and engineering perspective. Staff did not find any adverse impact on any of the public services listed above. The City Public Works Department has confirmed available water and sewer capacity.

(7) Whether the site and final engineering plan and subdivision of land, and related traffic report and plan provided by the applicant, details safe and efficient means of ingress and egress into and out of the neighborhood and adequately addresses the impact of projected traffic on the immediate neighborhood, traffic circulation pattern for the neighborhood, and traffic flow through immediate intersections and arterials.

Analysis: Staff has reviewed the TIA, (Figure "7") and finds that the site and final engineering plan depicts safe and efficient means of ingress and egress into and out of the neighborhood and adequately addresses the impact of projected traffic on the immediate neighborhood, traffic circulation patterns for the neighborhood, and traffic flow through immediate intersections and arterials

(8) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on housing and social conditions, including variety of housing unit types and prices, and neighborhood quality.

Analysis: As a commercial project, the proposed site and final engineering plan will not have an adverse impact on the variety of housing unit types and prices. As for neighborhood quality, subject to the Conditions of Approval, the proposed site and final engineering plan development will not have an adverse impact on neighborhood quality.

(9) Whether the proposed site and final engineering plan and subdivision of land avoids significant adverse odor, emission, noise, glare, and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other site elements.

Analysis: Staff finds that proposed site and final engineering plan avoids significant adverse odor, emissions, noise, glare and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other site elements.

(10) Whether the applicant has provided an acceptable security plan for the proposed establishment to be located on the site and final engineering plan and subdivision of land that addresses the safety and security needs of the establishment and its users and employees and minimizes impacts on the neighborhood, if applicable.

Analysis: The safety and security of the site was addressed in the applicant's Emergency Plan. It provides detailed procedures to address the safety for the children and staff in the event of a natural or human-caused emergency. Such procedures would have a minimal impact upon the neighborhood, if any.

(11) Whether the applicant has provided on the site and final engineering plan and subdivision of land an acceptable plan for the mass delivery of merchandise for new large footprint buildings (greater than twenty thousand (20,000) square feet) including the hours of operation for delivery trucks to come into and exit the property and surrounding neighborhood, if applicable.

Analysis: Not applicable as the structure being constructed is only 10,000 sf and would not receive mass deliveries of merchandise.

(12) Whether the applicant has demonstrated that the site and final engineering plan and subdivision of land have been designed to incorporate mitigative techniques and plans needed to prevent adverse impacts addressed in the criteria stated herein or to adjacent and surrounding uses and properties.

Analysis: Staff finds that subject to the Conditions of Approval, the site and final engineering plans have been designed to incorporate mitigative techniques and plans needed to prevent the adverse impacts mentioned in the criteria on adjacent and surrounding uses and properties.

(13) If the proposed conditional use is a residential use, whether the elementary, middle and high schools (K—12) that will be initially assigned to the residential project by the school district at the time the city commission considers final approval of the conditional use have both sufficient capacity, are in close proximity to the project so as to make each of the assigned schools accessible and convenient (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the school population that will be drawn from the project, and promote and support the integration of future residents of the project into the existing city of Winter Springs community in a sustainable manner.

Analysis: Not applicable as this is not a residential development.

(14) Whether the applicant has agreed to execute a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code.

Analysis: The applicant has agreed to and is working on a binding development agreement with the City addressing terms and conditions deemed necessary by the City Commission.

Water and Sewer: Public Works & Utilities Department Staff have confirmed that sufficient water and sewer capacity exists for this project.

Stormwater:
Not applicable for this project as no drainage was proposed for this project. The infrastructure included for the development will tie into the existing stormwater pond. That stormwater system will be private and subject to the Declaration of Conditions, Covenants, Easements, and Restrictions as recorded in the Official Records of Seminole County (ORSC), Book 8871, Page 98, as amended by the First Amendment to the same, as recorded in ORSC, Book 8964, Page 1579. These documents govern the maintenance and cost allocations among properties in the Town Center.

Transportation:
The applicant has provided a Traffic Impact Analysis (Figure "7"), which has been reviewed by City staff. It was Staff's finding that sufficient roadway capacity exists for this project. The project will not cause the impacted roadway segments to exceed their adopted level of service (LOS) under the Comprehensive Plan.

Parking:
The Town Center does not have minimum required parking standards, however, the applicant provided documentation (Figure "8") that the day care will offer a total of forty-two (42) spaces, thirty (30) for full and part-time staff and twelve (12) for pick-up and drop-off.

Aesthetic Review:

Pursuant to Section 9-603, which sets forth guidelines and minimum standards for Aesthetic Review packages, staff have utilized the criteria below in Section 9-603 to determine the following. The attached Aesthetic Review package (Figures 10, 11, and 18) includes all of the submittal requirements for aesthetic review as set forth in Section 9-600 through 9-607 and include the following: (a) a site plan; (b) elevations illustration all sides of structures facing public streets or spaces; (c) illustrations of all walls, fences, and other accessory structures and the indication of height and their associated materials; (d) elevation of proposed exterior permanent signs or other constructed elements other than habitable space, if any; (e) illustrations of materials, texture, and colors to be used on all buildings, accessory structures, exterior signs; and (f) other architectural and engineering data as may be required. The procedures for review and approval are set forth in Section 9-603.

Aesthetic Review	
1.	The plans and specifications of the proposed project indicate that the setting, landscaping, proportions, materials, colors, texture, scale, unity, balance, rhythm, contrast, and simplicity are coordinated in a harmonious manner relevant to the project, surrounding area and cultural character of the community. **Analysis:** Staff finds that subject to the approval of the physical landscaping/streetscaping within the area 27-foot area depicted within the

	streetscape waiver request, all architectural and landscaping elements are coordinated in a harmonious manner relevant to the particular proposal, the surrounding area, and cultural character of the community.
2.	The plans for the proposed project are in harmony with any future development which has been formally approved by the city within the surrounding area. **Analysis:** Staff finds that subject to the Conditions of Approval, the plans for the proposed project are in harmony with the Town Center District Code.
3.	The plans for the proposed project are not excessively similar or dissimilar to any other building, structure or sign which is either fully constructed, permitted but not fully constructed, or included on the same permit application, and facing upon the same or intersecting street within five hundred (500) feet of the proposed site, with respect to one or more of the following features of exterior design and appearance: a. Front or side elevations; b. Size and arrangement of elevation facing the street, including reverse arrangement; or c. Other significant features of design such as, but not limited to materials, roof line, hardscape improvements, and height or design elements. **Analysis:** The plans for this project are not excessively similar or dissimilar to other projects within 500 feet of the proposed project. The day care has sought a waiver to have its front façade facing interior to the site while maintaining an aesthetically pleasing rear façade facing SR 434.
4.	The plans for the proposed project are in harmony with, or significantly enhance, the established character of other buildings, structures or signs in the surrounding area with respect to architectural specifications and design features deemed significant based upon commonly accepted architectural principles of the local community. **Analysis:** As previously mentioned, the project has been reviewed under the Town Center District Code standards, ensuring conformance with the high standard of development for Town Center. The streetscape design has a waiver from the width requirements of Town Center standards that staff approved and the approved layout will further enhance the aesthetic impact of the project as compatible with other developments along SR 434.
5.	The proposed project has incorporated significant architectural enhancements such as concrete masonry units with stucco, wrought iron, columns and piers, porches, arches, planting areas, display windows, and other distinctive design features detailing and promoting the character of the community.

	Analysis: The project significantly meets the standards, with the building's primary exterior consisting of stucco material and painted in earth tones with some bright colors for the day care's sign and decorative toy blocks on the front façade facing interior to the lot. The rear façade facing SR 434 does not include the blocks and has landscaping between the roadway and the building to soften the appearance of the structure.

Reports:
The Final Engineering submittal is required to include the following reports or updates of previously prepared reports for the same property.

Reports	
September 16, 2024	Environmental Report (Figure 5)
September 16, 2024	Geotechnical Report (Figure 6)
June 6, 2025	Transportation Impact Analysis (Figure 7)

Procedural History:	
April 7, 2024	Pre-Application Meeting
June 18, 2025	Community Workshop
August 7, 2025	Planning & Zoning Board | Recommendation on Site/Final Engineering, Aesthetic Review, Waivers, Conditional Use Application, and Development Agreement.
August 25, 2025	City Commission | Hearing on Final Engineering Site/Final Engineering, Aesthetic Review, Waivers, Conditional Use Application, and Development Agreement.

Waiver Review: Pursuant to Section 20-34, Any real property owner may file a waiver application requesting a waiver(s) for their real property from any term and condition of this chapter (except from the list of permitted, conditional and prohibited uses set forth in any zoning district category). The Planning and Zoning Board shall be required to review all waiver applications and make a written recommendation to the City Commission. Such recommendation shall include the reasons for the board's recommendation and show the board has considered the applicable waiver criteria set forth and analyzed below. Upon receipt of the Planning and Zoning board's recommendation, the city

commission shall make a final decision on the application. If the city commission determines that the planning and zoning board has not made a recommendation on an application within a reasonable period, the city commission may, at its discretion, consider an application without the planning and zoning board's recommendation.

Waiver I: A waiver to allow The Learning Experience to be located at a setback of 15' from the right-of-way of SR 434 in lieu of the 25' minimum setback.

Waiver Review	
1.	The applicant clearly demonstrates that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development. **Analysis:** Staff find that the applicant demonstrated that the 25' setback requirement creates an impractical result in that it would not permit the lot to meet other requirements for fire access when coupled with the need to include a 10,000 sf building and necessary parking for staff and customers. The difference in ten feet (10') allows the applicant to provide enough width for the drive aisles as well as the building and the parking.
2.	The proposed development plan is in substantial compliance with this chapter and in compliance with the comprehensive plan. **Analysis:** Staff find that the proposed setback adjustment is substantially compliant with the Town Center setback standards as it will place the building closer to the street and is in compliance with the comprehensive plan.
3.	The proposed development plan will significantly enhance real property. **Analysis:** Staff find that the proposed site plan will significantly enhance the real property by allowing for the building to meet all necessary access and parking for the proposed use. By providing a day care service in the Town Center, the convenience of quality child care will provide a draw for employees to the Town Center as well as new residents who want a day care close to home. Bringing the rear of the building closer to the street will not adversely impact the ability to provide a 27' landscape buffer in compliance with the Code.
4.	The proposed development plan serves the public health, safety, and welfare. **Analysis:** Staff find that the construction of The Learning Experience will serve the public health, safety, and welfare of area residents. While the applicant has provided information about how the pick-up and drop-off arrangement for students will affect internal traffic and traffic along Sea Hawk Cove, the reduction in the rear setback should have no noticeable adverse effect on public health and safety while the provision of new child care options will be a benefit to the public welfare.

5.	The waiver will not diminish property values in or alter the essential character of the surrounding neighborhood. **Analysis:** Staff find that the waiver will not diminish property values or the essential character of the surrounding neighborhood. The Town Center is meant to be a mixed-use of commercial and residential to serve residents and visitors. The construction of The Learning Experience will enhance property values and the applicant has proposed that The Learning Experience could add $30,000 in tax revenues each year. Further, the essential character will be enhanced by increasing child care options in Town Center and efforts the applicant has made to adjust the architecture of the building so that the rear façade is aesthetically pleasing negate the adverse effects of not following the Code to have the front façade facing SR 434
6.	The waiver granted is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. **Analysis:** Staff find that the waiver is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. The design helps to meet the associated requirements of the use while still meeting the intent of the ordinance. A reduction in the rear setback helps to bring the building closer to SR 434 as required by the Code for Town Center buildings while preserving the applicant's need for an inward-facing building to serve the traffic and pedestrian needs of students, parents, and staff.
7.	The proposed development plan is compatible and harmonious with the surrounding neighborhood. **Analysis:** Staff find that the site plan is substantially compatible with the surrounding Sea Hawk Cove development and with the Town Center. The applicant developed this parcel with The Learning Experience in mind as one of the future businesses occupying the parent parcel, along with a coffee shop, and townhomes. The Learning Experience has also taken steps to mitigate less-compatible elements of its design by ensuring the that the proposed change in building orientation and reduction of the rear setback will be offset by significant landscaping and a building design that
8.	Whether the applicant has agreed to execute a binding development agreement required by the city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code. **Analysis:** The Applicant is working on and has agreed to a binding Development Agreement to incorporate terms and conditions deemed necessary by the City Commission.

Waiver II: A waiver to allow the rear façade of The Learning Experience to face SR 434 in lieu of the front façade.

Waiver Review	
1.	The applicant clearly demonstrates that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development. **Analysis:** Staff find that the applicant clearly demonstrates that the applicable conditions create an illogical, impossible, impractical, or patently unreasonable result as customer access for the day care needs to be facing inward to permit the pickup and drop off for parents and students. Not allowing this change would result in potential danger to motorists and traffic congestion along SR 434 as a front-facing building would require parents to access from SR 424, which could create traffic delays. Additionally, the Code does not allow for parking between the building and SR 434, necessitating the parking lot and driveways to be interior to the lot
2.	The proposed development plan is in substantial compliance with this chapter and in compliance with the comprehensive plan. **Analysis:** Staff find that the reorientation of the building is substantially compliant with the Code requirements and the desired goals for the Town Center as described in the comprehensive plan. The design of the building is such that it will still present an aesthetically pleasing view to passing motorists as it will contain similar elements to a front façade such as cornices, windows, a multi-tier façade, and a wall sign for The Learning Experience Such design elements mirror the front façade that will be facing internally
3.	The proposed development plan will significantly enhance the real property. **Analysis:** Staff find that the proposed site plan may not significantly enhance the real property with its rear-facing building; however, the presence of a quality day care service will enhance the value of surrounding property and provide families who live and work near Town Center with quality child care.
4.	The proposed development plan serves the public health, safety, and welfare. **Analysis:** Staff find that the plan services the public health, safety, and welfare. The building's front façade being oriented towards the interior of the parcel will enable motorists to enter the day care parking lot from Sea Hawk Cove rather than from SR 434, preventing traffic issues that could result from drop-off and pick-up of students during peak traffic hours. As such, a rear-facing building reduces the potential for traffic accidents and increases the safety of motorists and pedestrians.
5.	The waiver will not diminish property values in or alter the essential character of the surrounding neighborhood.

	Analysis: Staff find that the waiver will not diminish property values or the essential character of the surrounding neighborhood. The Town Center is meant to be a mixed-use of commercial and residential to serve residents and visitors. The street-facing facade of the building, as mentioned previously, will still contain architectural elements that will be harmonious with existing structures along SR 434. The construction of The Learning Experience will also enhance property values and the essential character of the Town Center by increasing child care options.
6.	The waiver granted is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. **Analysis:** Staff find that the waiver is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. The design helps to meet the associated requirements of the use while still meeting the intent of the ordinance. Were the front façade oriented to the side, it would not leave enough available space for parking and drive aisles and would also prevent the parcel from meeting the streetscape requirements. Flipping the facades is far less intrusive while still meeting the day care's needs.
7.	The proposed development plan is compatible and harmonious with the surrounding neighborhood. **Analysis:** Staff find that the proposed development plan is compatible and harmonious with the surrounding neighborhood. While the orientation of the building for the Town Center is not ideal, its design includes elements that mitigate the reorientation and help the rear façade mirror other buildings in the Town Center. Additionally, the building itself will accommodate a use that is desirable for the Town Center and the change has been mitigated by ensuring a pleasant façade facing SR 434.
8.	Whether the applicant has agreed to execute a binding development agreement required by the city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code. **Analysis:** The Applicant is working on and has agreed to a binding Development Agreement to incorporate terms and conditions deemed necessary by the City Commission.

Waiver III: A waiver to allow variations in the streetscape width and sequencing requirements for The Learning Experience, consisting of a 7.5' landscape and treescape area adjacent to the SR 434 right-of-way, a 6' sidewalk, and a 13.5' landscape area adjacent to the building.

Waiver Review

1.	The applicant clearly demonstrates that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development. **Analysis:** Staff find that the applicant clearly demonstrates that the applicable conditions create an illogical, impossible, impractical, or patently unreasonable result related to the Town Center streetscape requirements. The applicant has discussed the streetscape with FDOT and both parties prefer the existing landscape and sidewalk placement along SR 434. Additionally, maintaining the existing dimensions would be in keeping with adjacent parcels, which also sought waivers for the landscaping designs
2.	The proposed development plan is in substantial compliance with this chapter and in compliance with the comprehensive plan. **Analysis:** Staff find that the variations in the streetscape section widths are substantially compliant with the Code requirements and the desired goals for the Town Center as described in the Comprehensive Plan. The streetscape maintains the 27' overall width as required by the ordinance while adjusting the sections to be harmonious with the streetscapes on adjacent parcels.
3.	The proposed development plan will significantly enhance the real property. **Analysis:** Staff find that the proposed variations on the streetscape will significantly enhance the real property by enhancing the overall appearance of the streetscape. The applicant is proposing a number of canopy trees and shrubs beyond what is required that will improve the aesthetic value of the property .
4.	The proposed development plan serves the public health, safety, and welfare. **Analysis:** Staff find that the plan services the public health, safety, and welfare. The proposed streetscape will increase the quality of life for residents and visitors by maintaining the current path and providing a more aesthetically pleasing walkway. The increased number of trees along SR 424 will protect pedestrians along the sidewalk.
5.	The waiver will not diminish property values in or alter the essential character of the surrounding neighborhood. **Analysis:** Staff find that the waiver will not diminish property values or the essential character of the surrounding neighborhood. The proposed waiver does not affect the location of the sidewalk along SR 434 and if anything, enhances the aesthetics of the lot, thereby increasing property values and being more in-keeping with the character of the neighborhood.
6.	The waiver granted is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter.

	Analysis: Staff find that this waiver eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable conditions in the Code. The proposed waiver keeps the current landscape and sidewalk widths so as to be harmonious with the existing streetscape on adjacent parcels. The total required width of the streetscape as required by the Code will be unaffected.
7.	The proposed development plan is compatible and harmonious with the surrounding neighborhood. **Analysis:** Staff find that the proposed development plan is compatible and harmonious with the surrounding neighborhood. While the widths of each section as proposed are not within the Code, they are compatible with the streetscape for the adjacent parcels and the amount of both canopy trees, shrubs, and plantings will result in a harmonious landscape for the surrounding neighborhood.
8.	Whether the applicant has agreed to execute a binding development agreement required by the city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code. **Analysis:** The Applicant is working on and has agreed to a binding Development Agreement to incorporate terms and conditions deemed necessary by the City Commission.

Applicable Law, Public Policy, and Events:

Florida Statutes 163.2511-163.3246: Growth Policy; County and Municipal Planning; Land Development Regulation (Provides that land development regulations for municipal planning be consistent with the Comprehensive Plan).
Home Rule Powers
Code of Ordinances City of Winter Springs.
Section 20-1. Definitions.

Fiscal Impact:

The Fiscal Impact Report shall be reviewed and approved prior to the project being heard before the City Commission.

Development Agreement:

The Applicant is currently working with the City Attorney on the Development Agreement for the project. The Development Agreement shall be executed prior to any work on the project covered within this document.

STAFF RECOMMENDATION

Staff recommends that the Planning & Zoning Board recommend approval of the Site/Final Engineering, Aesthetic Review, Waivers, Conditional Use Application, and Development Agreement, subject to the following conditions of approval:

1. Execution of the Development Agreement.
2. Construction on the site shall not began until the site preparation work is substantially complete.
3. Illuminated wall signage located above the entrance to the building and facing Lot 4 of the Blake Commons plat must be turned off when the daycare facility is closed.
4. All grass on the Property shall be Bahia grass. No St. Augustine grass or grass types with low drought tolerance shall be permitted.
5. Economic Impact analysis required before City Commission Public Hearing.

Attachments:

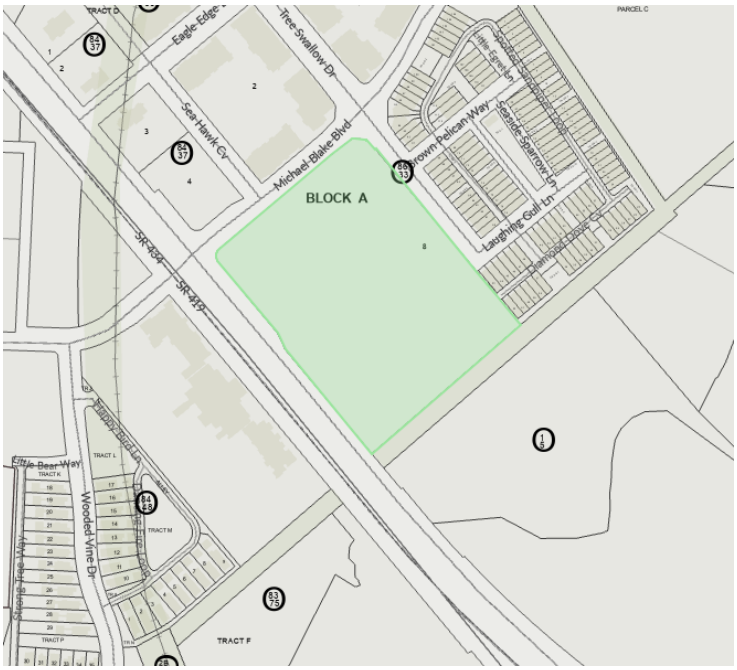
Figure "1" – Community Workshop Flyer
Figure "2" – Community Workshop Attendance Sheet
Figure "3" – The Learning Experience Site Plan
Figure "4" – Dumpster Site Plan
Figure "5 " – Environmental Report
Figure "6" – Geotechnical Report
Figure "7" – Traffic Impact Analysis
Exhibit "8" – Parking Letter
Exhibit "9" – Fiscal Impact
Exhibit "10" – Architectural Elevations
Exhibit "11" – Architectural Renderings
Exhibit "12" – Setback Waiver Description
Exhibit "13" – Building Orientation Waiver Description
Exhibit "14" – Streetscape Waiver Description
Exhibit "15" – Conditional Use Justification
Exhibit "16" – Development Agreement
Exhibit "17" – Site Plan Application
Exhibit "18" – Architectural Review Application
Exhibit "19" – Development Agreement Application
Exhibit "20" – Setback Waiver Application
Exhibit "21" – Building Orientation Waiver Application
Exhibit "22" – Streetscape Waiver Application
Exhibit "23" – Conditional Use Application

COMMUNITY WORKSHOP

Date: June 18, 2025 @ 7:00 P.M.

Location: The Foundry Church – Classroom 5
1491 E. State Road 434, Winter Springs, FL 32708

Community Workshop to consider construction of The Learning Experience daycare in a new 10,000 square foot building.



Project: The Learning Experience

Location: SE corner of E. State Road 434 and Michael Blake Blvd.
Parcel ID: 26-20-30-5AR-0A00-007L
Acreage: ± 1.02-acre project (±8.11-acre parcel)
Zoning: Town Center District (T5)
Future Land Use: Town Center (TC)
Applicant/Presenter: James Herbert, Project Engineer, NV5

COMMUNITY WORKSHOP SIGN-IN SHEET

PROJECT NAME: The Learning Experience

MEETING LOCATION & DATE: The Foundry Church (Classroom #5) - June 18, 2025

NAME	MAILING ADDRESS (STREET, CITY, ZIP)	E-MAIL ADDRESS
1. Richard Rieper	2430 Enterprise Rd Ste 201 Clearwater, FL 33763	RRieper@kwquality.com
2. LEA XU	1126 E State Road 434, Winter Spgs, FL, 32708	LXU@winterspringsFL.org
3. Jenada Garrett	1126 E SR 434 "City of Winter Springs"	jgarrett@winterspringsfl.org
4. Connor Truby	11750 College Park Tr., Apt. A, Bldg 14	connor.truby@nv5.com
5. James Herbert	" " "	james.herbert@nv5.com
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

PARCEL ID #: 26-20-30-5AR-0A00-007L

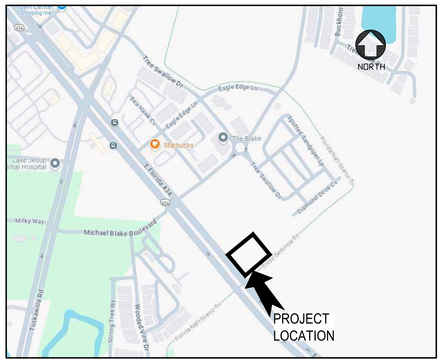
THE LEARNING EXPERIENCE

AT

SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA

DEVELOPER
RICHARD KERPER
KW PARTNERS, LLC
2420 ENTERPRISE ROAD SUITE 201
CLEARWATER, FL 33763

ENGINEER APPLICANT
NV5, INC.
6200 LEE VISTA BLVD.
ORLANDO, FL 32822
FRANKLIN A. PORTER, P.E.
407-896-3317



VICINITY MAP
NTS



AERIAL PHOTO
NTS

SITE UTILITY NOTES:

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
2. CONTRACTOR SHALL NOTIFY THE PROPER UTILITIES AUTHORITIES 48 HOURS PRIOR TO ANY UTILITIES CONSTRUCTION.
3. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
   8" PVC SDR35 PER ASTM D3034, FOR PIPES LESS THAN 10' DEEP
   8" PVC SDR26 PER ASTM D3034, FOR PIPES MORE THAN 10' DEEP
   6" PVC SDR35 PER ASTM D3034
   DUCTILE IRON PIPE PER AWWA C150
4. WATER LINES SHALL BE AS FOLLOWS, UNLESS OTHERWISE DEPICTED ON PLANS:
   6" AND LARGER, PVC C-900 PER ASTM D2241
   CLASS 200 UNDER PUBLIC ROADS, OTHERWISE CLASS 150
   6" AND LARGER DUCTILE IRON PIPE PER AWWA C150
   SMALLER THAN 6" EITHER COPPER TUBE TYPE "L" (SOFT) PER ANSI 816.22
   OR PVC, 200 P.S.I., PER ASTM D1784 and D2241.
5. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
6. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3'-0" COVER ON ALL WATERLINES AND SANITARY SEWER.
7. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BY CITY OF WINTER SPRINGS PUBLIC WORKS BEFORE BACKFILLING.
8. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE SIX INCHES ABOVE UNPAVED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
9. EXISTING UTILITIES HAVE BEEN FIELD VERIFIED, HOWEVER, EXISTING UTILITIES SHALL BE RE-VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES. THE EXISTING SANITARY SEWER SIZE, LOCATION, AND ELEVATION SHALL BE VERIFIED PRIOR TO CONSTRUCTION AND DEPICTED ON THESE PLANS.
10. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
11. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
12. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
13. ALL WATER JOINTS ARE TO BE MECHANICAL RESTRAINED JOINTS.
14. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATER LINE SHALL HAVE MECHANICAL RESTRAINED JOINTS AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
15. ALL SANITARY LATERALS (LESS THAN 6" DIAMETER) SHALL BE SLOPED AT A MINIMUM OF 1.00%.
16. CONTRACTOR SHALL TURN OFF THE CORPORATION STOPS AT THE METERS FOR ALL WATER SERVICES THAT ARE TO BE REMOVED.
17. WHEN ANY ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING LAND CLEARING AND/OR GRADING OF THE SITE THE ROOTS MUST BE CUT OFF EVENLY WITH CLEAN SHARP PRUNING TOOLS. CONTRACTOR SHALL MINIMIZE DAMAGE TO TREE ROOT SYSTEM.
18. A MINIMUM OF 5 FT SEPARATION SHALL BE PROVIDED BETWEEN THE UNDERGROUND UTILITIES AND ANY PROPOSED LARGE CANOPY TREES.
19. PRIVATE DEDICATED UNDERGROUND FIRE MAINS AND FIRE HYDRANTS MUST BE INSTALLED BY A LICENSED FIRE CONTRACTOR CLASS I, II, III, IV. COMBINATION FIRE MAINS (SHARED DOMESTIC AND FIRE PROTECTION SERVICE) AND FIRE HYDRANTS UP TO THE DEDICATED FIRE PROTECTION SYSTEM "POINT OF SERVICE" CAN BE INSTALLED BY A LICENSED UNDERGROUND UTILITY /EXCAVATION CONTRACTOR, GENERAL CONTRACTOR, OR PLUMBING CONTRACTOR.
20. UNDERGROUND FIRE MAINS WILL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 24-2025 EDITION. STANDARDS FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES.
21. IN PAVED AREAS, ALL CLEANOUT COVERS SHALL BE TRAFFIC RATED.

SITE GRADING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. ALL CUT OR FILL SLOPES SHALL BE 4:1 OR FLATTER UNLESS OTHERWISE NOTED.
4. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
5. EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
6. STORM PIPE SHALL BE PER MASTER SITE SPECIFICATIONS SECTION 02630.
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
8. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT
9. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
10. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
11. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
12. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
13. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
14. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
15. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
16. TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYOR CONSULTANT. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
17. ALL EXISTING MANHOLE RIMS TO BE FLUSH WITH FINISHED GRADE. CONTRACTOR TO INSTALL MANHOLE RISERS OR ADJUST EXISTING FRAMES AS NECESSARY.
18. EXISTING GRATE ELEVATIONS TO REMAIN. WHERE PAVEMENT OVERLAY IS TO BE PLACED, FEATHER OVERLAY TO MATCH EXISTING GRATE ELEVATION TO FORM A SMOOTH TRANSITION.
19. SPOT ELEVATIONS ADJACENT TO CURBS REPRESENT EDGE OF PAVEMENT ELEVATIONS, TOP OF CURB SHOULD BE CONSIDERED 6" HIGHER.
20. CONTRACTOR TO MATCH EXISTING GRADE AT LIMITS OF DISTURBANCE, AS DEPICTED ON SWPPP SITE MAPS
21. STRIP THE SURFICIAL ORGANIC SANDS AND IMPORT A MINIMUM OF 2 FEET OF PRE-APPROVED ENGINEERED FILL WITHIN THE LIMITS OF PROPOSED BUILDING FOUNDATIONS AND PAVEMENT.
22. AFTER STRIPPING IS COMPLETE, THE EXPOSED SUBGRADE SHALL BE OBSERVED, TESTED AND PROOF-ROLLED WITH A MINIMUM OF 10 PASSES WITH A HEAVY VIBRATORY ROLLER IN PERPENDICULAR DIRECTIONS.
23. FILL SHALL BE COMPACTED IN LIFTS NO THICKER THAN 9 TO 12 INCHES IN LOOSE THICKNESS, WITH EACH LIFT COMPACTED TO AT LEAST 95 PERCENT OF THE SOILS MODIFIED PROCTOR DRY DENSITY, (ASTM D-1557), AT A DEPTH OF 1 FOOT BELOW THE COMPACTED SURFACE, AS DETERMINED BY IN-PLACE DENSITY TESTS.
24. FILL SHALL BE COMPACTED TO 95 PERCENT OF THE MATERIAL'S MAXIMUM MODIFIED PROCTOR DRY DENSITY
25. IMPORTED FILL OR BACKFILL SHOULD CONSIST OF FINE SAND WITH LESS THAN 15 PERCENT PASSING THE NO. 200 SIEVE, FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.
26. MOISTURE CONTENT OF THE FILL SHALL BE WITH IN +/-2 PERCENT OF OPTIMUM MOISTURE CONTENT AS ESTABLISHED IN ASTM D-1557.
27. ONE FIELD DENSITY TEST SHALL BE CONDUCTED PER 2,500 SQUARE FEET (OR FRACTION THEREOF) PER LIFT, IN THE BUILDING AREA, 1 TEST PER 5,000 SQUARE FEET IN PAVEMENT AREAS.
28. ALTHOUGH THE EXPOSED SUBGRADE IS ANTICIPATED TO BE RELATIVELY STABLE UPON INITIAL EXPOSURE, UNSTABLE SUBGRADE CONDITIONS COULD DEVELOP DURING GENERAL CONSTRUCTION OPERATIONS IF THE SOILS ARE WETTED AND/OR SUBJECTED TO REPETITIVE CONSTRUCTION TRAFFIC.
29. LANDSCAPED AREAS BETWEEN RESIDENTIAL BUILDINGS AND SIDEWALKS ALONG PUBLIC ROADS SHALL BE SLOPED SUCH THAT THE EXPOSED FOOTER OF THE BUILDING IS A MINIMUM OF 1 FOOT AND MAXIMUM OF 2.5 FEET.

SITE PLAN NOTES:

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY OF WINTER SPRINGS REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, ETC., PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED. SEE 02900 SPECIFICATION.
4. ALL ISLANDS WITH CURB & GUTTER SHALL BE LANDSCAPED, UNLESS OTHERWISE NOTED. THOSE ISLANDS ARE TO HAVE CONC. CURB.
5. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
6. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE MODIFIED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
8. THE SITE WORK FOR THE PROJECT SHALL MEET OR EXCEED THE "SITE SPECIFIC SPECIFICATIONS".
9. LIGHTING ELECTRICAL PLANS TO BE PROVIDED BY DUKE ENERGY.
10. ALL SIGNAGE AND STRIPING TO BE INSTALLED IN ACCORDANCE WITH MUTCD (LATEST EDITION) STANDARDS AND SPECIFICATIONS.
11. ALL CONSTRUCTION DUMPSTERS TO BE WASTE PRO, NO EXCEPTIONS.
12. NO ONSITE BURNING IS ALLOWED AT ANY TIME.
13. ALL ORGANIC OR OTHER UNSUITABLE MATERIALS MUST BE HAULED OFF THE SITE AND PROPERLY DISPOSED.
14. PAYMENT OF THE 1% SITE INSPECTION FEE IS DUE PRIOR TO BREAKING GROUND. FEE IS 1% OF THE TOTAL SITEWORK CONSTRUCTION COST, NOT INCLUDING ITEMS COVERED BY A BUILDING PERMIT.
15. PROVIDE A VIDEO INSPECTION OF ALL SANITARY SEWER MAINS, SANITARY SEWER LATERALS, AND ALL STORMWATER PIPES. PROVIDE THE CITY WITH A DVD COPY OF ALL VIDEO INSPECTIONS.
16. ALL WORK PERFORMED WITHIN THE FDOT RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH 2017 DESIGN STANDARDS, 2017 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND 2010 UTILITY ACCOMMODATION MANUAL.

GEOTECHNICAL DATA:

1. SITE PREPARATION FOR CONSTRUCTION SHOULD CONSIST OF REMOVAL OF ALL EXISTING STRUCTURES, FOUNDATIONS, PAVEMENTS, UNDERGROUND UTILITIES, LANDSCAPE, AND OTHER DELETERIOUS MATERIALS WITHIN PROPOSED BUILDING AND PAVEMENT, FOOTPRINTS. ANY VOIDS CREATED BY THE REMOVAL OF THESE DELETERIOUS MATERIALS SHOULD BE PROPERLY BACKFILLED.
2. SITE PREPARATION RECOMMENDED ABOVE SHOULD INCLUDE THE PLANNED STRUCTURE AND PAVEMENT FOOTPRINTS PLUS A FIVE-FOOT PERIMETER.
3. FILL SOILS SHOULD CONSIST OF EITHER INORGANIC, NON-PLASTIC SAND HAVING LESS THAN 12% MATERIAL PASSING THE NO. 200 SIEVE. IN PARTICULAR, FILL SOILS PLACED WITHIN THE UPPER 12 INCHES OF THE SUBGRADE OF BUILDING GRADE SLABS ON GRADE SHOULD CONSIST OF EITHER SAND WITH LESS THAN 10% PASSING THE NUMBER 200 SIEVE.
4. REPRESENTATIVE SAMPLES OF THE FILL SOILS SHOULD BE COLLECTED FOR CLASSIFICATION AND COMPACTION TESTING. THE MAXIMUM DRY DENSITY, OPTIMUM MOISTURE CONTENT, GRADATION, AND PLASTICITY SHOULD BE DETERMINED. THESE TESTS ARE NEEDED FOR QUALITY CONTROL OF THE COMPACTED FILL.
5. FILL SOILS SHOULD BE PLACED WITH LOOSE LIFT THICKNESSES OF NOT MORE THAN 12 INCHES, MOISTURE-CONDITIONED TO WITHIN THREE (3) PERCENT OF THE OPTIMUM MOISTURE CONTENT BASED ON ASTM D-1557 AND COMPACTED TO A MINIMUM OF 95 PERCENT RELATIVE COMPACTION. ONE TEST SHOULD BE PERFORMED FOR EACH 2,500 SQUARE FEET OF FILL AREA PER LIFT OF FILL SOIL. IF DURING THE COMPACTION PROCESS FILL SHOWS EVIDENCE OF YIELDING UNDER THE WEIGHT OF THE ROLLER, IT SHOULD BE SCARIFIED AND RE-COMPACTED, OR REMOVED AND REPLACED WITH FILL.
6. VIBRATIONS PRODUCED BY THE OPERATION OF THE COMPACTOR SHOULD BE MONITORED FOR POTENTIAL ADVERSE EFFECTS ON ADJACENT EXISTING STRUCTURES, PAVEMENTS, AND UTILITIES. IF NEARBY STRUCTURES WILL BE AFFECTED BY THE VIBRATION OF THE COMPACTOR, THE COMPACTION PROCEDURE MAY REQUIRE MODIFICATION AS APPROVED BY THE GEOTECHNICAL ENGINEER.
7. FINAL SURROUNDING GRADES SHOULD BE SLOPED AWAY FROM THE STRUCTURE ON ALL SIDES TO PREVENT PONDING OF WATER. ROOF DRAINAGE SHOULD DISCHARGE TO THE STORMWATER SYSTEM OR A MINIMUM OF 10 FEET BEYOND THE FOOTPRINT OF THE PROPOSED STRUCTURES WHERE THERE ARE PERVIOUS SURFACES. SITE GRADES SHOULD BE SET CONSIDERING THE ESTIMATED SEASONAL HIGH GROUNDWATER.

LEGAL DESCRIPTION:

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024)

PARCEL A (DESCRIPTION PROVIDED BY SURVEYOR)

A PORTION OF LOT 8, BLOCK "A", D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ON LAKE JESSUP, SAID LANDS LYING IN SECTION 6, TOWNSHIP 21 SOUTH, RANGE 31 EAST, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF STATE ROAD 434 AND TUSKAWILLA ROAD (PER FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP, SECTION 77070-2516, SHEET 10 OF 13, P.I. STATION 600+32.11); THENCE RUN S38°23'34"E, A DISTANCE OF 1320.11 FEET ALONG THE BASELINE OF SURVEY AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE DEPARTING SAID BASELINE, RUN N51°36'26"E, A DISTANCE OF 94.94 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF THE AFORESAID STATE ROAD 434, AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 164.51 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 193.14 FEET TO THE INTERSECTION WITH THE NORTHWESTERLY BOUNDARY LINE OF ACQUISITION PARCEL B (RAILS TO TRAILS CORRIDOR) AS RECORDED IN OFFICIAL RECORDS BOOK 4092, PAGE 0164, PUBLIC RECORDS OF SEMINOLE COUNTY FLORIDA; THENCE N50°31'58"W, ALONG SAID NORTHWESTERLY BOUNDARY, A DISTANCE OF 231.33 FEET; THENCE N38°28'33"W, A DISTANCE OF 188.71 FEET; THENCE S51°37'48"W, A DISTANCE OF 232.12 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 1.015 ACRES, MORE OR LESS.

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE	REVISIONS 03/11/25	REVISIONS 05/23/25	REVISIONS 06/18/25	REVISIONS 07/11/25
C01.0	COVER SHEET	X	X	X	X
C02.0	SWPPP PHASE 1 PLAN	X			
C03.0	SWPPP PHASE 2 PLAN	X			
C04.0	SWPPP DETAILS AND NOTES				
C05.0	SITE PLAN	X	X	X	
C06.0	GRADING PLAN	X	X	X	X
C07.0	UTILITY PLAN	X	X		
C08.0	WATER DETAILS				
C09.0	SANITARY SEWER DETAILS				
C10.0	GENERAL DETAIL SHEET 1				
C11.0	GENERAL DETAIL SHEET 2				
C12.0	FIRE TRUCK ACCESS PLAN				
C13.0	OVERALL DEVELOPMENT PLAN		X		
1 OF 2	BOUNDARY AND TOPO. SURVEY	X			
2 OF 2	BOUNDARY AND TOPO. SURVEY	X			
L-1	LANDSCAPE PLAN	X	X		

MASTER SPECIFCATIONS UNDER SEPERATE COVER AVAILABLE UPON REQUEST

TREE REMOVAL COORDINATED UNDER SEPARATE PERMIT

JURISDICTION / UTILITIES

SITEWORK CONSTRUCTION
CITY OF WINTER SPRINGS, FLORIDA
1126 EAST STATE ROAD 434
WINTER SPRINGS, FLORIDA 32708
407-327-8979

WATER MANAGEMENT:
ST. JOHNS RIVER WATER MAN. DISTRICT
2501 S. BINION RD
APOPKA, FLORIDA 32703
407-695-4800

WATER
CITY OF WINTER SPRINGS, FLORIDA
1126 EAST STATE ROAD 434
WINTER SPRINGS, FLORIDA 32708
407-327-8979

WASTEWATER
CITY OF WINTER SPRINGS, FLORIDA
1126 EAST STATE ROAD 434
WINTER SPRINGS, FLORIDA 32708
407-327-8979

ELECTRIC:
DUKE ENERGY
2801 WEST STATE ROAD 426
OVIEDO, FLORIDA 32765
800-700-8744

CONSULTANTS

CIVIL ENGINEER:
NV5, INC.
6200 LEE VISTA BLVD.
ORLANDO, FLORIDA 32822
FRANK A. PORTER, P.E.
407-896-3317

SURVEYOR:
CHW, INC., AN NV5 COMPANY
2100 SE 17TH STREET, UNIT 802
OCALA, FLORIDA 34471
CLINTON N. RICKNER, PSM
352-414-4621

ARCHITECT:
ARC3 ARCHITECTURE, INC.
6699 13TH AVENUE NORTH, SUITE 4A
ST. PETERSBURG, FLORIDA 33710
STEVEN J. VINCI, AIA
727-381-5220

LANDSCAPE:
J. SCOTT LIBERTY, LANDSCAPE ARCHITECT
5621 REVELWOOD LOOP
WINTER PARK, FLORIDA 32792
J. SCOTT LIBERTY
407-719-2124

GEOTECH:
NV5, INC
6200 LEE VISTA BLVD.
ORLANDO, FLORIDA 32822
JAMES R. HILL, III, P.E., S.I.
407-275-5120

FRANKLIN A. PORTER
LICENSE
No 69092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Digitally signed by Franklin A Porter
Date: 2025.07.11 15:50:11-04'00'

This item has been electronically signed and sealed by Franklin Porter, PE on the date adjacent to the seal using a SHA authentication code.

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

JOB #: 24056.20 | PRJ. MGR: FAP | DESIGNER: SCK | CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092
DATE: JUL. 11, 2025

NO.	DATE	REVISIONS
1	07/11/25	GRADING PLAN SHEET REVISIONS
2	06/18/25	SITE PLAN REVIEW COMMENTS 06/05/25
3	05/22/25	SITE PLAN REVIEW COMMENTS 04/24/25
4	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25

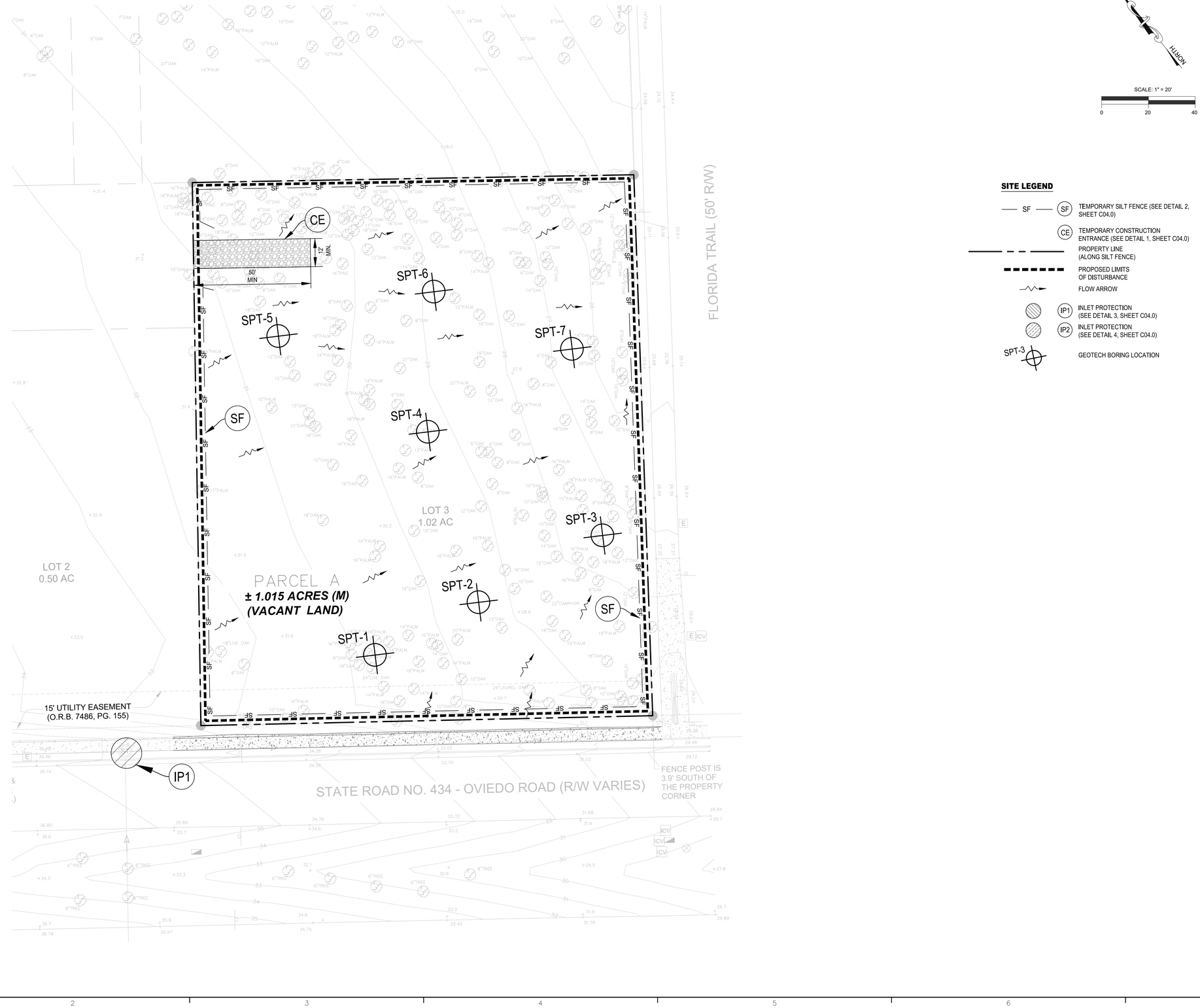
THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

COVER SHEET

\\nv5.com\panzuro\NP\INF-East\FL\ORL\Civil\civil2\24056.20\CONST\C01.0 COVER SHEET.dwg — Jul 11, 2025 — 4:17pm

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
407.896.3317
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C01.0



NORTH

SCALE: 1" = 20'

0 20 40

SITE LEGEND

- SF — TEMPORARY SILT FENCE (SEE DETAIL 2, SHEET C04.0)
- CE — TEMPORARY CONSTRUCTION ENTRANCE (SEE DETAIL 1, SHEET C04.0)
- PROPERTY LINE (ALONG SILT FENCE)
- PROPOSED LIMITS OF DISTURBANCE
- FLOW ARROW
- IP1 — INLET PROTECTION (SEE DETAIL 3, SHEET C04.0)
- IP2 — INLET PROTECTION (SEE DETAIL 4, SHEET C04.0)
- SPT-3 — GEOTECH BORING LOCATION

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092
DATE: JUL. 11, 2025

NO	DATE	REVISIONS
1	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25

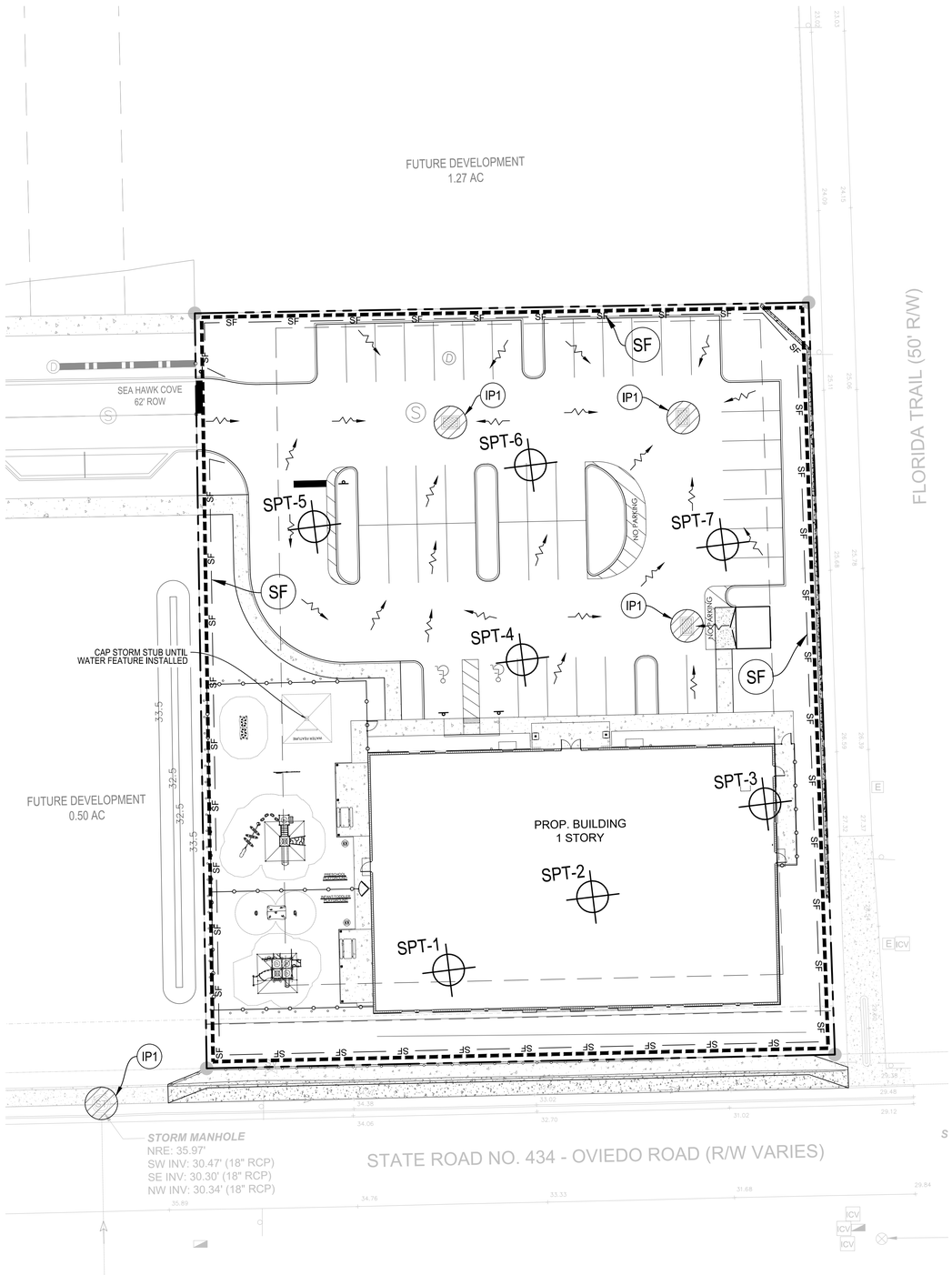
THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

SWPPP PHASE 1
PLAN

NV5
6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3375
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C02.0

\\nv5.com\ponzuro\INF\INF-East\FL\ORL\Civil\civil2\24056.20\CONST\C02.0 SWPPP PHASE 1.dwg — Jul 11, 2025 — 4:17pm





SCALE: 1" = 20'

0 20 40

SITE LEGEND

- SF — TEMPORARY SILT FENCE (SEE DETAIL 3, SHEET C10.0)
- CE — TEMPORARY CONSTRUCTION ENTRANCE
- PROPERTY LINE (ALONG SILT FENCE)
- PROPOSED LIMITS OF DISTURBANCE
- FLOW ARROW
- IP1 — INLET PROTECTION (SEE DETAIL 4, SHEET C10.0)
- IP2 — INLET PROTECTION (SEE DETAIL 7, SHEET C10.0)
- SPT-3 — GEOTECH BORING LOCATION

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092
DATE: JUL. 11, 2025

NO	DATE	REVISIONS
1	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

SWPPP PHASE 2
PLAN

NV5
6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3317
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C03.0

\\nv5.com\ponzuro\INF\INF-East\FL\ORL\Civil\civil2\24056.20\CONST\C03.0 SWPPP PHASE 2.dwg — Jul 11, 2025 — 4:21pm

BEST MANAGEMENT PRACTICES SEQUENCE

1. SITE DESCRIPTION

A. CONSTRUCTION OF CHILD AND DAY CARE CENTER BUILDING AND SURFACE PARKING AREAS.

B. SEQUENCE OF SOIL DISTURBANCE:
(1) INSTALL PERIMETER SEDIMENT AND EROSION CONTROLS.
(2) PREPARE SITE.
(3) CLEAR AND GRUB PROPOSED AREA.
(4) INSTALL PROPOSED UNDERGROUND STORMWATER AND UTILITIES.
(5) INSTALL CONCRETE CURB, CONCRETE SIDEWALK. AND PAVEMENT
(6) STABILIZE SITE.

C. TOTAL SITE AREA: 1.01± ACRES
DISTURBED SITE AREA: 1.01± ACRES

D. SOILS: -EAUGALLIE & IMMOKALEE FINE SANDS
-POMPANO FINE SANDS

E. DRAINAGE AREA FOR EXISTING DISCHARGE POINT: 1.01± ACRES
DRAINAGE AREA FOR PROPOSED DISCHARGE POINT: 1.01± ACRES

F. LATITUDE AND LONGITUDE OF EXISTING DISCHARGE POINT:
DISCHARGE POINT LAT: 28°41'37.53" N
DISCHARGE POINT LONG: 81°15'30.13" W
DISCHARGES TO ADJACENT WOODLAND

LATITUDE AND LONGITUDE OF PROPOSED DISCHARGE POINT:
DISCHARGE POINT LAT: 28°41'38.59" N
DISCHARGE POINT LONG: 81°15'31.94" W
DISCHARGES TO MASTER STORM POND, SJRWMD PERMIT NO. 95027-2

2. CONTROLS

A. EROSION AND SEDIMENT CONTROLS:

(1) STABILIZATION PRACTICES:
1. TEMPORARY SEEDING SHALL BE RYE GRASS APPLIED AT MANUFACTURER'S RECOMMENDATIONS TO ANY DISTURBED AREAS THAT ARE INACTIVE FOR SEVEN DAYS.
2. MULCHING PRACTICES AND SOD SHALL BE APPLIED TO PARKING LOT ISLANDS.

(2) STRUCTURAL PRACTICES:
1. PRIOR TO CLEARING, A SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE SITE, AS SHOWN HEREIN.
2. DURING THE CLEARING, GRUBBING, AND SITE GRADING STAGES, AREAS TO BE LEFT DISTURBED MORE THAN 7 DAYS SHALL BE STABILIZED WITH RYE GRASS APPLIED PER THE MANUFACTURER'S SPECIFICATIONS. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 4,000 POUNDS OF STRAW PER ACRE.
3. AFTER ALL INITIAL SITE GRADING WORK, ALL PROPOSED INLETS/OUTFALLS, ONCE INSTALLED, SHALL BE PROTECTED FROM EROSION AND SEDIMENT RUNOFF BY THE USE OF THE INLET PROTECTION DESIGNATED ON THE SITE MAP. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED SHALL BE STABILIZED WITH SEED OR SOD AS INDICATED ON THE SITE MAP NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. SEEDING SHALL BE THE SAME AS IN TEMPORARY SEEDING.
4. ALL INSTALLATION SHALL BE COMMENCED AS DEPICTED ON THE SITE MAPS AND EROSION CONTROL DETAIL SHEET.
5. IF SEDIMENT AND EROSION CONTROL MEASURES DEVIATE FROM THE PLANS, CITY OF WINTER SPRINGS SHALL BE NOTIFIED.

B. PERMANENT STORMWATER MANAGEMENT CONTROLS:

1. CATCH BASINS AND STORM SEWER SYSTEM ON-SITE TO PROVIDE POSITIVE DRAINAGE OF THE ENTIRE SITE TO THE DISCHARGE POINT.

C. CONTROLS FOR OTHER POLLUTANTS:

1. WASTE DISPOSAL: ALL WASTE WILL BE DISPOSED OF IN AN APPROPRIATE LEGAL MANOR, AND COMPLY WITH CITY OF WINTER SPRINGS ORDINANCES FOR WASTE DISPOSAL AND COMMERCIAL SITE DEVELOPMENT.

2. VEHICLE TRACKING: OFF SITE VEHICLE TRACKING OF SEDIMENTS AND DUST GENERATION WILL BE MINIMIZED VIA BEST POSSIBLE PRACTICES, DAILY SWEEPING AND THE USE OF WATER TO KEEP DUST DOWN.

3. FERTILIZERS, HERBICIDES, AND PESTICIDES: FERTILIZERS AND PESTICIDES WILL BE USED AT A MINIMUM AND IN ACCORDANCE WITH THE MANUFACTURERS' SUGGESTED APPLICATION APPLICATION RATES. THE FERTILIZERS AND PESTICIDES SHALL BE STORED IN A COVERED SHED.

4. TOXIC SUBSTANCES: ALL PAINTS AND OTHER CHEMICALS WILL BE STORED IN A LOCKED COVERED SHED.

5. OTHER: PORT-O-LETS WILL BE PLACED AWAY FROM THE STORM SEWER SYSTEMS AND STORM INLETS. NO VEHICLE MAINTENANCE SHALL BE CONDUCTED ON-SITE. A WASHDOWN AREA SHALL BE DESIGNATED AT ALL TIMES AND WILL NOT BE LOCATED IN ANY AREA THAT WILL ALLOW FOR THE DISCHARGE OF POLLUTED RUNOFF. A SMALL VEGETATED BERM SHALL BE PLACED AROUND THE WASHDOWN AREA.

3. MAINTENANCE:

1. SILT FENCE SHALL BE INSPECTED AT LEAST WEEKLY. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
2. INLETS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAIN EVENT AND ANY REPAIRS SHALL BE PERFORMED IMMEDIATELY.
3. BARE AREAS OF THE SITE THAT WERE PREVIOUSLY SEEDED SHALL BE RE-SEEDED PER MANUFACTURES' INSTRUCTIONS.
4. MULCH AND SOD THAT HAS BEEN WASHED OUT SHALL BE REPLACED IMMEDIATELY.
5. DEWATERING ACTIVITIES SHALL NOT RESULT IN ANY DISCHARGE OF WATER WITH TURBIDITY GREATER THAN 29 NTUS FROM THE SITE.

ALL MEASURES ON THIS SITE MAP, 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. CONTROLS ARE TO BE REPLACED OR REPAIRED IF IN A SUBSTANDARD CONDITION. ALL MAINTENANCE MODIFICATIONS ARE TO BE NOTED, ON PLANS, AS THEY OCCUR.

4. INSPECTIONS:

1.1. A QUALIFIED INSPECTOR SHALL INSPECT ALL POINTS OF DISCHARGE INTO SURFACE WATERS OF THE STATE AND MS4 (CITY OF WINTER SPRINGS & FDOT); DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED; AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; STRUCTURAL CONTROLS; AND, LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.50 INCHES OR GREATER. A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION SHALL BE MADE AND RETAINED IN THE CONSTRUCTION TRAILER AS PART OF THE STORMWATER POLLUTION PREVENTION
1.2. INSPECTIONS BY THE CONTRACTOR TO DETERMINE THE EFFECTIVENESS OF EROSION/SEDIMENT CONTROL EFFORTS SHALL BE CONDUCTED DAILY AND WITHIN 24 HOURS AFTER EACH 0.50 INCH OR GREATER RAINFALL EVENT. ANY NECESSARY REMEDIES SHALL BE PERFORMED IMMEDIATELY.

5. NON-STORMWATER DISCHARGES:

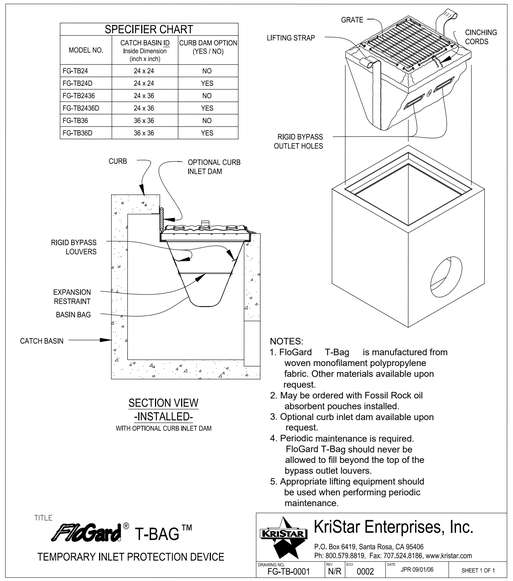
IT IS ANTICIPATED THAT THE FOLLOWING NON-STORMWATER DISCHARGES MAY OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:
1. WATER FROM LINE FLUSHINGS
2. PAVEMENT WASH WATER (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED)
3. SITE WATERING, TO ALLEVIATE FUGATIVE DUST
4. ROUTINE EXTERNAL BUILDING WASHDOWN WHICH DOES NOT USE DETERGENTS
5. IRRIGATION DRAINAGE

IF SAID DISCHARGES DO OCCUR, THEY WILL BE DIRECTED TO THE TEMPORARY EROSION CONTROL MEASURES PRIOR TO DISCHARGE.

6. CONTRACTOR/SUBCONTRACTOR CERTIFICATION:

ALL CONTRACTOR(S) AND SUBCONTRACTOR(S) IDENTIFIED ABOVE MUST SIGN THE FOLLOWING CERTIFICATION:

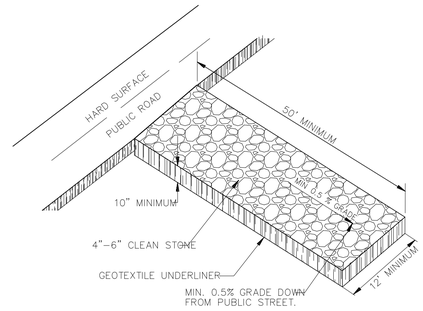
"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."



INLET SEDIMENT FILTER

N.T.S.

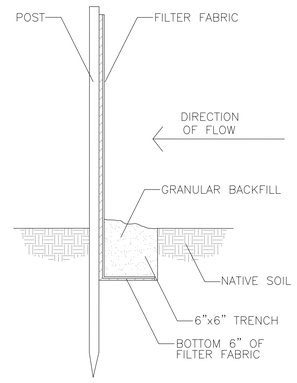
4



CONSTRUCTION ENTRANCE

N.T.S.

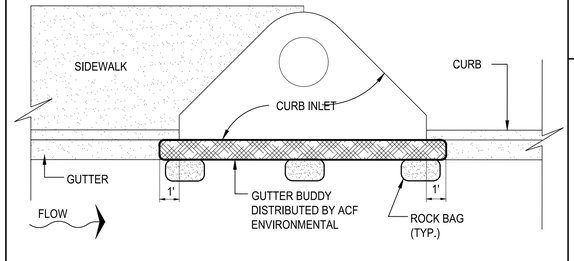
1



SILT BARRIER DETAIL

N.T.S.

2



GUTTER BUDDY CURB INLET PROTECTION

N.T.S.

3

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092

DATE: Jul. 11, 2025

NO	DATE	REVISIONS

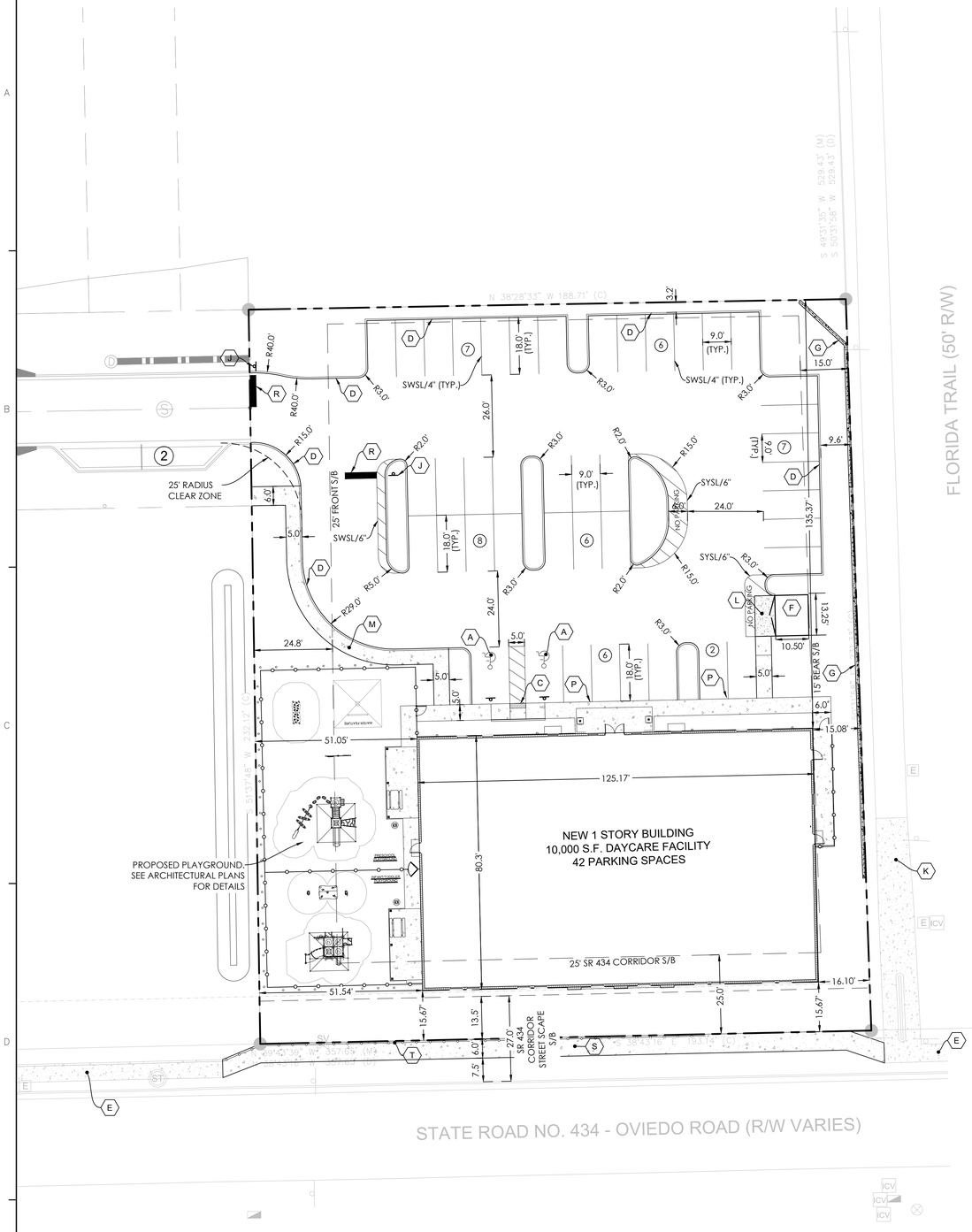
THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

SWPPP DETAILS AND NOTES

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3311
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29085

SHEET
C04.0

\\nv5.com\ponzuro\INF\INF-East\FL\ORL\Civil\civil2\24056.20\CONST\C04.0 SWPPP DETAILS AND NOTES.dwg — Jul 11, 2025 — 4:17pm



SITE LEGEND

- (A) ACCESSIBLE PARKING SPACE (TYP), SEE DETAIL FOR ACCESSIBLE PARKING SPACE, SIGN AND SYMBOL (SEE SHEET C11.0 DETAIL 1)
- (B) PAVEMENT MARKINGS (TYP). PER FDOT INDEX 17346
- (C) FDOT ADA RAMP WITH DETECTABLE WARNING SURFACE (TYP). (SEE SHEETC11.0 DETAIL 2)
- (D) TYPE D CURB . PER FDOT INDEX 520-001
- (E) EXISTING CONCRETE SIDEWALK
- (F) DUMPSTER ENCLOSURE
- (G) 189 LF RETAINING WALL WITH MIN. 42" HIGH BLACK ALUMINUM DECORATIVE GUARDRAIL ANCHORED TO TOP OF RETAINING WALL. GUARDRAIL SHALL COMPLY WITH FLORIDA BUILDING CODE SECTION 1015.3.
- (H) SEE NOTE NO. 3 UNDER SITE INFORMATION SECTION THIS SHEET.
- (I) FIRE HYDRANT PAVEMENT MARKER (SEE SHEET C10.0, DETAIL 8)
- (J) DECORATIVE STOP SIGN (R1-1) - HIGH REFLECTIVE INTENSITY (SEE SHEET C10.0, DETAILS 9 & 10)
- (K) CROSS SEMINOLE TRAIL
- (L) CONCRETE PAVEMENT (SEE SHEET C10.0, DETAIL 4)
- (M) PROPOSED 5' WIDE CONCRETE SIDEWALK (SEE SHEET C10.0, DETAIL 1)
- (N) SEE NOTE NO. 1 UNDER SITE INFORMATION SECTION THIS SHEET.
- (O) TYPE F CURB AND GUTTER (SEE SHEET C10.0, DETAIL 3)
- (P) THICKENED CURB (SEE SHEET C10.0, DETAIL 1)
- (Q) 6' X 6' TRANSFORMER CONCRETE PAD
- (R) STOP BAR (SEE SHEET C10.0, DETAIL 6)
- (S) PROPOSED 6' WIDE CONCRETE SIDEWALK
- (T) PROPOSED 154 LF HANDRAIL. IF POSSIBLE REUSE EXISTING HANDRAIL. ALL HANDRAIL NOT USED TO BE RETURNED TO FDOT DISTRICT 5 OVIEDO OPERATIONS OFFICE, LAITH KAREEM (407) 278 - 2800

MAINTENANCE OF TRAFFIC NOTE:

ALL WORK WITHIN S.R. 434 RIGHT-OF-WAY SHALL CONFORM TO FDOT STANDARD PLANS, INDEX 102-602, FOR MAINTENANCE OF TRAFFIC (MOT) REQUIREMENTS.

NORTH

SCALE: 1" = 20'

0 20 40

STRIPING LEGEND

NOTE: ALL STRIPING TO BE NON-SLIP PAINT

SYSL/4"	SINGLE YELLOW SOLID LINE / 4" WIDE
SYSL/6"	SINGLE YELLOW SOLID LINE / 6" WIDE
SWSL/4"	SINGLE WHITE SOLID LINE / 4" WIDE
SWSL/6"	SINGLE WHITE SOLID LINE / 6" WIDE
SWSL/24"	SINGLE WHITE SOLID LINE / 24" WIDE
(7)	PARKING COUNT

PAVEMENT LEGEND

- RIGID PAVEMENT (SEE SHEET C10.0, DETAIL 4)
- HARDSCAPE PER ARCH. PLANS.
- STANDARD DUTY ASPHALT (SEE SHEET C09.0, DETAIL 5)
- CONCRETE SIDEWALK (SEE SHEET C10.0, DETAIL 1)

SITE ADDRESS
SR 434 & MICHAEL BLAKE BLVD

SITE JURISDICTION
CITY OF WINTER SPRINGS

ZONING
EXIST. TOWN CENTER DISTRICT (T5-URBAN CENTER)
PROP. TOWN CENTER DISTRICT (T5-URBAN CENTER)

FUTURE LAND USE
TOWN CENTER DISTRICT (T5-URBAN CENTER)

SITE DATA

TOTAL AREA:	1.01 AC
IMPERVIOUS AREA:	0.67 AC
PERVIOUS AREA:	0.34 AC

SITE FEMA
CITY OF WINTER SPRINGS 120295: ZONE X

BUILDING SETBACKS

	REQUIRED	PROVIDED
FRONT	25'-50'	51.54'
REAR	15' MIN	15.08'
SIDE	5'-100'	135.37'
SR 434 CORRIDOR*	25'	15.67'

*A WAIVER FROM WINTER SPRINGS CITY CODE SEC. 20-325 TO ALLOW A 15.67 FOOT SR 434 CORRIDOR SETBACK FOR THE PROPOSED BUILDING IN LIEU OF A REQUIRED SR 434 CORRIDOR SETBACK OF 25 FEET.

BUILDING SETBACKS PER CITY OF WINTER SPRINGS CODE SEC. 20-325. - TRANSECT STANDARDS

BUILDING HEIGHT

	REQUIRED	PROPOSED
COMMERCIAL	2 STORIES**	

**SECOND STORY CAN BE FAUX

BUILDING HEIGHT REQUIREMENTS PER CITY OF WINTER SPRINGS CODE SEC. 20-325. - TRANSECT STANDARDS

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092

DATE: JUL. 11, 2025

NO	DATE	REVISIONS
1	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25
2	05/23/25	SITE PLAN REVIEW COMMENTS 04/24/25
3	06/18/25	SITE PLAN REVIEW COMMENTS 06/05/25

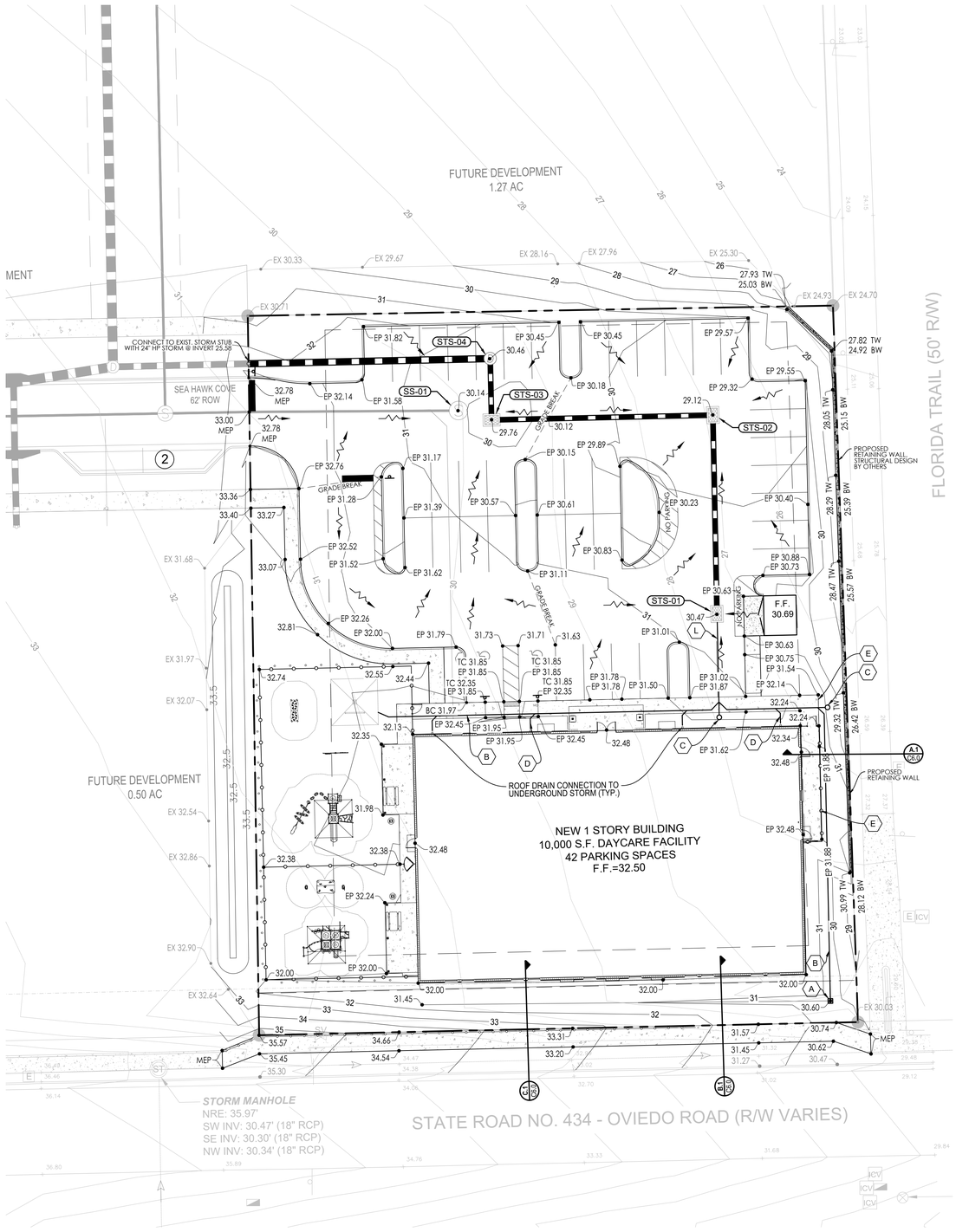
THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

SITE PLAN

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3317
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C05.0

\\nv5.com\ponzaro\INF\INF-East\FL\ORL\Civil\2_24056.20\CONST\C05.0 SITE PLAN.dwg — Jul 11, 2025 — 4:21pm



LEGEND

40.89	= SPOT ELEVATION AT EDGE OF PAVEMENT
– – – – – –	= GRADE BREAK
	= SURFACE FLOW
SC	= SAWCUT EXISTING EOP AND MATCH TO LINE AND GRADE
MEP	= MATCH EXISTING PAVEMENT
TC	= TOP OF CURB
EP	= EDGE OF PAVEMENT

PAVEMENT LEGEND

- STANDARD DUTY ASPHALT
- REGULAR DUTY CONCRETE
- HARDSCAPE PER ARCH. PLANS.

GRADING LEGEND

- (A) 12"X12" YARD DRAIN
- (B) 12" HP STORM PIPE
- (C) 12" CLEANOUT
- (D) 6" ADS CORRUGATED PIPE
- (E) THICKENED EDGE SIDEWALK TO BE INSTALLED ENTIRE LENGTH OF SIDEWALK ADJACENT TO WALL (SEE SHEET C10.0, DETAIL 1)

NORTH

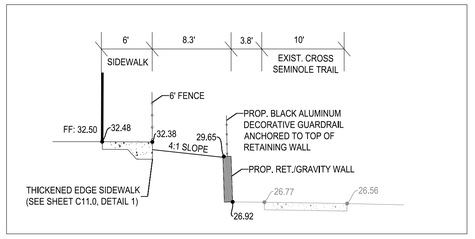
SCALE: 1" = 20'
0 20 40

NOTES:

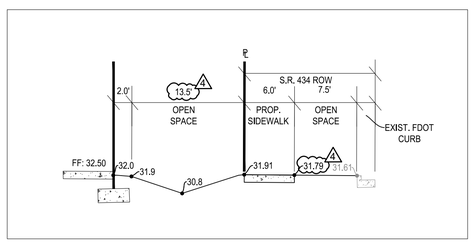
1. LOT GRADING SHALL NOT IMPOSE ANY ADDITIONAL RUNOFF ONTO NOR IMPEDE RUNOFF FROM ADJACENT PROPERTIES.
2. ALL SITE WORK SHOWN SHALL BE CONSTRUCTED BY THE GENERAL CONTRACTOR.
3. ELEVATIONS SHOWN ARE BASED ON NAVD88, SEE BOUNDARY & TOPOGRAPHIC SURVEY UNDER GENERAL NOTES.
4. SLOPE ALL ROOF DRAIN DOWN SPOUT PIPING AT 1.00% MIN.
5. STORMWATER MANAGEMENT IS PROVIDED THROUGH A MASTER STORMWATER SYSTEM. ALL ONSITE RUNOFF HAS BEEN ADDRESSED AND ACCOUNTED FOR IN THE SYSTEM. RUNOFF WILL BE CONVEYED THROUGH A COMBINATION OF PROPOSED SWALE AND UNDERGROUND PIPING TO THE EXISTING MASTER STORMWATER SYSTEM LOCATED IN SEA HAWK COVE ROW. SJRWMD MASTER PERMIT NO. 95027 SERIES.

STORM SEWER SCHEDULE

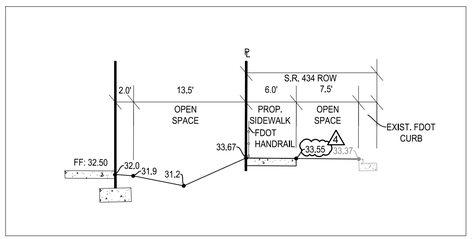
STRUCTURE NUMBER	STRUCTURE TYPE	RIM / FLOW LINE ELEV.	DOWNSTREAM STRUCTURE	INVERTS IN	INVERTS OUT	DOWNSTREAM PIPE LENGTH	PIPE SIZE/ MATERIAL	SLOPE
STS-01	TYPE C STORM STRUCTURE	30.47	STS-02		26.46' NE	64.17'	18" HP STORM PP	0.34%
STS-02	TYPE C STORM STRUCTURE	29.12	STS-03	26.24' SW	26.24' NW	71.38'	18" HP STORM PP	0.26%
STS-03	TYPE C STORM STRUCTURE	29.76	STS-04	26.05' SE	26.05' NE	19.80'	18" HP STORM PP	0.80%
STS-04	STORM MANHOLE	30.46	STS-04A	25.89' SW	25.89' NW	77.97'	24" HP STORM PP	0.40%
STS-04A	24" HP-STORM STUB MARKED @ PROP. GRADE	32.70		25.58' SE				



RETAINING WALL CROSS SECTION — NOT TO SCALE — A.1 / C6.0



SWALE CROSS SECTION — NOT TO SCALE — B.1 / C6.0



SWALE CROSS SECTION — NOT TO SCALE — C.1 / C6.0

Sunshine811
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!

NO	DATE	REVISIONS
1	07/11/25	GRADING PLAN SHEET REVISIONS
2	06/18/25	SITE PLAN REVIEW COMMENTS 06/05/25
3	05/23/25	SITE PLAN REVIEW COMMENTS 04/24/25
4	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092

DATE: Jul. 11, 2025

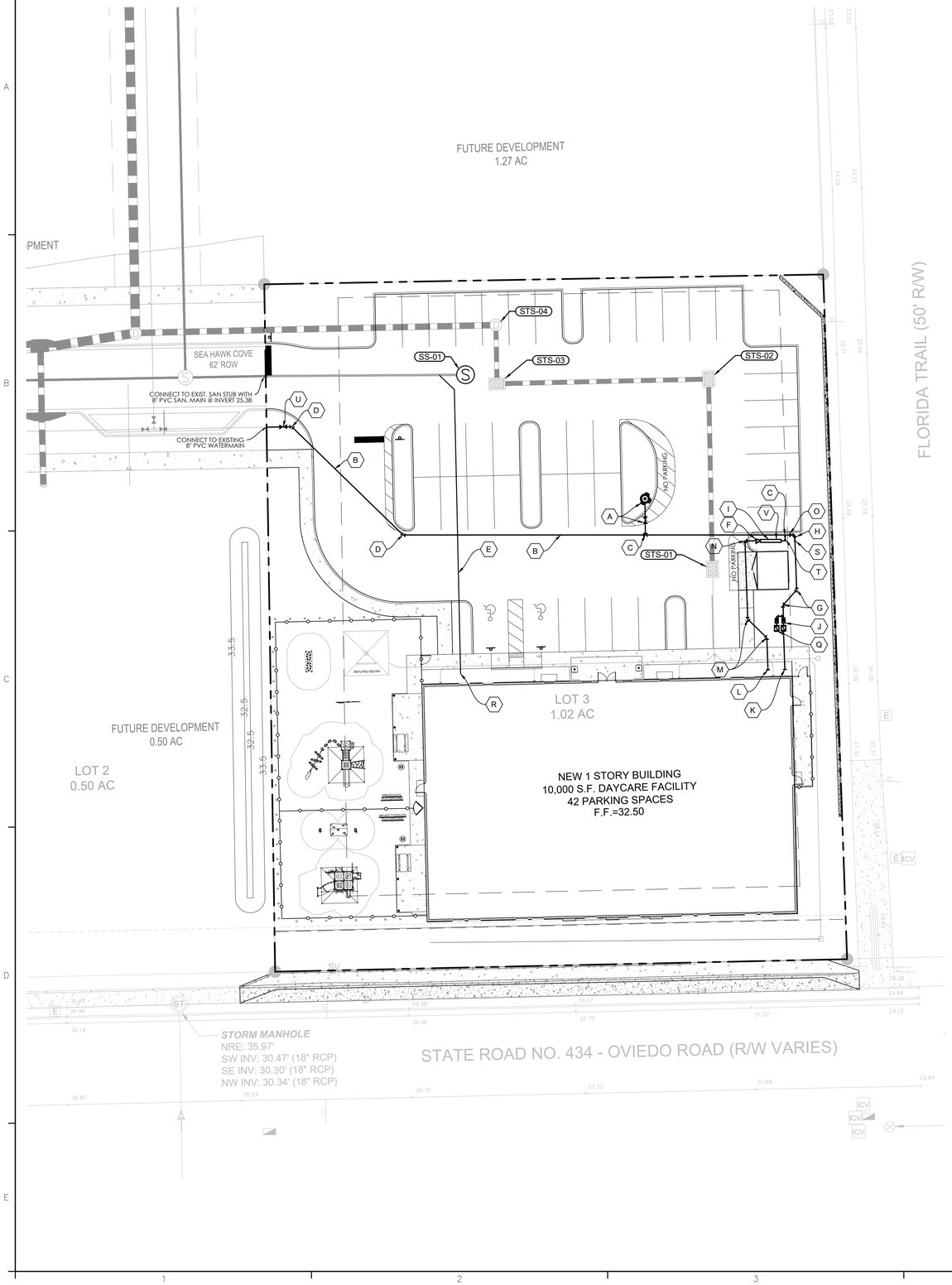
THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

GRADING PLAN

NV5
6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3317
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C06.0

\\nv5.com\ponzuro\INF\INF-East\FL\ORL\Civil\civil2\24056.20\CONST\C06.0 GRADING PLAN.dwg — Jul 11, 2025 — 4:19pm



UTILITY LEGEND

- A 6" FIRE HYDRANT ASSEMBLY AND VALVE, SEE DETAIL 3, SHEET C08.0
- B 8" PVC WATER MAIN
- C 8" X 6" TEE
- D 8" 45 ELBOW
- E 6" PVC SEWER LATERAL @ 1% MINIMUM SLOPE
- F FDC MOUNTED TO BACKFLOW
- G 2" 45 ELBOW
- H 2" 90 ELBOW
- I 4" BACKFLOW PREVENTOR, SEE DETAIL 10, SHEET C08.0
- J 2" METER AND 2" RPZ FOR DOMESTIC WATER, SEE DETAIL 13, SHEET C08.0
- K 2" DOMESTIC SERVICE LINE
- L 4" FIRE SERVICE LINE
- M 4" 45 ELBOW
- N 4" 90 ELBOW
- O 8" X 2" REDUCER
- P NOT USED
- Q 1" METER AND 1" RPZ FOR IRRIGATION POINT OF CONNECTION
- R CLEAN OUT, INV. 28.96
- S 2" GATE VALVE, SEE DETAIL 5, SHEET C08.0
- T 4" GATE VALVE, SEE DETAIL 5, SHEET C08.0
- U 8" GATE VALVE, SEE DETAIL 5, SHEET C08.0
- V FIRE LINE POINT-OF-SERVICE (POS)

NOTE: SEE SHEET C08.0 & C09.0 FOR UTILITY DETAILS

NOTES:

1. LOT GRADING SHALL NOT IMPOSE ANY ADDITIONAL RUNOFF ONTO NOR IMPEDE RUNOFF FROM ADJACENT PROPERTIES.
2. ALL SITE WORK SHOWN SHALL BE CONSTRUCTED BY THE GENERAL CONTRACTOR.
3. ELEVATIONS SHOWN ARE BASED ON NAVD88, SEE BOUNDARY & TOPOGRAPHIC SURVEY UNDER GENERAL NOTES.
4. SLOPE ALL ROOF DRAIN DOWN SPOUT PIPING AT 1.00% MIN.
5. ALL FIRE LINES SHALL BE INSPECTED BY THE FIRE INSPECTION DEPT. BEFORE BEING COVERED.
   – A SEPARATE PERMIT AND REVIEW ARE REQUIRED FOR THE INSTALLATION OF PRIVATE FIRE MAINS.
6. AT MINIMUM, A CLASS FIVE CONTRACTOR IS REQUIRED TO INSTALL FIRE LINES. FIRE LINES SHALL BEGIN AT THE POINT IN WHICH THE PIPING IS USED EXCLUSIVELY FOR FIRE PROTECTION AND END AT A POINT 1-FOOT ABOVE THE FINISHED FLOOR.
7. ANY FIRE LINE CHARGED BY THE FDC SHALL BE DR-14 PIPE
8. A FIRE SITE CLEARANCE INSPECTION WILL BE REQUIRED PRIOR TO THE RELEASE OF THE BUILDING PERMIT. AT THIS INSPECTION, A FIRE FLOW TEST AND DATA SHALL BE PROVIDED FOR THE PROPOSED NEW HYDRANT TO VERIFY IT MEETS THE FLOW CAPABILITIES PROPOSED ON THESE PLANS.

NORTH

SCALE: 1" = 20'
0 20 40

POTABLE WATER USAGE:

ESTABLISHMENT	UNIT	ERU/ERC FACTOR	NUMBER OF CHILDREN	TOTAL ERC	ERC/ERU GALLON FACTOR (GPD)	TOTAL GALLONS PER DAY
DAYCARE OR PRESCHOOL	CHILD, PER PERMITTED OCCUPANCY	0.025	174	4.35	350	1,523
TOTAL						1,523
NOTE: FIXTURE UNIT RATES PER ORANGE COUNTY FLORIDA UTILITIES STANDARDS AND SPECIFICATIONS MANUAL, APPENDIX E						

SANITARY SEWER SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	RIM ELEV.	DOWNSTREAM STRUCTURE	INVERTS IN	INVERTS OUT	DOWNSTREAM PIPE LENGTH	PIPE SIZE/ MATERIAL	SLOPE	NOTES
SS-01	SANITARY MANHOLE	30.13			26.34' NW	8.94'	8" PVC SAN. MAIN	1.42%	PRIVATELY MAINTAINED

Sunshine811

Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.

Check positive response codes before you dig!

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092
DATE: Jul. 11, 2025

NO	DATE	REVISIONS
2	05/23/25	SITE PLAN REVIEW COMMENTS 04/24/25
1	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

UTILITY PLAN

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3317
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C07.0

\\nv5.com\ponzuro\INF\INF-East\FL\ORL\Civil\2\24056.20\CONST\C07.0 UTILITY PLAN.dwg — Jul 11, 2025 — 4:23pm

11

9

	PVC PIPE DIAMETERS							
FITTINGS	4"	6"	8"	10"	12"	16"	18"	20"
TEE	30	45	70	75	95	120	140	165
END CAPS AND VALVES ON THE END OF THE MAIN	50	110	115	121	141	180	220	240
90° BENDS	40	40	45	50	60	75	75	95
45° BENDS	20	20	20	30	30	40	40	50
22 1/2° BENDS	10	10	10	10	10	20	20	20
11 1/4° BENDS	10	10	10	10	10	10	10	10

DUCTILE IRON PIPE APPLICATIONS

MINIMUM LINEAR FEET OF PVC PIPE TO BE RESTRAINED

	DUCTILE IRON DIAMETERS											
FITTINGS	6"	***	8"	***	10"	***	12"	***	16"	***	18"	***
TEE	36	45	54	81	72	108	90	126	117	171	135	198
END CAPS AND VALVES ON THE END OF THE MAIN	45	90	81	126	99	153	117	171	144	216	162	243
90° BENDS	36	36	36	45	45	54	54	63	72	81	72	90
45° BENDS	18	18	18	27	27	27	27	27	36	36	36	45
22 1/2° BENDS	9	9	9	9	9	18	18	18	18	18	18	18
11 1/4° BENDS	9	9	9	9	9	9	9	9	9	9	9	9

*** = DUCTILE IRON PIPE WITH POLYETHYLENE WRAP

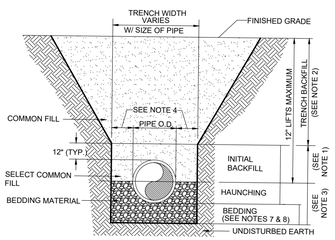
NOTE:

* THE LINEAR FOOTAGE OF PIPE IS MEASURED FROM THE BEND OR FITTING OUT TO THE AMOUNT SHOWN ON THE CHART; ANY BELL OR JOINT THAT FALLS WITHIN THAT LINEAR FOOTAGE SHALL HAVE A BELL OR JOINT RESTRAINT INSTALLED

PIPE JOINT RESTRAINT DETAIL

NTS

7



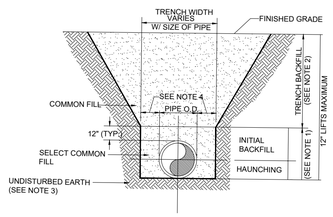
NOTES:

1. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY, PER AASHTO T-180. DENSITY TEST SHALL BE PROVIDED TO THE CITY BY AN APPROVED LAB.
2. TYPE "A" BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
3. 15" MAXIMUM/12" MINIMUM FOR PIPE DIAMETER LESS THAN 24".
4. 24" MAXIMUM/12" MINIMUM 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. BEDDING DEPTH SHALL BE A 4" MINIMUM FOR PIPE DIAMETERS UP TO 12" 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. UTILITIES SHALL DETERMINE (IN THE FIELD) THE REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
9. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCIES.

BEDDING & TRENCHING - TYPE A

NTS

4



NOTES:

1. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY, PER AASHTO T-180. DENSITY TEST SHALL BE PROVIDED TO THE CITY BY AN APPROVED LAB.
2. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE "A" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY UTILITIES.
3. 15" MAXIMUM/12" MINIMUM FOR PIPE DIAMETERS LESS THAN 24".
4. 24" MAXIMUM/12" MINIMUM FOR PIPE DIAMETERS 24" AND LARGER
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPES ARE TO BE INSTALLED WITH THE BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCIES.

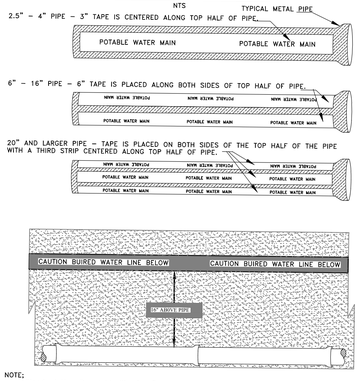
BEDDING & TRENCHING - TYPE B

NTS

1

DUCTILE IRON POTABLE WATER MAIN

NTS



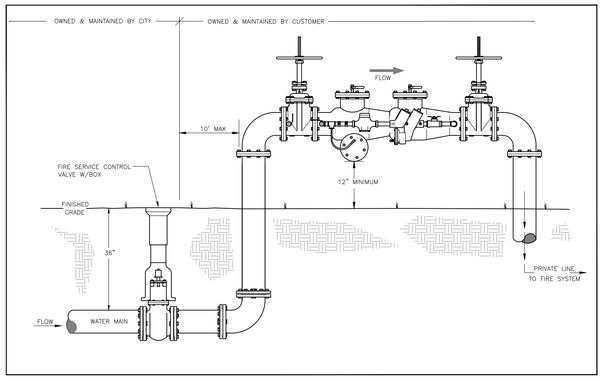
NOTE:

Standard Non-Detectable Warning Tape
Water Line Tape is 3" Wide and Blue With Black Lettering
Sewer Line Tape is 3" Wide and Green With Black Lettering
Force Main Tape is 3" Wide and Brown With Black Lettering

W:\A DETAILS\08-WATER DT

PIPE IDENTIFICATION AND WARNING TAPE

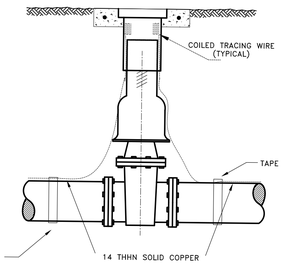
10



WILKINS 375ADA REDUCED PRESSURE DETECTOR BACKFLOW PREVENTER - ABOVE GROUND

NTS

8

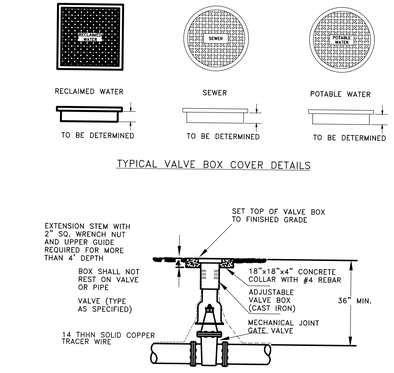


TRACING WIRE GENERAL NOTES:

1. PIPE LINE TRACING WIRE IS TO BE INSTALLED ON ALL POTABLE WATER RECLAIMED WATER AND SEWER FORCE MAINS.
2. SYSTEMS-TRACING WIRE SHALL ALLOW TRACABILITY OF ALL PIPE BRANCHES INCLUDING THOSE FOR HYDRANTS. TRACING WIRE SHALL BE INSTALLED OVER THE ENTIRE LENGTH OF THE MAIN AND SECURED TO THE MAIN EVERY 5 FEET WITH ADHESIVE TAPE. WIRE SHALL EXTEND A MINIMUM OF 12" ABOVE GRADE AT EACH INTERVAL AND SHALL BE COILED AND PLACED IN A VALVE BOX FOR EASY ACCESSIBILITY.
3. ON DEAD END MAINS THE TRACING WIRE SHALL BE PLACED IN A PROPERLY IDENTIFIED PVC VALVE BOX AT THE END OF THE RUN.

TRACING WIRE CONNECTION

5

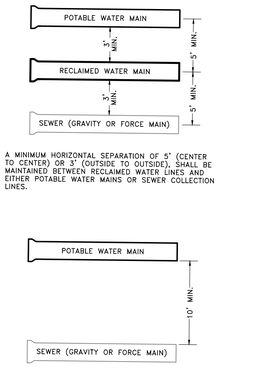


TYPICAL VALVE BOX COVER DETAILS

TYPICAL VALVE AND VALVE BOX DETAIL

VALVE, VALVE BOX AND COVER

2



A MINIMUM HORIZONTAL SEPARATION OF 5' (CENTER TO CENTER) OR 3' (OUTSIDE TO OUTSIDE), SHALL BE MAINTAINED BETWEEN RECLAIMED WATER LINES AND EITHER POTABLE WATER MAINS OR SEWER COLLECTION LINES.

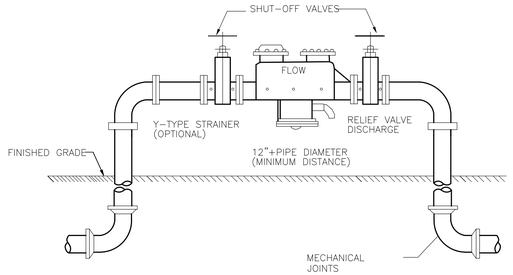
A MINIMUM HORIZONTAL SEPARATION OF 10' (OUTSIDE TO OUTSIDE), SHALL BE MAINTAINED BETWEEN SEWER COLLECTION LINES AND POTABLE WATER MAINS.

MINIMUM HORIZONTAL SEPARATION REQUIREMENTS FOR POTABLE, RECLAIMED, AND SEWER LINES

13

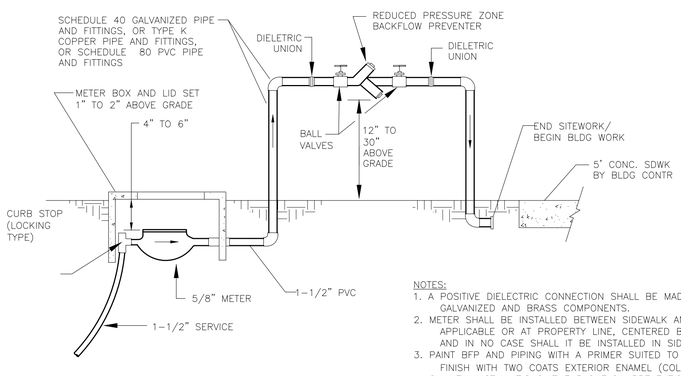
REDUCED PRESSURE PRINCIPLE BACKFLOW
(TYPICAL INSTALLATION)

NTS



TYPICAL RPZ B.F.P. AND METER ASSEMBLY

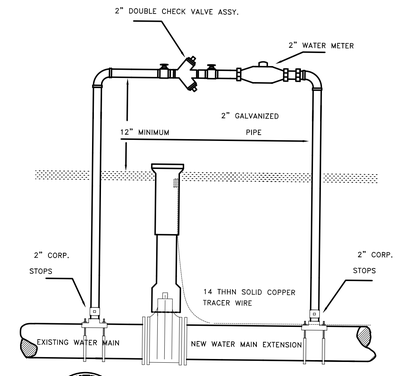
NTS



NOTES:

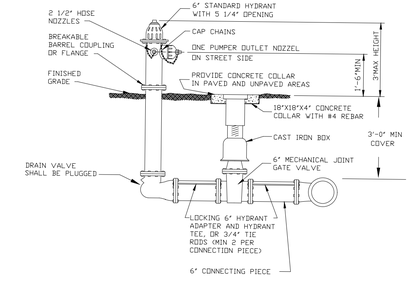
1. A POSITIVE DIELECTRIC CONNECTION SHALL BE MADE BETWEEN ALL GALVANIZED AND BRASS COMPONENTS.
2. METER SHALL BE INSTALLED BETWEEN SIDEWALK AND CURB WHERE APPLICABLE OR AT PROPERTY LINE, CENTERED BETWEEN THE LOT LINES AND IN NO CASE SHALL IT BE INSTALLED IN SIDEWALK OR OTHER PAVED AREAS.
3. PAINT BFP AND PIPING WITH A PRIMER SUITED TO BASE MATERIALS. FINISH WITH TWO COATS EXTERIOR ENAMEL (COLOR IS OPTIONAL)
4. ON NEW INSTALLATIONS, THE BACKFLOW PREVENTION DEVICES SHALL BE TESTED BEFORE THE METER INSTALLATION CAN BE APPROVED FOR USE.
5. POLY SERVICE LINE SIZED BY SERVICE CONNECTION (1 1/2" MIN.)
6. MAINTENANCE OF THE BACKFLOW PREVENTER, PIPING AND APPURTENCES DOWN STREAM OF THE METER SHALL BE THE RESPONSIBILITY OF THE OWNER.

6



TEMPORARY BYPASS

3



NOTES:

1. THE HYDRANTS ACCEPTABLE TO THE CITY OF WINTER SPRINGS SHALL BE EITHER THE CLOW # 42 MEDALION AMERICAN DARLING B84B, OR THE MUELLER A-423.
2. ENTIRE ASSEMBLY SHALL BE PAINTED SHERWIN WILLIAMS SAFETY YELLOW.
3. GRIP RING OR MEGA LUG RESTRAINTS MAY USED IN PLACE OF ALL THREAD RODS

FIRE HYDRANT ASSEMBLY

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL. LIC. #59922

DATE: Jul. 11, 2025

NO.	DATE	REVISIONS

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

WATER DETAILS

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
407.896.4357
WWW.NV5.COM

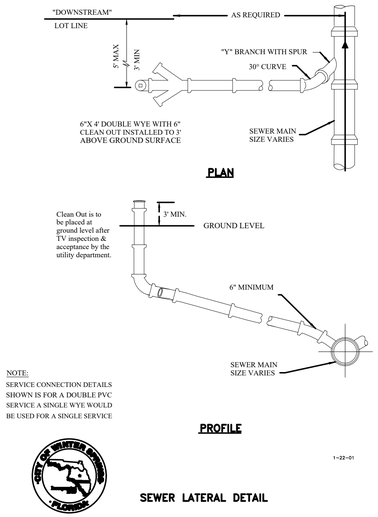
CERTIFICATE OF AUTHORIZATION # 28065

SHEET
C08.0

\\nv5.com\panzuro\NF\NF-East\FL\ORL\Civil\civil2\24056.20\CONST\C8.0 WATER DETAILS.dwg — Jul 11, 2025 — 4:20pm

10

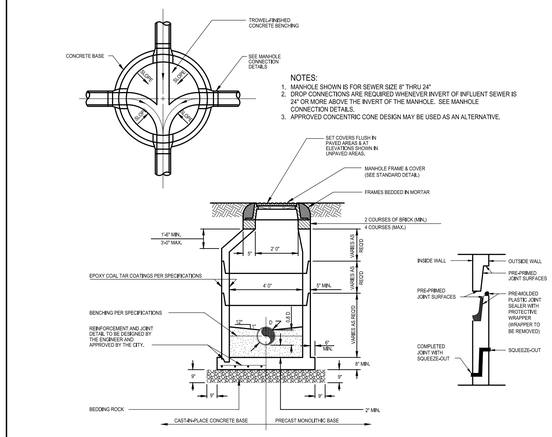
7



NOTE:
SERVICE CONNECTION DETAILS SHOWN IS FOR A DOUBLE PVC SERVICE A SINGLE WYE WOULD BE USED FOR A SINGLE SERVICE

SEWER LATERAL DETAIL

4

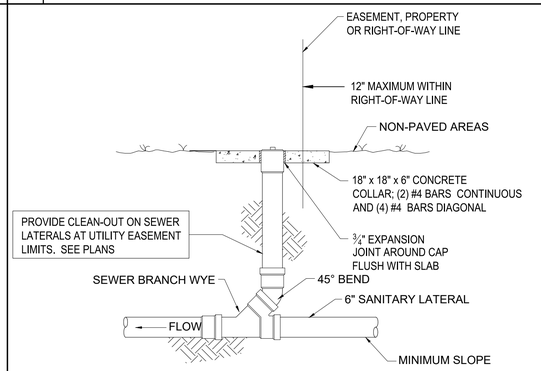


PRECAST CONCRETE MANHOLE PLAN AND SECTION
N.T.S.

1

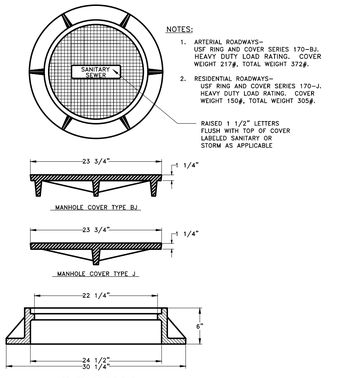
11

8



SEWER CLEAN-OUT DETAIL
NON PAVED AREAS
NTS

5



W.S. Detail 6-9-00

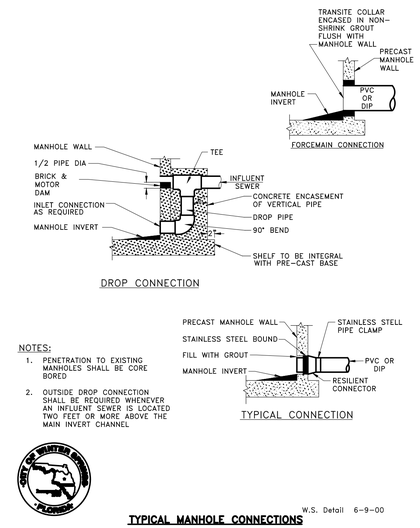
MANHOLE FRAME & COVER

2

12

9

6



NOTES:
1. PENETRATION TO EXISTING MANHOLES SHALL BE CORE BORED
2. OUTSIDE DROP CONNECTION SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO FEET OR MORE ABOVE THE MAIN INVERT CHANNEL

W.S. Detail 6-9-00

TYPICAL MANHOLE CONNECTIONS

3

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

SANITARY SEWER DETAILS

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL. LIC. #69092

DATE: Jul. 11, 2025

NO.	DATE	REVISIONS

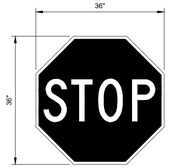
6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3317
WWW.NV5.COM

CERTIFICATE OF AUTHORIZATION # 26065

SHEET
C09.0

\\nv5.com\ponzuro\INF\INF-East\FL\ORL\civil\civil2\24056.20\CONST\C9.0 SANITARY SEWER DETAILS.dwg — Jul 11, 2025 — 4:19pm

10



WHITE LEGEND RED BACKGROUND HIGH REFLECTIVE INTENSITY

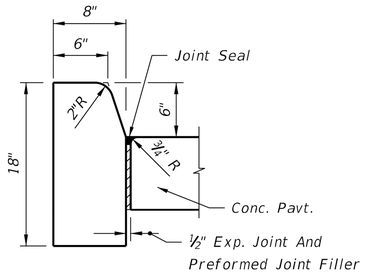
R1-1

"STOP" SIGN DETAIL

N.T.S.

POLE AND SIGN PER CITY OF WINTER SPRINGS TOWN CENTER CODE SEC. 20-325 TRANSECT STANDARDS

7



TYPE D

Note: For use adjacent to concrete or flexible pavement, concrete shown. Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 2.

TYPE D CONCRETE CURB

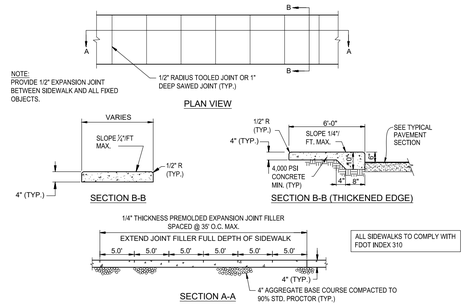
4

RIGID (PORTLAND CEMENT CONCRETE) PAVEMENT DESIGN SHOULD FOLLOW SEMINOLE COUNTY SPECIFICATIONS FOR MINIMUM COMPRESSIVE STRENGTH, BASED ON OUR EXPERIENCE, A MINIMUM THICKNESS OF 6 INCHES CAN BE USED FOR STANDARD DUTY APPLICATIONS AND A MINIMUM THICKNESS OF 7 INCHES SHOULD BE UTILIZED FOR HEAVY DUTY APPLICATIONS. ANY STEEL REINFORCEMENT WITHIN THE CONCRETE PAVEMENT SHOULD BE DESIGNED BY THE PROJECT CIVIL OR PAVEMENT ENGINEER. THE SUBGRADE SHOULD BE PREPARED TO ACHIEVE A MINIMUM LBR OF 30 TO A DEPTH OF 12 INCHES BELOW THE CONCRETE BASE ELEVATION. THE SUBGRADE SOILS SHOULD BE COMPACTED TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. TO AID IN THE DESIGN OF THE ANTICIPATED CONCRETE PAVEMENT SECTIONS, A MODULUS OF SUBGRADE REACTION OF 100 PCI (LBR 20 SANDS) SHOULD BE UTILIZED FOR THE LOW BEARING SANDS UNLESS STABILIZATION IS ADDED TO INCREASE THE BEARING VALUE. IF THE SANDS ARE STABILIZED, A MODULUS VALUE OF 150 PCI CAN BE UTILIZED.

CONCRETE PAVING

NTS

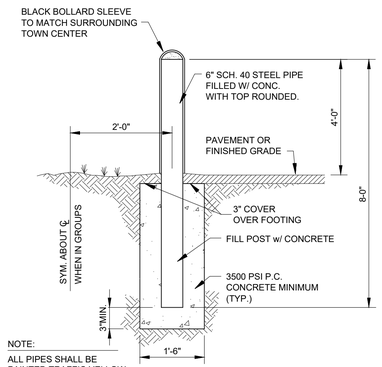
1



TYPICAL CONCRETE SIDEWALK DETAIL

N.T.S.

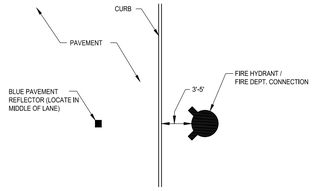
11



CONCRETE BOLLARD

NTS

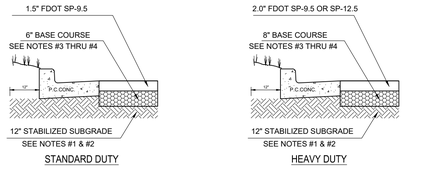
8



PAVEMENT MARKING AT FIRE HYDRANT / FDC DETAIL

N.T.S.

5



1. 12 INCHES OF COMPACTED NATURAL SUBGRADE STABILIZED TO A MINIMUM LIMEROCK BEARING RATIO (LBR; FLORIDA METHOD OF TEST DESIGNATION FM 5-515) VALUE OF 40. STABILIZATION OF THE SUB-BASE SHOULD BE ACCOMPLISHED USING COARSE AGGREGATE AS WELL-GRADED CRUSHED CONCRETE OR FDOT-APPROVED LIMEROCK STABILIZATION MATERIAL. THE SUBGRADE SHOULD BE COMPACTED TO AT LEAST 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180 OR ASTM D-1557).

2. 6 INCHES (8 INCHES FOR HEAVY DUTY) OF LIMEROCK BASE COMPACTED TO AT LEAST 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180 OR ASTM D-1557). LIMEROCK BASE COURSES SHOULD BE MINED FROM A FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) APPROVED SOURCE, SHOULD HAVE A MINIMUM LBR VALUE OF 100.

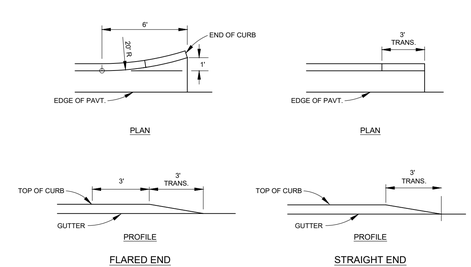
3. 1.5 INCHES (2 INCHES FOR HEAVY DUTY) OF ASPHALTIC CONCRETE STRUCTURAL COURSE ACCORDING TO FDOT SPECIFICATIONS SECTION 330, 331 (MARSHALL).

4. TRAFFIC SHOULD NOT BE ALLOWED ON THE SUBGRADE AS THE BASE IS PLACED TO AVOID RUTTING. BEFORE PAVING, THE BASE SHOULD BE CHECKED FOR SOUNDNESS.

ASPHALT PAVING

NTS

2

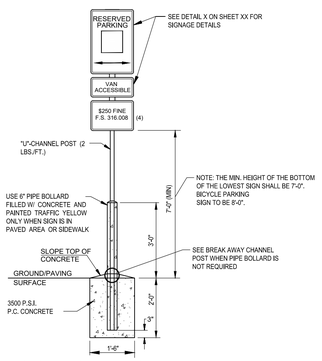


CURB AND GUTTER ENDINGS DETAIL

N.T.S.

12

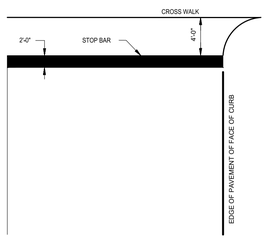
9



SIGN MOUNTING DETAIL

N.T.S.

6

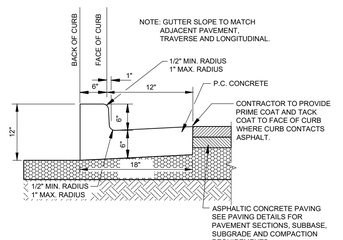


NOTE:
1. PAVEMENT STOP BARS ARE TO BE THERMOPLASTIC WHITE PAINT. ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

STOP BAR DETAIL

N.T.S.

3



18" CURB AND GUTTER DETAIL

N.T.S.

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL. LIC. #69922

DATE: Jul. 11, 2025

NO.	DATE	REVISIONS

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

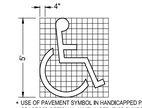
GENERAL DETAIL SHEET 1

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3377
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C10.0

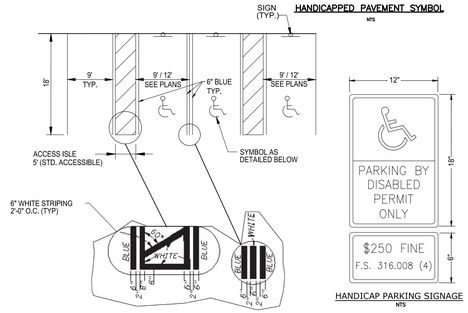
\\nv5.com\panzura\NF\NF-East\FL\ORL\Civil\Civil2\24056.20\CONST\C10.0 GENERAL DETAIL SHEET 1.dwg - Jul 11, 2025 - 4:18pm

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 REQUIRED FOR EACH PARKING SPACE.
5. INSTALLATION HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).



* USE OF PAVEMENT SYMBOL IN HANDICAPPED PARKING SPACES IS OPTIONAL. WHEN USED, THIS SYMBOL SHALL BE 3 TO 5 FEET HIGH AND WHITE IN COLOR.

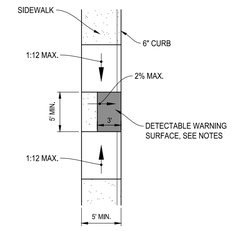
HANDICAPPED PAVEMENT SYMBOL
NTS



HANDICAP PARKING SIGNAGE
NTS

PARKING LOT STRIPING DETAILS
NTS

1



IN-LINE RAMP

NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE UTILIZED AT HAZARDOUS VEHICULAR AREAS AND SHALL BE A CONTINUOUS SURFACE 36" WIDE AS MEASURED IN THE DIRECTION OF THE RAMP.
2. DETECTABLE WARNING SURFACES SHALL CONSIST OF: EXPOSED AGGREGATE, SUCH AS ⅝" ADA TRUNCATED DOME PAVERS.
3. DETECTABLE WARNING SURFACE MATERIAL SHALL CONTRAST IN COLOR AND TEXTURE WITH THE ADJACENT WALKING SURFACES BY AT LEAST 70%. CONTRAST SHALL BE DETERMINED BY THE DIFFERENCE IN LIGHT REFLECTANCE VALUE (LRV) OF EACH MATERIAL.

ON-SITE ADA RAMPS
NTS

2

4

7

6

5

3

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092

DATE: Jul. 11, 2025

NO.	DATE	REVISIONS

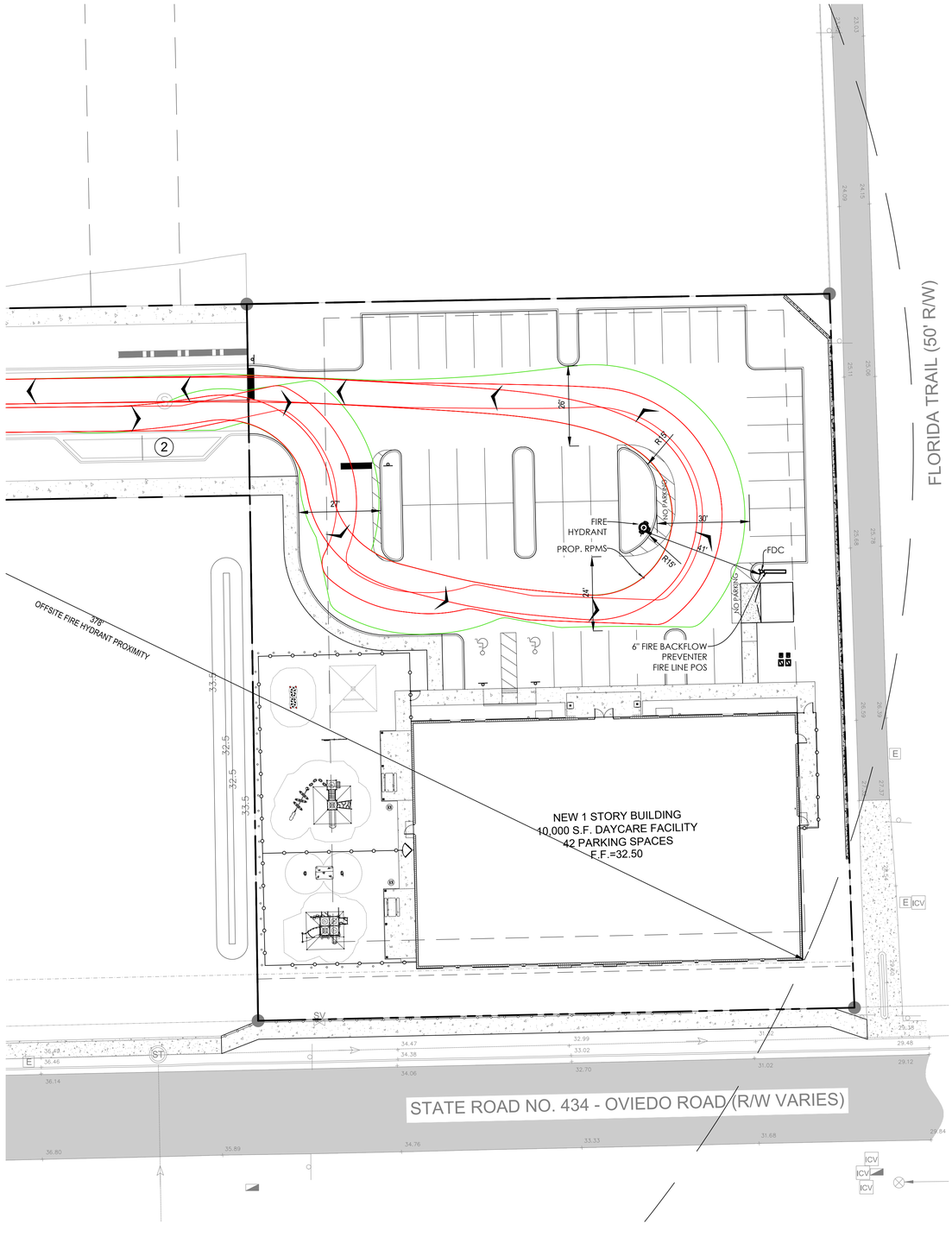
THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

GENERAL DETAIL
SHEET 2

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3377
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 28065

SHEET
C11.0

\\nv5.com\ponzuro\INF-East\FL\ORL\Civil\civil2\24056.20\CONST\C11.0 GENERAL DETAIL SHEET 2.dwg — Jul 11, 2025 — 4:20pm

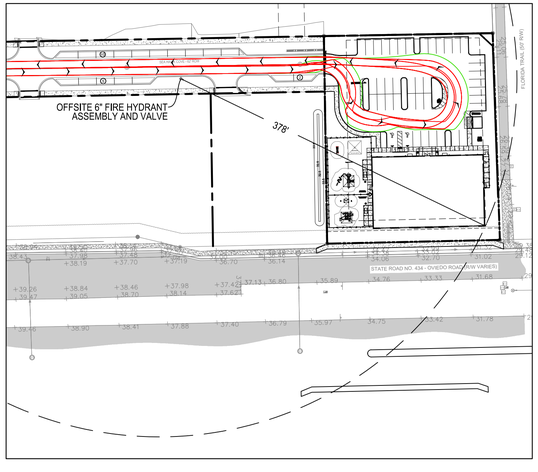


NOTES

1. FIRE DEPARTMENT ACCESS ROADS PROVIDED AT THE START OF A PROJECT AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. (NFPA 1, 16.1.4).
2. A SECOND ENTRANCE/EXIT MIGHT BE REQUIRED PER AHJ IF THE RESPONSE TIME FOR EMERGENCY IS EXCEEDED PER NFPA 1, SECTION 18.2.3.3 MULTIPLE ACCESS ROADS.
3. A WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ACCUMULATES. THIS APPLIES TO BOTH COMMERCIAL AND RESIDENTIAL DEVELOPMENTS. (NFPA 1, 16.4.3.1),
4. WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED, AND IN SERVICE PRIOR TO CONSTRUCTION WORK. (NFPA 1, 16.4.3,1.3).
5. FIRE FLOW TESTING SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 291, RECOMMENDED PRACTICE FOR FIRE FLOW TESTING.
6. A 36 IN. CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS AND A CLEAR SPACE OF NOT LESS THAN 60 IN. (1524 MM) SHALL BE PROVIDED IN FRONT OF EACH HYDRANT CONNECTION HAVING A DIAMETER GREATER THAN 21/2 IN. NFPA 1, 18.5.7.
7. HYDRANT SHALL BE MARKED WITH A BLUE REFLECTOR THAT IS PLACED 6" IN THE ROADWAY IN ACCORDANCE WITH NFPA 1, CHAPTER 18.5.10.
8. ACCESS TO GATED SUBDIVISIONS OR DEVELOPMENTS SHALL PROVIDE FIRE DEPARTMENT ACCESS THROUGH AN APPROVED SOS AND SEMINOLE COUNTY KNOX KEY SWITCH. NFPA 1, 18.2.2.2.

FIRE FLOW CALCULATION

BUILDING LABEL:	COMMERCIAL OFFICE
BUILDING TYPE:	IBC II-B, NFPA II(000)
BUILDING FLOOR AREA:	10,000 SF
MINIMUM REQUIRED FIRE FLOW (NFPA1 TABLE 18.4.5.2.1):	2,250 GPM, 2 HOURS
75% FIRE FLOW REDUCTION PER NFPA 18.4.5.3.2	600 GPM
ACTUAL REQUIRED FIRE FLOW:	1000 GPM
NUMBER OF FIRE HYDRANT PROVIDED:	2 HYDRANTS (1 PROPOSED, 1 EXISTING)
MAXIMUM FIRE HYDRANT FIRE FLOW CAPACITY (NFPA13 TABLE 18.5.4.3):	1 PROPOSED HYDRANT AT < 250' = 1,500 GPM 1 EXISTING HYDRANT AT >250' = 1,000 GPM



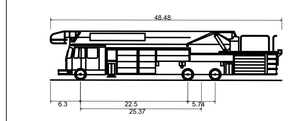
OFFSITE FIRE HYDRANT LOCATIONS
1" = 80'



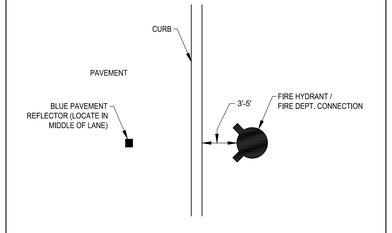
SCALE: 1" = 20'
0 20 40

LEGEND

- AUTOTURN VEHICLE
- SEMINOLE CO. AERIAL TRUCK FRONT AND REAR WHEEL TRACKS
- SEMINOLE CO. AERIAL TRUCK OVERHANG
- VEHICLE TRAVEL ARROW SYMBOL
- EXISTING ASPHALT PAVEMENT



Seminole Co. Aerial Truck	
Overall Length	48.480ft
Overall Width	6.910ft
Overall Body Height	10.241ft
Min Body Ground Clearance	0.671ft
Track Width	6.910ft
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	48.417ft



PAVEMENT MARKING AT FIRE HYDRANT
N.T.S

JOB #: 24056.20
PRJ. MGR: FAP
DESIGNER: SCK
CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL LIC. #69092

DATE: Jul. 11, 2025

NO	DATE	REVISIONS
1	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3375
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

FIRE TRUCK ACCESS PLAN

SHEET
C12.0

\\nv5.com\gonzuro\INF\INF-East\FL\ORL\Civil\2 24056.20\CONST\C12.0 FIRE TRUCK ACCESS PLAN.dwg - Jul 11, 2025 - 4:18pm

LOT 4
4.58 AC

LOT 1
1.32 AC

LOT 2
0.50 AC

LOT 3
1.02 AC

10' UTILITY EASEMENT

29' UTILITY EASEMENT

CITY OF WINTER SPRINGS SITE
PLAN NUMBER FEDP-2024-0009

SEA HAWK COVE
62' RIGHT-OF-WAY

APPROX.
DRIPLINE
52"
OAK

N 53°37'06" E 71.07' (D)
N 52°36'43" E 71.07' (M)

N 51°16'44" E 389.87' (D)
N 50°16'21" E 389.87' (M)

S 38°21'49" E 606.04' (D)
S 39°22'12" E 606.04' (M)

N 39°43'39" W 246.60' (M)
N 38°43'16" W 246.60' (D)

S 39°36'25" E 164.37' (M)
S 38°41'48" E 164.51' (C)

N 38°28'33" W 188.21' (C)

S 51°37'46" W 232.32' (C)

S 50°37'05" W 529.43' (M)
S 49°37'26" W 529.43' (D)

EXTENT OF THE LEARNING EXPERIENCE PROJECT
CITY OF WINTER SPRINGS SITE PLAN NUMBER FEDP-2024-0010

NORTH

SCALE: 1" = 30'
0 30 60

JOB # 24056.20 | PRJ. MGR: FAP | DESIGNER: SCK | CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL. LIC. #69092

DATE: Jul. 11, 2025

NO.	DATE	REVISIONS
1	05/23/25	SITE PLAN REVIEW COMMENTS 04/24/25

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

OVERALL
DEVELOPMENT
PLAN

NV5
6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
407.812.6007
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C13.0

\\nv5.com\pranzuro\INF_East\FL\ORL\civil\civil2\24056.20\CONST\C13.0 OVERALL DEV PLAN.dwg – Jul 11, 2025 – 4:20pm

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NORTHWEST QUARTER (NW 1/4) OF SECTION 6, TOWNSHIP 21 SOUTH, RANGE 31 EAST CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA

LINE DATA TABLE		
LINE	DIRECTION	LENGTH
L1	N 25°10'29" W(M) N 24°10'06" W(D)	48.66'(M) 48.66'(D)
L2	S 86°18'18" E(M) S 85°17'55" E(D)	22.68'(M) 22.68'(D)
L3	S 86°04'56" E(M) S 43°04'36" E(D)	31.18'(M) 31.18'(D)
L4	N 50°24'26" E(M) N 51°24'49" E(D)	1.88'(M) 1.88'(D)

CURVE DATA TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD BEARING
C1	39.27'(M) 39.27'(D)	25.00'(M) 25.00'(D)	90°00'00"(M) 90°00'00"(D)	35.36'(M)	N 5°16'21" E (M) N 6°16'44" E (D)
C2	10.76'(M) 10.76'(D)	15.00'(M) 15.00'(D)	41°04'59"(M) 41°04'59"(D)	10.53'(M)	N 73°09'12" E(M) N 74°09'35" E(D)
C3	11.05'(M) 11.05'(D)	15.00'(M) 15.00'(D)	42°13'19"(M) 42°13'19"(D)	10.81'(M)	S 65°11'39" E(M) S 64°11'16" E(D)

GRAPHIC SCALE
0 20 40 80

SANITARY MANHOLE
NRE: 27.46'
SW INV: 16.32'
(6" PVC)

SITE BENCHMARK
FOUND NAIL & DISK
STAMPED "TRAV PT LB 8246"
ELEVATION: 31.81'
N: 1585749.90
E: 573112.88

TREE SWALLOW DRIVE
60' ACCESS EASEMENT
(O.R.B. 9168 PAGE 1505)

SANITARY MANHOLE
NRE: 27.46'
NE INV: 16.71'
(6" PVC)

2' CURB & GUTTER (TYPICAL)

S 38°21'49" E 606.04' (D)
S 39°22'12" E 606.04' (M)

SEMINOLE CROSSING TOWNHOMES
(PB. "86", PGS. 33-36)

THREE STORY WOOD FRAME APARTMENT COMPLEX

57.2'

5.0'

4.7'

THREE STORY WOOD FRAME APARTMENT COMPLEX

50.5'

SITE BENCHMARK
FOUND NAIL & DISK
STAMPED "TRAV PT LB 8246"
ELEVATION: 19.58'
N: 1585202.13
E: 573958.07

CONCRETE WALL

(18.44'R)

FENCE POST IS 0.1' WEST OF THE PROPERTY CORNER

CATCH BASIN
RIM: 27.96'
BOTTOM OF STRUCTURE: 19.38'

N 53°37'06" E 71.07' (D)
N 52°36'43" E 71.07' (M)

L1 L2 L3 L4 C1 C2 C3

MICHAEL BLAKE BOULEVARD (R/W VARIES)

N 51°16'44" E 389.87' (D)
N 50°16'21" E 389.87' (M)

SOUTHEASTERLY R/W LINE OF MICHAEL BLAKE BLVD.

PARENT PARCEL
A PORTION OF LOT 8, BLOCK "A" OF D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ON LAKE JESSUP (PB. "1", PG. 5) LANDS DESCRIBED IN O.R.B. 9168, PG. 1498 ± 8.106 ACRES (M) (VACANT LAND)

NORTHWESTERLY BOUNDARY OF ACQUISITION PARCEL B (RAILS TO TRAILS CORRIDOR) (O.R.B. 9168, PG. 1498)

ACQUISITION PARCEL B (RAILS TO TRAILS CORRIDOR) (O.R.B. 9168, PG. 1498)

S 50°31'58" W 296.10' (C)

50'

S 49°31'35" W 529.43' (M)
S 50°31'58" W 529.43' (D)

PARCEL B
± 7.091 ACRES (M) (VACANT LAND)

N 38°28'33" W 188.71' (C)

FLORIDA TRAIL (50' R/W)

LANDS DESCRIBED IN O.R.B. 3988, PG. 1075 OWNER: TITTGREENWAYS & TRAILS WINTER SPRINGS TOWN, A FLORIDA (TAX PARCEL ID# 06-21-30-5AR-0A00-006B)

S 51°37'48" W 232.12' (C)

N 50°31'58" E 231.33' (C)

PARCEL A
± 1.015 ACRES (M) (VACANT LAND)

POINT OF BEGINNING
PARCEL "B"
PARENT PARCEL

POINT OF BEGINNING
PARCEL "A"

SOUTHEASTERLY R/W LINE OF MICHAEL BLAKE BOULEVARD (PER DEED)

N 39°43'39" W 246.60' (M)
N 38°43'16" W 246.60' (D)

NORTHEASTERLY R/W LINE OF STATE ROAD NO. 434

S 39°36'25" E 164.37' (M)
S 38°43'16" E 164.51' (C)

15' UTILITY EASEMENT (O.R.B. 7486, PG. 155)

L7

N 39°43'39" W 357.65' (M)
N 38°43'16" W 357.65' (D)

S 38°43'16" E 193.14' (C)

± 292'

STORM MANHOLE
NRE: 40.80'
SE INV: 35.28'
(18" RCP)

SITE BENCHMARK
FOUND 5/8" IRON & CAP
MARKED "TRAV PT LB 8246"
ELEVATION: 40.63'
N: 1585320.46
E: 572685.68

STORM MANHOLE
NRE: 36.86'
SW INV: 31.88' (18" RCP)
SE INV: 31.81' (18" RCP)
NW INV: 31.83' (18" RCP)

2' CURB & GUTTER (TYPICAL)

STORM MANHOLE
NRE: 35.97'
SW INV: 30.47' (18" RCP)
SE INV: 30.30' (18" RCP)
NW INV: 30.34' (18" RCP)

STATE ROAD NO. 434 - OVIEDO ROAD (R/W VARIES)

FENCE POST IS 1.9' SOUTH OF THE PROPERTY CORNER

STORM MANHOLE
NRE: 27.83'
NW INV: 22.80'
(18" RCP)

SITE BENCHMARK
FOUND 5/8" IRON & CAP
MARKED "TRAV PT LB 8246"
ELEVATION: 28.93'
N: 1584822.53
E: 573114.51

POINT OF COMMENCEMENT
INTERSECTION OF SR. NO 434 & TUSKAWILLA ROAD (PER FDOT R/W MAP, SECTION 77070-2516, PG. 10, P.I. STATION 600+32.11)

N 51°36'26" E 94.94' (D)

BASELINE OF SURVEY AS SHOWN ON FDOT F/W MAP, SECTION 77070-2516, PG. 10, P.I. STATION 600+32.11

S 38°23'24" E 1320.11' (D)

STORM MANHOLE
NRE: 39.06'
NE INV: 33.68'
(18" RCP)

STORM MANHOLE
NRE: 35.86'
NE INV: 31.52'
(18" RCP)

ZONING RESTRICTIONS:

NOT PROVIDED AT THE TIME OF THIS SURVEY

LEGEND AND VICINITY MAP:
SEE PAGE 2 OF 2

FLOOD ZONE:

THIS PROPERTY IS LOCATED IN FEDERAL FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS INTERPOLATED FROM FEMA F.I.R.M. PANEL NO. 160 OF 330, COMMUNITY PANEL NO. *120295 0160 F, EFFECTIVE DATE: SEPTEMBER 28, 2007.

LEGAL DESCRIPTION: LEGAL DESCRIPTION: (PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024)
PARENT PARCEL:

A PORTION OF LOT 8, BLOCK "A", D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ON LAKE JESSUP, SAID LANDS LYING IN SECTION 6, TOWNSHIP 21 SOUTH, RANGE 31 EAST, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF STATE ROAD 434 AND TUSKAWILLA ROAD (PER FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP, SECTION 77070-2516, SHEET 10 OF 13, P.I. STATION 600+32.11); THENCE RUN S38°23'34"E, A DISTANCE OF 1320.11 FEET ALONG THE BASELINE OF SURVEY AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE DEPARTING SAID BASELINE, RUN N51°36'26"E, A DISTANCE OF 94.94 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF THE AFORESAID STATE ROAD 434, AS SHOWN ON SAID RIGHT-OF-WAY MAP FOR THE POINT OF BEGINNING, SAID POINT ALSO LYING UPON THE SOUTHEASTERLY RIGHT OF WAY LINE OF MICHAEL BLAKE BOULEVARD AS RECORDED IN OFFICIAL RECORDS BOOK 7486, PAGE 138, PUBLIC RECORDS OF SEMINOLE COUNTY FLORIDA, FOR A POINT OF BEGINNING; THENCE, DEPARTING SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF STATE ROAD 434, RUN ALONG SAID SOUTHEASTERLY RIGHT OF WAY LINE OF MICHAEL BLAKE BOULEVARD THE FOLLOWING COURSES AND DISTANCES: RUN N24°10'06"W A DISTANCE OF 48.66 FEET; THENCE RUN N38°43'16"W A DISTANCE OF 246.60 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE EASTERLY HAVING A RADIUS OF 25.00 FEET; AND A CHORD BEARING OF N06°16'44"E, THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 90°00'00" A DISTANCE OF 39.27 FEET TO THE POINT OF TANGENCY; THENCE RUN N51°1 6'44"E A DISTANCE OF 389.87 FEET, THENCE RUN N53°37'06"E A DISTANCE OF 71.07 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 15.00 FEET AND A CHORD BEARING OF N74°09'35"E; THENCE RUN EASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 41°04'59" A DISTANCE OF 10.76 FEET TO THE POINT OF TANGENCY; THENCE RUN S85°17'55"E A DISTANCE OF 22.68 FEET TO THE POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 15.00 FEET AND A CHORD BEARING OF S64°11'16"E; THENCE RUN EASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 42°13'19" A DISTANCE OF 11.05 FEET TO THE POINT OF TANGENCY; THENCE RUN S43°04'36"E A DISTANCE OF 31.18 FEET; THENCE RUN N51°24'49"E A DISTANCE OF 1.88 FEET; THENCE DEPARTING SAID SOUTHEASTERLY RIGHT OF WAY LINE, RUN S38°21'49"E A DISTANCE OF 606.04 FEET TO A POINT ON THE NORTHWESTERLY BOUNDARY LINE OF ACQUISITION PARCEL B (RAILS TO TRAILS CORRIDOR) AS RECORDED IN OFFICIAL RECORDS BOOK 4092, PAGE 0164, PUBLIC RECORDS OF SEMINOLE COUNTY FLORIDA; THENCE RUN S50°31'58"W ALONG SAID NORTHWESTERLY BOUNDARY LINE A DISTANCE OF 298.10 FEET; THENCE N38°28'33"W, A DISTANCE OF 232.12 FEET TO A POINT ON THE AFORESAID NORTHEASTERLY RIGHT-OF-WAY LINE OF STATE ROAD 434; THENCE DEPARTING SAID NORTHWESTERLY BOUNDARY LINE, RUN N38°43'16"W ALONG SAID NORTHEASTERLY RIGHT OF WAY LINE, A DISTANCE OF 164.51 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 7.091 ACRES, MORE OR LESS.

SURVEYORS NOTES:
1. MEASURED COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO STATE PLANE FLORIDA EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 1983).
2. OBSERVED EVIDENCE OF UTILITIES HAS BEEN SHOWN PURSUANT TO SECTION 5 PARAGRAPH E (iv) OF THE ALTA/NSPS MINIMUM STANDARD DETAIL REQUIREMENTS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
3. THE SURVEYOR HAS NO KNOWLEDGE OF UNDERGROUND FOUNDATIONS WHICH MAY ENCROACH.
4. THIS SURVEY WAS PRODUCED WITH THE BENEFITS OF FURNISHED TITLE WORK VIA FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024. NO FURTHER INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND OR OWNERSHIP WERE FURNISHED TO THE SURVEYOR EXCEPT AS SHOWN, AND NO SEARCH OF THE PUBLIC RECORDS HAS BEEN DONE BY THE SURVEYOR.
5. THE SURVEYOR HAS NO KNOWLEDGE OF UNDERGROUND FOUNDATIONS WHICH MAY ENCROACH.
6. FENCING, SYMBOLS AND MONUMENTATION SHOWN HEREON MAY BE EXAGGERATED FOR PICTORIAL PURPOSES ONLY AND MAY NOT BE SHOWN TO SCALE.
7. IN THE OPINION OF THIS SURVEYOR, THE PERIMETER LINES AS SHOWN HEREON REPRESENT THE LOCATION OF THE BOUNDARY LINES OF THE SUBJECT PARCEL IN RELATION TO THE DESCRIPTION OF RECORD AND THOSE EXISTING LAND CORNERS FOUND TO BE ACCEPTABLE BY THIS SURVEYOR.
8. INFORMATION FROM FEDERAL EMERGENCY MANAGEMENT AGENCY, (F.E.M.A.) FLOOD INSURANCE RATE MAP(S), SHOWN ON THIS MAP WAS CURRENT AS OF THE REFERENCED DATE. MAP REVISIONS AND AMENDMENTS ARE PERIODICALLY MADE BY LETTER AND MAY NOT BE REFLECTED ON THE MOST CURRENT MAP.
9. VERTICAL DATUM REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) AND WERE DERIVED FROM SEMINOLE COUNTY BENCHMARK DESIGNATION #5172001, WITH A PUBLISHED ELEVATION OF 16.09 FEET (NAVD88).
10. ADDITIONAL POINTS MAY BE FOUND BY TURNING ON THE SV-NODE* LAYERS IN THE SUPPLIED DIGITAL FILE.
11. ONLY TREES 6" IN DIAMETER OR GREATER (MEASURED AT CHEST HEIGHT) ARE SHOWN HEREON.
12. TOPOGRAPHIC INFORMATION SHOWN HEREON BASED ON GROUND SURVEY. CONTOURS SHOWN HEREON REFLECT 1-FOOT INTERVALS.
13. THERE WERE NO MARKED PARKING SPACES OBSERVED AT THE TIME OF THIS SURVEY.
14. THERE WAS NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS BEING CONDUCTED AT THE TIME OF THIS SURVEY.
15. THERE WAS NO EVIDENCE OF CHANGES IN STREET RIGHT OF WAY LINES, CURRENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS AT THE TIME OF THIS SURVEY.
16. THERE IS NO OBSERVED EVIDENCE OF SITE USE AS A CEMETERY, SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL.
17. DISTANCE TO NEAREST INTERSECTING STREET IS 435 FEET, MORE OR LESS, TO THE INTERSECTION OF MICHAEL BLAKE BOULEVARD AND STATE ROAD 434.

SCHEDULE B-2: (AS FURNISHED PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024)

ITEM NO. 4: THIS PROPERTY IS SUBJECT TO THE RESTRICTION AS TO THE NEARBY PROPERTY ONLY, AND NO OTHER RESTRICTION, AS DEFINED IN AND SET FORTH IN PARAGRAPH 18.02(C) OF THE THIRD AMENDMENT TO MEMORANDUM OF LEASE RECORDED MAY 30, 2006, IN OFFICIAL RECORDS BOOK 6265, PAGE 934, AS EVIDENCED BY THAT CERTAIN LEASE DATED OCTOBER 19, 2001, BY AND BETWEEN CAPITAL GREEN I, LLC, A GEORGIA LIMITED LIABILITY COMPANY ("LANDLORD") AND PUBLIX SUPER MARKETS, INC., A FLORIDA CORPORATION ("TENANT") AS EVIDENCED BY THAT CERTAIN MEMORANDUM OF LEASE RECORDED SEPTEMBER 27, 2002, IN OFFICIAL RECORDS BOOK 4539, PAGE 651; AS AMENDED BY FIRST ADDENDUM TO MEMORANDUM OF LEASE RECORDED FEBRUARY 16, 2003, IN OFFICIAL RECORDS BOOK 4713, PAQE 1200; FURTHER AMENDED BY SECOND AMENDMENT TO MEMORANDUM OF LEASE RECORDED JUNE 9, 2005, IN OFFICIAL RECORDS BOOK 5759, PAGE 833; AS FURTHER AMENDED BY THIRD AMENDMENT TO MEMORANDUM OF LEASE MAY 30, 2006, IN OFFICIAL RECORDS BOOK 6265, PAGE 934; AS FURTHER AMENDED BY FOURTH AMENDMENT TO MEMORANDUM OF LEASE RECORDED MAY 30, 2006, IN OFFICIAL RECORDS BOOK 6265. PA0E 944 AND AS FURTHER AMENDED BY FIFTH AMENDMENT TO MEMORANDUM OF LEASE RECORDED FEBRUARY 11, 2013, IN OFFICIAL RECORDS BOOK 7962 PAGE 1505. (NO PLOTTABLE INFORMATION)

ITEM NO. 5: THIS PROPERTY IS SUBJECT TO THE FUTURE DEVELOPMENT COMMITMENT AGREEMENT BY AND BETWEEN WINTER SPRINGS HOLDINGS INC., A DELAWARE CORPORATION AND THE CITY OF WINTER SPRINGS, FLORIDA RECORDED NOVEMBER 29, 2010, IN OFFICIAL RECORDS BOOK 7486 PAGE 146. (NO PLOTTABLE INFORMATION)

ITEM NO. 6: THIS PROPERTY IS SUBJECT TO THE UTILITY EASEMENT AGREEMENT BY AND BETWEEN WINTER SPRINGS HOLDINGS INC., A DELAWARE CORPORATION AND THE CITY OF WINTER SPRINGS, FLORIDA, A FLORIDA MUNICIPAL CORPORATION RECORDED NOVEMBER 29, 2010, IN OFFICIAL RECORDS BOOK 7486 PAGE 155. (AS SHOWN HEREON)

ITEM NO. 7: THIS PROPERTY IS SUBJECT TO THE DEVELOPMENT AGREEMENT (MULTI-FAMILY/MIXED USE APARTMENT PROJECT-S.R. 434), BY AND BETWEEN THE CITY OF WINTER SPRINGS, FLORIDA AND WINTER SPRINGS HOLDINGS INC., A DELAWARE CORPORATION, RECORDED APRIL 9, 2015, IN OFFICIAL RECORDS BOOK 8446, PAGE 1131; AS MODIFIED BY THAT CERTAIN FIRST MODIFICATION OF DEVELOPMENT AGREEMENT BY AND BETWEEN THE CITY OF WINTER SPRINGS, A FLORIDA MUNICIPAL CORPORATION AND WINTER SPRINGS HOLDINGS, INC., A DELAWARE CORPORATION, RECORDED JANUARY 31, 2017, IN OFFICIAL RECORDS BOOK 8802, PAGE 1719. (NO PLOTTABLE INFORMATION)

ITEM NO. 8: THIS PROPERTY IS SUBJECT TO THE TERMS, CONDITIONS AND OBLIGATIONS AS CONTAINED IN THAT CERTAIN DECLARATION OF CONDITIONS, COVENANTS, EASEMENTS AND RESTRICTIONS BY AND BETWEEN WINTER SPRINGS HOLDINGS, INC., A DELAWARE LIMITED LIABILITY COMPANY AND WINTER SPRINGS APARTMENTS, LP, A DELAWARE LIMITED PARTNERSHIP RECORDED MARCH 3, 2017, IN OFFICIAL RECORDS BOOK 8871, PAQE 98; AS AMENDED BY THAT CERTAIN FIRST AMENDMENT TO DECLARATION OF CONDITIONS, COVENANTS, EASEMENTS AND RESTRICTIONS BY AND BETWEEN WINTER SPRINGS HOLDINGS, INC., A DELAWARE CORPORATION, TUSKAWILLA RETAIL PARTNERS, LLC, A FLORIDA LIMITED LIABILITY COMPANY AND WINTER SPRINGS APARTMENTS, LP, A DELAWARE LIMITED LIABILITY PARTNERSHIP RECORDED AUGUST 3, 2017, IN OFFICIAL RECORDS BOOK 8964, PAQE 1579 AND AS AFFECTED BY WAIVER AND RELEASE OF USE RESTRICTION AND CONSENT TO FUTURE AMENDMENT RECORDED JULY 12, 2024, IN OFFICIAL RECORDS BOOK 10660 PAGE 912. (NO PLOTTABLE INFORMATION)

ITEM NO. 9: THIS PROPERTY IS SUBJECT TO THE TERMS, CONDITIONS AND OBLIGATIONS AS CONTAINED IN THAT CERTAIN EASEMENT BY AND BETWEEN TUSKAWILLA RETAIL PARTNERS, LLC, A FLORIDA LIMITED LIABILITY COMPANY, TUSKAWILLA RETAIL PARTNERS II, LLC, A FLORIDA LIMITED LIABILITY COMPANY, AS TRUSTEE UNDER THE WSR TRUST AGREEMENT DATED JULY 2, 2018 AND JOINED IN BY DFC SEMINOLE CROSSING, LLC, A FLORIDA LIMITED LIABILITY COMPANY RECORDED JULY 9, 2018, IN OFFICIAL RECORDS BOOK 9168 PAQE 1505. (AS SHOWN HEREON)

ITEM NO. 10: THIS PROPERTY IS SUBJECT TO THE TERMS, CONDITIONS AND OBLIGATIONS AS CONTAINED IN THAT CERTAIN DRAINAGE EASEMENT AGREEMENT BY AND BETWEEN TUSKAWILLA RETAIL PARTNERS, LLC, A FLORIDA LIMITED LIABILITY COMPANY, TUSKAWILLA RETAIL PARTNERS II, LLC, A FLORIDA LIMITED LIABILITY COMPANY, AS TRUSTEE UNDER THE WSR TRUST AGREEMENT DATED JULY 2, 2018 AND JOINED IN BY DFC SEMINOLE CROSSING, LLC, A FLORIDA LIMITED LIABILITY COMPANY RECORDED JULY 9, 2018, IN OFFICIAL RECORDS BOOK 9168, PAQE 1520. (AFFECTS SUBJECT PROPERTY BUT NO PLOTTABLE INFORMATION)

SURVEYOR'S CERTIFICATION:

TO: KW PARTNERS, LLC, A FLORIDA LIMITED LIABILITY COMPANY; FIDELITY NATIONAL TITLE INSURANCE COMPANY; CALLOWAY TITLE AND ESCROW, LLC

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(B), 8, 9, 11, 13, 14, 16, 17 AND 19, OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JULY 22, 2024.

Clinton N Rickner

Digitally signed by Clinton N Rickner
DN: cn=Clinton N Rickner, o=Kimley-Horn and Associates, Inc., ou=Orlando Regional, ou=Orlando, ou=FL, email=clint.rickner@kimley-horn.com, c=US
Date: 2024.09.23 10:11:44 -04'00'

CLINTON N. RICKNER
FLORIDA SURVEYOR & MAPPER CERTIFICATE NUMBER 7409
CLINT.RICKNER@KNVS.COM

09/23/2024
DATE OF PLAT OR MAP:

11801 Research Drive
Alachua, FL 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075
CHW
AN NV5 COMPANY

SCALE: 1" = 40'

VERIFY SCALE BAR IS CORRECT ON PLOTTED MEDIA
0 40 80
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.

SEE SURVEYOR'S CERTIFICATION

CERTIFIED TO:

SURVEY DATE:	08/21/2024
REVISION DATE:	N/A
PROJECT NUMBER:	24-0422.01
TECHNICIAN:	CNR
CREW CHIEF:	CNR
CHECKED BY:	CNR
FIELD BOOK & PAGE:	65 / 13-18

CLINTON N. RICKNER
SEE SURVEYOR'S CERTIFICATION
Professional Surveyor & Mapper Fla. License No. 7409

This map prepared by:

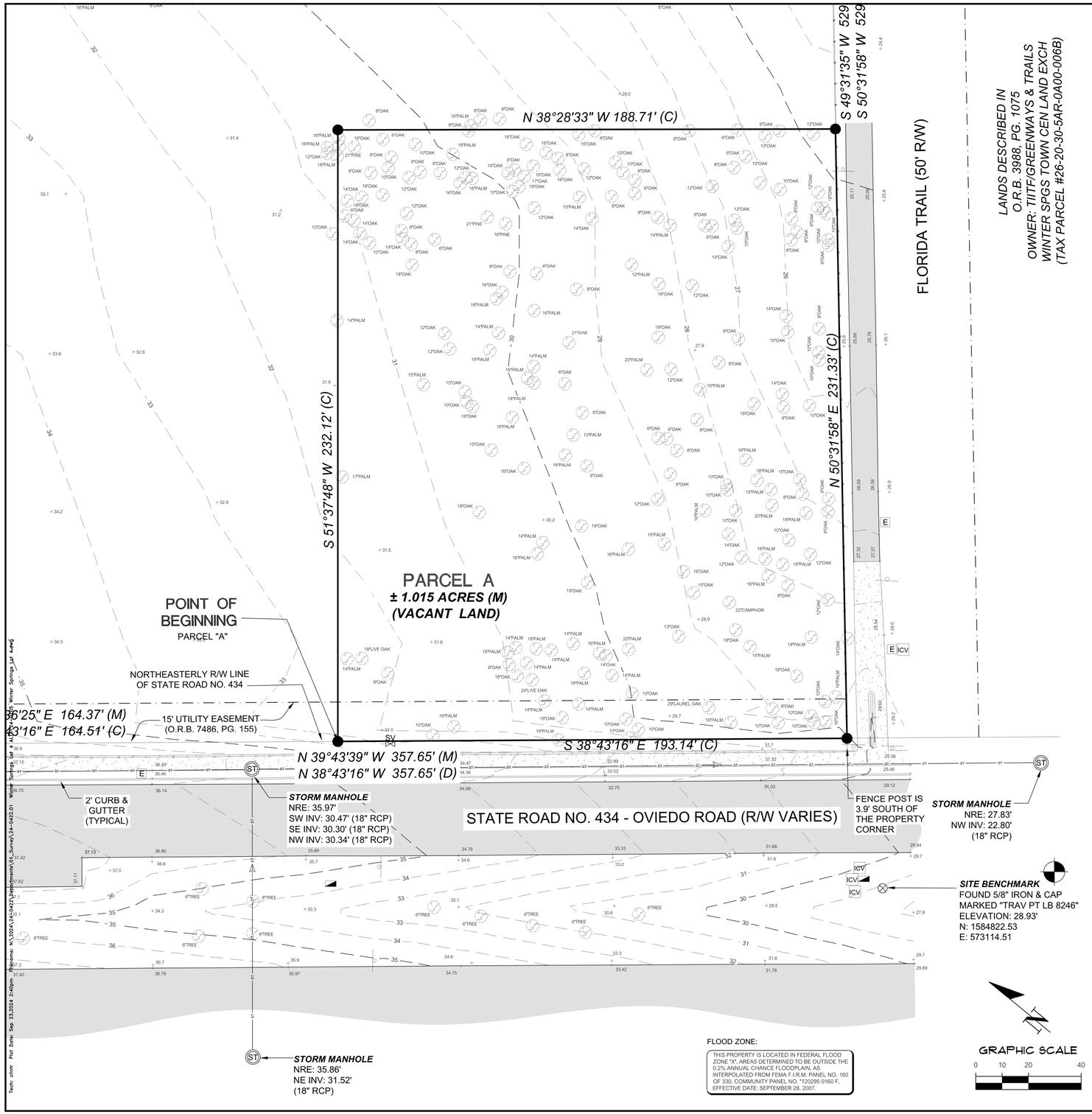
Certificate of Authorization No. L.B. 5075
SHALL NOT BE VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.:
1 OF 2

Tech: clchr Plot Date: Sep 23,2024 1:22pm Filename: N:\2024\24-0422\Deptmntwrk\01_Survey\24-0422.01 Winter Springs Lot 4 ALTA_24-0105 Winter Springs Lot 4.dwg

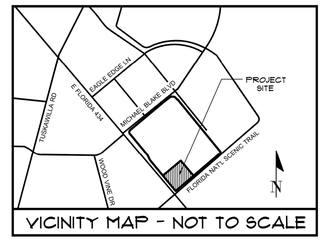
ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE NORTHWEST QUARTER (NW 1/4) OF SECTION 6, TOWNSHIP 21 SOUTH, RANGE 31 EAST CITY OF WINTER SPRINGS, SEMINOLE COUNTY, FLORIDA



SURVEYORS NOTES:

1. MEASURED COORDINATES AND BEARINGS SHOWN HEREON ARE REFERENCED TO STATE PLANE FLORIDA EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 1983),
2. OBSERVED EVIDENCE OF UTILITIES HAS BEEN SHOWN PURSUANT TO SECTION 5 PARAGRAPH E (IV) OF THE ALTA/NSPS MINIMUM STANDARD DETAIL REQUIREMENTS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
3. THE SURVEYOR HAS NO KNOWLEDGE OF UNDERGROUND FOUNDATIONS WHICH MAY ENCROACH.
4. THIS SURVEY WAS PRODUCED WITH THE BENEFITS OF FURNISHED TITLE WORK VIA FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024. NO FURTHER INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND OR OWNERSHIP WERE FURNISHED TO THE SURVEYOR EXCEPT AS SHOWN, AND NO SEARCH OF THE PUBLIC RECORDS HAS BEEN DONE BY THE SURVEYOR.
5. THE SURVEYOR HAS NO KNOWLEDGE OF UNDERGROUND FOUNDATIONS WHICH MAY ENCROACH.
6. FENCING, SYMBOLS AND MONUMENTATION SHOWN HEREON MAY BE EXAGGERATED FOR PICTORIAL PURPOSES ONLY AND MAY NOT BE SHOWN TO SCALE.
7. IN THE OPINION OF THIS SURVEYOR, THE PERIMETER LINES AS SHOWN HEREON REPRESENT THE LOCATION OF THE BOUNDARY LINES OF THE SUBJECT PARCEL IN RELATION TO THE DESCRIPTION OF RECORD AND THOSE EXISTING LAND CORNERS FOUND TO BE ACCEPTABLE BY THIS SURVEYOR.
8. INFORMATION FROM FEDERAL EMERGENCY MANAGEMENT AGENCY, (F.E.M.A.) FLOOD INSURANCE RATE MAP(S), SHOWN ON THIS MAP WAS CURRENT AS OF THE REFERENCED DATE. MAP REVISIONS AND AMENDMENTS ARE PERIODICALLY MADE BY LETTER AND MAY NOT BE REFLECTED ON THE MOST CURRENT MAP.
9. VERTICAL DATUM REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) AND WERE DERIVED FROM SEMINOLE COUNTY BENCHMARK DESIGNATION #5172001, WITH A PUBLISHED ELEVATION OF 16.09 FEET (NAVD88).
10. ADDITIONAL POINTS MAY BE FOUND BY TURNING ON THE SV-NODE* LAYERS IN THE SUPPLIED DIGITAL FILE.
11. ONLY TREES 6" IN DIAMETER OR GREATER (MEASURED AT CHEST HEIGHT) ARE SHOWN HEREON.
12. TOPOGRAPHIC INFORMATION SHOWN HEREON BASED ON GROUND SURVEY. CONTOURS SHOWN HEREON REFLECT 1-FOOT INTERVALS.
13. THERE WERE NO MARKED PARKING SPACES OBSERVED AT THE TIME OF THIS SURVEY.
14. THERE WAS NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS BEING CONDUCTED AT THE TIME OF THIS SURVEY.
15. THERE WAS NO EVIDENCE OF CHANGES IN STREET RIGHT OF WAY LINES, CURRENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS AT THE TIME OF THIS SURVEY.
16. THERE IS NO OBSERVED EVIDENCE OF SITE USE AS A CEMETERY, SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL.
17. DISTANCE TO NEAREST INTERSECTING STREET IS 435 FEET, MORE OR LESS, TO THE INTERSECTION OF MICHAEL BLAKE BOULEVARD AND STATE ROAD 434.



VICINITY MAP - NOT TO SCALE

LEGEND:

(D) = DATA BASED ON OFFICIAL RECORDS
(M) = DATA BASED ON FIELD MEASUREMENTS
FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY
F.I.R.M. = FLOOD INSURANCE RATE MAP
R/W = RIGHT OF WAY
ID. = IDENTIFICATION
INV = INVERT
RCP = REINFORCED CONCRETE PIPE
O.R.B. = OFFICIAL RECORDS BOOK
PB. = PLAT BOOK
PG. = PAGE
OAK = OAK TREE
PALM = PALM TREE
PINE = PINE TREE
TREE = UNKNOWN TREE
30. = CONTOUR LINE
= TREE (SIZE/TYPE AS NOTED)

= IRRIGATION CONTROL VALVE
= CLEANOUT
= ELECTRIC HANDHOLE
= STORM SEWER MANHOLE
= SEWER VALVE
= TELEPHONE JUNCTION BOX
= FOUND 4"X4" CONCRETE MONUMENT (AS NOTED)
= FOUND 1/2" REBAR & CAP (AS NOTED)
= FOUND IRON ROD (NO ID.)
= FOUND NAIL & DISK (AS NOTED)
= SET 5/8" STEEL ROD & CAP (LB 5075)
= TRAFFIC SIGN
= BENCHMARK
X30.5 = SPOT ELEVATION (PERVIOUS)
X 30.45 = SPOT ELEVATION (IMPERVIOUS)

= IRRIGATION CONTROL BOX
= ELECTRIC BOX
= TRAFFIC SIGNAL BOX
= WOOD LIGHT POLE
= METAL LIGHT POLE
= WATER VALVE
= WATER METER
= STORM INLET
= METAL HANDRAIL
= 4' METAL LINK FENCE
= ASPHALT SURFACE
= CONCRETE SURFACE
= BRICK SURFACE

FLOOD ZONE:

THIS PROPERTY IS LOCATED IN FEDERAL FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS INTERPOLATED FROM FEMA F.I.R.M. PANEL NO. 160 OF 330, COMMUNITY PANEL NO. "120295 0160 F, EFFECTIVE DATE: SEPTEMBER 28, 2007.

GRAPHIC SCALE
0 10 20 40

11801 Research Drive
Alachua, FL 32615
(352) 331-1976
www.chw-inc.com
est. 1988 FLORIDA CA-5075
CHW
AN NV5 COMPANY

SCALE: 1" = 20'

VERIFY SCALE BAR IS CORRECT ON PRINTED PLOT.
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY.
0 1" 2"

CERTIFIED TO:

SURVEY DATE: 07-22-2024
REVISION DATE: N/A
PROJECT NUMBER: 24-0422.01

TECHNICIAN: NAD
CREW CHIEF:
CHECKED BY: CNR
FIELD BOOK & PAGE: 65 / 13-18

CLINTON N. RICKNER
SEE SURVEYOR'S CERTIFICATION
Professional Surveyor & Mapper Fla. License No. 7409

SEE SURVEYOR'S CERTIFICATION

This map prepared by:
Certificate of Authorization No. LB. 5075
AND SHALL NOT BE CONSIDERED VALID WITHOUT THE ORIGINAL SIGNATURE AND RAISED (EMBOSSED) OR DIGITAL SIGNATURE OF A FLORIDA LICENSED SURVEYOR AND MAPPER

SHEET NO.: 2 OF 2

Tech: clnr Plot Date: Sep 23,2024 2:40pm File Name: N:\2024\24-0422.01\Survey\24-0422.01 Winter Springs Lot 4.dwg

SECTION – 02800
LANDSCAPE WORK

PART I – GENERAL

1.01 Scope of Work:

Provide all labor, materials, equipment and incidentals required to prepare planting beds and install landscape planting in accordance with the plans and as specified.

Related Work Specified Elsewhere:

A. Section 02952 – Site Maintenance

1.03 General Requirements:

A. Finish Grade: The Contractor will perform the fine grading and amend the soil as required by these specifications. The contractor is responsible for any trees/shrubs that are planted prior to achieving final grade.

B. Comply with applicable Federal, State, County and local codes, ordinances and regulations governing landscape materials and work.

C. The work shall be coordinated with other trades to prevent conflicts.

D. All planting shall be performed by personnel familiar with planting procedures and under the supervision of a qualified landscape foreman.

E. Prior to the preparation of planting areas and plant pits, ascertain the location of all landscape underdrain trenches, electrical cable, conduits, utility lines, oil tanks, supply lines and other subsurface structures so that proper precautions may be taken not to disturb or damage any of these elements or improvements.

F. Prior to bidding, the Contractor shall visit the site and ascertain all site conditions, including utilities, slopes, access and available work space to preclude any misunderstandings and ensure a trouble-free installation. It shall be the Contractor's responsibility to avoid conflicts with existing underground and overhead utilities. The contractor shall notify all utilities servicing the work area at least 48 hours prior to any excavation so that underground utilities may be located.

G. Excavate all planting beds to their proper dimensions per the details.

H. Prior to placing planting mix and backfill, or commencing with planting of trees or shrubs, obtain the Owner's approval of soil amendments and backfill soils.

I. The Contractor shall take all necessary precautions to avoid damage to any building, building structure or waterproofing while working adjacent to fixed buildings, walls or other structures. The use of mechanical equipment within five (5) feet of any building or existing structure to move plants or materials shall be approved by the City prior to its use. The Contractor shall be responsible for all damages to the subsurface utilities, buildings, or building footings caused by his operations.

Applicable Documents:

A. Plants:

1. Nomenclature: Shall conform to the names given in "Standardized Plant Names", 1942 Editions, prepared by the American Joint Committee on Horticultural Nomenclature or by the Bureau of Plant Industry, State of Florida.

2. Names of varieties not included therein shall conform generally with names accepted in the nursery trade.

3. Substitutions will be permitted only upon submission of proof that any specified plant is not obtainable or suitable for the location as specified on the plan and upon written authorization of the Owner and City.

1.05 Quality Control:

A. Plants shall have a habit of growth that is normal for the species and shall be sound, healthy, vigorous and free from insect pests, fungi plant diseases and injuries.

B. Trees shall be heavily branched. All trees shall have a dominant leader and no crossing branches.

C. Plant material shall be graded Florida No. 1 or better as outlined under "Grades and Standards for Nursery Plants", established by the Florida Dept. of Agriculture.

D. The Owner shall have the right, at any stage of the operations, to reject any and all work and materials, which, in their opinion, do not meet the requirements of these specifications or aesthetically do not comply with design intent. Trees that are scarred or damaged during delivery or off loading will be rejected.

E. Representative samples of proposed plant materials are required to be inspected and approved by the Owner prior to any delivery to the project site. Such samples may be viewed at the respective nurseries prior to delivery to the project site.

Inspection:

A. All shipments of plant material shall be properly inspected at the nursery or at the growing site by the authorized State Agencies, prior to delivery to the project site.

B. All required inspection certificates shall accompany the bill of laden or invoices. Required transportation documents are to be submitted with invoices as back-up.

1.07 Soil Testing & Analysis:

A. The Landscape Contractor is required to take representative samples of the site soils.

B. Submit all samples to an independent testing laboratory for analysis. Laboratory selection is required to be approved by the Owner. Test for soil pH, salts, magnesium, calcium, phosphorus, potash, and percolation rates. Report from laboratory will identify nutrient deficiencies and recommendations to correct the deficiencies and to adjust pH to comply with the specifications. Submittal of the Contractor's fertilizer program for the maintenance period is required prior to acceptance.

C. Certificates:

1. Manufacturer's certification and/or testing laboratory certification that content of soil conditioners meet specification requirements.

2. Manufacturer's certificate of fertilizer's chemical composition including but not limited to percentage and derivation of nitrogen, phosphorus, potassium, and I micro-nutrients.

1.08 Measurements:

A. The minimum acceptable size of all plants measured after pruning, with branches in normal positions, shall conform to the measurements as shown on landscape plans and conform to the grades and standards established by the Florida Dept. of Agriculture.

B. Substantial deviations from these measurements must be approved by the City.

C. The caliper of tree trunks is to be taken twelve inches above the ground level.

1.09 Pre-performance Conference:

A. Provide a tentative working schedule including sequence of performance with bar charts.

B. Provide the proposed method of traffic control.

C. Provide a list of emergency phone numbers.

D. A Preconstruction conference will be required. Meeting to be scheduled by the Owner.

1.10 Shipment and Delivery:

A. Contractor shall notify the City and Owner, a minimum of 48 hours in advance, of all plant material deliveries. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CITY WITH NURSERY CERTIFICATION OF PLANT MATERIAL GRADE PRIOR TO DELIVERY TO SITE.

B. Plant materials shall be protected from weather and adequately packed to prevent breakage and drying during transit.

C. The Owner may exercise its option to inspect, select and assist the Contractor with the tagging of plant materials at the nursery.

D. Legible tags will be attached to at least one plant of each species. Packages, boxes, or bunches of plants will be identified with a similar tag attached. Plants which do not meet specifications for quality herein stated or plants that show improper handling or arrive on site in an unsatisfactory condition will be rejected. Rejected plants shall immediately be removed, disposed of, and replaced with approved nursery stock of like variety, size and age. These plants shall be replaced without additional cost to the Owner.

E. Final acceptance of plant material will be given only after material is planted and after meeting requirements prescribed herein.

PART II – PRODUCTS

2.01 Topsoil:

A. Topsoil material shall be free from subsequent hard clods, stiff clay, hard pan, stones larger than one inch (1) in diameter, noxious weeds and plants, including nutgrass and torpedo grass, sods, partially disintegrated debris, insects or any other undesirable material, plants, or seeds, that would be toxic or harmful to growth. All beds which contain topsoil contaminated with nut grass or torpedo grass shall have the top 24" of soil removed and replaced with uncontaminated soil or fumigated at no additional cost to the Owner. Topsoil shall be obtained from approved sources and shall contain 24 % organic matter. PH shall range from 5.5 to 7.5 inclusive.

2.02 Planting Mix and Backfill:

A. All planting areas shall be backfilled with a mixture of prepared and approved plant mix as shown below.

Planting Beds:
60 % Florida Fibrous Peat
20 % Compost
20 % Sand

B. Mix as prepared by Hillary Peat or approved equal.

C. All planting areas shall be stripped of all grass, weeds, trash, soil, etc.

D. Provide soil additive to adjust PH to be within range of 5.5 to 7.5 inclusive.

2.03 Plant Material:

A. The words "Plant Materials" or "Plants" refer to and include trees, shrubs, ground cover, grass or herbaceous materials.

B. Plant species shall conform to those indicated on the plans and in the specifications.

C. Plants shall be sound, healthy, vigorous, free from plant diseases, insect pests or their eggs and shall have healthy normal growth and root systems. Tree trunks shall have the specified caliper, straight with no fresh cuts, scrapes or scars, and shall have the specified clear trunk height.

D. Plants, with the exception of "Hurricane Cut" palm trees, shall not be pruned prior to delivery except as approved by the Owner.

E. All shrubs and ground covers are required to be container grown. Trees are required to be one of the following unless specified otherwise in the Plant List:

1. Container Grown:

Plastic containers: Trees grown in plastic containers should be well established in the container. Minimum container size guidelines will follow those established by the Florida Dept. of Agriculture in the Florida Grades and Standards. Root bound container plants will not be accepted. No synthetic grow bags or equivalent will be accepted.

2. Field Grown:

Shall have the appropriate root ball size based on the trees diameter and height as established by the American National Standards Institutes recommendations. Field grown trees should be hardened off in the nursery for a period of 60-90 days.

F. Collected plants shall not be used unless specifically called for in the specifications or approved in writing by the Owner. The type, size and availability of specific species will be the basis of selection of any collected plants.

G. All plants for this project, which can only be secured outside of the Central Florida area, are required to be acclimatized for a minimum period of one (1) year. The acclimatization of these plants must take place off-site at the Contractor's secured property or certified nursery grower's site. The cost of acclimatization and its scheduling are the responsibility of the contractor.

2.04 Quantities:

A. The quantities shown in the leader call outs in the plans govern the required installed quantities. The Plant List is provided as a reference only. The contractor is responsible for his own take-off. Discrepancies must be brought to the Owner's attention, in writing, or be corrected by the Contractor at no additional expense to the Owner.

2.05 Fertilizer for Plantings:

A. Commercial grade fertilizer to comply with State of Florida Fertilizer laws. Chemical designation shall be as specified with at least 70 % of the nitrogen derived from a non-water soluble organic or slow release source.

B. Fertilizer shall include all trace elements plus 3.00 % magnesium. Percentages shall be verified by the soil test report fertilizer recommendations and revised, if necessary.

1. Federal Specifications O-F-241 Type 1, Grade A or B.

2. The chemical designation for granular fertilizer for all plantings shall be 12-6-8.

C. Fertilizer shall be incorporated into the planting soil mix at a rate of 8 lbs. per cubic yard.

2.06 Mulch:

A. All plant beds shall receive a uniform 3" layer of mini pine bark nugget mulch or City and Owner approved alternative.

PART III – EXECUTION

3.01 General:

A. The Contractor's work shall conform to accepted horticultural practices as used in the trade, unless specifically directed to the contrary by the contract documents and by the City.

B. Plants shall be protected upon arrival at the site by being thoroughly watered and properly maintained until planted. Plants shall not remain unprotected for a period exceeding 24 hours. At all times, workmanlike and customary horticultural practices shall be exercised.

3.02 Bed Preparation:

A. All existing vegetation and debris shall be removed and legally disposed of off-site from within the area of the planting and mulch beds completely as described on the Drawings and in these Specifications. In areas where there is existing grass or other vegetation, remove by approved mechanical means completely. Take care not to disturb existing tree roots, nor layers of soil below the excavated area except as needed to grade the area to avoid disturbing dormant weed seed. All planting and mulch beds are to be weed free prior to planting.

3.03 Digging of Pits:

B. The existence and location of underground structures, elements and utilities are shown on drawings other than the landscape plans. All elements shall be investigated and verified in the field before starting work. Excavation in the vicinity of structures and utilities shall be performed with due caution. Coordination with other Contractors and the Owner before all site excavations is required.

C. Should overhead or underground obstructions be encountered which interfere with the specified plantings, alternate locations or plan modifications will be selected and approved by the City and Owner.

D. Before digging of holes or beds, the location and arrangement of the planting shall be staked by the Contractor and then approved by the Owner. Staking shall conform to the plant list, specifications, plans and details. Shrubs shall be placed in true straight lines and evenly spaced as specified. Groundcovers shall be triangular spaced.

3.04 Tree Installation:

A. All tree pits shall be excavated to size and depth in accordance with the University of Florida recommendations, unless shown otherwise on the plans and details, and backfilled with the prepared Planting Mix as specified. Test all tree pits with water before planting to ensure proper drainage percolation is available. All tree pits shall drain fully within one hour after being filled with water. No allowance will be made for lost plants due to improper drainage. All plant beds, planters, tree wells and tree islands shall be inspected by the City and Owner to verify removal of concrete, limerock base material, etc. prior to backfilling.

1. Container-grown plants:

a. Gently place the plant straight in the hole and be sure the top of the root ball is no deeper that the existing landscape soil surface. In areas of compacted or poorly drained soils, the top of the root ball may be positioned slightly above the soil surface to provide an adequate volume of well-drained soil for root development. Fill around the ball with soil and gently firm the soil. Do not pack the soil. Water thoroughly while planting to remove air pockets.

b. Do not mound soil over the roots but form a saucer-like catch basin around the edge of the root ball with a soil ridge 3 to 6 inches high to facilitate watering.

c. Mulch with 3-inch layer of specified material to buffer soil temperature, reduce weed competition, and conserve moisture. Be sure to keep the mulch layer approximately 3 inches away from the plant stem.

2. Balled and Burlapped Plants

Planting procedures for balled and burlapped plants are similar to those for planting container-grown plants. Always move balled and burlapped plants by the root ball only. Never use the trunk as a handle to pick up or move these plants. Care should be taken not to disturb the root ball as this would severely damage the root system. Removal of all the burlap before planting is not necessary, although the top one-third of the burlap should be pulled back from the stem. Removal of woven plastic wraps completely after setting the plant in the hole is necessary. Nondegradable, woven plastic fabrics can girdle roots as they expand through the material. However, this practice may not be feasible when moving large trees that have been sleeved in woven plastic materials before being placed in wire baskets. Slice the material through the wire baskets to facilitate healthy root growth into the landscape soil. Always remove nylon twine tied around the plant stem. Nylon twine does not rot and will eventually girdle the stem if left in place.

3. Palms

Generally, procedures for planting balled and burlapped shrubs and trees are suitable for palms. Palms should be harvested with a root ball appropriate for the size and species of palm. Although a 2 foot diameter root ball would be adequate for a palm 3 to 6 feet in height, a root ball of 4 to 5 feet in diameter is recommended for larger palms. Foliage of all palm species except Sabal palmetto shall have the leaves tied with a biodegradable twine in a bundle around the bud. Complete leaf removal at the time of digging is required when planting Sabal palmetto.

B. No trees shall be planted prior to completion of final finish grading.

C. Trees shall be set plumb and held in position until the planting mixture has been flushed into place with slow full hose stream.

3.05 All Plant Materials:

A. Plants shall be set on prepared planting soil backfilled and brought to a height to allow planting above the depth the plants grew in the nursery as shown on the details. Upright plants shall be kept in a vertical position. All trees shall be handled by a padded nylon strap for lifting purposes.

B. Circular receiving holes with vertical sides shall be excavated for all plants except for bare-root ground covers. Diameter of receiving holes for all plants shall be as shown on the drawings.

C. After placing the plant in the pit, the planting soil specified herein shall be watered and firmly tamped to ensure the backfill mixture is surrounding the root ball. All tamping shall be such that no plants will settle below their original growing height and the finish grade specified.

D. Plants in containers shall be carefully removed from the pots, cans, boxes or other containers in a manner not to damage the roots or the root ball of soil formed by the container. Scarifying the root ball on the sides and bottom to stimulate new root growth outside of the existing root ball should be performed prior to placement into the pit. Plants shall be set in the pit with the planting mixture carefully washed and tamped around the base of each to fill voids.

E. All plants shall be thoroughly watered at the time of planting and dept adequately watered until time of acceptance. No additional allowances will be made for plant losses due to lack of adequate or proper watering.

F. Pruning shall be done after planting and with due regard to the natural form and growth characteristics of each species. Method and amount of pruning shall be determined by the Landscape Architect/Owner. Trees with pruned terminal leaders will not be accepted.

G. During the course of planting, excess and waste materials shall be removed daily. All reasonable precautions shall be taken to avoid damage to structures and plantings. When planting in an area has been completed the area shall be fully policed for debris and maintained in this finished state until Final Acceptance.

3.06 Mulching:

A. Plants and planting beds shall receive a layer of the specified mulch, entirely covering the area around each plant or the entire 3" minimum surface of each planting bed.

B. Mulch shall be placed between and around all newly planted trees and shrubs as shown on drawings and a specified. For individual plants, the mulch shall be spread to cover the saucer area and maintained until acceptance. Mulch shall be kept a minimum of 3" away from the trunks of all trees. When in place, the mulch is to be watered thoroughly.

3.07 Guying and Staking:

A. Guy and stake plant materials as specified and detailed to assure upright form. Follow the recommendations from the University of Florida Cooperative Extension Service Circular 858, unless noted otherwise in drawings.

B. Prevent plants from falling or being blown over, re-straighten and replant all plants which lean or fall, and replace all plants which are damaged due to lack of guying and staking.

C. If un-guyed plants are blown over by high winds, the City will determine if the plant is to be replaced. Such decision shall not be cause for additional expense to the Owner. Damaged plants shall be replaced and guyed or staked at no additional cost to the Owner.

D. All stakes and staking material should be removed between the 16th and 18th months following planting, except on those trees identified by the Owner. The Contractor shall notify the Owner fourteen (14) days prior to removing stakes and staking material.

3.08 Maintenance Prior to Substantial Completion:

A. Maintenance shall commence after each plant is planted and shall continue until substantial completion. After substantial completion, the formal one year guarantee period shall commence.

B. Plant maintenance shall include watering, pruning, weeding, cultivating, mulching, tightening and repair of guys, replacement of sick or dead plants, resetting plants to proper grades or upright position, restoration of the planting saucer, and all other care required for proper growth of the plants. Proper protection of lawn areas shall be provided and any damages resulting from planting or maintenance operations shall be repaired promptly by the Contractor at no additional cost to the Owner.

C. Damage resulting from erosion, gullies, washouts or other causes shall be repaired by the Contractor by filling with topsoil, tamping, re-fertilizing and re-stabilizing slopes, at no additional cost to the Owner.

3.08 Guarantee and Replacement:

A. All work shall be guaranteed for a period of one year from the date of substantial completion. All plants shall be alive and in satisfactory growth throughout the guarantee period, if, at any time during the one year guarantee period, substandard or dead trees or plants are identified by the Owner, such trees and plants shall be replaced by the Contractor within fourteen (14) calendar days of notification, at no additional cost to the Owner.

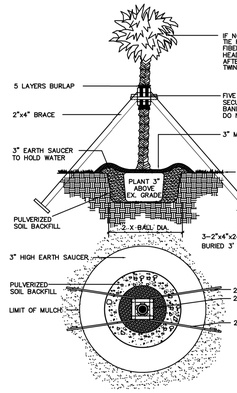
B. The Landscape Contractor shall notify the Owner in writing, ten (10) days prior to expiration of guarantee periods, and said guarantee period shall be continued until such time as written notification is received.

C. At the end of the guarantee period, an inspection will be made by the Contractor and the Owner. All plants that are dead or fail to meet the grade requirements initially specified or are otherwise considered in unsatisfactory condition, as determined by the Owner, shall be removed from the site and immediately replaced with approved plants meeting the original specifications.

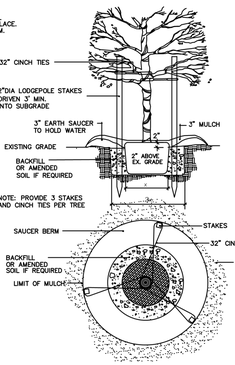
D. All replacements shall be plants of the same species and size as specified in the Plant List. They shall be furnished and planted as specified with no additional cost to the Owner.

E. All replacement plants shall become guaranteed for a period of one year from the date of their acceptance. A written agreement is required to be submitted by the Contractor for this additional guarantee.

END OF SECTION

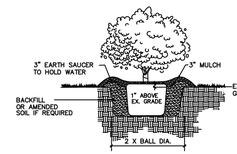


PALM PLANTING DETAIL



TREE PLANTING DETAIL

N.T.S.



SHRUB PLANTING DETAIL

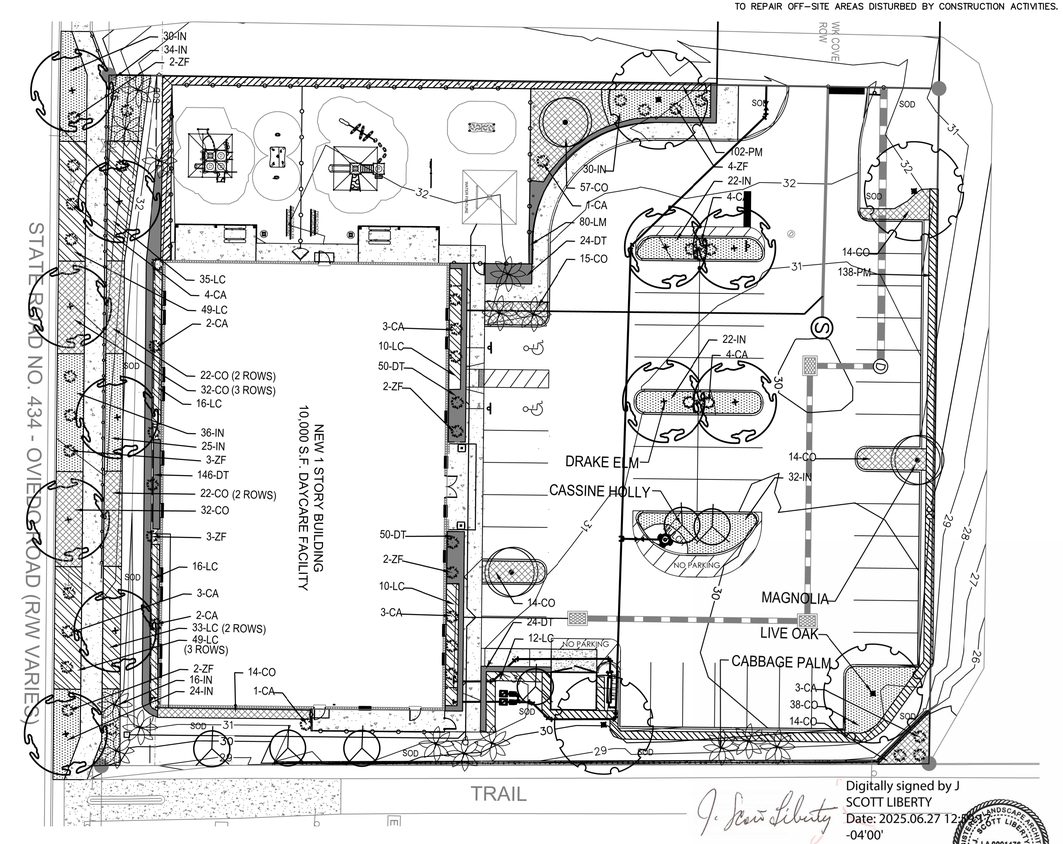
N.T.S.

PLANT LIST

GENERAL NOTE: CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CITY WITH NURSERY CERTIFICATION OF PLANT MATERIAL GRADE PRIOR TO DELIVERY OF MATERIAL TO SITE. PRIOR TO INSTALLATION, CONTRACTOR SHALL SCHEDULE A PLANT MATERIAL INSPECTION WITH THE CITY INSPECTOR TO VERIFY THAT PLANTS MEET OR EXCEED THE MINIMUM SPECIFICATIONS FOR ALL PLANT MATERIALS. IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL AT TIME OF PLANTING.

50% MIN. NATIVE (N)	QTY	LABEL	COMMON NAME (BOTANICAL NAME) SPECIFICATIONS
TREE CREDITS: (SEE CIVIL)			**STREET TREE: (SEE LABELS)**
5.5 (ON SITE)	11	UP	DRAKE ELM (ULMUS PARVIFOLIA 'DRAKE') 3" DBH, 14-16' HT., 6' CT., 200 GAL., SINGLE CENTRAL LEADER
			TREES: (SEE LABELS)
20 N	4	QV	CATHEDRAL LIVE OAK (QUERCUS VIRGINIANA 'CATHEDRAL OAK') 5" CAL., 16' HT. MIN., FULL, 6' CT., B&B (NO SYNTHETICS)
9 N	3	MG	SOUTHERN MAGNOLIA (MAGNOLIA GRANDIFLORA 'LITTLE GEM') 30 GAL. MIN., 10' HT. MIN., FULL
– N	13	SP	CABBAGE PALM (SABAL PALMETTO) 10', 12', AND 14' CT HT. IN EACH GROUP, STRAIGHT TRUNK
18 N	6	IC	DAHOON HOLLY (ILEX CASSINE) 30 GAL. MIN., 10' HT. MIN., FULL
52.5 TOTAL			
			LARGE ACCENT SHRUBS:
18		ZF	CARDBOARD PALM (ZAMIA FURFURACEA) 15 GAL. MIN., 30" HT., 30" SPREAD, FULL
30		CA	RED CRINUM LILY (CRINUM SPP.) 10 GAL. MIN., 4' HT., FULL
			SCREEN HEDGE:
240		PM	PODOCARPUS (PODOCARPUS MACROPHYLLUS) 7 GAL. MIN., 30" HT., FULL, 24" OC
			SHRUBS:
N 230		LC	DWARF FIREBUSH (HAMELIA PATENS 'FIREFLY') NO SUBSTITUTIONS 3 GAL. MIN., 12" HT. 12" SPREAD, FULL, 30" OC.
N 246		IN	DWARF YAUPON (ILEX VOMITORIA 'NANA') 3 GAL. MIN., 12" HT., FULL, 30" OC.
N 274		CO	COONTIE (ZAMIA PUMILA) 3 GAL. MIN., 12" HT., 15" SPREAD, FULL, 30" OC.
			GROUNDCOVERS:
294		DT	VARIEGATED FLAX LILY (DANIELLA TASMANICA 'VARIEGATA') 1 GAL. MIN., FULL, 18" OC
80		LM	LIRIOPE (LIRIOPE MUSCARI 'EMERALD GODDESS') NO SUBSTITUTIONS 1 GAL. MIN., 9 PPP, FULL PLANT, 18" OC

SOD: ARGENTINE BAHIA (PASPALUM NOTATUM) SOLID SOD (SEE PLAN "SOD" LABELS). SOD SOIL MAT TO BE FLUSH WITH TOP OF ADJACENT SIDEWALKS AND BACK OF CURB. CONTRACTOR TO REPAIR OFF-SITE AREAS DISTURBED BY CONSTRUCTION ACTIVITIES.



SCALE: 1" = 20'
0 20 40

Digitally signed by J SCOTT LIBERTY
Date: 2025.06.27 12:59:11 -04'00'

J. SCOTT LIBERTY, LANDSCAPE ARCHITECT
FLORIDA REGISTRATION NO. LA00001476
5621 REVELWOOD LOOP, WINTER PARK, FL. 32792
PHONE: 407-719-2124 FAX: 407-671-6904

REGISTERED LANDSCAPE ARCHITECT J. SCOTT LIBERTY LA 0001476 STATE OF FLORIDA

NO.	DATE	REVISIONS
1	6/26/25	ADD TREES AND SHRUBS TO BUFFER PER COMMENTS
2	8/16/25	SITE PLAN CHANGES
3	5/23/25	SITE PLAN CHANGES / STREETSCAPE PLANTING ADDED
4	11/26/24	SITE PLAN CHANGES

JOB #: 23012.20 | PRJ. MGR: JPM | DESIGNER: JSL | CHECKED: JSL

ENGINEER
JASON P. MAHONEY, PE
FL. LIC. #65183

DATE: Jun. 27, 2025

WSTC RETAIL CONCEPT
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FL
FOR
TUSKAWILLA RETAIL PARTNERS

LANDSCAPE PLAN

6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3317
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
L1.0

September 16, 2024 *Sent via email*

KW PARTNERS, LLC
2420 Enterprise Road, Suite 201
Clearwater, FL 33763

Attn Richard Kerper
Email: rk@kwequity.com

Re: Phase I Environmental Site Assessment Report
The Learning Experience
SR 434 and Michael Blake Boulevard
Winter Springs, Seminole County, FL 32708
NV5 Project Number 4420424-0006043.00

Dear Mr. Kerper:

NV5, Inc. (NV5) is pleased to present the attached Phase I Environmental Site Assessment (ESA) report for the 1.02-acre commercial out-parcel property located at SR 434 and Michael Blake Boulevard, Seminole County, Florida 32708 ("*Property*"). The conclusions presented in this report are based on the results of a reconnaissance-level property visit conducted by NV5 personnel, and a review of available and pertinent background information. The Phase I ESA was conducted in accordance with ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-21, dated February 13, 2023; and/or the Code of Federal Regulations (CFR) 40 CFR Part 312, "Standards and Practices for All Appropriate Inquiries: Final Rule."

NV5 appreciates this opportunity to provide consulting services to you. If you have any questions concerning this project, would like to discuss other environmental concerns, or if NV5 can be of any additional service please contact us at 407.275.5120 or via email at scott.graf@NV5.com.

Sincerely,
NV5, INC.

Scott D. Graf, P.G.
Central Florida Environmental Manager

Stephen J. Crotty, P.G.
Director of Environmental Operations, Florida

Enclosure

PHASE I ENVIRONMENTAL SITE ASSESSMENT



OF THE

The Learning Experience
SR 434 and Michael Blake Boulevard
Winter Springs
Seminole County, Florida 32708

PREPARED FOR

KW PARTNERS, LLC
2420 Enterprise Road, Suite 201
Clearwater, Florida 33763

SEPTEMBER 16, 2024

NV5 PROJECT NO. 4420424-0006043.00

PREPARED BY:

NV5, Inc.
6200 Lee Vista Boulevard, Suite 400
Orlando, Florida 32822

EXECUTIVE SUMMARY

Project Details

Property Name:	The Learning Experience, SR 434 and Michael Blake Boulevard, Winter Springs, Seminole County, Florida 32708
Transaction Type:	Due diligence for property acquisition and development for a daycare facility
NV5 Contact:	Scott D. Graf, P.G.
EP/Consultant:	NV5, Inc. 6200 Lee Vista Boulevard, Suite 400 Orlando, Florida 32822 Scott D. Graf – Scott.Graf@NV5.com

Background

The *Property* consists of an approximately 1.02-acre out-parcel located within the larger 8.03-acre parent tract parcel identified as Seminole County Property Appraiser Parcel No. 26-20-30-5AR-0A00-007L. The *Property* is currently undeveloped wooded land.

The approximate center of the *Property* lies at 28.69359° North Latitude, -81.25889° West Longitude in Seminole County, Florida and entirely within Section 38, Township 21 South, Range 31 East, as shown on the 2021 USGS "Casselberry, FL" and "Oviedo, FL" 7.5-minute topographic quadrangle maps. The *Property* is currently owned by Tuskawilla Retail Partners II LLC.

The *Property* is bound by undeveloped wooded land to the north and northeast, undeveloped vacant land to the northwest, SR 434 and a multi-family retirement facility to the west and southwest, SR 434, the Cross Seminole Trail, and a stormwater pond and undeveloped land to the south, and the Cross Seminole Trail and undeveloped wooded land to the southeast, with a stormwater pond to the east.

Based on a review of the information collected, the *Property* has consisted of undeveloped land from 1941 through the present day.

Regulatory Records Review

NV5 contracted with Environmental Risk Information Services, Inc. (ERIS) to conduct a search of state and federal regulatory databases to identify recorded concerns for the *Property* and surrounding properties.

The *Property* is located within the Town Center Seminole Economic Enhancement District (S.E.E.D.) / Brownfield Area. Based on the nature of this listing as a designated area to support economic development incentive and redevelopment, which does not specifically identify impacted sites on the Property or adjoining properties, it is not considered a REC.

Several facilities were identified on the state and federal databases within the specified search radii. Based on the regulatory file review, these facilities are not considered a REC to the *Property*.

On-Site Recognized Environmental Conditions

NV5 did not identify any current on-site recognized environmental condition during the completion of this Phase I ESA.

Deviations

NV5 did not deviate from ASTM Standard E1527-21 to the extent that we could determine such deviations.

De Minimis Conditions

A *de minimis* condition, as defined in the ASTM Standard, is a condition that generally does not present a threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not RECs or CRECs.

NV5 did not identify *de minimis* conditions in association with the *Property*.

Off-Site Recognized Environmental Conditions

NV5 did not identify off-site recognized environmental conditions during the completion of this Phase I ESA.

Conclusions

The Environmental Professional (EP), Scott D. Graf, has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 and the authorized Scope of Work for the *Property* identified as the 1.02-acre commercial out-parcel located at SR 434 and Michael Blake Boulevard, Seminole County, Florida 32708.

Any exceptions to or deletions from this practice are described in Section 5.1 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the *Property*.

Issues beyond the Scope of ASTM Standard E1527-21

NV5 was not retained to provide additional services beyond those outlined in our proposal and in accordance with ASTM Standard E1527-21.

Deviations

NV5 did not deviate from ASTM Standard E1527-21 to the extent that we could determine such deviations.

Vapor Encroachment Screen

A Vapor Encroachment Screen (VES) was completed for the *Property* in accordance with ASTM Standard E2600-10: "Standard Guide for Vapor Encroachment Screening on *Property* Involved in Real Estate Transactions." Based on the findings and assessment of the VES, there are no identifiable Vapor Encroachment Conditions (VECs), which is the presence or likely presence of COC vapors in the sub-surface of the *Property* caused by the release of vapors from contaminated soil or groundwater either on or near the *Property* as identified by Tier 1 procedures as set forth in ASTM Standard E2600-15. Off-site identified VECs were not identified within the specified search radii and can be ruled out because a VEC from these sites does not or is not likely to exist.

CONTENTS

EXECUTIVE SUMMARY I

Off-Site Recognized Environmental Conditions ii

Vapor Encroachment Screen ii

1.0 INTRODUCTION 7

1.1 Objective 7

1.2 Detailed Scope of Services 7

1.3 Significant Assumptions 8

1.4 Limitations and Exceptions 8

2.0 SITE OVERVIEW 10

2.1 Property Location and Description 10

2.1.1 Legal Description 10

2.2 Property and Vicinity General Characteristics 10

2.3 Property Improvements 10

2.4 Topography and Wetlands 11

2.4.1 Topography 11

2.4.2 Wetlands 11

2.5 Geological Characterization 11

2.5.1 Surface Features 11

2.5.2 Subsurface Features 11

3.0 USER-PROVIDED INFORMATION 13

3.1 Title Records 13

3.2 Environmental Liens or Activity and Use Limitations 13

3.3 Owner, Property Manager, and Occupant Information 13

3.4 Reason for Performing Phase I 13

3.5 Other 13

4.0 ASSUMPTIONS, LIMITATIONS, EXCEPTIONS, DEVIATIONS AND DATA GAPS 14

4.1 Significant Assumptions 14

4.2 Limitations, Exceptions, Deviations and Data Gaps 14

5.0 HISTORICAL RECORDS REVIEW 15

5.1 History of Property Use 15

5.2 Historical Records Review 15

5.2.1 Historical Aerial Photographs 15

5.2.3 Historical Sanborn® Maps 17

5.2.4 Historical Topographic Maps 17

5.2.5 Historical City Directories 17

5.2.6 Recorded Land Titles and Environmental Lien & Activity and Use Limitation Search 17

5.2.7 Property Tax Records 17
5.3 Agency File Review 17
5.3.1 Seminole County Fire Department 17
5.3.2 Winter Springs Building Department 17
5.3.3 Florida Department of Environmental Protection (FDEP) 18
5.4 Previous Environmental Reports 18
5.5 Summary of Historical Information 18

6.0 ENVIRONMENTAL RECORDS REVIEW 19

6.1 Standard Environmental Record Sources 19
6.2 Federal Agency Records Review 19
6.3 State Agency, Local, Tribal, ERIS Proprietary Record Review and Additional Environmental Record Sources 19

7.0 PROPERTY RECONNAISSANCE 20

7.1 Methodology and Limiting Conditions 20
7.2 General Property Conditions 20
7.2.1 Exterior Observations 20
7.2.2 Interior Observations 20
7.2.3 Storage Tanks 20
7.2.4 Hazardous Substances and Petroleum Products in Connection with Identified Uses 20
7.2.5 Hazardous Substance and Petroleum Products Containers (Not Necessarily in Connection with Identified Uses) 20
7.2.6 Drums 20
7.2.7 Unidentified Substance Containers 20
7.2.8 PCBs 21
7.2.9 Odors 21
7.2.10 Pools of Liquid 21
7.2.11 Pits, Ponds, or Lagoons 21
7.2.12 Stained Soil or Pavement 21
7.2.13 Stains or Corrosion 21
7.2.14 Stressed Vegetation 21
7.2.15 Solid Waste 21
7.2.16 Wastewater 21
7.2.17 Wells 21
7.2.18 Drains and Sumps 21
7.2.19 Septic Systems 21
7.2.20 Heating/Cooling 21
7.2.21 Radon 22
7.2.22 Current Uses of Adjoining Properties 22

8.0 INTERVIEWS 23

8.1 Interview with Owner/Key Property Manager 23
8.2 Interviews with Occupants 23
8.3 Interviews with Local Regulatory Agencies 23

8.4 Interviews with Others 23

9.0 FINDINGS/OPINION 24

9.1 On-Site Recognized Environmental Conditions 24
9.2 Off-Site Recognized Environmental Conditions 24
9.3 Issues beyond the Scope of ASTM Standard E1527-21 24

10.0 CONCLUSIONS 25

11.0 STANDARD OF CARE 1

Phase I Environmental Site Assessment 1
Unidentifiable Conditions 1

12.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS 2

13.0 REFERENCES 3

FIGURES

1 Property (Site) Vicinity Map
2 Property (Site) Plan

APPENDICES

A Aerial Photographs
B Property (Site) Photographs
C User Questionnaire
D ERIS Database Search Report
E Supporting Historical Documentation
F Qualifications of Environmental Professionals

1.0 INTRODUCTION

NV5, Inc. (NV5) performed a Phase I Environmental Site Assessment (ESA) of the 1.02-acre commercial out-parcel located at SR 434 and Michael Blake Boulevard, Seminole County, Florida 32708 (hereafter the "*Property*").

The *Property* consists of an approximately 1.02-acre out-parcel located within the larger 8.03-acre parent tract parcel identified as Seminole County Property Appraiser Parcel No. 26-20-30-5AR-0A00-007L. The *Property* is currently owned by Tuskawilla Retail Partners II LLC. The *Property* is currently undeveloped wooded land.

The approximate center of the *Property* lies at 28.69359° North Latitude, -81.25889° West Longitude in Seminole County, Florida and entirely within Section 38, Township 21 South, Range 31 East, as shown on the 2021 USGS "Casselberry, FL" and "Oviedo, FL" 7.5-minute topographic quadrangle maps.

The *Property* is bound by undeveloped wooded land to the north and northeast, undeveloped vacant land to the northwest, SR 434 and a multi-family retirement facility to the west and southwest, SR 434, the Cross Seminole Trail, and a stormwater pond and undeveloped land to the south, and the Cross Seminole Trail and undeveloped wooded land to the southeast, with a stormwater pond to the east.

1.1 Objective

NV5 was contracted by KW PARTNERS, LLC to conduct a Phase I ESA of the *Property*. The objective of the Phase I ESA was to identify recognized environmental conditions in connection with the property, to the extent feasible pursuant to the processes prescribed in ASTM E-1527-21. The term *recognized environmental conditions (RECs)* as defined by ASTM is the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or the material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

This Phase I ESA includes information gathered from federal, state, and local agencies; personal interviews with people familiar with the *Property* and surrounding properties; and a *property* visit conducted by an NV5 representative. The report is intended to meet the requirements of ASTM E-1527-21.

1.2 Detailed Scope of Services

The Phase I ESA conducted by NV5 included, but was not limited to, the following services:

- A reconnaissance-level *Property* visit to look for evidence of the release(s) of hazardous materials and petroleum products and to assess the potential for On-*Property* releases of hazardous materials and petroleum products.
- Drive-by observations of adjacent properties and the *Property* vicinity.
- Interviews with people familiar with the *Property*.
- Review of regulatory agency files.
- Review of prior reports.
- Review of historical documents.

- Preparation of a report presenting our findings including summary of conclusions.

NV5 received written authorization to proceed with this work by electronic correspondence referencing NV5 proposal number P44224-0006043.00 on August 23, 2024.

1.3 Significant Assumptions

The purpose of this Phase I ESA is to provide appropriate inquiry into the previous ownership and use of the *Property* consistent with good commercial and customary practice in an effort to minimize environmental liability. NV5 also assumes that the information provided by the Client, regulatory database providers, and regulatory agencies is true and reliable.

1.4 Limitations and Exceptions

This document was prepared for the sole use of NV5 and the Catholic Charities Bureau, Inc., and may be relied upon by such parties. No other party should rely on the information contained herein without the prior written consent of NV5.

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by NV5 and the original party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. To the extent that NV5 relied upon any information prepared by other parties not under contract to NV5, NV5 makes no representation as to the accuracy or completeness of such information.

Only the party for whom this report was originally prepared, and other specifically named parties, may make use of and rely upon the information in this report, in its entirety, for a period not to exceed 180 days in accordance with the American Society for Testing and Materials' (ASTM's) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-00, dated May 10, 2000; ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-05, dated November 1, 2005; ASTM's "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-21, dated November 1, 2013; and/or the Code of Federal Regulations (CFR) 40 CFR Part 312, "Standards and Practices for All Appropriate Inquiries: Final Rule," dated November 1, 2005. After 180 days and prior to using the information contained herein, the report should be updated in accordance with ASTM Standards and federal regulations.

The findings presented in this report apply solely to site conditions existing at the time when NV5's assessment was performed. It must be recognized, however, that an ESA is intended for the purpose of evaluating the potential for contamination through limited research and investigative activities and in no way represents a conclusive or complete site characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. NV5's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in ESA conclusions cannot reasonably be achieved. NV5, therefore, does not provide any guarantees, certifications, or warranties (express or implied) that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and all applicable laws, codes, regulations, or standards.

Visual observations of site conditions could only be made from accessible locations. This inherently limits the findings of this Phase I ESA to only those observations that could be made.

1.5 Special Terms and Conditions

The scope of work for this Phase I ESA did not include testing of electrical equipment for the potential presence of polychlorinated biphenyls (PCBs) or the assessment of natural hazards such as naturally occurring asbestos, or methane gas, assessment of the potential presence of radionuclides, or assessment of non-chemical hazards such as the potential for damage from earthquakes or floods. This Phase I ESA also did not include an extensive assessment of the environmental compliance status of the *Property* or of the businesses operating at the *Property*, or a health-based risk assessment.

2.0 SITE OVERVIEW

2.1 Property Location and Description

The *Property* consists of an approximately 1.02-acre out-parcel located within the larger 8.03-acre parent tract parcel identified as Seminole County Property Appraiser Parcel No. 26-20-30-5AR-0A00-007L. The *Property* is currently owned by Tuskawilla Retail Partners II LLC. The *Property* is currently undeveloped wooded land.

The approximate center of the *Property* lies at 28.69359° North Latitude, -81.25889° West Longitude in Seminole County, Florida and entirely within Section 38, Township 21 South, Range 31 East, as shown on the 2021 USGS "Casselberry, FL" and "Oviedo, FL" 7.5-minute topographic quadrangle maps.

Based on a review of the information collected, the *Property* has consisted of primarily undeveloped land from 1941 through the present day.

2.1.1 Legal Description

According to the Seminole County Property Appraiser's website, the parent tract parcel that the *Property* is located within is described as follows:

PT OF LOTS 7 & 8 N OF SR 434 E OF RD DESC IN ORB 7486 PG 138 S & W OF TIITF PARCEL DESC IN ORB 3988 PG 1075 DESC AS BEG AT INT OF R/W 434 & R/W TUSKAWILLA RD RUN S 38 DEG 23 MIN 34 SEC E 1320.11 FT N 51 DEG 36 MIN 26 SEC E 94.94 FT TO POB RUN N 24 DEG 10 MIN 06 SEC W 48.66 FT N 38 DEG 43 SEC 16 MIN W 246.6 FT NELY ALONG CURVE 39.27 FT N 51 DEG 16 SEC 44 MIN E 389.87 FT N 53 DEG 37 MIN 06 SEC E 71.07 FT ELY ALONG CURVE 10.76 FT S 85 DEG 17 MIN 55 SEC E 22.68 FT SELY ALONG CURVE 11.05 FT S 43 DEG 04 MIN 36 SEC E 31.18 FT N 51 DEG 24 MIN 49 SEC E 1.88 FT S 38 DEG 21 MIN 49 SEC E 606.04 FT S 50 DEG 31 MIN 58 SEC W 529.43 FT N 38 DEG 43 MIN 16 SEC W 357.65 FT TO POB D R MITCHELLS SURVEY OF THE LEVY GRANT PB 1 PG 5

2.2 Property and Vicinity General Characteristics

A Property (Site) Vicinity Map and Property (Site) Plan are presented as Figures 1 and 2, respectively.

The *Property* is located within an area of generally residential (both single-family and multifamily) development, with commercial use further to the northwest along SR 434.

The *Property* is bound by undeveloped wooded land to the north and northeast, undeveloped vacant land to the northwest, SR 434 and a multi-family retirement facility to the west and southwest, SR 434, the Cross Seminole Trail, and a stormwater pond and undeveloped land to the south, and the Cross Seminole Trail and undeveloped wooded land to the southeast, with a stormwater pond to the east.

NV5 visually inspected accessible areas on foot crisscrossing the areas of the *Property* that were at ground level. NV5 did not note areas of potential environmental concern during the *Property* reconnaissance.

2.3 Property Improvements

The *Property* is undeveloped, wooded land with recently cleared paths extending throughout the *Property*. The paths appear to be associated with large vehicles and/or equipment which may have been recently used to conduct soil borings based on the presence of flagged survey stakes throughout the cleared areas of the *Property*.

2.4 Topography and Wetlands

2.4.1 Topography

According to the 2021 USGS 7.5-Minute Series Topographic Map of the "Casselberry, FL" and "Oviedo, FL" quadrangles, the *Property* elevation is approximately 25-30 feet above mean sea level (msl). Topographically, the *Property* and vicinity slope to the east and southeast.

The approximate center of the *Property* lies at 28.69359° North Latitude, -81.25889° West Longitude in Seminole County, Florida and entirely within Section 38, Township 21 South, Range 31 East, as shown on the 2021 USGS "Casselberry, FL" and "Oviedo, FL" 7.5-minute topographic quadrangle maps.

2.4.2 Wetlands

NV5's review of the National Wetlands Inventory Map as well as soil survey information did not indicate that wetland areas are located on the *Property*.

2.5 Geological Characterization

2.5.1 Surface Features

The *Property* sloped to the northeast and southeast. Surface drainage was not noted on the *Property*.

2.5.2 Subsurface Features

Published geologic information indicates the following:

Topographic Property Elevation	Approximately 25-30 feet above mean sea level
Surficial Materials	The Soil Survey for Seminole County produced by the Soil Conservation District indicates the predominant surficial soils in the vicinity of the site belong to the following series: Pomello fine sand, 0 to 5 percent slopes and St. Johns and EauGallie find sands. Pomello fine sand, 0 to 5 percent slopes: This component is on ridges, coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 0 within 30 inches of the soil surface. St. Johns and EauGallie fine sands Component: St. Johns (57%) The St. Johns component makes up 57 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

	Component: EauGallie (36%) The EauGallie component makes up 36 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.
Area geology beneath *Property*	Undifferentiated Quaternary Sediments - Much of Florida's surface is covered by a varying thickness of undifferentiated sediments consisting of siliciclastics, organics and freshwater carbonates. Where these sediments exceed 20 feet (6.1 meters) thick, they were mapped as discrete units. In an effort to subdivide the undifferentiated sediments, those sediments occurring in flood plains were mapped as alluvial and flood plain deposits (Qal). Sediments showing surficial expression of beach ridges and dunes were mapped separately (Qbd) as were the sediments composing Trail Ridge (Qtr). Terrace sands were not mapped (refer to Healy [1975] for a discussion of the terraces in Florida). The subdivisions of the Undifferentiated Quaternary Sediments (Qu) are not lithostratigraphic units but are utilized in order to facilitate a better understanding of the State's geology. The siliciclastics are light gray, tan, brown to black, unconsolidated to poorly consolidated, clean to clayey, silty, unfossiliferous, variably organic-bearing sands to blue green to olive green, poorly to moderately consolidated, sandy, silty clays. Gravel is occasionally present in the panhandle. Organics occur as plant debris, roots, disseminated organic matrix and beds of peat. Freshwater carbonates, often referred to as marls in the literature, are scattered over much of the State. In southern Florida, freshwater carbonates are nearly ubiquitous in the Everglades. These sediments are buff colored to tan, unconsolidated to poorly consolidated, fossiliferous carbonate muds. Sand, silt and clay may be present in limited quantities. These carbonates often contain organics. The dominant fossils in the freshwater carbonates are mollusks.
Regional groundwater flow direction	Regional groundwater flow in the vicinity of the *Property* is expected to be towards the east and southeast.
Sole source aquifer (if present)	The Property does not overly a sole source aquifer.

3.0 USER-PROVIDED INFORMATION

The Client provided NV5 with an Architectural Site Plan for the *Property*, the completed User Questionnaire, and the name and contact information for the *Property* owner as defined in ASTM Standard E1527-21.

3.1 Title Records

NV5 did not perform a chain of title search for each parcel of the *Property*.

3.2 Environmental Liens or Activity and Use Limitations

NV5 performed a search for Environmental Liens (ELs) or Activity and Use Limitations (AULs) via the publicly available records of Seminole County and the State of Florida Department of Environmental Protection, (FDEP), but none were identified for the *Property*.

3.3 Owner, Property Manager, and Occupant Information

The *Property* is currently owned by Tuskawilla Retail Partners LLC and comprises an approximately 1.02-acre out-parcel located within the larger 8.03-acre parent tract parcel identified as Seminole County Property Appraiser Parcel No. 26-20-30-5AR-0A00-007L.

3.4 Reason for Performing Phase I

The reason for performing this Phase I ESA was to evaluate the *Property* for the presence of environmental concerns during the due diligence process for the acquisition and development of a daycare facility.

3.5 Other

NV5 was not commissioned with providing additional services in the completion of this Phase I ESA.

4.0 ASSUMPTIONS, LIMITATIONS, EXCEPTIONS, DEVIATIONS AND DATA GAPS

4.1 Significant Assumptions

NV5 made the following assumptions in developing our Phase I ESA findings and conclusions:

- Groundwater Flow Direction - NV5 interpreted and inferred the direction of the shallow groundwater movement based on the information we obtained and our experience. Actual groundwater flow may be locally influenced by many factors beyond the scope of this study. Subsurface investigation would be necessary to determine site-specific groundwater flow direction.

- Regulatory Agency Information - NV5 considers all information provided by ERIS regarding regulatory status of facilities to be complete, accurate, and current.

- Other Regulatory Information - NV5 considers all other information obtained from regulatory or enforcement agencies to be complete, accurate, and current.

- Title, Lien and Activity and Use Limitation (AUL) Information - NV5 considers all information provided by ERIS, its subcontractors, or other real estate title records revie w firms regarding property ownership or encumbrances to be complete, accurate and current.

- Interviews - NV5 considers all information provided through interviews to be complete, unbiased and provided in good faith.

- Other - None

4.2 Limitations, Exceptions, Deviations and Data Gaps

NV5 considers that limitations, exceptions and deviations from the Practice manifest as a lack of or inability to obtain information required by the Practice. This represents the definition of the 'data gap' contained in the Practice.

In general, when required information was incomplete, not provided, otherwise not obtained or indicated a need for additional information, NV5 attempted to use information from other sources to meet the Practices' performance objectives. When the data gaps affected the Environmental Professional's ability to identify RECs, NV5 considered the data gap(s) to be significant. NV5 identified significant data gaps (if any) and reported them here.

The first undeveloped use of the property was identified in NV5's research. Useful Historical data was available back to 1941. Data gaps in excess of the recommended 5-year interval were also encountered. Based on the available information, this historical data gap is not significant.

NV5 encountered data limitations by not interviewing the past Site owners and adjacent property owners, as none were available for comment, did not respond to requests to information, or did not exist. However, based on our review of the available municipal, regulatory, and historical information, the absence of information obtained from interviews with these individuals is not considered significant to the findings, conclusions, and recommendation of this environmental site assessment.

A walkover *Property* inspection was conducted to identify visible evidence of environmental concerns but was limited due to the presence of dense vegetative growth over portions of the ground surface of the *Property*.

5.0 HISTORICAL RECORDS REVIEW

5.1 History of Property Use

NV5 reviewed the historical usage of the *Property* and surrounding properties. This included review of historical topographic maps, city directories, and aerial photographs.

NV5's sources of information included the following. Copies of representative historical source information are provided in applicable Appendices.

Historical Data Sources	Years Reviewed	Data Source/Publisher	Note
Aerial Photographs	1941, 1948, 1957, 1964, 1974, 1984, 1989, 1993, 1999, 2005, 2006, 2007, 2010, 2013, 2015, 2017, 2019, 2021, and 2024	ERIS and Seminole County Property Appraiser website	Pertinent copies in Appendix A
Fire Insurance Maps	NA	ERIS; Sanborn®	NA
United States Geological Survey (USGS) Topographic Maps	1962, 1970, 1972, 1980, 1994, 2015, and 2021	"Casselberry, Florida" and "Oviedo, Florida"/USGS	Copies of the USGS maps are found in Appendix E
Local City Directories	1968, 1972, 1976, 1981, 1986, 1990, 1996, 2000, 2003, 2007, 2012, 2016, 2020, and 2023	ERIS	City directories reviewed did not identify suspect historical businesses located in the property vicinity. Copies can be found in Appendix E
Property Tax Files	2024	Seminole County *Property* Appraiser's website	NLU
Building Department Records	All available	City of Winter Springs	NLU
Zoning/Land Use Records	March 2024	City of Winter Springs Zoning Map	The *Property* is zoned T-C (Town Center District Code)
Note Key: NRA = Not Reasonably Ascertainable, NLU = Not Likely to be Useful, NA = None Available, NR = Not Reviewed			

5.2 Historical Records Review

The following sections present the results of NV5's review of the historical references obtained and reviewed through the course of this Phase I ESA. These included city directories, aerial photographs, and topographic maps pertaining to the *Property*.

Based on a review of the information collected, the *Property* has consisted of undeveloped land from 1941 to 2024.

5.2.1 Historical Aerial Photographs

Historical aerial photographs were reviewed as presented in Appendix A of the NV5 Phase I ESA. NV5 reviewed historical aerial photographs for the years 1941, 1948, 1957, 1964, 1974, 1984, 1989, 1993, 1999, 2005, 2006, 2007, 2010, 2013, 2015, 2017, 2019, 2021 and 2024, inclusive. NV5 did not identify concerns for the *Property* or the adjacent and adjoining properties from the review of the historical aerial photographs.

Year(s)	Description of Past Property Use
1941 - 2024	The *Property* was initially undeveloped land with scattered trees and the tree coverage increased to the point where the Property was covered with trees/vegetation.

The historical information developed and reviewed of the aerial photographs for the *Property* did not reveal evidence of recognized environmental conditions. Copies of pertinent aerial photographs are included in Appendix A.

Year(s)	Description of Adjoining and Adjacent Property Use
North/Northeast/Northwest	
1941 - 1948	Undeveloped land with scattered trees and some trails
1957 - 1999	Undeveloped land with scattered trees
2005 - 2010	Unpaved road extends from SR 434 to the northwest of the *Property*
2013 - 2015	Clearing to the north; Michael Blake Boulevard constructed further north and northwest
2017	Two rows of stockpiled material located to the northwest
2019 - 2024	Undeveloped land with scattered to dense tree/vegetation coverage
East	
1941	Undeveloped land with scattered trees
1948	Some clearing and trails
1957 - 1999	Undeveloped land with increasing tree coverage
2005 - 2015	Cross Seminole Trail with bridge over SR 434 has been constructed along the southeast Property boundary extending northeast to southwest
2017 - 2024	Stormwater pond constructed to east of Cross Seminole Trail
South	
1941	Undeveloped land with scattered trees; SR 434 located further south and southwest
1948 - 1993	Undeveloped land with increasing tree coverage/vegetation
1999 - 2015	SR 434 is widened to 4-lane divided highway
2017 - 2024	Retention pond constructed southwest of SR 434
West	
1941	Undeveloped land with scattered trees; SR 434 located further south and southwest
1948 - 1984	Undeveloped land with increasing tree coverage/vegetation
1989 - 1993	Cleared area apparent to the west, southwest of SR 434
1999 - 2017	SR 434 is widened to 4-lane divided highway
2019 - 2024	The Savoy multi-family retirement facility constructed to the west, southwest of SR 434

The historical information developed and reviewed for the aerial photographs of the adjoining and adjacent properties revealed no evidence of historical recognized environmental conditions in association with the *Property*. Copies of pertinent aerial photographs are included in Appendix A.

5.2.3 Historical Sanborn® Maps

Historical Sanborn® maps were requested from ERIS. There was no coverage available for the *Property* area or surrounding properties. A copy of the ERIS Fire Insurance Maps Report is included in Appendix E of this report.

5.2.4 Historical Topographic Maps

Historical USGS topographic maps were requested from US Geological Survey (USGS) for the *Property* area. Historical topographic map coverage was available for the years 1962, 1970, 1972, 1980, 1994, 2015, and 2021. In the topographic quadrangle maps reviewed, the *Property* remained undeveloped with no building structures shown. The adjoining and adjacent properties are depicted as being undeveloped with the exception of the south/southwest adjoining SR 434.

The historical information developed and reviewed for the *Property* and the adjoining and adjacent properties from the historical USGS topographic maps did not reveal evidence of recognized environmental conditions in connection with the *Property*. A copy of the ERIS Historical Topographic Map Report is included in Appendix E of this report.

5.2.5 Historical City Directories

NV5 completed a review of available City Directories for the *Property*. Suspect city directory listings were not identified for the Property and adjoining properties. The ERIS City Directory report can be reviewed in Appendix E of this report.

5.2.6 Recorded Land Titles and Environmental Lien & Activity and Use Limitation Search

NV5 performed a search for ELs or AULs via the publicly available records of the Florida Department of Environmental Protection, but none were identified for the *Property*.

5.2.7 Property Tax Records

NV5 reviewed tax records found on the Seminole County Property Appraiser's website. No useful historical information was obtained from this data source.

5.3 Agency File Review

5.3.1 Seminole County Fire Department

NV5 contacted the Seminole County Fire Department regarding documented records of emergency responses or releases of petroleum products or hazardous materials for the *Property*, but a response was not received prior to finalizing this report.

5.3.2 Winter Springs Building Division

NV5 submitted a records request for building records for the Property to the City of Winter Springs, but a response was not received prior to finalizing this report.

5.3.4 Florida Department of Environmental Protection (FDEP)

NV5 searched the FDEP online storage tank compliance management (STCM) database for records regarding USTs, aboveground storage tanks (ASTs), and/or releases of petroleum product or hazardous materials at the *Property*. The FDEP database had no records of tanks or releases of oil or hazardous materials in relation to the *Property*.

5.4 Previous Environmental Reports

NV5 was not provided previous reports completed for the *Property*.

5.5 Summary of Historical Information

Based on a review of the information collected, the *Property* has consisted of undeveloped land from 1941 to 2024.

6.0 ENVIRONMENTAL RECORDS REVIEW

6.1 Standard Environmental Record Sources

Regulatory agency database information was obtained from ERIS, which maps and lists properties in federal and state environmental databases with existing conditions or status that may have the potential to affect the *Property*. The number of listed sites identified within the AMSDs from the Federal and state standard environmental records database listings specified in ASTM Standard E 1527-21 § 8.2.1 are summarized in the following table. Also shown are ASTM supplemental database searched and sites identified within the search distance. In some instances, an identified facility may be listed multiple times in the same database. In these cases, NV5 adjusts the reported number of listings in the database to accurately reflect a single facility listed more than once in the same database, which results in a difference in the number of facilities reported in the table below when compared to the ERIS regulatory database report presented in Appendix E. The results of the review for each database are discussed below. Databases with listings identified on or in the area of the *Property* are discussed separately, following the table, along with an opinion about the significance of the listing to the analysis of recognized environmental conditions in connection with the *Property*. The database report is provided as Appendix D.

NV5 reviewed regulatory agency database information compiled by ERIS to help identify recognized environmental conditions in connection with the *Property*. Unless stated otherwise in this section, the scope of NV5's review is limited to review of the information provided by ERIS and does not include review of regulatory agency files pertaining to specific sites that may have been identified.

The ERIS report includes an Orphan list of facilities that could not be precisely located due to inadequate address information. NV5 reviewed this list and determined where these facilities are located relative to the Site. None of the Orphan listings are located on the target Site (*Property*), or on the adjoining properties. The information was incorporated into the discussion of the appropriate database. Additionally, NV5's field survey verifies the locations of ERIS-identified facilities in relation to the *Property*, and, if necessary, adjusts their distances and directions with respect to their actual locations.

The approximate locations for the facilities discussed in this section are shown on the figures in the ERIS report, included as Appendix D. A detailed description of each regulatory database searched is included in the ERIS Report.

6.2 Federal Agency Records Review

The *Property* was not identified in any of the federal databases within the specified search radii. Several facilities were identified on the federal databases within the specified search radii. Based on the regulatory file review, these facilities are not considered a REC to the *Property*.

6.3 State Agency, Local, Tribal, ERIS Proprietary Record Review and Additional Environmental Record Sources

The *Property* is located within the Town Center Seminole Economic Enhancement District (S.E.E.D.) / Brownfield Area. Based on the nature of this listing as a designated area to support economic development incentive and redevelopment, which does not specifically identify impacted sites on the Property or adjoining properties, it is not considered a REC.

Several facilities were identified on the state databases within the specified search radii. Based on the regulatory file review, these facilities are not considered a REC to the *Property*.

7.0 PROPERTY RECONNAISSANCE

On September 12, 2024, Scott D. Graf, representative of NV5, performed a reconnaissance-level assessment of the *Property* to observe general property conditions and indications of the possible release(s) of petroleum products or hazardous materials to the subsurface. A walkover *Property* inspection was conducted to identify visible evidence of environmental concerns. Photographs taken during NV5's *Property* inspection are included in Appendix B.

7.1 Methodology and Limiting Conditions

Observations made from accessible spaces. NV5 could not conduct an uninterrupted ground reconnaissance of the *Property* due to the presence of dense vegetation in several portions of the *Property*. However, the lack of unobstructed visibility on the *Property* is not anticipated to alter the findings of this Phase I ESA.

7.2 General Property Conditions

7.2.1 Exterior Observations

NV5 visually inspected accessible portions of the Property that were at ground level. NV5 did not note areas of potential environmental concern during the *Property* reconnaissance.

7.2.2 Interior Observations

The *Property* did not contain building structures.

7.2.3 Storage Tanks

Evidence of ASTs, USTs, vent pipes, fill pipes, or access ways indicating USTs were assessed during the *Property* visit. NV5 did not observe any evidence of ASTs, USTs, vent pipes, fill pipes, or access ways indicating the presence of USTs from the publicly accessible spaces.

7.2.4 Hazardous Substances and Petroleum Products in Connection with Identified Uses

NV5 did not observe the presence hazardous materials or petroleum products on the subject property. NV5 did not observe evidence of staining or improper use of hazardous materials at the *Property* during our reconnaissance.

7.2.5 Hazardous Substance and Petroleum Products Containers (Not Necessarily in Connection with Identified Uses)

NV5 did not observe other hazardous substances or petroleum product containers at the *Property* that were not in connection with identified uses.

7.2.6 Drums

NV5 did not observe evidence of drums during the *Property* reconnaissance.

7.2.7 Unidentified Substance Containers

NV5 did not observe unidentified containers at the *Property* during our reconnaissance.

7.2.8 PCBs

NV5 did not observe equipment that would be suspected of containing PCBs on the *Property*.

7.2.9 Odors

NV5 did not detect readily noticeable strong, pungent, or noxious odors on the *Property*.

7.2.10 Pools of Liquid

NV5 did not observe evidence of standing water or pools containing liquids likely to contain hazardous substances or petroleum products on the *Property*.

7.2.11 Pits, Ponds, or Lagoons

NV5 did not observe any pits, ponds or lagoons on the *Property*.

7.2.12 Stained Soil or Pavement

NV5 did not observe areas of staining on the *Property*.

7.2.13 Stains or Corrosion

NV5 did not observe areas of staining or corrosion on the *Property*.

7.2.14 Stressed Vegetation

NV5 did not observe stressed vegetation on the *Property*.

7.2.15 Solid Waste

NV5 did not observe evidence of solid waste dumping on the *Property*.

7.2.16 Wastewater

NV5 did not observe wastewater discharges on the *Property*.

7.2.17 Wells

NV5 did not observe wells on the *Property*.

7.2.18 Drains and Sumps

NV5 did not identify or observe drains or sumps on the *Property*.

7.2.19 Septic Systems

NV5 did not observe septic systems on the *Property*.

7.2.20 Heating/Cooling

Heating and cooling systems were not observed on the *Property*.

7.2.21 Radon

Federal EPA Radon Zone for *SEMINOLE* County: 3 - Low potential; average indoor radon levels may be less than 2 (picocuries per liter) pCi/L.

7.2.22 Current Uses of Adjoining Properties

Properties adjoining the *Property* are as follows:

- North and Northeast: Undeveloped wooded land
- Northwest: Undeveloped vacant land
- West and Southwest: SR 434 and a multi-family retirement facility
- South: SR 434, the Cross Seminole Trail, and a stormwater pond
- Southeast: The Cross Seminole Trail and undeveloped wooded land
- East: The Cross Seminole Trail and a stormwater pond

Evidence of outdoor storage of chemicals was not observed on the adjoining or adjacent properties from accessible locations. No spills stressed or discolored vegetation, or stained soils were observed during NV5's site vicinity reconnaissance. Overall, surrounding property uses are not expected to impact subsurface conditions at the *Property* at this time.

8.0 INTERVIEWS

8.1 Interview with Owner/Key Property Manager

NV5 interviewed Mr. Jorge Sardinas, Partner with the current *Property* owner, Tuskawilla Retail Partners II LLC. Mr. Sardinas indicated that the *Property* was acquired by Tuskawilla Retail Partners II LLC in approximately 2017/2018. He indicated that a Phase I ESA was conducted at the time of purchase and the findings indicated "all clear", otherwise they wouldn't have purchased the *Property*. Mr. Sardinas indicated that they typically don't provide a copy of the prior Phase I ESAs. Mr. Sardinas indicated that the prior owner of the Property was the International Brotherhood of Electrical Workers (IBEW) or a subsidiary. Mr. Sardinas indicated that the *Property* has been vacant land. Mr. Sardinas was not aware of wells or septic tanks on the *Property*, and he indicated that municipally supplied water and sewer service will be provided to the *Property*. Mr. Sardinas was not aware of any spills or discharges of petroleum products or hazardous materials at the *Property* or the adjoining properties. He was not aware of any aboveground or underground storage tanks on the *Property*. He was not aware of any solid waste disposal or landfilling on the *Property*. Mr. Sardinas was not aware of any historic dry cleaners, printers or other businesses that might use or handle hazardous materials on the *Property* or adjoining properties Mr. Sardinas was not aware of any environmental concerns associated with the *Property* or adjoining properties.

8.2 Interviews with Occupants

Property occupants were not interviewed as part of this Phase I ESA as the *Property* was undeveloped land at the time of our reconnaissance.

8.3 Interviews with Local Regulatory Agencies

Interviews conducted with local regulatory agencies have been summarized in Section 5.3.

8.4 Interviews with Others

No past owners, operators or occupants were identified at the time of this assessment.

9.0 FINDINGS/OPINION

Scott D. Graf (the Environmental Professional) has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 and the authorized Scope of Work for the 1.02-acre commercial out-parcel property located at SR 434 and Michael Blake Boulevard, Seminole County, Florida 32708 (the "*Property*"). Any exceptions to, or deletions from, this practice are described in Section 5.1 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the *Property*.

9.1 On-Site Recognized Environmental Conditions

NV5 did not identify any current on-site recognized environmental condition during the completion of this Phase I ESA.

Deviations

NV5 did not deviate from ASTM Standard E1527-21 to the extent that we could determine such deviations.

9.2 Off-Site Recognized Environmental Conditions

NV5 did not identify any off-site recognized environmental conditions during the completion of this Phase I ESA.

De Minimis Conditions

A *de minimis* condition, as defined in the ASTM Standard, is a condition that generally does not present a threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not RECs or CRECs.

NV5 did not identify *de minimis* conditions in association with the *Property*.

9.3 Issues beyond the Scope of ASTM Standard E1527-21

NV5 was not retained to provide additional services beyond those outlined in our proposal and in accordance with ASTM Standard E1527-21.

10.0 CONCLUSIONS

The Environmental Professional (EP), Scott D. Graf, has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 and the authorized Scope of Work for the 1.02-acre commercial out-parcel property located at SR 434 and Michael Blake Boulevard, Seminole County, Florida 32708, the *Property*. Any exceptions to or deletions from this practice are described in Section 5.1 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the Property.

Based on the information obtained in the course of this assessment, NV5 recommends that no further assessment is warranted with respect to issues included within the scope of ASTM Standard E1527-21 and AAI.

11.0 STANDARD OF CARE

The services performed by NV5, Inc. on this project have been conducted with that level of care and skill ordinarily exercised by reputable members of the profession, practicing in the same locality, under similar budget and time constraints.

Phase I Environmental Site Assessment

NV5 warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the ASTM Standard E 1527-21 protocol. These methodologies are described by the standard as representing good commercial and customary practice for conducting an Environmental Site Assessment of a parcel of property for the purpose of identifying recognized environmental conditions. However, these findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in the protocol and some of which are more specifically set forth below.

Unidentifiable Conditions

There is a possibility that even with proper application of these methodologies, conditions may exist on the property that could not be identified within the scope of the assessment or that were not reasonably identifiable from the available information. NV5 believes that the information obtained from the records review and the interviews concerning the property is reliable. However, NV5 cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all-inclusive or comprehensive results, but rather to provide the client with information regarding apparent suspicions of existing and potential adverse environmental conditions relating to the subject property.

As directed by the client, NV5 did not provide any service to investigate or detect the presence of moisture, mold or other biological contaminates in or around any structure, or any service that was designed or intended to prevent or lower the risk of the occurrence of the amplification of the same. Client acknowledges that mold is ubiquitous to the environment with mold amplification occurring when building materials are impacted by moisture. Client further acknowledges that site conditions are outside of NV5's control, and that mold amplification will likely occur, or continue to occur, in the presence of moisture. As such, NV5 cannot and shall not be held responsible for the occurrence or recurrence of mold amplification.

No other warranties are implied or expressed.

No other additional services were provided as part of the Phase I ESA.

12.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

The environmental assessment described herein was conducted by the undersigned employee of NV5. NV5's investigation consisted solely of the activities described in the Introduction of this report, and in accordance with the Client's agreement with NV5, authorized prior to initiation of the assessment, as applicable.

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in §312.10 of 40 Code of Federal Regulations (CFR) 312, and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the *Property*. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



September 16, 2024

Scott D. Graf, P.G. Date
Central Florida Environmental Manager

13.0 REFERENCES

Method References

Phase I Environmental Site Assessment Process, Designation E 1527-21

Physical Setting References

United States Fish & Wildlife Service National Wetlands Inventory wetlands mapper http://www.fws.gov/nwi/

United States Geological Survey, "Casselberry, FL" and "Oviedo, FL" 7½ minute topographic quadrangles, 2021

Historical References

ERIS – Database Report™ No. 24090500255, The Learning Experience, SR 434 and Michael Blake Boulevard, Winter Springs, FL 32708 dated September 6, 2024

ERIS – Fire Insurance Map Report No. 24090500255, The Learning Experience, SR 434 and Michael Blake Boulevard, Winter Springs, FL 32708 dated September 5, 2024

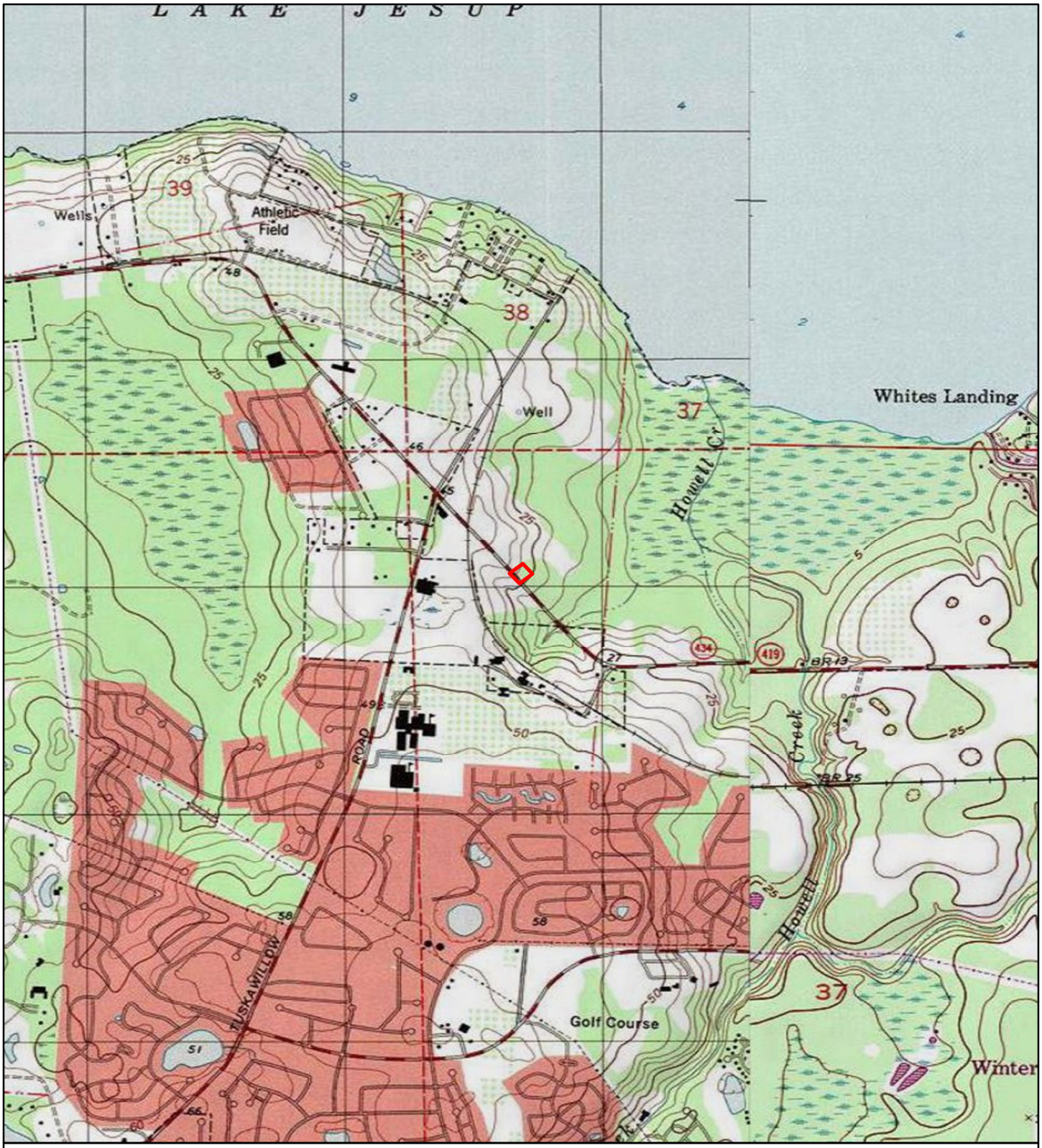
ERIS – Historical Aerial Report No. 24090500255, The Learning Experience, SR 434 and Michael Blake Boulevard, Winter Springs, FL 32708 dated September 9, 2024

ERIS – Physical Setting Report (PSR) Report No. 24090500255p, The Learning Experience, SR 434 and Michael Blake Boulevard, Winter Springs, FL 32708 dated September 5, 2024

ERIS – Topographic Report Report No. 24090500255, The Learning Experience, SR 434 and Michael Blake Boulevard, Winter Springs, FL 32708 dated September 5, 2024

ERIS – City Directory Report No. 24090500255, The Learning Experience, SR 434 and Michael Blake Boulevard, Winter Springs, FL 32708 dated September 6, 2024

FIGURES



Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubedUSGS 7.5 Minute Topographic Map

LEGEND

PROPERTY

2,400 Feet

N

NV5

6200 LEE VISTA BLVD., SUITE 400
ORLANDO, FL 32822
TEL: 407.275.5120

PROJECT LOCATION MAP

THE LEARNING EXPERIENCE
SR 434 AND MICHAEL BLAKE BOULEVARD
PHASE I ENVIRONMENTAL SITE ASSESSMENT

FIGURE 1

FOR:

KW PARTNERS, LLC

DES: RD	DR: RD	CHK: SG

PROJECT NO. 4420424-0006043.00 | DATE: 9/10/2024 | SHT 1 OF 2

Document Path: E:\4420424-0006043.00\4420424-0006043.00 Figure 1.mxd



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User

LEGEND

PROPERTY

240 Feet

N

NV5
6200 LEE VISTA BLVD., SUITE 400
ORLANDO, FL 32822
TEL: 407.275.5120

PROJECT SITE MAP

THE LEARNING EXPERIENCE
SR 434 AND MICHAEL BLAKE BOULEVARD
PHASE I ENVIRONMENTAL SITE ASSESSMENT

FIGURE 2

FOR:

KW PARTNERS, LLC

DES: RD	DR: RD	CHK: SG

PROJECT NO. 4420424-0006043.00 | DATE: 9/13/2024 | SHT 2 OF 2

Document Path: E:\4420424-0006043.00\4420424-0006043.00 Figure 2.mxd

APPENDIX A

Aerial Photographs

HISTORICAL AERIALS

Project Property: The Learning Experience
SR 434 and Michael Blake Boulevard
Winter Springs FL 32708

Project No: 4420424-0006043.00

Requested By: NV5

Order No: 24090500255

Date Completed: September 09,2024

Aerial Maps included in this report are produced by the sources listed above and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property. ERIS provides no warranty of accuracy or liability. The information contained in this report has been produced using aerial photos listed in above sources by ERIS Information Inc. (in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS'. The maps contained in this report do not purport to be and do not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

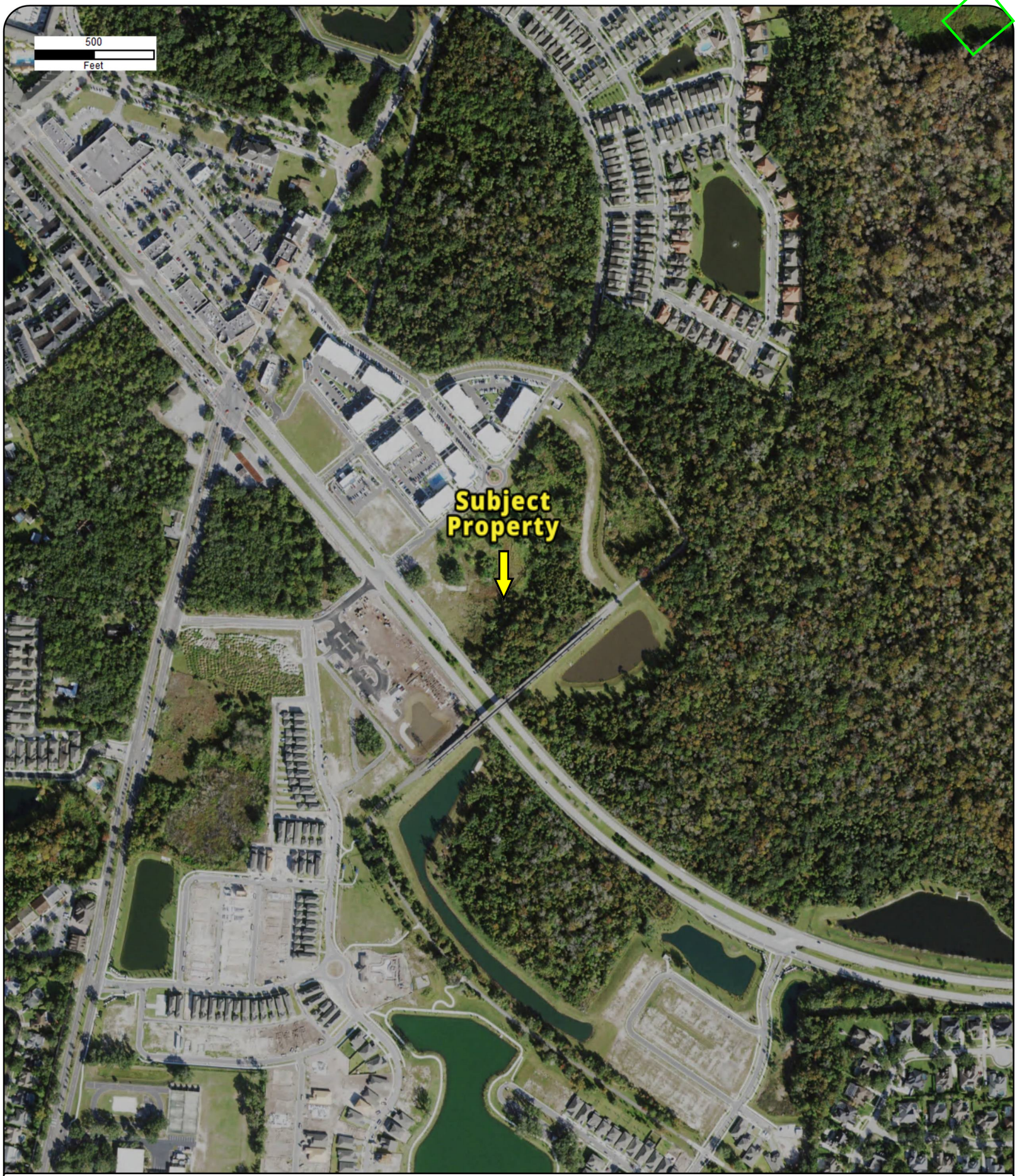
Date	Source	Scale	Comments
2021	Maxar Technologies	1" = 500'	
2019	United States Department of Agriculture	1" = 500'	
2017	United States Department of Agriculture	1" = 500'	
2015	United States Department of Agriculture	1" = 500'	
2013	United States Department of Agriculture	1" = 500'	
2010	United States Department of Agriculture	1" = 500'	
2007	United States Department of Agriculture	1" = 500'	
2006	United States Department of Agriculture	1" = 500'	
2005	United States Department of Agriculture	1" = 500'	
1999	United States Geological Survey	1" = 500'	
1993	Florida Department of Transportation	1" = 500'	
1989	Florida Department of Transportation	1" = 500'	
1984	United States Geological Survey	1" = 500'	
1974	Agricultural Stabilization & Conserv. Service	1" = 500'	
1964	Florida Department of Transportation	1" = 500'	
1957	Agricultural Stabilization & Conserv. Service	1" = 500'	
1948	Agricultural Stabilization & Conserv. Service	1" = 500'	
1941	Agricultural Stabilization & Conserv. Service	1" = 500'	



Year: 2021
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

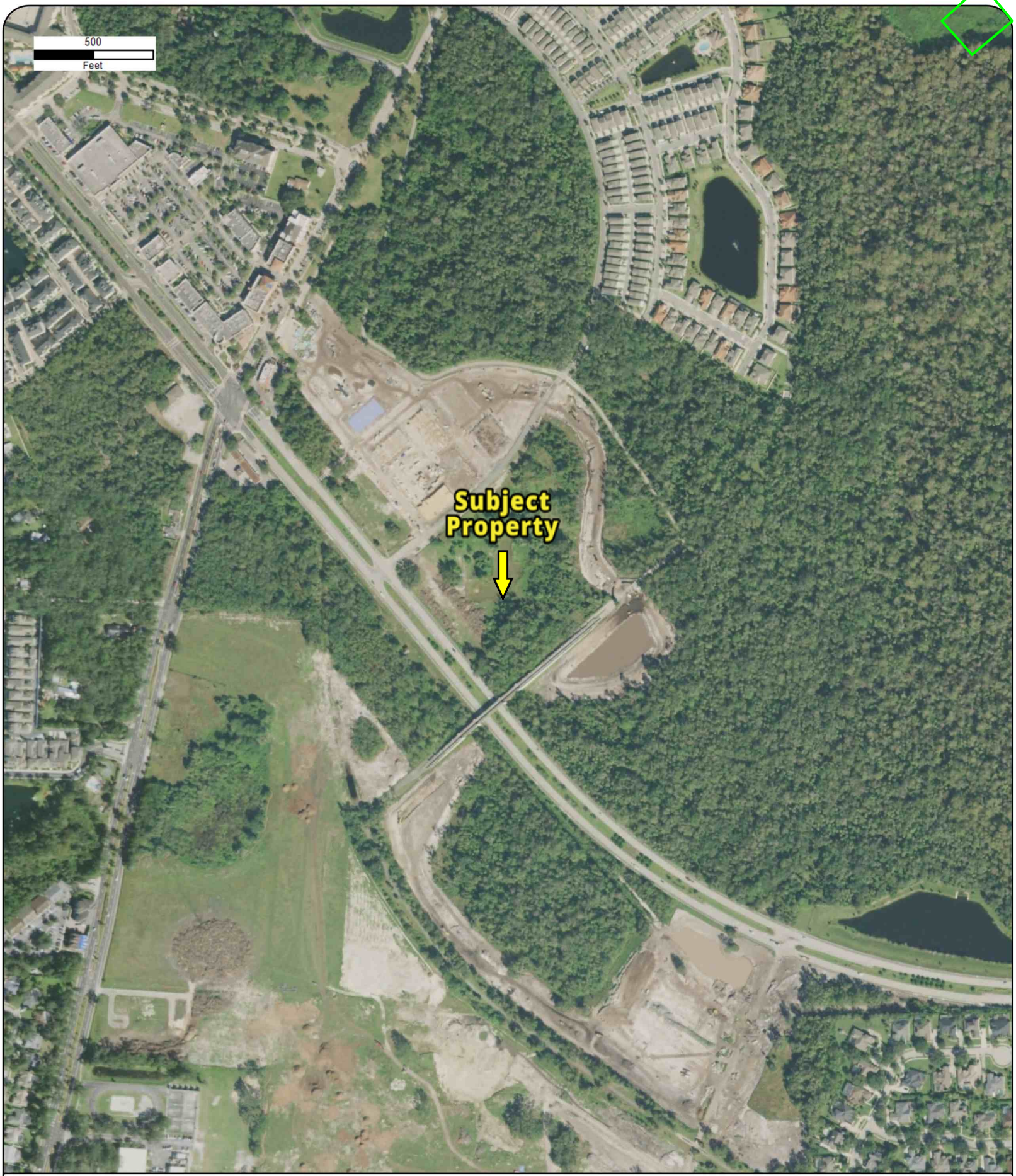
Order No: 24090500255



Year: 2019
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255



Year: 2017
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS



Year: 2015
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255



Year: 2013
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255



Year: 2010
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255



Year: 2007
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255



Year: 2006
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255



Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS

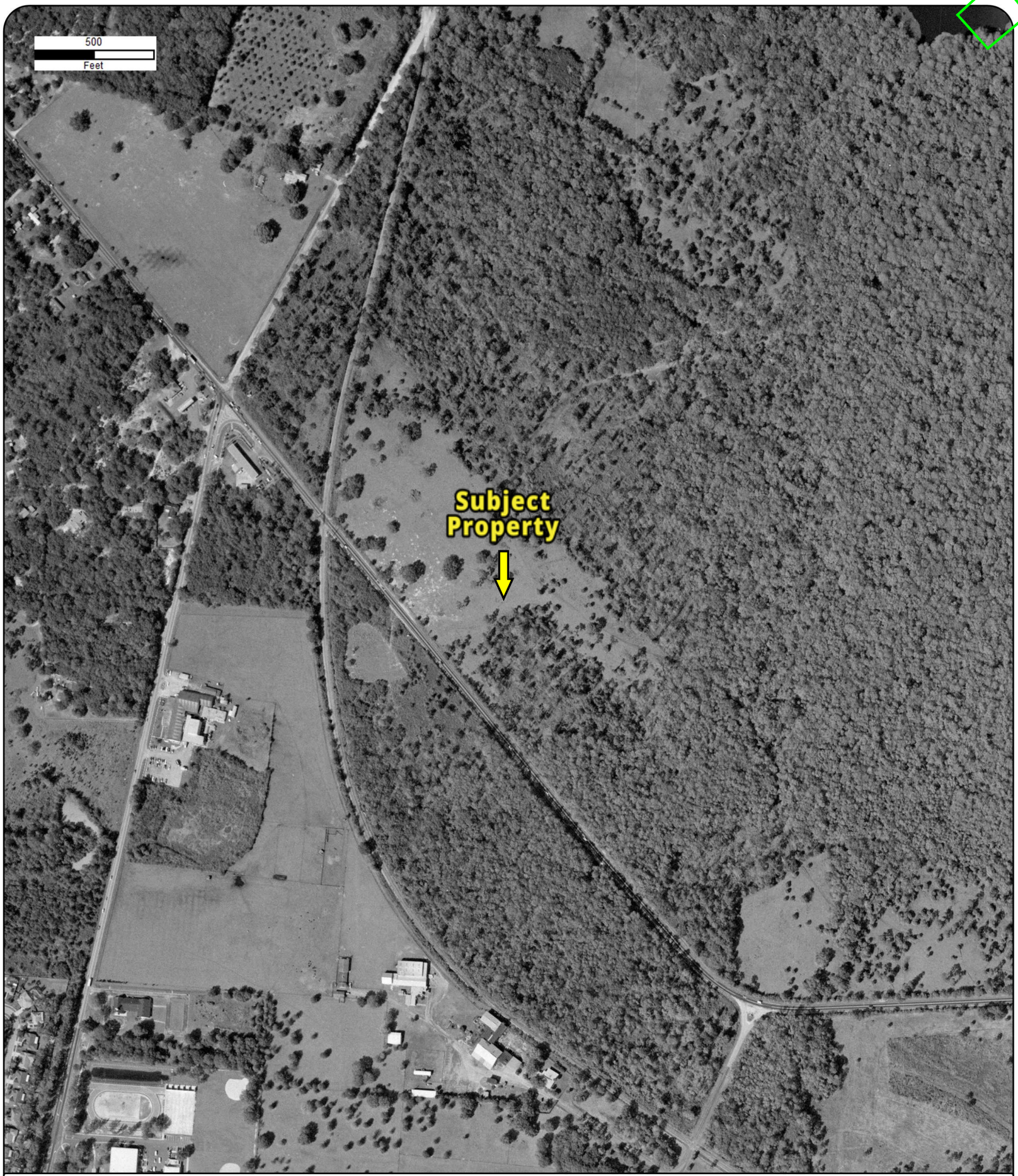


Year: 1999
Source: USGS
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS



Year: 1993
Source: FDOT
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255



Year: 1989
Source: FDOT
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS



Year: 1984
Source: USGS
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

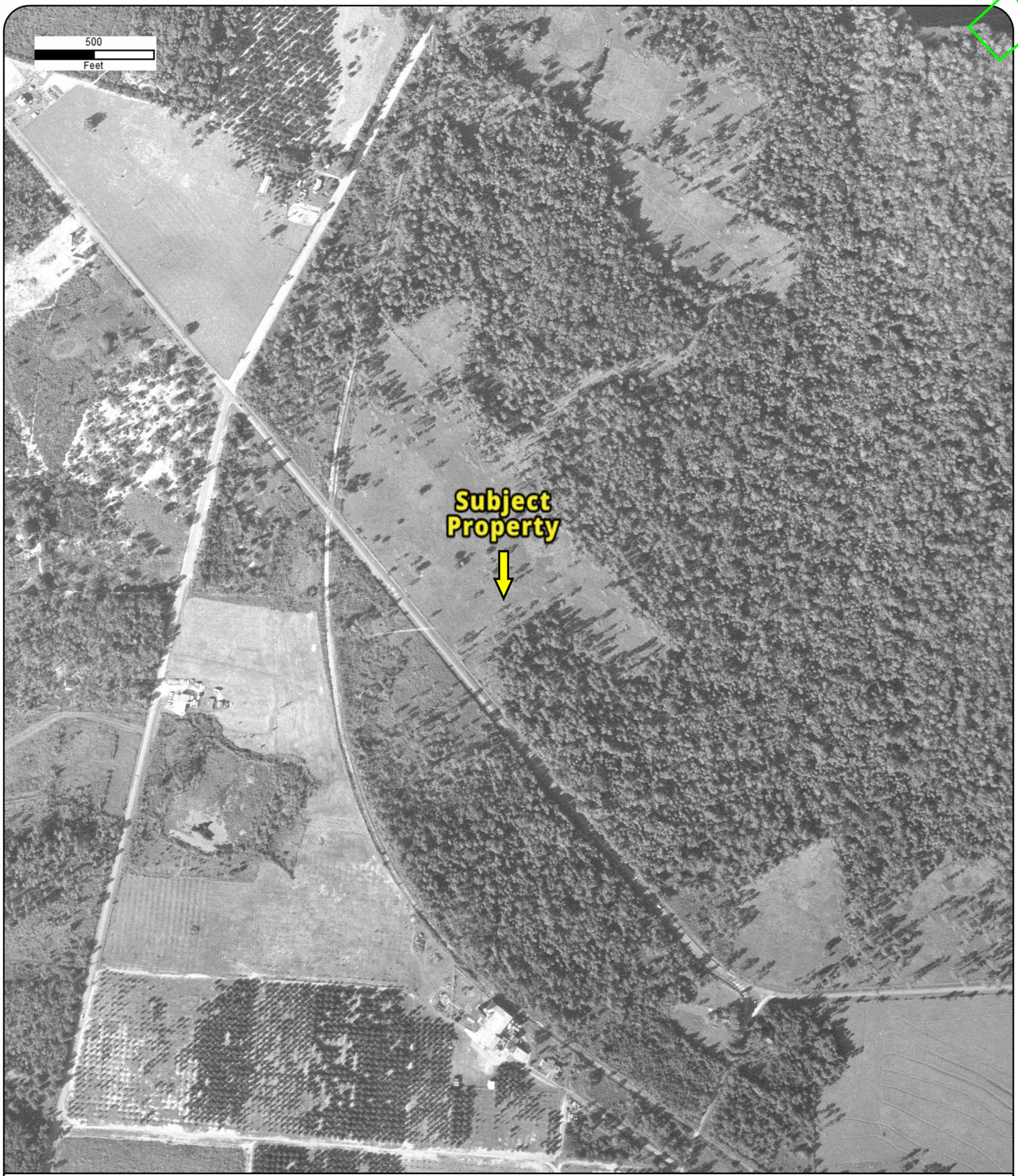


Year: 1974
Source: ASCS
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS



Year: 1964
Source: FDOT
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS

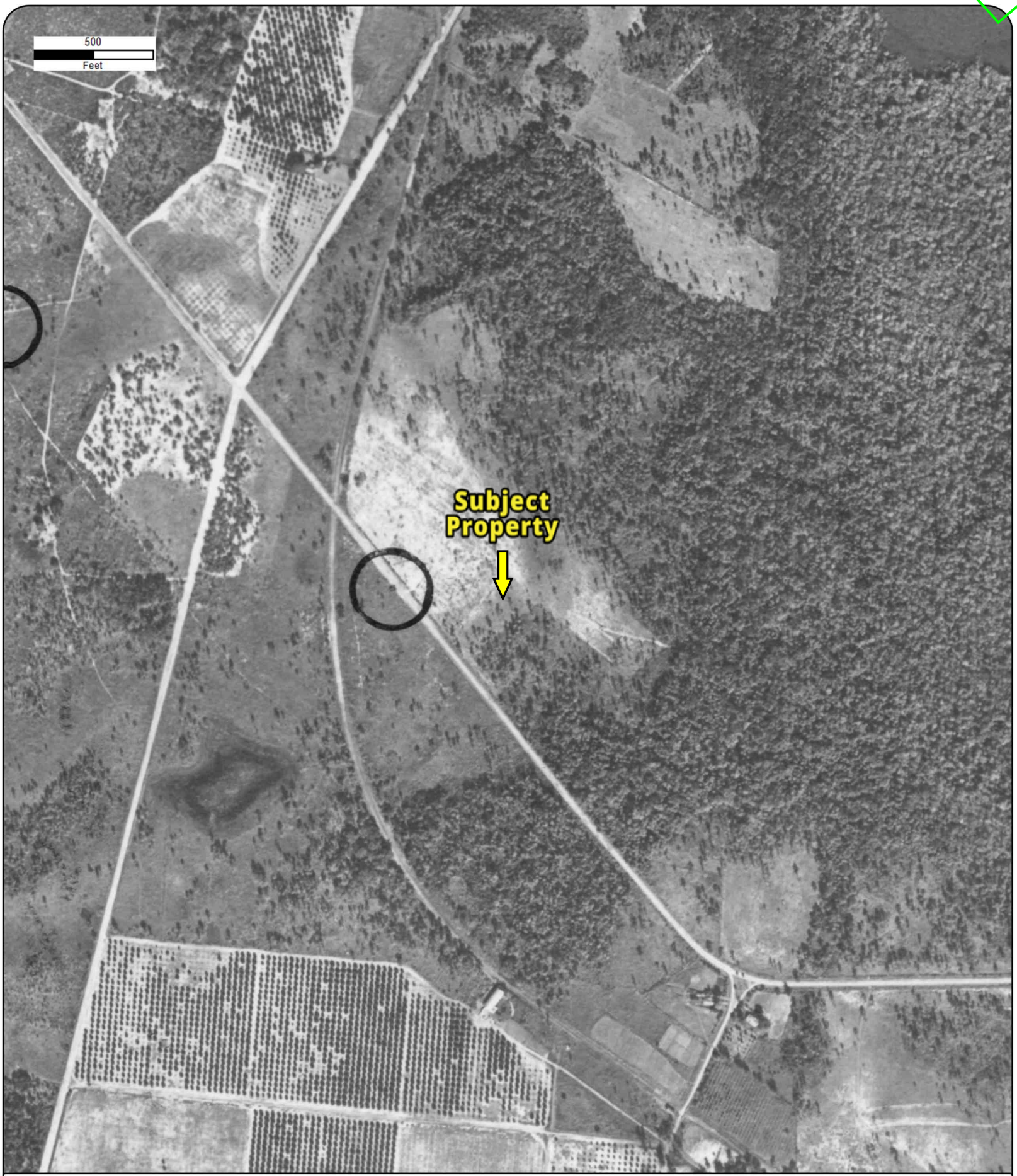


Year: 1957
Source: ASCS
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS



Year: 1948
Source: ASCS
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS 100



Year: 1941
Source: ASCS
Scale: 1" = 500'
Comment:

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL
Approx Center: -81.25886923,28.69376063

Order No: 24090500255

ERIS

APPENDIX B

Property Photographs



Photograph #1.

Description of Photograph:
View of *Property* looking southeast

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #2.

Description of Photograph:
View of *Property* looking north from bridge over SR 434

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #3.

Description of Photograph:
View of *Property* looking northeast across SR 434

Site Location:
SR 434 and Michael Blake Boulevard, Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #4.

Description of Photograph:
View of *Property* looking east-northeast across SR 434

Site Location:
SR 434 and Michael Blake Boulevard, Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #5.

Description of Photograph:
View of *Property* looking southeast

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #6.

Description of Photograph:
View of typical survey stake within interior of *Property*

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #7.

Description of Photograph:
View of interior of *Property*

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #8.

Description of Photograph:
View of west side of interior of *Property*

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #9.

Description of Photograph:
View of northeast adjoining property

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #10.

Description of Photograph:
View of southwest adjoining property looking across SR 434

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #11.

Description of Photograph:
View of southeast adjoining property

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024



Photograph #12.

Description of Photograph:
View of northwest adjoining property

Site Location:
SR 434 and Michael Blake Boulevard,
Winter Springs, Florida

Photograph Taken By:
Scott D. Graf
September 12, 2024

APPENDIX C

User Questionnaires

NV5

ASTM E1527-21
User Questionnaire
Property location: The Learning Experience, SR 434 & Michael Blake Blvd., Winter Springs, FL

This questionnaire is utilized in order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"). LLPs is the term used to describe the three types of potential defenses to Superfund liability in EPA's *Interim Guidance Regarding Criteria Landowners Must Meet in order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability* issued on March 6, 2003. The user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

1) **Environmental cleanup liens that are filed or recorded against the subject property (40 CFR 312.25).**
Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state or local law? If such documentation is available, please provide. Title Search was performed and no environmental liens were found

2) **Activity and land use limitations (AULs) that are in place on the subject property or that have been filed or recorded in a registry (40 CFR 312.26).**
Did a search of recorded land title records (or judicial records where appropriate,) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law? No

3) **Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).**
As the user of this environmental site assessment (ESA) do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No Knowlege or experience

NV5
6200 Lee Vista Boulevard, Suite 400
Orlando, FL 32822
Phone: 407-275-5120

4) **Relationship of the purchase price to the fair market value of the subject property if it were not contaminated (40 CFR 312.29).**

Does the purchase price being paid for this subject property reasonably reflect the fair market value of the subject property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the subject property? Purchase price reasonably reflects fair market value

5) **Commonly known or reasonably ascertainable information about the subject property (40 CFR 312.30).**

Are you aware of commonly known or reasonably ascertainable information about the subject property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

a) Do you know the past use of the subject property?

NO

b) Do you know the specific chemicals that are present or once were present at the subject property? NO

c) Do you know of spills or other chemical releases that have taken place at the subject property? NO

d) Do you know of any environmental cleanups that have taken place at the subject property? NO

6) **The degree of obviousness of the presence or likely presence of the contamination at the subject property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).**

Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

NOT THAT I AM AWARE

Signature: _____ Date: 9/2/24

Name : Richard Kerpen Company: KW Partners, LLC

Association to the property/ transaction: Buyer

NV5
6200 Lee Vista Boulevard, Suite 400
Orlando, FL 32822
Phone: 407-275-5120

APPENDIX D

ERIS Database Search Report

DATABASE REPORT

Project Property:	*The Learning Experience* *SR 434 and Michael Blake Boulevard* *Winter Springs FL 32708*
Project No:	*4420424-0006043.00*
Report Type:	*Database Report*
Order No:	*24090500255*
Requested by:	*NV5*
Date Completed:	*September 6, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Table of Contents.....2
Executive Summary.....3
Executive Summary: Report Summary.....4
Executive Summary: Site Report Summary - Project Property.....8
Executive Summary: Site Report Summary - Surrounding Properties.....9
Executive Summary: Summary by Data Source.....13
Map.....19
Aerial.....22
Topographic Map.....23
Detail Report.....24
Unplottable Summary.....72
Unplottable Report.....73
Appendix: Database Descriptions.....77
Definitions.....93

Notice: IMPORTANT LIMITATIONS and YOUR LIABILITY

Reliance on information in Report: This report DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as database review of environmental records.

License for use of information in Report: No page of this report can be used without this cover page, this notice and the project property identifier. The information in Report(s) may not be modified or re-sold.

Your Liability for misuse: Using this Service and/or its reports in a manner contrary to this Notice or your agreement will be in breach of copyright and contract and ERIS may obtain damages for such mis-use, including damages caused to third parties, and gives ERIS the right to terminate your account, rescind your license to any previous reports and to bar you from future use of the Service.

No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc. ("ERIS") using various sources of information, including information provided by Federal and State government departments. The report applies only to the address and up to the date specified on the cover of this report, and any alterations or deviation from this description will require a new report. This report and the data contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein and does not constitute a legal opinion nor medical advice. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

Trademark and Copyright: You may not use the ERIS trademarks or attribute any work to ERIS other than as outlined above. This Service and Report (s) are protected by copyright owned by ERIS Information Inc. Copyright in data used in the Service or Report(s) (the "Data") is owned by ERIS or its licensors. The Service, Report(s) and Data may not be copied or reproduced in whole or in any substantial part without prior written consent of ERIS.

Executive Summary

Property Information:

Project Property:	*The Learning Experience* *SR 434 and Michael Blake Boulevard Winter Springs FL 32708*
Project No:	*4420424-0006043.00*

Coordinates:

Latitude:	*28.69376063*
Longitude:	*-81.25886923*
UTM Northing:	*3,174,085.12*
UTM Easting:	*474,712.15*
UTM Zone:	*UTM Zone 17R*

Elevation: *27 FT*

Order Information:

Order No:	*24090500255*
Date Requested:	*September 5, 2024*
Requested by:	*NV5*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (with Project Boundaries)*
City Directory Search	*CD - 2 Street Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*Physical Setting Report (PSR)*
Product Summary	*Product Summary for Aerials, FIMs & Topos*
Topographic Map	*Topographic Maps*
Vapor Screening Tool	*Vapor Screening Tool*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	***4***	-	-	***4***
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0
State								
SHWS	Y	1	0	0	0	0	0	0
DELISTED SHWS	Y	1	0	0	0	0	0	0
ERIC	Y	1	0	**1**	**2**	0	0	**3**
CLEANUP DEP	Y	1	0	0	0	0	0	0
WCRPS	Y	1	0	**1**	0	0	0	**1**
DELISTED WCP	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	**1**	**1**	-	**2**
LST	Y	0.5	0	0	**2**	**1**	-	**3**
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	**2**	-	-	**2**
AST	Y	0.25	0	**1**	**1**	-	-	**2**
TANK	Y	0.25	0	0	0	-	-	0
DEL UST AST TANK	Y	0.25	0	0	0	-	-	0
DEL STORAGE TANK	Y	0.25	0	0	0	-	-	0
FF TANKS	Y	0.25	0	0	0	-	-	0
STCS	Y	0.5	0	**1**	**2**	**2**	-	**5**
INST	Y	0.5	0	0	0	**1**	-	**1**
ENG	Y	0.5	0	0	0	**1**	-	**1**
VCP	Y	0.5	0	0	**2**	0	-	**2**
BROWNFIELDS	Y	0.5	0	0	**1**	0	-	**1**
BROWNFIELD AREA	Y	0.5	**1**	0	**1**	0	-	**2**
HAZ WASTE FAC	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County	***No County databases were selected to be included in the search.***							
Additional Environmental Records								
Federal								
PFAS GHG	Y	0.5	0	0	0	0	-	0
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
ERNS PFAS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	**1**	**1**
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
HIST RISK	Y	0.125	0	0	-	-	-	0
PRIORITYCLEAN	Y	0.5	0	0	0	0	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
HISTORICAL DRYC	Y	0.25	0	0	0	-	-	0
SPILLS	Y	0.125	0	0	-	-	-	0
DWM CONTAM	Y	0.5	0	0	**6**	**2**	-	**8**
DEL CONTAM SITE	Y	0.5	0	0	0	**1**	-	**1**
PFAS AFFF	Y	0.5	0	0	0	0	-	0
PFAS	Y	0.5	0	0	0	0	-	0
GW CONTAM	Y	0.125	0	0	-	-	-	0
UIC	Y	PO	0	-	-	-	-	0
WELL SURVEILLANCE	Y	0.25	0	0	**4**	-	-	**4**
CDV SOUTHEAST	Y	0.5	0	0	0	0	-	0
TIER 2	Y	0.125	0	0	-	-	-	0
DELISTED COUNTY	Y	0.25	0	0	0	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental databases were selected to be included in the search.***							
Total:			***1***	***4***	***28***	***9***	***1***	***43***

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	BROWNFIELD AREA	TOWN CENTER S.E.E.D. / BROWNFIELD	CITY OF WINTER SPRINGS FL	ESE	0.00 / 0.00	-1	24

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
2	AST	WINTER SPRINGS CITY - LIFT STATION	80 MICHAEL BLAKE BLVD WINTER SPRINGS FL 32708	W	0.06 / 339.66	5	24
			***Facility ID	Facility Status:*** 9818667 | OPEN ***Tank Status	Status Date:*** U - IN SERVICE | 01-AUG-2021			
2	STCS	WINTER SPRINGS CITY - LIFT STATION	80 MICHAEL BLAKE BLVD WINTER SPRINGS FL 32708	W	0.06 / 339.66	5	25
			***Facility ID	Fac Stat (OD):*** 9818667 | OPEN			
3	WCRPS	SCRIMSHER PARCEL	E SR 434 WINTER SPRINGS, FL	W	0.12 / 645.77	13	27
3	ERIC	SCRIMISHER PARCEL	E SR 434 WINTER SPRINGS, FL 32708	W	0.12 / 645.77	13	27
4	RCRA NON GEN	CENTRAL FLORIDA DRUM INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	11	28
			EPA Handler ID: FLD032630212				
4	RCRA NON GEN	POLYMETRICS INC	2950 RAILROAD AVE OVIEDO FL 32794	SSW	0.17 / 894.83	11	29
			EPA Handler ID: FLD984183426				
4	LST	L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765-8240	SSW	0.17 / 894.83	11	31
			***Facility ID	Facility Status:*** 8520795 | CLOSED ***Cleanup Required:*** R - CLEANUP REQUIRED			
4	VCP	*L D PLANTE (BF)	2950 RAILROAD AVE - OVIEDO FL -	SSW	0.17 / 894.83	11	34
4	WELL SURVEILLANCE	PLANTE	2950 RAILROAD AVE WINTER SPRINGS FL 32708	SSW	0.17 / 894.83	11	34
4	WELL SURVEILLANCE	L D PLANTE INC	2950 RAILROAD AVE WINTER SPRINGS FL 32708	SSW	0.17 / 894.83	11	34
4	WELL SURVEILLANCE	LD PLANTE	2950 RAILROAD AVE OVIEDO FL 32708	SSW	0.17 / 894.83	11	35
4	DWM CONTAM	L D PLANTE (BF)	2950 RAILROAD AVE OVIEDO FL	SSW	0.17 / 894.83	11	35
			Facility ID: 38428				

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
4	UST	L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	11	36
			***Facility ID	Facility Status:*** 8520795	CLOSED ***Tank Status	Status Date:*** B - REMOVED FROM SITE	31-DEC-1988, B - REMOVED FROM SITE	31-DEC-1988			
4	AST	L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	11	36
			***Facility ID	Facility Status:*** 8520795	CLOSED ***Tank Status	Status Date:*** B - REMOVED FROM SITE	31-DEC-1988, B - REMOVED FROM SITE	31-DEC-1988			
4	ERIC	Polymetrics Inc	2950 RAILROAD AVE OVIEDO FL 0	SSW	0.17 / 894.83	11	37
4	ERIC	L D PLANTE INC	2950 RAILROAD AVENUE OVIEDO FL 32765	SSW	0.17 / 894.83	11	38
4	DWM CONTAM	L.D.PLANTE	2950 RAILROAD AVENUE OVIEDO FL	SSW	0.17 / 894.83	11	38
4	STCS	L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	11	39
			***Facility ID	Fac Stat (OD):*** 8520795	CLOSED						
4	VCP	*L D PLANTE (BF)	2950 RAILROAD AVE - OVIEDO FL -	SSW	0.17 / 894.83	11	41
4	DWM CONTAM	L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	11	42
			Facility ID: 8520795				
5	BROWNFIELDS	Former Central Florida Drum Facility	2950 (M-1 Zoning Area Only) and 2960 Railroad Avenue WINTER SPRINGS FL 32708	SSW	0.17 / 894.83	11	42
6	BROWNFIELD AREA	Former Central Florida Drum Facility	WINTER SPRINGS FL	SSW	0.17 / 894.83	11	43
7	RCRA NON GEN	FOREIGN CAR PARTS SERVICE	1207 E STATE ROAD 434 WINTER SPRINGS FL 32708-2811 ***EPA Handler ID:*** FLD981748007	NW	0.22 / 1,184.34	16	43
8	RCRA NON GEN	MOBIL OIL CORP SS #Q8M	1205 E SR 434 WINTER SPRINGS FL 32708	WNW	0.23 / 1,193.88	16	44
			EPA Handler ID: FLD984205518				
8	UST	MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708	WNW	0.23 / 1,193.88	16	46
			***Facility ID	Facility Status:*** 9045623	OPEN ***Tank Status	Status Date:*** B - REMOVED FROM SITE	01-OCT-2008, U - IN SERVICE	01-OCT-2008, U - IN SERVICE	01-OCT-2008, B - REMOVED FROM SITE	01-OCT-2008, B - REMOVED		

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			FROM SITE | 01-OCT-2008, B - REMOVED FROM SITE | 01-OCT-2008				
8	LST	MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708-2811 ***Facility ID | Facility Status:*** 9045623 | OPEN ***Cleanup Required:*** R - CLEANUP REQUIRED	WNW	0.23 / 1,193.88	16	49
8	WELL SURVEILLANCE	MOBIL RS #10918	1205 W HWY 434 WINTER SPRINGS FL 32708	WNW	0.23 / 1,193.88	16	52
8	DWM CONTAM	MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708 ***Facility ID:*** 9045623	WNW	0.23 / 1,193.88	16	52
8	DWM CONTAM	MOBIL R/S #10918	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708 ***Facility ID:*** 9045623 ***Facility Status:*** ACTIVE	WNW	0.23 / 1,193.88	16	53
8	DWM CONTAM	7-ELEVEN STORE #34786	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708 ***Facility ID:*** 9045623 ***Facility Status:*** ACTIVE	WNW	0.23 / 1,193.88	16	54
8	STCS	MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708 ***Facility ID | Fac Stat (OD):*** 9045623 | OPEN	WNW	0.23 / 1,193.88	16	54
9	SWF/LF	1212 E. SR 434 DEBRIS STAGING AREA	1212 E. SR 434 WINTER SPRINGS FL 32708	NW	0.23 / 1,211.30	14	57
10	INST	L D PLANTE INC	2950 RAILROAD AVENUE OVIEDO FL 32765	SSW	0.26 / 1,360.53	15	58
10	ENG	L D PLANTE INC	2950 RAILROAD AVENUE OVIEDO FL 32765	SSW	0.26 / 1,360.53	15	59
11	STCS	HI-FLAVOR MEATS INC	401 TUSKAWILLA RD WINTER SPRINGS FL 32308 ***Facility ID | Fac Stat (OD):*** 8520784 | CLOSED	WSW	0.30 / 1,602.74	14	59
12	LST	HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708-3715 ***Facility ID | Facility Status:*** 8516641 | CLOSED ***Cleanup Required:*** R - CLEANUP REQUIRED, R - CLEANUP REQUIRED	NW	0.32 / 1,666.62	18	61
12	DEL CONTAM SITE	HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708	NW	0.32 / 1,666.62	18	65
12	DWM CONTAM	HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708	NW	0.32 / 1,666.62	18	66

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			Facility ID: 8516641 ***Facility Status:*** ACTIVE				
12	STCS	HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708	NW	0.32 / 1,666.62	18	66
			Facility ID | Fac Stat (OD): 8516641 | CLOSED				
12	DWM CONTAM	HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708	NW	0.32 / 1,666.62	18	69
			Facility ID: 8516641				
13	SWF/LF	TUSKAWILLA CROSSINGS DISASTER DEBRIS MANAGEMENT SITE	395 TUSKAWILLA RD WINTER SPRINGS FL 32708	SW	0.41 / 2,168.64	20	70
14	MRDS	SULLIVAN MATERIALS - TUSCAWILLA UNITS	SEMINOLE COUNTY WINTER SPRINGS FL 32708	ESE	0.77 / 4,071.78	-12	71
			Dep ID: 10306524				

Executive Summary: Summary by Data Source

Standard

Federal

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Apr 8, 2024 has found that there are 4 RCRA NON GEN site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
POLYMETRICS INC	2950 RAILROAD AVE OVIEDO FL 32794 ***EPA Handler ID**: FLD984183426*	SSW	0.17 / 894.83	4
CENTRAL FLORIDA DRUM INC	2950 RAILROAD AVE OVIEDO FL 32765 ***EPA Handler ID**: FLD032630212*	SSW	0.17 / 894.83	4
FOREIGN CAR PARTS SERVICE	1207 E STATE ROAD 434 WINTER SPRINGS FL 32708-2811 ***EPA Handler ID**: FLD981748007*	NW	0.22 / 1,184.34	7
MOBIL OIL CORP SS #Q8M	1205 E SR 434 WINTER SPRINGS FL 32708 ***EPA Handler ID**: FLD984205518*	WNW	0.23 / 1,193.88	8

State

ERIC - ERIC Waste Cleanup

A search of the ERIC database, dated May 28, 2024 has found that there are 3 ERIC site(s) within approximately 1.00miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
SCRIMISHER PARCEL	E SR 434 WINTER SPRINGS, FL 32708	W	0.12 / 645.77	3
L D PLANTE INC	2950 RAILROAD AVENUE OVIEDO FL 32765	SSW	0.17 / 894.83	4
Polymetrics Inc	2950 RAILROAD AVE OVIEDO FL 0	SSW	0.17 / 894.83	4

WCRPS - Waste Cleanup Responsible Party Sites

A search of the WCRPS database, dated Apr 11, 2021 has found that there are 1 WCRPS site(s) within approximately 1.00miles of the

project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
SCRIMSHER PARCEL	E SR 434 WINTER SPRINGS, FL	W	0.12 / 645.77	3

SWF/LF - Solid Waste Facilities and Landfills

A search of the SWF/LF database, dated Jun 12, 2024 has found that there are 2 SWF/LF site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
1212 E. SR 434 DEBRIS STAGING AREA	1212 E. SR 434 WINTER SPRINGS FL 32708	NW	0.23 / 1,211.30	9
TUSKAWILLA CROSSINGS DISASTER DEBRIS MANAGEMENT SITE	395 TUSKAWILLA RD WINTER SPRINGS FL 32708	SW	0.41 / 2,168.64	13

LST - Leaking Tanks

A search of the LST database, dated Apr 22, 2024 has found that there are 3 LST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765-8240	SSW	0.17 / 894.83	4
	***Facility ID | Facility Status**: 8520795 | CLOSED* ***Cleanup Required**: R - CLEANUP REQUIRED*			
MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708-2811	WNW	0.23 / 1,193.88	8
	***Facility ID | Facility Status**: 9045623 | OPEN* ***Cleanup Required**: R - CLEANUP REQUIRED*			
HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708-3715	NW	0.32 / 1,666.62	12
	***Facility ID | Facility Status**: 8516641 | CLOSED* ***Cleanup Required**: R - CLEANUP REQUIRED, R - CLEANUP REQUIRED*			

UST - Underground Storage Tanks

A search of the UST database, dated May 30, 2024 has found that there are 2 UST site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	4
	***Facility ID | Facility Status**: 8520795 | CLOSED* ***Tank Status | Status Date**: B - REMOVED FROM SITE | 31-DEC-1988, B - REMOVED FROM SITE | 31-DEC-1988*			

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708	WNW	0.23 / 1,193.88	8
	***Facility ID | Facility Status**: 9045623 | OPEN* ***Tank Status | Status Date**: B - REMOVED FROM SITE | 01-OCT-2008, U - IN SERVICE | 01-OCT-2008, U - IN SERVICE | 01-OCT-2008, B - REMOVED FROM SITE | 01-OCT-2008, B - REMOVED FROM SITE | 01-OCT-2008, B - REMOVED FROM SITE | 01-OCT-2008*			

AST - Aboveground Storage Tanks

A search of the AST database, dated May 30, 2024 has found that there are 2 AST site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
WINTER SPRINGS CITY - LIFT STATION	80 MICHAEL BLAKE BLVD WINTER SPRINGS FL 32708	W	0.06 / 339.66	2
	***Facility ID | Facility Status**: 9818667 | OPEN* ***Tank Status | Status Date**: U - IN SERVICE | 01-AUG-2021*			
L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	4
	***Facility ID | Facility Status**: 8520795 | CLOSED* ***Tank Status | Status Date**: B - REMOVED FROM SITE | 31-DEC-1988, B - REMOVED FROM SITE | 31-DEC-1988*			

STCS - Storage Tank/Contaminated Facility Search

A search of the STCS database, dated Apr 24, 2024 has found that there are 5 STCS site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
WINTER SPRINGS CITY - LIFT STATION	80 MICHAEL BLAKE BLVD WINTER SPRINGS FL 32708	W	0.06 / 339.66	2
	***Facility ID | Fac Stat (OD)**: 9818667 | OPEN*			
L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765	SSW	0.17 / 894.83	4
	***Facility ID | Fac Stat (OD)**: 8520795 | CLOSED*			
MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708	WNW	0.23 / 1,193.88	8
	***Facility ID | Fac Stat (OD)**: 9045623 | OPEN*			
HI-FLAVOR MEATS INC	401 TUSKAWILLA RD WINTER SPRINGS FL 32308	WSW	0.30 / 1,602.74	11
	***Facility ID | Fac Stat (OD)**: 8520784 | CLOSED*			
HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708	NW	0.32 / 1,666.62	12
	***Facility ID | Fac Stat (OD)**: 8516641 | CLOSED*			

INST - Institutional Controls Registry

A search of the INST database, dated Jun 19, 2024 has found that there are 1 INST site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
L D PLANTE INC	2950 RAILROAD AVENUE OVIEDO FL 32765	SSW	0.26 / 1,360.53	10

ENG - Engineering Controls

A search of the ENG database, dated Jun 19, 2024 has found that there are 1 ENG site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
L D PLANTE INC	2950 RAILROAD AVENUE OVIEDO FL 32765	SSW	0.26 / 1,360.53	10

VCP - Voluntary Cleanup Sites

A search of the VCP database, dated Jul 1, 2022 has found that there are 2 VCP site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
*L D PLANTE (BF)	2950 RAILROAD AVE - OVIEDO FL -	SSW	0.17 / 894.83	4
*L D PLANTE (BF)	2950 RAILROAD AVE - OVIEDO FL -	SSW	0.17 / 894.83	4

BROWNFIELDS - Brownfield Sites

A search of the BROWNFIELDS database, dated Jan 16, 2024 has found that there are 1 BROWNFIELDS site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Former Central Florida Drum Facility	2950 (M-1 Zoning Area Only) and 2960 Railroad Avenue WINTER SPRINGS FL 32708	SSW	0.17 / 894.83	5

BROWNFIELD AREA - Brownfield Areas

A search of the BROWNFIELD AREA database, dated Apr 2, 2024 has found that there are 2 BROWNFIELD AREA site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Former Central Florida Drum Facility	WINTER SPRINGS FL	SSW	0.17 / 894.83	6

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
TOWN CENTER S.E.E.D. / BROWNFIELD	CITY OF WINTER SPRINGS FL	ESE	0.00 / 0.00	1

Non Standard

Federal

MRDS - Mineral Resource Data System

A search of the MRDS database, dated Mar 15, 2016 has found that there are 1 MRDS site(s) within approximately 1.00miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
SULLIVAN MATERIALS - TUSCAWILLA UNITS	SEMINOLE COUNTY WINTER SPRINGS FL 32708 ***Dep ID**: 10306524*	ESE	0.77 / 4,071.78	14

State

DWM CONTAM - Contaminated Sites

A search of the DWM CONTAM database, dated Jul 14, 2023 has found that there are 8 DWM CONTAM site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
L D PLANTE INC	2950 RAILROAD AVE OVIEDO FL 32765 ***Facility ID**: 8520795*	SSW	0.17 / 894.83	4
L D PLANTE (BF)	2950 RAILROAD AVE OVIEDO FL ***Facility ID**: 38428*	SSW	0.17 / 894.83	4
L.D.PLANTE	2950 RAILROAD AVENUE OVIEDO FL	SSW	0.17 / 894.83	4
7-ELEVEN STORE #34786	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708 ***Facility ID**: 9045623* ***Facility Status**: ACTIVE*	WNW	0.23 / 1,193.88	8
MOBIL R/S #10918	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708 ***Facility ID**: 9045623* ***Facility Status**: ACTIVE*	WNW	0.23 / 1,193.88	8
MOBIL-WINTER SPRINGS #731	1205 E STATE ROAD 434 WINTER SPRINGS FL 32708 ***Facility ID**: 9045623*	WNW	0.23 / 1,193.88	8

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708 ***Facility ID**: 8516641*	NW	0.32 / 1,666.62	12
HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708 ***Facility ID**: 8516641* ***Facility Status**: ACTIVE*	NW	0.32 / 1,666.62	12

DEL CONTAM SITE - Delisted Contaminated Sites

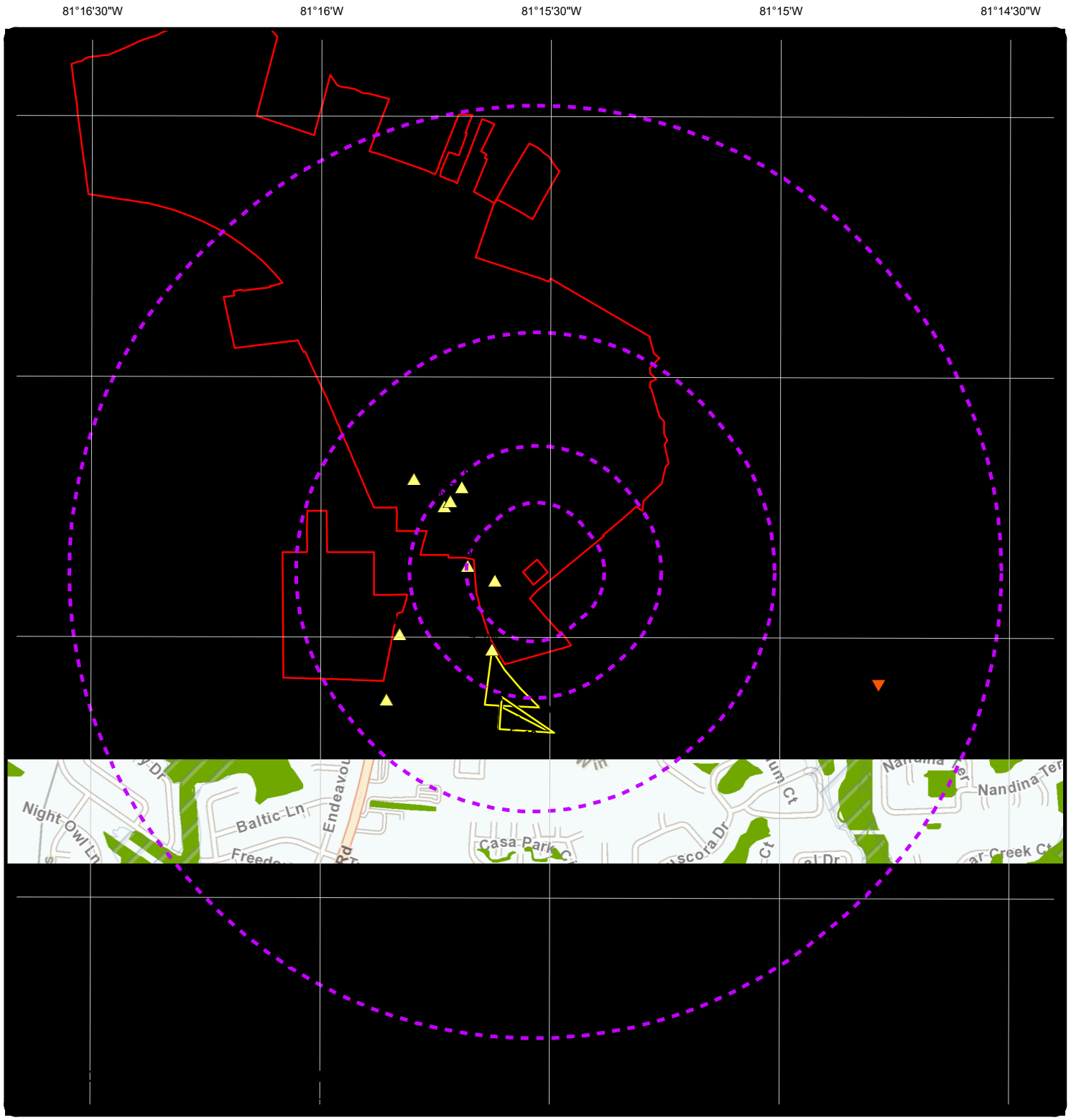
A search of the DEL CONTAM SITE database, dated Sep 30, 2015 has found that there are 1 DEL CONTAM SITE site(s) within approximately 0.50miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
HANDY WAY FOOD STORE #3333	170 TUSCAWILLA RD WINTER SPRINGS FL 32708	NW	0.32 / 1,666.62	12

WELL SURVEILLANCE - Well Surveillance Program Facilities

A search of the WELL SURVEILLANCE database, dated May 31, 2024 has found that there are 4 WELL SURVEILLANCE site(s) within approximately 0.25miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
LD PLANTE	2950 RAILROAD AVE OVIEDO FL 32708	SSW	0.17 / 894.83	4
L D PLANTE INC	2950 RAILROAD AVE WINTER SPRINGS FL 32708	SSW	0.17 / 894.83	4
PLANTE	2950 RAILROAD AVE WINTER SPRINGS FL 32708	SSW	0.17 / 894.83	4
MOBIL RS #10918	1205 W HWY 434 WINTER SPRINGS FL 32708	WNW	0.23 / 1,193.88	8



Map: 1.0 Mile Radius

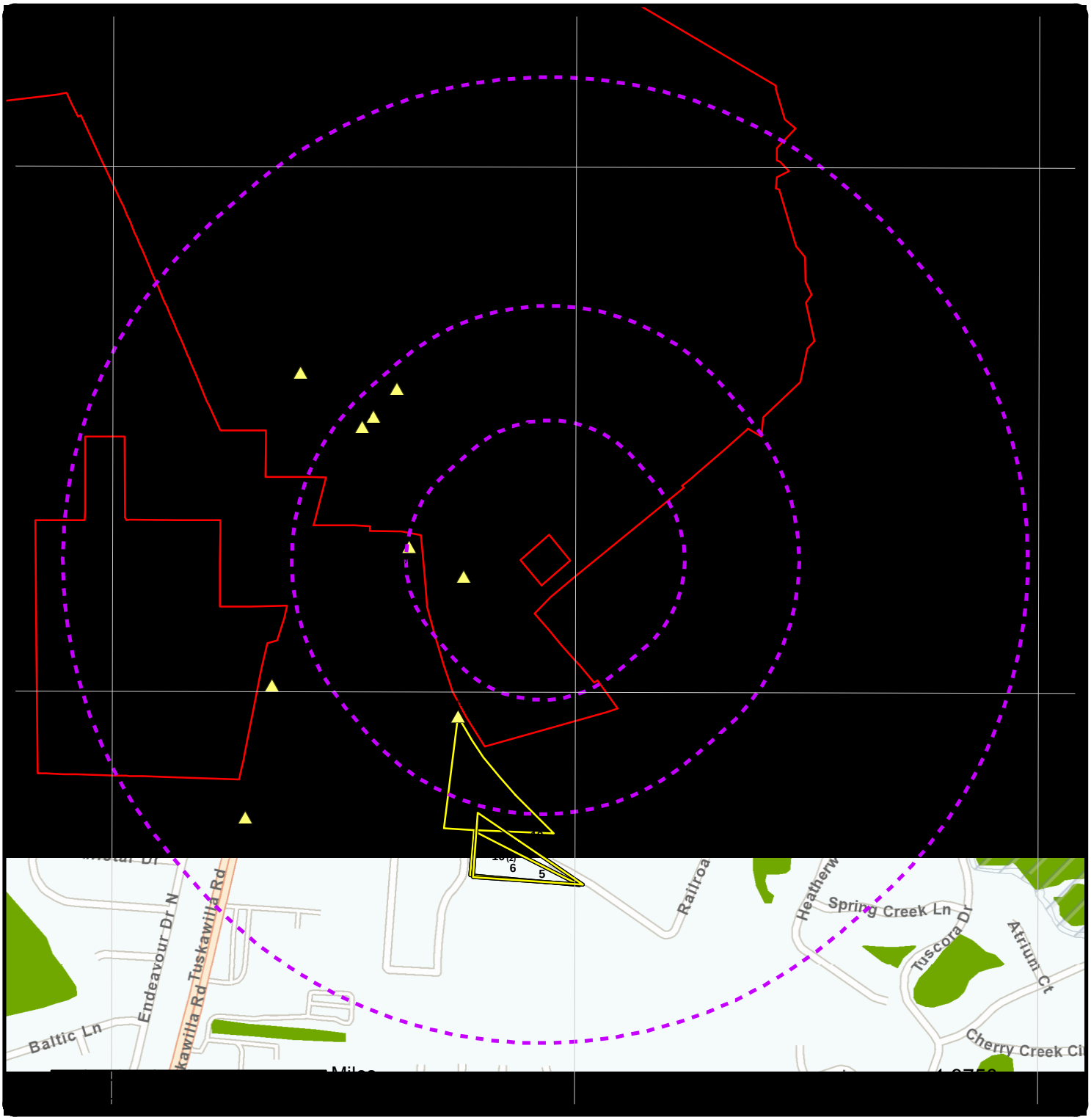
Order Number: 24090500255

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



Map: 0.5 Mile Radius

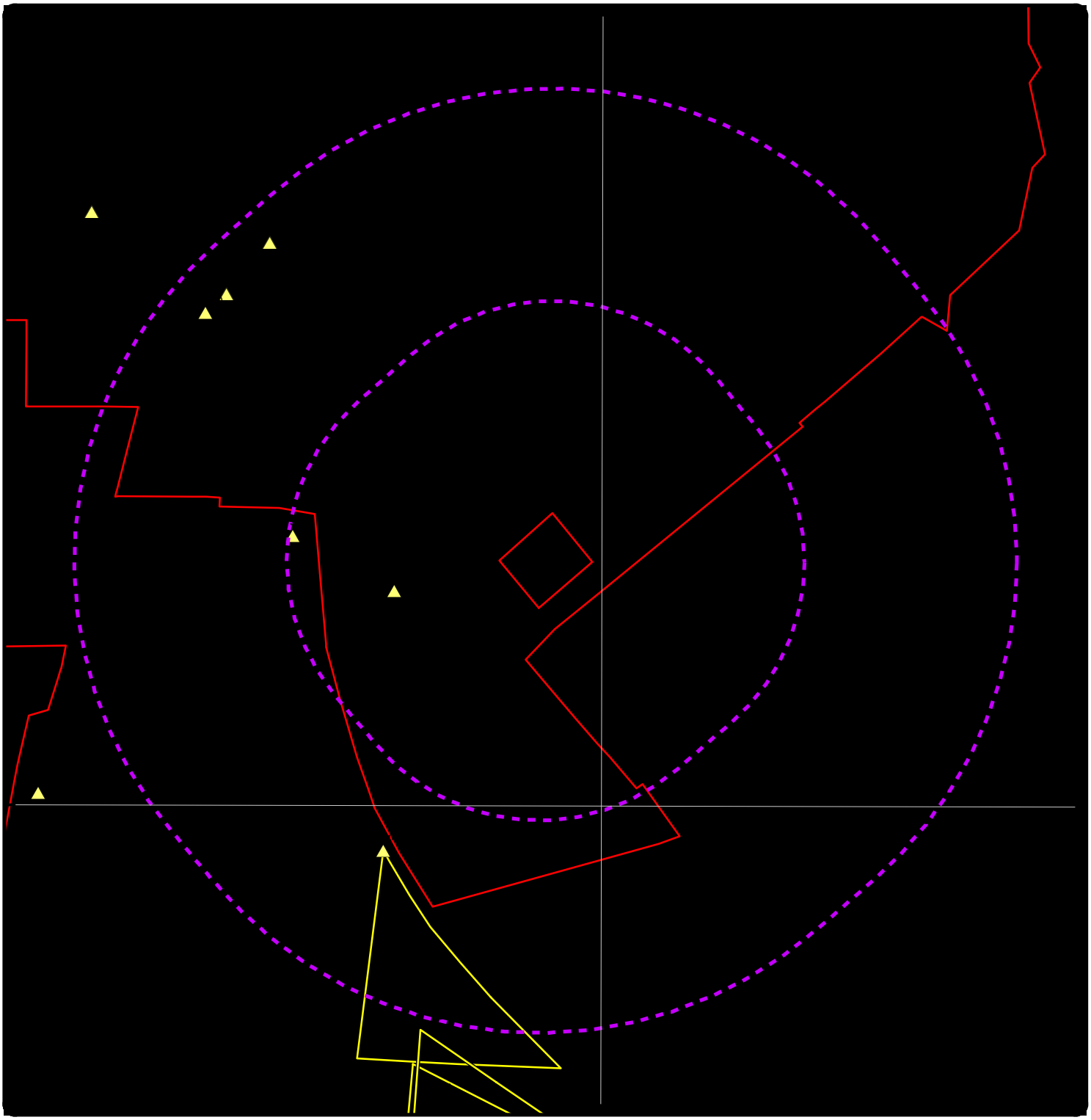
Order Number: 24090500255

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



Map: 0.25 Mile Radius

Order Number: 24090500255

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

© ERIS Information Inc.



Aerial **Year: 2021**

Order Number: 24090500255

Address: SR 434 and Michael Blake Boulevard, Winter Springs, FL

Source: ESRI World Imagery

© ERIS Information In



Topographic Map

Year: 2021

Order Number: 24090500255

Address: SR 434 and Michael Blake Boulevard, FL

Quadrangle(s): Oviedo FL, Casselberry FL

Source: USGS Topographic Map

© ERIS Information In

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	ESE	0.00 / 0.00	25.55 / -1	TOWN CENTER S.E.E.D. / BROWNFIELD CITY OF WINTER SPRINGS FL	BROWNFIELD AREA

Area ID:	BF590803000	**Latitude:**	28.70136235
User Name:	WILLIAMS_CA	**Longitude:**	-81.264094
Method:	PAPER	**Latitude Degrees:**	28
County:	SEMINOLE	**Latitude Minutes:**	42
District:	CENTRAL	**Latitude Seconds:**	4.90444992
Acreage:	2220603.5	**Longitude Degrees:**	-81
Resolution No:	2008-36	**Longitude Minutes:**	15
Resolution Date:	04-SEP-08 12.00.00.000000 AM	**Longitude Seconds:**	50.73841008
Shape Area:		**X Coordinate:**	666787.08142153
Shape Length:		**Y Coordinate:**	524645.88599683

Date Stamp: 13-OCT-08 12.00.00.000000 AM
Source: CITY OF WINTER SPRINGS
Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/BF590803000/gis-facility!search

---

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of2	W	0.06 / 339.66	31.54 / 5	WINTER SPRINGS CITY - LIFT STATION 80 MICHAEL BLAKE BLVD WINTER SPRINGS FL 32708	AST

Facility ID:	9818667	**County:**	SEMINOLE
Facility Status:	OPEN	**Lat/Long Method:**	
Facility Type:	C	**Lat DD:**	
Type Desc:	Fuel user/Non-retail	**Lat MM:**	
Facility Phone:	4073271800	**Lat SS:**	
Dep Co:	P	**Long DD:**	
Owner ID:	24225	**Long MM:**	
Owner Phone:	4073271800	**Long SS:**	

Owner: WINTER SPRINGS CITY
Owner Address1: 1126 E SR 434
Owner Address2: ATTN: STORAGE TANK REGIS
Owner City: WINTER SPRINGS
Owner State: FL
Owner Zip 5: 32708
Contact: IAN FLETCHER
Data Source: Tank Facility - All Locations and Tank Information; Tank Facility - All Locations and Owner Information
Oculus Docs Inventory URL: https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=9818667&CAT=11
Information Portal Fac URL: http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=9818667
Information Portal Doc URL: http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9818667/facility!search

Tank Information

Tank ID:	1	**Tank Desc:**	Double Walled
Tank Status:	U - IN SERVICE	**Capacity:**	631
Status Date:	01-AUG-2021	**Placement:**	ABOVEGROUND
Installation Date:	01-AUG-2021	**Tank Vessel Indic:**	TANK

Content Desc: G - Emerg Generator Diesel

Piping

Piping Description: A-Abv, no soil contact

Piping Description: N-Approved synthetic material

Monitoring

Monitoring Desc: F-Monitor dbl wall tank space

Monitoring Desc: 1-Continuous electronic sensing

Monitoring Desc: Q-Visual inspection of ASTs

Tank Construction

Constr Code: C
Constr Desc: Steel

Constr Code: I
Constr Desc: Double wall

Constr Code: M
Constr Desc: Spill containment bucket

Constr Code: P
Constr Desc: Level gauges/alarms

2	2 of2	W	0.06 / 339.66	31.54 / 5	WINTER SPRINGS CITY - LIFT STATION 80 MICHAEL BLAKE BLVD WINTER SPRINGS FL 32708	STCS

Facility ID:	9818667	***Clnup Cd (OD):***	
Type:	C - Fuel User/Non-Retail	***Fac Clnup Stat (OD):***	
Status:	Open	***Clnup Dt (OD):***	
Status (OD):	REVIEWED	***Status (Map):***	REVIEWED
Fac Stat (OD):	OPEN	***Contam (Map):***	
Fac Code (OD):	C	***Fac Type (Map):***	Fuel user/Non-retail
Fac Type (OD):	Fuel user/Non-retail	***Fac Stat (Map):***	OPEN

Fac Name (OD): WINTER SPRINGS CITY - LIFT STATION
Address (OD): 80 MICHAEL BLAKE BLVD
City (OD): WINTER SPRINGS
County (OD): SEMINOLE
Zip5 (OD): 32708
Name (Map): WINTER SPRINGS CITY - LIFT STATION
Address (Map): 80 MICHAEL BLAKE BLVD
City (Map): WINTER SPRINGS
County (Map): 59
Zip4 (Map): 0
Zip5 (Map): 32708
Address Line 1: 80 Michael Blake Blvd
Address Line 2:
City: Winter Springs
County: SEMINOLE
State: FL
Zip: 32708
Report Source: FDEP Geospatial Open Data - Registered Tanks from Storage Tank Contamination Monitoring (STCM)(OD); FDEP Geospatial Open Data - Storage Tank Contamination Monitoring (STCM)(Map); Storage Tank Contaminated Facility Name and Address Search

FDEP Storage Tank Monitoring Open Data Details

Object ID:	70774	***Map Src:***	imagerywithroads
X:	-81.2612656666684	***Map Scale:***	1128
Y:	28.6939910000032	***Elevation:***	
Regulated:	YES	***El Datum:***	
Col Meth:	DPHO	***El Resolut:***	

Col Name:	WILLIAMS_CA	**El Units:**	
Col Date:	16-Aug-2021	**ALB East:**	667080.99
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**ALB North:**	523833.61
Ver Meth:	DPHO	**Loc ID:**	71942
Ver Name:	WILLIAMS_CA	**Lat DD:**	28
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Date:	16-Aug-2021	**Lat SS:**	
OOIC:	FACILITY	**Long DD:**	81
Rel Feat:	CENTR	**Long MM:**	15
Datum:	NAD83	**Long SS:**	
Coord Acc:	4		
Col Aff:	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Ver Aff:	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Direct:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9818667/gis-facility!search		

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID:	71942	**Rel Feat:**	CENTR
Site Type:	Fuel user/Non-retail	**El Datum:**	
Contam Ind:		**El Resolut:**	
Phone:	4073271800	**El Units:**	
Operator:	CITY OF WINTER SPRINGS	**Map Src:**	imagerywithroads
Next action:	PLACARD 26-JUN-2023	**Map Scale:**	1128
Fin Respon:		**Coord Acc:**	4
Office:	CD	**Alb East:**	667080.99
OOIC:	FACILITY	**Alb North:**	523833.61
Col Meth:	DPHO	**Datum:**	NAD83
Col Name:	WILLIAMS_CA	**Elevation:**	
Col Date:	8/16/2021	**Lat DD:**	28
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Meth:	DPHO	**Lat SS:**	
Ver Name:	WILLIAMS_CA	**Long DD:**	81
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Long MM:**	15
Ver Date:	8/16/2021	**Long SS:**	
Object ID:	71942		
Col Aff:	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Ver Aff:	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9818667/gis-facility!search		

Storage Tank Contaminated Facility Name & Address Search Details

Name:	Winter Springs City - Lift Station 80 Michael Blake Blvd Winter Springs, FL 32708
LL Method:	DPHO
Account Owner:	Winter Springs City
Contact:	City Of Winter Springs
Phone:	407-327-1800
District:	CD
County 1:	59 - Seminole
Latitude:	28:41:38.3676
Longitude:	81:15:40.5564

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No:	1
Size:	631
Content:	Emerg Generator Diesel
Installed:	08/01/2021
Placement:	ABOVE
Status:	In Service
Construction:	C - Steel I - Double Wall M - Spill Containment Bucket P - Level Gauges/Alarms

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Piping: A - Abv, No Soil Contact
N - Approved Synthetic Material

Monitoring: 1 - Continuous Electronic Sensing
F - Monitor Dbl Wall Tank Space
Q - Visual Inspection Of Asts

---

3 | **1 of2** | **W** | **0.12 / 645.77** | **40.24 / 13** | **SCRIMSHER PARCEL**
E SR 434
WINTER SPRINGS, FL | **WCRPS**

Site ID:	346911	**Coord Accuracy ID:**	3
Datum ID:	NAD83	**Zip5:**	32708
Method ID:	DPHO	**Zip4:**	
Feature:		**County ID:**	59
Object of Interest:	CAP_RAP SITE	**County:**	SEMINOLE
Proximity to Object:	EXACT	**Lat DD:**	28
Interpolation Scale:	12000	**Lat MM:**	41
Map Source:	IMAGERY_11_13	**Long DD:**	81
Map Source Scale:	12000	**Long MM:**	15

Collect Program ID: CR
Collect Username: HOUSTON_G
Collect Affiliation: Florida Department of Environmental Protection
Verifying Program ID: CR
Verify Method ID: DPHO
Verifier Username: HOUSTON_G
Verifier Affiliation: Florida Department of Environmental Protection
Project Name: SCRIMSHER PARCEL
Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/COM_346911/gis-facility!search

Project Details

Project ID:	352812	**District:**	CD
OGC No:		**GIS ALBX:**	667143.17
Status:	CLOSED	**GIS ALBY:**	523807.99
Priority Score:		**Source:**	Closed Responsible Party Sites
Offsite COC:	N		
Contaminants:			

---

3 | **2 of2** | **W** | **0.12 / 645.77** | **40.24 / 13** | **SCRIMISHER PARCEL**
E SR 434
WINTER SPRINGS, FL 32708 | **ERIC**

Eric ID:	ERIC_11188	**Offste Contami Key:**	NOCONTAM
Site Status:	CLOSED	**Se Anno Cad Data:**	
Source Facility ID:	138637	**State:**	FL
District:	CD	**County Name:**	Seminole
WMD:	SJRWMD	**County ID:**	59
ICR Indicator:	NO	**Datum ID:**	NAD83
Discharge Date:		**Geometry:**	
Method ID:	DPHO	**X:**	-81.2606340977941
Object of Interest:	CAP_R	**Y:**	28.6937478753188
Proximit to Object:	EXACT	**Lat DD:**	28
Collector Username:	HOUSTON_G	**Lat MM:**	41
Collect Date:		**Lat SS:**	
Map Source:	IMAGERY_11_13	**Long DD:**	81
Map Source Scale:	12000	**Long MM:**	15
Intrpolation Scale:	12000	**Long SS:**	
Coord Accuracy ID:	3	**Gis Albx:**	667143.17
Site Phase Dsc:	Phase 2 - Full Assessment	**Gis Alby:**	523807.99

Site Name: SCRIMSHER PARCEL
Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/ERIC_11188/gis-facility!search

Program Details

Program: Responsible Party Cleanup

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Program Type:		RESPONSPARTY				
Program Status:		COMPLETE				
Site Manager:		George Houston				
4	1 of16	SSW	0.17 / 894.83	37.97 / 11	CENTRAL FLORIDA DRUM INC 2950 RAILROAD AVE OVIEDO FL 32765	RCRA NON GEN

EPA Handler ID: FLD032630212
Gen Status Universe: No Report
Contact Name: KENNETH PLANTE
Contact Address: 2950 , RAILRD AVE , , OVIEDO , FL, 32765 , US
Contact Phone No and Ext: 305-365-3688
Contact Email:
Contact Country: US
County Name: SEMINOLE
EPA Region: 04
Land Type: Private
Receive Date: 19940726
Location Latitude: 28.689269
Location Longitude: -81.25924

Violation/Evaluation Summary

Note: VIOLATION or UNDETERMINED: There are VIOLATION or UNDETERMINED details or records associated with this facility (EPA ID) in the Compliance Monitoring and Enforcement table dated Apr, 2024.

Violation Details

Found Violation: Yes
Citation: GGR:
Violation Short Description: Generators - General
Violation Type: 262.A
Violation Determined Date: 19860303
Scheduled Compliance Date:
Return to Compliance: Unverifiable
Actual Return to Compl: 19860331
Violation Responsible Agency: State

Enforcement Details

Enforcement Type: 125
Enforcement Type Description: DEP WARNING LETTER
Enforcement Action Date: 19860303
Enf Disposition Status:
Disposition Status Date:
Enforcement Lead Agency: State
Proposed Penalty Amount:
Final Amount:
Paid Amount:

Evaluation Details

Evaluation Start Date: 19860303
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Violation Short Description: Generators - General
Return to Compliance Date: 19860331
Evaluation Agency: State

Handler Summary

Importer Activity: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	199407
Receive Date:	19940726
Handler Name:	CENTRAL FLORIDA DRUM INC
Source Type:	Notification
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street 1:**	2950 RAILROAD AVE
Name:	KENNETH PLANTE	**Street 2:**	
Date Became Current:	19961018	**City:**	OVIEDO
Date Ended Current:		**State:**	FL
Phone:		**Country:**	US
Source Type:	Notification	**Zip Code:**	32765

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street 1:**	2950 RAILROAD AVE
Name:	PLANTE KENNETH	**Street 2:**	
Date Became Current:	19961018	**City:**	OVIEDO
Date Ended Current:		**State:**	FL
Phone:		**Country:**	US
Source Type:	Notification	**Zip Code:**	32765

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	2 of16	SSW	0.17 / 894.83	37.97 / 11	POLYMETRICS INC 2950 RAILROAD AVE OVIEDO FL 32794	RCRA NON GEN

EPA Handler ID:	FLD984183426
Gen Status Universe:	No Report
Contact Name:	MARY HORNE
Contact Address:	PO BOX 1085 , , MAITLAND , FL, 32794 , US
Contact Phone No and Ext:	407-767-5976
Contact Email:	
Contact Country:	US
County Name:	SEMINOLE
EPA Region:	04
Land Type:	Private
Receive Date:	20000812
Location Latitude:	28.690086
Location Longitude:	-81.259989

Violation/Evaluation Summary

Note:	NO VIOLATIONS: All of the compliance records associated with this facility (EPA ID) indicate NO VIOLATIONS; Compliance Monitoring and Enforcement table dated Apr, 2024.

Evaluation Details

Evaluation Start Date: 20000812
Evaluation Type Description: NON-FINANCIAL RECORD REVIEW
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 19990211
Evaluation Type Description: COMPLIANCE SCHEDULE EVALUATION
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 19990112
Evaluation Type Description: COMPLIANCE SCHEDULE EVALUATION
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 19980730
Evaluation Type Description: COMPLIANCE SCHEDULE EVALUATION
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 19980723
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 199011
Receive Date: 19901107
Handler Name: POLYMETRICS INC
Source Type: Notification
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator

Waste Code Details

Hazardous Waste Code: F003
Waste Code Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Code: F005
Waste Code Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Sequence No: 200008
Receive Date: 20000812
Handler Name: POLYMETRICS INC
Source Type: Implementer
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: MARY HORNE
Date Became Current: 19990422
Date Ended Current:
Phone:
Source Type: Notification
Street No:
Street 1: PO BOX 1085
Street 2:
City: MAITLAND
State: FL
Country: US
Zip Code: 32794

Owner/Operator Ind: Current Owner
Type: Private
Name: MARY HORNE
Date Became Current: 19990422
Date Ended Current:
Phone:
Source Type: Implementer
Street No:
Street 1: PO BOX 1085
Street 2:
City: MAITLAND
State: FL
Country: US
Zip Code: 32794

Historical Handler Details

Receive Dt: 19901107
Generator Code Description: Small Quantity Generator
Handler Name: POLYMETRICS INC

4	3 of16	SSW	0.17 / 894.83	37.97 / 11	L D PLANTE INC 2950 RAILROAD AVE OVIEDO FL 32765-8240	LST

Facility ID: 8520795
Facility Status: CLOSED
Facility Type: C - Fuel user/Non-retail
Feature:
Method: DPHO
Rank: 6627
Operator: L D PLANTE INC
Phone: (407)365-3241
Name Changed:
Address Changed:
Prim Related Party: 12685
Primary RP Role: ACCOUNT OWNER
RP Begin Date: 10/04/1985
Score: 26
Score Effctve Date: 12/21/2004
Score when Ranked: 26
Facility Name: L D PLANTE INC
Address1: 2950 RAILROAD AVE
Address2:
City: OVIEDO
State: FL
Zip5: 32765
Zip4: 8240
District: CD
County: SEMINOLE
County No: 59

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

RP Name:	L D PLANTE INC	**Datum:**	0
RP Address1:	2950 RAILROAD AVE	**Lat DD:**	28
RP Address2:		**Lat MM:**	41
RP City:	OVIEDO	**Lat SS:**	22.4273
RP State:	FL	**Long DD:**	81
RP Zip5:	32765	**Long MM:**	15
RP Zip4:	8240	**Long SS:**	35.5688
Contact:	DON PLANTE	**Section:**	006
RP Phone:	(407)365-3241	**Township:**	21S
RP Phone Ext.:		**Range:**	31E
RP Bad Addr Ind:	No		

Facility ID (Map):	8520795
Facility Type (Map):	Fuel user/Non-retail
Facility Status (Map):	CLOSED
Facility Name (Map):	L D PLANTE INC
Address (Map):	2950 RAILROAD AVE
City (Map):	OVIEDO
Zip5 (Map):	32765
County (Map):	SEMINOLE
Lat DD (Map):	28
Lat MM (Map):	41
Lat SS (Map):	
Long DD (Map):	81
Long MM (Map):	15
Long SS (Map):	
Datum (Map):	HARN
Geometry (Map):	
Rel Feat (Map):	CENTR
Collection (Map):	DPHO
Collector (Map):	SNYDER_W
Collection Date (Map):	5/20/2004
Document Link (Map):	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520795/facility!search
Oculus Docs Inventory:	https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=8520795&CAT=11
Information Portal Fac URL:	http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=8520795
Information Portal Doc URL:	http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520795/facility!search
Source:	DEP; Storage Tanks & Contamination Monitoring, Discharge Info.; FDEP Open Data, Petroleum Contamination Monitoring (PCTS) Discharges (Map)

Discharge Cleanup Summary

Discharge Date:	12/31/2002
Cleanup Required:	R - CLEANUP REQUIRED
Discharge Cleanup Status:	NFAC - NO FURTHER ACTION WITH CONDITIONS
Discharge Cleanup Stat Date:	06/04/2014
Eligibility Indicator:	I - INELIGIBLE
Site Manager:	WHITE_CL
Site Manager End Date:	05/13/2014
Tank Office:	PCLP48 - ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV

Contaminated Media

Contaminated Drinking Wells:	
Contaminated Mntring Wells:	
Contaminated Soil:	
Contaminated Surface Water:	
Contaminated Ground Water:	YES
Pollutant:	B - Unleaded Gas
Other Description:	DISCOVERED DURING ASSESSMENT
Gallons Discharged:	

Task Info

SA Task ID:	81170	**SR Soil Treatment:**	
SA Cleanup Resp:	-	**SR Other Treatment:**	
SA Actual Cost:		**SR Alt Proc Rec:**	
SA Complete Date:		**RAP Task ID:**	

SA Payment Date:		**RAP Clean Resp ID:**	-
SR Task ID:		**RAP Actual Cost:**	
SR Cleanup Resp:	-	**RAP Complete Date:**	
SR Actual Cost:		**RAP Payment Date:**	
SR Complete Date:		**RAP Last Ord Appr:**	
SR Payment Date:		**RA Task ID:**	78123
SR Oral Date:		**RA Cleanup Resp:**	-
SR Written Date:		**RA Yrs to Complete:**	0
SR Soil Removal:		**RA Actual Cost:**	
SR Free Prod Rmvl:		**Tank Office:**	PCLP48 - Orange County
SR Soil Ton Remove:			

SR Fund Elig Type:	-
SA Fund Elig Type:	-
RAP Fund Elig Type:	-
RA Fund Elig Type:	-
SR Alternate Procedure Status:	
SR Alt Procedure Status Dt:	
SR Alt Procedure Comment:	
SRC Action Type:	NFAC - NO FURTHER ACTION WITH CONDITIONS
SRC Submit Date:	6/20/2012
SRC Review Date:	07-18-2012
SRC Complete Status:	A - APPROVED
SRC Comp Status Dt:	07-18-2012
SRC Issue Date:	06-04-2014
SRC Comments:	

Petroleum Cleanup PCT Facility Score

Related Party ID:	12685
RP Contact:	DON PLANTE
Facility Cleanup Status:	CMPL - COMPLETED
Bad Address Indicator:	N

Discharge Info (Map)

Discharge:	55225	**Eligibility:**	INELIGIBLE
Discharge 1:	31-Dec-2002	**Eligibility 1:**	
Discharge 2:	26	**Report Pha:**	COMPLETED
Discharge 3:	NFAC	**Report Sub:**	COMPLETED
General Cl:	CLOSURE	**Report S 1:**	04-Jun-2014
Disch Clea:	04-Jun-2014	**Staff Assi:**	
Tank Offic:	ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV		

AST UST Discharges

Dep Co:	P	**Long MM:**	12
CU Req:	R	**Long SS:**	28.63
Score:	00026	**Stat Desc:**	NO FURTHER ACTION WITH CONDITIONS
Descrip:	CLEANUP REQUIRED	**Fac Name:**	L D PLANTE INC
Discharge Date:	31-DEC-02	**Fac Type:**	C
Score Date:	03-JUN-2010	**Type Desc:**	Fuel user/Non-retail
Stat Date:	04-JUN-2014	**Fac Addr:**	2950 RAILROAD AVE
LL Meth:	DPHO	**Fac City:**	OVIEDO
Lat DD:	28	**Fac Zip:**	32765
Lat MM:	40	**County:**	59
Lat SS:	14.93	**Fac State:**	CLOSED
Long DD:	81	**Fac Phone:**	4073653241
Prg Desc:			

Ineligible Discharges

Discharge Date:	12/31/2002
Score:	26
Current Status:	CLOSED

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Facility: L D PLANTE INC
Address: 2950 RAILROAD AVE
City: OVIEDO
Zip: 32765
County: SEMINOLE
Owner: L D PLANTE INC
Owner Address: 2950 RAILROAD AVE
Ownercity: OVIEDO
Owner State: FL
Owner Zip: 32765
Owner Phone: (407)365-3241
Owner Email:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	4 of16	SSW	0.17 / 894.83	37.97 / 11	*L D PLANTE (BF) 2950 RAILROAD AVE - OVIEDO FL -	VCP

Eric ID: ERIC_11104
System ID: BF590702001
System: BROWNFIELD
Status: CLOSEDWCOND
Activity Code: BSRA
Activity Dt: 12/27/2007
County: Seminole
District: CD
Object of Interest: CAP_R
Method: DPHO
Datum: HARN
Activity Description: Brownfields Site Rehabilitation Agreement

Point Proximity: EXACT
Accuracy: 4
Verification Meth: DPHO
Verification Date: 10/11/2005 1:38:54 PM
Latitude Degrees: 28
Latitude Minutes: 41
Latitude Seconds: 28.6187
Longitude Degrees: 81
Longitude Minutes: 15
Longitude Seconds: 42.1317

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	5 of16	SSW	0.17 / 894.83	37.97 / 11	PLANTE 2950 RAILROAD AVE WINTER SPRINGS FL 32708	WELL SURVEILLANCE

Facility ID: DEP0086
Project ID: SUPER
Req No: DC23186
Loc ID: 102247
GPS ID: 102247
Type: PETROLEUM
Insp CHD: SEMINOLE
HAE: -21.55
Loc Method: GPS - Uncorrected GPS
Insp F Name: JOYCE
Insp L Name: BITTLE
Comment: Was able to gps closer to actual site

County: SEMINOLE
Longitude: -81.259777
Latitude: 28.689453
GPS Date: 5/25/2006 0:00:00
Datum:
Software: Risk_Solo_v2
Streetside:
Agency: DOH

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	6 of16	SSW	0.17 / 894.83	37.97 / 11	L D PLANTE INC 2950 RAILROAD AVE WINTER SPRINGS FL 32708	WELL SURVEILLANCE

Facility ID: 8520795
Project ID: SUPER
Req No:
Loc ID: 204719
GPS ID: 204719
Type: PETROLEUM
Insp CHD: SEMINOLE
HAE: 11.2
Loc Method: DGPS - Differentially Corrected GPS
Insp F Name: JIM
Insp L Name: COLLINS
Comment: TANKS 3 AND 4

County: SEMINOLE
Longitude: -81.259128
Latitude: 28.688939
GPS Date: 11/12/2004 8:11:00
Datum: WS1984
Software:
Streetside:
Agency:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	7 of16	SSW	0.17 / 894.83	37.97 / 11	LD PLANTE 2950 RAILROAD AVE OVIEDO FL 32708	WELL SURVEILLANCE

Facility ID:	DEP 0086	**County:**	SEMINOLE
Project ID:	SUPER	**Longitude:**	-81.256997
Req No:	DEP0086	**Latitude:**	28.687418
Loc ID:	102255	**GPS Date:**	4/29/2009 0:00:00
GPS ID:	102255	**Datum:**	
Type:	PETROLEUM	**Software:**	Risk_Solo_v2
Insp CHD:	SEMINOLE	**Streetside:**	
HAE:	-31.9	**Agency:**	DOH
Loc Method:	DGPS - Differentially Corrected GPS		
Insp F Name:	JOYCE		
Insp L Name:	BITTLE		
Comment:	Fac. is gated- can not get in. gps gate		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	8 of16	SSW	0.17 / 894.83	37.97 / 11	L D PLANTE (BF) 2950 RAILROAD AVE OVIEDO FL	DWM CONTAM

Facility ID:	38428	**Contact:**	
Site ID:	ERIC_11104	**Phone:**	
Program Area:		**Method:**	
Facility Type:		**Datum:**	
Fac Type:		**Related Party ID:**	
County ID:	59	**Primary RP Role:**	
Ftc1 Fac Type ID:		**RP Begin Date:**	
Stcm Facility Type:	FIESTA	**RP Address1:**	
District:	CD	**RP Address2:**	
Site Status:		**RP City:**	
Section:		**RP State:**	
Township:		**RP Zip5:**	
County:	Seminole	**RP Zip4:**	
Range:		**RP Phone:**	
Rank:		**RP Extension:**	
Operator:		**RP Bad Addr Ind:**	
Name Changed:		**RP Name:**	
Addr Changed:			
Facility Name:	Polymetrics Inc		
Description:			

Program Details

Facility Status:		**Staff Assigned:**	
Offsite Contam:		**Priority:**	
Priority Score:		**Score Effective Dt:**	
Project Coordinato:		**Score When Ranked:**	
Program Eligible:		**District:**	
Ineligible:		**Datum:**	HARN
Program Area:	BROWNFIELDS	**Method:**	DPHO
Site Manager:	Tracy Jewsbury	**Lat DD:**	28
Discharge Date:		**Lat MM:**	41
Discharge Eligibil:		**Lat SS:**	28.6187
Eligibility Progrm:		**Long DD:**	81
Cleanup Status:	Closed-ERIC	**Long MM:**	15
Closure Type:		**Long SS:**	42.1317
Closure Date:			

Program Details

Facility Status:		**Staff Assigned:**	
Offsite Contam:		**Priority:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Priority Score:		**Score Effective Dt:**	
Project Coordinato:		**Score When Ranked:**	
Program Eligible:		**District:**	
Ineligible:		**Datum:**	HARN
Program Area:	RESPONSPARTY	**Method:**	DPHO
Site Manager:	Tracy Jewsbury	**Lat DD:**	28
Discharge Date:		**Lat MM:**	41
Discharge Eligibil:		**Lat SS:**	28.6187
Eligibility Progrm:		**Long DD:**	81
Cleanup Status:	Closed-ERIC	**Long MM:**	15
Closure Type:		**Long SS:**	42.1317
Closure Date:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	9 of16	SSW	0.17 / 894.83	37.97 / 11	L D PLANTE INC 2950 RAILROAD AVE OVIEDO FL 32765	UST

Facility ID:	8520795	**County:**	SEMINOLE
Facility Status:	CLOSED	**Lat/Long Method:**	DPHO
Facility Type:	C	**Lat DD:**	28
Type Desc:	Fuel user/Non-retail	**Lat MM:**	40
Facility Phone:	4073653241	**Lat SS:**	14.93
Dep Co:	P	**Long DD:**	81
Owner ID:	12685	**Long MM:**	12
Owner Phone:	4073653241	**Long SS:**	28.63
Owner:	L D PLANTE INC		
Owner Address1:	2950 RAILROAD AVE		
Owner Address2:			
Owner City:	OVIEDO		
Owner State:	FL		
Owner Zip 5:	32765		
Contact:	DON PLANTE		
Source:	Tank Facility - All Locations and Tank Information; Tank Facility - All Locations and Owner Information		
Oculus Docs Inventory URL:	https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=8520795&CAT=11		
Information Portal Fac URL:	http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=8520795		
Information Portal Doc URL:	http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520795/facility!search		

Tank Information

Tank ID:	3	**Capacity:**	10000
Tank Status:	B - REMOVED FROM SITE	**Substance:**	B - Unleaded Gas
Status Date:	31-DEC-1988	**Placement:**	UNDERGROUND
Installation Date:	01-JUL-1960	**Tank Vessel Indic:**	TANK
Tank Desc:			

Tank Information

Tank ID:	4	**Capacity:**	1000
Tank Status:	B - REMOVED FROM SITE	**Substance:**	D - Vehicular Diesel
Status Date:	31-DEC-1988	**Placement:**	UNDERGROUND
Installation Date:	01-JUL-1967	**Tank Vessel Indic:**	TANK
Tank Desc:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	10 of16	SSW	0.17 / 894.83	37.97 / 11	L D PLANTE INC 2950 RAILROAD AVE OVIEDO FL 32765	AST

Facility ID:	8520795	**County:**	SEMINOLE
Facility Status:	CLOSED	**Lat/Long Method:**	DPHO
Facility Type:	C	**Lat DD:**	28
Type Desc:	Fuel user/Non-retail	**Lat MM:**	40
Facility Phone:	4073653241	**Lat SS:**	14.93
Dep Co:	P	**Long DD:**	81
Owner ID:	12685	**Long MM:**	12
Owner Phone:	4073653241	**Long SS:**	28.63

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner: L D PLANTE INC
Owner Address1: 2950 RAILROAD AVE
Owner Address2:
Owner City: OVIEDO
Owner State: FL
Owner Zip 5: 32765
Contact: DON PLANTE
Data Source: Tank Facility - All Locations and Tank Information; Tank Facility - All Locations and Owner Information
Oculus Docs Inventory URL: https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=8520795&CAT=11
Information Portal Fac URL: http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=8520795
Information Portal Doc URL: http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520795/facility!search

Tank Information

Tank ID: 2
Tank Status: B - REMOVED FROM SITE
Status Date: 31-DEC-1988
Installation Date: 01-JUL-1974
Content Desc: D - Vehicular Diesel
Tank Desc:
Capacity: 20000
Placement: ABOVEGROUND
Tank Vessel Indic: TANK

Tank Information

Tank ID: 1
Tank Status: B - REMOVED FROM SITE
Status Date: 31-DEC-1988
Installation Date: 01-JUL-1974
Content Desc: D - Vehicular Diesel
Tank Desc:
Capacity: 10000
Placement: ABOVEGROUND
Tank Vessel Indic: TANK

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	11 of16	SSW	0.17 / 894.83	37.97 / 11	Polymetrics Inc 2950 RAILROAD AVE OVIEDO FL 0	ERIC

Eric ID: ERIC_11104
Site Status: CLOSEDWCOND
Source Facility ID: 38428
District: CD
WMD: SJRWMD
ICR Indicator: NO
Discharge Date:
Method ID: DPHO
Object of Interest: CAP_R
Proximit to Object: EXACT
Collector Username: GRANDE_M
Collect Date:
Map Source: 1999 doqs
Map Source Scale: 5000
Intrpolation Scale: 0
Coord Accuracy ID: 4
Site Phase Dsc: Phase 5 - Cleanup Complete
Site Name: L D PLANTE (BF)
Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/ERIC_11104/gis-facility!search
Offste Contami Key: CONTAMNOSCHOOL
Se Anno Cad Data:
State: FL
County Name: Seminole
County ID: 59
Datum ID: HARN
Geometry:
X: -81.2617032653299
Y: 28.6912829371314
Lat DD: 28
Lat MM: 41
Lat SS:
Long DD: 81
Long MM: 15
Long SS:
Gis Albx: 667045.0
Gis Alby: 523532.0

Program Details

Program: Petroleum Restoration Program
Program Type: PETROLEUM
Program Status: COMPLETEWITHCOND
Site Manager: Tracy Jewsbury

Program Details

Program: Responsible Party Cleanup
Program Type: RESPONSPARTY

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Status: COMPLETEWITHCOND
Site Manager: Tracy Jewsbury

Program Details

Program: Brownfield Site Rehabilitation
Program Type: BROWNFIELDS
Program Status: COMPLETEWITHCOND
Site Manager: Tracy Jewsbury

---

4 | **12 of16** | **SSW** | **0.17 / 894.83** | **37.97 / 11** | **L D PLANTE INC**
2950 RAILROAD AVENUE
OVIEDO FL 32765 | **ERIC**

Eric ID:	ERIC_7080	**Offste Contami Key:**	CONTAMUNKNOWN
Site Status:	CLOSEDWCOND	**Se Anno Cad Data:**	
Source Facility ID:	8520795	**State:**	FL
District:	CD	**County Name:**	Seminole
WMD:	SJRWMD	**County ID:**	59
ICR Indicator:	YES	**Datum ID:**	HARN
Discharge Date:		**Geometry:**	
Method ID:	DPHO	**X:**	-81.2598768375852
Object of Interest:	FACIL	**Y:**	28.6895638338426
Proximit to Object:	CENTR	**Lat DD:**	28
Collector Username:	ERIC_ICR_INIT_LOAD	**Lat MM:**	41
Collect Date:	5/20/2004	**Lat SS:**	
Map Source:	1999 doqs	**Long DD:**	81
Map Source Scale:	5000	**Long MM:**	15
Intrpolation Scale:	0	**Long SS:**	
Coord Accuracy ID:	3	**Gis Albx:**	667227.33
Site Phase Dsc:	Phase 4 - Design Implementation	**Gis Alby:**	523345.09

Site Name: L.D.PLANTE
Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/ERIC_7080/gis-facility!search

Program Details

Program: Brownfield Site Rehabilitation
Program Type: BROWNFIELDS
Program Status: COMPLETEWITHCOND
Site Manager:

Program Details

Program: Petroleum Restoration Program
Program Type: PETROLEUM
Program Status: COMPLETEWITHCOND
Site Manager:

---

4 | **13 of16** | **SSW** | **0.17 / 894.83** | **37.97 / 11** | **L.D.PLANTE**
2950 RAILROAD AVENUE
OVIEDO FL | **DWM CONTAM**

Facility ID:		**Contact:**	
Site ID:	ERIC_7080	**Phone:**	
Program Area:		**Method:**	
Facility Type:		**Datum:**	
Fac Type:		**Related Party ID:**	
County ID:		**Primary RP Role:**	
Ftc1 Fac Type ID:		**RP Begin Date:**	
Stcm Facility Type:		**RP Address1:**	
District:	CD	**RP Address2:**	
Site Status:	Open	**RP City:**	
Section:		**RP State:**	
Township:		**RP Zip5:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

County:	Seminole	**RP Zip4:**	
Range:		**RP Phone:**	
Rank:		**RP Extension:**	
Operator:		**RP Bad Addr Ind:**	
Name Changed:		**RP Name:**	
Addr Changed:			
Facility Name:			
Description:			

Program Details

Facility Status:		**Staff Assigned:**	
Offsite Contam:		**Priority:**	
Priority Score:		**Score Effective Dt:**	
Project Coordinato:		**Score When Ranked:**	
Program Eligible:		**District:**	
Ineligible:		**Datum:**	HARN
Program Area:	BROWNFIELDS	**Method:**	DPHO
Site Manager:	Christopher A. Williams	**Lat DD:**	28
Discharge Date:		**Lat MM:**	41
Discharge Eligibil:		**Lat SS:**	22.4273
Eligibility Progrm:		**Long DD:**	81
Cleanup Status:		**Long MM:**	15
Closure Type:		**Long SS:**	35.5688
Closure Date:			

Program Details

Facility Status:		**Staff Assigned:**	
Offsite Contam:		**Priority:**	
Priority Score:		**Score Effective Dt:**	
Project Coordinato:		**Score When Ranked:**	
Program Eligible:		**District:**	
Ineligible:		**Datum:**	HARN
Program Area:	BROWNFIELDS	**Method:**	DPHO
Site Manager:		**Lat DD:**	28
Discharge Date:	WILLIAM B YEOMANS JR	**Lat MM:**	41
Discharge Eligibil:	(315)372-3722	**Lat SS:**	22.4273
Eligibility Progrm:	1/29/2019	**Long DD:**	81
Cleanup Status:		**Long MM:**	15
Closure Type:		**Long SS:**	35.5688
Closure Date:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	14 of16	SSW	0.17 / 894.83	37.97 / 11	L D PLANTE INC 2950 RAILROAD AVE OVIEDO FL 32765	STCS

Facility ID:	8520795	**Clnup Cd (OD):**	CMPL
Type:	C - Fuel User/Non-Retail	**Fac Clnup Stat (OD):**	COMPLETED
Status:	Closed	**Clnup Dt (OD):**	2014/06/18
Status (OD):	REVIEWED	**Status (Map):**	REVIEWED
Fac Stat (OD):	CLOSED	**Contam (Map):**	
Fac Code (OD):	C	**Fac Type (Map):**	Fuel user/Non-retail
Fac Type (OD):	Fuel user/Non-retail	**Fac Stat (Map):**	CLOSED
Fac Name (OD):	L D PLANTE INC		
Address (OD):	2950 RAILROAD AVE		
City (OD):	OVIEDO		
County (OD):	SEMINOLE		
Zip5 (OD):	32765		
Name (Map):	L D PLANTE INC		
Address (Map):	2950 RAILROAD AVE		
City (Map):	OVIEDO		
County (Map):	59		
Zip4 (Map):	8240		
Zip5 (Map):	32765		
Address Line 1:	2950 Railroad Ave		

Address Line 2:	
City:	Oviedo
County:	SEMINOLE
State:	FL
Zip:	32765- 8240
Report Source:	FDEP Geospatial Open Data - Registered Tanks from Storage Tank Contamination Monitoring (STCM)(OD); FDEP Geospatial Open Data - Storage Tank Contamination Monitoring (STCM)(Map); Storage Tank Contaminated Facility Name and Address Search

FDEP Storage Tank Monitoring Open Data Details

Object ID:	9326	**Map Src:**	1999 doqs
X:	-81.2598802222244	**Map Scale:**	5000
Y:	28.6895631388922	**Elevation:**	
Regulated:	NO	**El Datum:**	
Col Meth:	DPHO	**El Resolut:**	
Col Name:	SNYDER_W	**El Units:**	
Col Date:	20-May-2004	**ALB East:**	667227.33
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**ALB North:**	523345.09
Ver Meth:	DPHO	**Loc ID:**	18599
Ver Name:	WOEBER_A	**Lat DD:**	28
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Date:	07-Jun-2005	**Lat SS:**	
OOIC:	FACILITY	**Long DD:**	81
Rel Feat:	CENTR	**Long MM:**	15
Datum:	HARN	**Long SS:**	
Coord Acc:	3		
Col Aff:	DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Direct:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520795/gis-facility!search		

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID:	18599	**Rel Feat:**	CENTR
Site Type:	Fuel user/Non-retail	**El Datum:**	
Contam Ind:		**El Resolut:**	
Phone:	4073653241	**El Units:**	
Operator:	L D PLANTE INC	**Map Src:**	1999 doqs
Next action:		**Map Scale:**	5000
Fin Respon:		**Coord Acc:**	3
Office:	CD	**Alb East:**	667227.33
OOIC:	FACILITY	**Alb North:**	523345.09
Col Meth:	DPHO	**Datum:**	HARN
Col Name:	SNYDER_W	**Elevation:**	
Col Date:	5/20/2004	**Lat DD:**	28
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Meth:	DPHO	**Lat SS:**	
Ver Name:	WOEBER_A	**Long DD:**	81
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Long MM:**	15
Ver Date:	6/7/2005	**Long SS:**	
Object ID:	18599		
Col Aff:	DEPARTMENT OF ENVIRONMENTAL PROTECTION		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520795/gis-facility!search		

Storage Tank Contaminated Facility Name & Address Search Details

Name:	L D Plante Inc 2950 Railroad Ave Oviedo, FL 32765- 8240
LL Method:	DPHO - Digital Aerial Photography with Ground Control
Account Owner:	L D Plante Inc
Contact:	L D Plante Inc
Phone:	407-365-3241
District:	CD

County 1: 59 - Seminole
Latitude: 28:41:22.4273
Longitude: 81:15:35.5688

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 1
Size: 10000
Content: Vehicular Diesel
Installed: 07/01/1974
Placement: ABOVE
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 2
Size: 20000
Content: Vehicular Diesel
Installed: 07/01/1974
Placement: ABOVE
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 4
Size: 1000
Content: Vehicular Diesel
Installed: 07/01/1967
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 3
Size: 10000
Content: Unleaded Gas
Installed: 07/01/1960
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

4	***15 of16***	***SSW***	***0.17 / 894.83***	***37.97 / 11***	****L D PLANTE (BF) 2950 RAILROAD AVE - OVIEDO FL -***	***VCP***

Eric ID: ERIC_11104
System ID: BF590702000
System: BROWNFIELD
Status: CLOSEDWCOND
Activity Code: BSRA
Activity Dt: 12/27/2007
County: Seminole
Point Proximity: EXACT
Accuracy: 4
Verification Meth: DPHO
Verification Date: 10/11/2005 1:38:54 PM
Latitude Degrees: 28
Latitude Minutes: 41
Latitude Seconds: 28.6187

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

District:	CD	**Longitude Degrees:**	81
Object of Interest:	CAP_R	**Longitude Minutes:**	15
Method:	DPHO	**Longitude Seconds:**	42.1317
Datum:	HARN		
Activity Description:	Brownfields Site Rehabilitation Agreement		

4	**16 of16**	**SSW**	**0.17 / 894.83**	**37.97 / 11**	**L D PLANTE INC 2950 RAILROAD AVE OVIEDO FL 32765**	**DWM CONTAM**

Facility ID:	8520795	**Contact:**	
Site ID:	8520795	**Phone:**	
Program Area:		**Method:**	
Facility Type:		**Datum:**	
Fac Type:		**Related Party ID:**	
County ID:	59	**Primary RP Role:**	
Ftc1 Fac Type ID:	C	**RP Begin Date:**	
Stcm Facility Type:	C	**RP Address1:**	
District:	CD	**RP Address2:**	
Site Status:		**RP City:**	
Section:	6	**RP State:**	
Township:	21S	**RP Zip5:**	
County:	Seminole	**RP Zip4:**	
Range:	31E	**RP Phone:**	
Rank:		**RP Extension:**	
Operator:		**RP Bad Addr Ind:**	
Name Changed:		**RP Name:**	
Addr Changed:			
Facility Name:	L D PLANTE INC		
Description:	Fuel user/Non-retail		

Program Details

Facility Status:		**Staff Assigned:**	
Offsite Contam:		**Priority:**	
Priority Score:	26	**Score Effective Dt:**	
Project Coordinato:		**Score When Ranked:**	
Program Eligible:		**District:**	
Ineligible:		**Datum:**	0
Program Area:	PETROLEUM	**Method:**	DPHO
Site Manager:		**Lat DD:**	28
Discharge Date:	12/31/2002	**Lat MM:**	40
Discharge Eligibil:	I	**Lat SS:**	14.93
Eligibility Progrm:		**Long DD:**	81
Cleanup Status:	CLOSED-STCM	**Long MM:**	12
Closure Type:	NFAC	**Long SS:**	28.63
Closure Date:	6/4/2014		

5	**1 of1**	**SSW**	**0.17 / 894.83**	**37.97 / 11**	**Former Central Florida Drum Facility 2950 (M-1 Zoning Area Only) and 2960 Railroad Avenue WINTER SPRINGS FL 32708**	**BROWNFIELDS**

Site ID:	BF590702001	**CCD1 City ID:**	4905
Area ID:	BF590702000	**CC2 County ID:**	59
Remediation:	AWAITING CLEANUP	**County:**	SEMINOLE
Acreage:	6.158711	**DDC Dep District ID:**	CD
SRCO Date:	03-MAY-19 12.00.00.000000 AM	**District:**	Central
BSRA Date:	27-DEC-07 12.00.00.000000 AM	**Latitude:**	28.68969728
X Coordinate NBR:	667217.0221	**Longitude:**	-81.25983692
Y Coordinate NBR:	523396.5232	**Lat DD:**	28
Shape Area:	24923.37804306	**Lat MM:**	41
Shape Length:	1139.95164134	**Lat SS:**	24.1246
Method:	PAPER	**Long DD:**	-81

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

CMC2 Verif Method:	DPHO	**Long MM:**	15
Verification Date:	17-JAN-08 12.00.00.000000 AM	**Long SS:**	35.8967
Date Stamp:	20-DEC-07 12.00.00.000000 AM	**Username:**	CLARKE_C
Source:	Seminole County		
Area Name:	Former Central Florida Drum Facility		
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/BF590702001/gis-facility!search		
Comment:	aka L.D. Plante, Inc.		
Oculus Docs Inventory Url:	https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=BF590702001&CAT=5		
Information Portal Facility Url:	http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=BF590702001		

6	1 of1	SSW	0.17 / 894.83	37.97 / 11	**Former Central Florida Drum Facility** **WINTER SPRINGS FL**	**BROWNFIELD AREA**

Area ID:	BF590702000	**Latitude:**	28.68969727
User Name:	CLARKE_C	**Longitude:**	-81.25983692
Method:	PAPER	**Latitude Degrees:**	28
County:	SEMINOLE	**Latitude Minutes:**	41
District:	Central	**Latitude Seconds:**	22.91018964
Acreage:	6.15871	**Longitude Degrees:**	-81
Resolution No:	2007-R-233	**Longitude Minutes:**	15
Resolution Date:	11-DEC-07 12.00.00.000000 AM	**Longitude Seconds:**	35.41292064
Shape Area:		**X Coordinate:**	667230.8907127
Shape Length:		**Y Coordinate:**	523359.9865243
Date Stamp:	20-DEC-07 12.00.00.000000 AM		
Source:	Seminole County		
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/BF590702000/gis-facility!search		

7	1 of1	NW	0.22 / 1,184.34	42.82 / 16	**FOREIGN CAR PARTS SERVICE** **1207 E STATE ROAD 434** **WINTER SPRINGS FL 32708-2811**	**RCRA NON GEN**

EPA Handler ID:	FLD981748007
Gen Status Universe:	No Report
Contact Name:	WAYNE NORMAN
Contact Address:	1207 , E STATE ROAD 434 , , WINTER SPRINGS , FL, 32708-2811 , US
Contact Phone No and Ext:	305-699-4505
Contact Email:	
Contact Country:	US
County Name:	SEMINOLE
EPA Region:	04
Land Type:	Private
Receive Date:	20121019
Location Latitude:	28.69765
Location Longitude:	-81.325183

Violation/Evaluation Summary

Note:	NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No

Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	198701
Receive Date:	19870114
Handler Name:	FOREIGN CAR PARTS SERVICE
Source Type:	Notification
Federal Waste Generator Code:	2
Generator Code Description:	Small Quantity Generator

Hazardous Waste Handler Details

Sequence No:	201210
Receive Date:	20121019
Handler Name:	FOREIGN CAR PARTS SERVICE
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	1207 E STATE ROAD 434
Name:	NORMAN WAYNE	***Street 2:***	
Date Became Current:	20000925	***City:***	WINTER SPRINGS
Date Ended Current:		***State:***	FL
Phone:		***Country:***	US
Source Type:	Notification	***Zip Code:***	32708-2811

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	1207 E STATE ROAD 434
Name:	WAYNE NORMAN	***Street 2:***	
Date Became Current:	20000925	***City:***	WINTER SPRINGS
Date Ended Current:		***State:***	FL
Phone:		***Country:***	US
Source Type:	Implementer	***Zip Code:***	32708-2811

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	1207 E STATE ROAD 434
Name:	WAYNE NORMAN	***Street 2:***	
Date Became Current:	20000925	***City:***	WINTER SPRINGS
Date Ended Current:		***State:***	FL
Phone:		***Country:***	US
Source Type:	Notification	***Zip Code:***	32708-2811

Historical Handler Details

Receive Dt:	19870114
Generator Code Description:	Small Quantity Generator
Handler Name:	FOREIGN CAR PARTS SERVICE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	*1 of8*	*WNW*	*0.23 / 1,193.88*	*43.19 / 16*	***MOBIL OIL CORP SS #Q8M*** ***1205 E SR 434*** ***WINTER SPRINGS FL 32708***	***RCRA NON GEN***

EPA Handler ID:	FLD984205518
Gen Status Universe:	No Report

Contact Name:	DAN HORTON
Contact Address:	3225 , GALLOWS RD , , FAIRFAX , VA, 22037-0002 , US
Contact Phone No and Ext:	703-849-3330
Contact Email:	
Contact Country:	US
County Name:	SEMINOLE
EPA Region:	04
Land Type:	Private
Receive Date:	20111012
Location Latitude:	28.695923
Location Longitude:	-81.262253

Violation/Evaluation Summary

Note:	NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	199108
Receive Date:	19910802
Handler Name:	MOBIL OIL CORP SS #Q8M
Source Type:	Notification
Federal Waste Generator Code:	2
Generator Code Description:	Small Quantity Generator

Waste Code Details

Hazardous Waste Code:	D001
Waste Code Description:	IGNITABLE WASTE
Hazardous Waste Code:	D018
Waste Code Description:	BENZENE

Hazardous Waste Handler Details

Sequence No:	201110
Receive Date:	20111012
Handler Name:	MOBIL OIL CORP SS #Q8M
Source Type:	Notification
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D018
Waste Code Description: BENZENE

Owner/Operator Details

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street 1:**	3225 GALLOWS RD
Name:	MOBIL OIL CORP SS # Q8M	**Street 2:**	
Date Became Current:	19910615	**City:**	FAIRFAX
Date Ended Current:		**State:**	VA
Phone:		**Country:**	US
Source Type:	Notification	**Zip Code:**	22037

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street 1:**	3225 GALLOWS RD
Name:	HORTON DAN	**Street 2:**	
Date Became Current:	20000209	**City:**	FAIRFAX
Date Ended Current:		**State:**	VA
Phone:		**Country:**	US
Source Type:	Notification	**Zip Code:**	22037

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street 1:**	3225 GALLOWS RD
Name:	DAN HORTON	**Street 2:**	
Date Became Current:	20000209	**City:**	FAIRFAX
Date Ended Current:		**State:**	VA
Phone:		**Country:**	US
Source Type:	Notification	**Zip Code:**	22037

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street 1:**	3225 GALLOWS RD
Name:	DONNA HYMES	**Street 2:**	
Date Became Current:	20111027	**City:**	FAIRFAX
Date Ended Current:		**State:**	VA
Phone:		**Country:**	US
Source Type:	Notification	**Zip Code:**	22037

Historical Handler Details

Receive Dt: 19910802
Generator Code Description: Small Quantity Generator
Handler Name: MOBIL OIL CORP SS #Q8M

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	2 of8	WNW	0.23 / 1,193.88	43.19 / 16	MOBIL-WINTER SPRINGS #731 1205 E STATE ROAD 434 WINTER SPRINGS FL 32708	UST

Facility ID:	9045623	**County:**	SEMINOLE
Facility Status:	OPEN	**Lat/Long Method:**	DPHO
Facility Type:	A	**Lat DD:**	28
Type Desc:	Retail Station	**Lat MM:**	41
Facility Phone:	8136814279	**Lat SS:**	45.59
Dep Co:	P	**Long DD:**	81
Owner ID:	922	**Long MM:**	15
Owner Phone:	8136814279	**Long SS:**	43.85

Owner: AUTOMATED PETROLEUM & ENERGY CO INC (APEC)
Owner Address1: PO BOX 1110
Owner Address2: ATTN: STORAGE TANK REGIS
Owner City: Brandon
Owner State: FL
Owner Zip 5: 33509
Contact: BILL MCKNIGHT | RICK HERWEH

Source: Tank Facility - All Locations and Tank Information; Tank Facility - All Locations and Owner Information
Oculus Docs Inventory URL: https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=9045623&CAT=11
Information Portal Fac URL: http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=9045623
Information Portal Doc URL: http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9045623/facility!search

Tank Information

Tank ID: 2
Tank Status: B - REMOVED FROM SITE
Status Date: 01-OCT-2008
Installation Date: 01-NOV-1989
Tank Desc:
Capacity: 10000
Substance: B - Unleaded Gas
Placement: UNDERGROUND
Tank Vessel Indic: TANK

Tank Information

Tank ID: 5
Tank Status: U - IN SERVICE
Status Date: 01-OCT-2008
Installation Date: 01-OCT-2008
Tank Desc: Double Walled
Capacity: 20000
Substance: B - Unleaded Gas
Placement: UNDERGROUND
Tank Vessel Indic: TANK

Piping

Pipe Description: F-Double wall
Pipe Description: C-Fiberglass
Pipe Description: J-Pressurized piping system
Pipe Description: K-Dispenser liners

Monitoring

Monitoring Desc: G-Electronic line leak detector
Monitoring Desc: 4-Visual inspect dispenser liners
Monitoring Desc: K-Monitor dbl wall pipe space
Monitoring Desc: L-Automatic tank gauging - USTs
Monitoring Desc: F-Monitor dbl wall tank space
Monitoring Desc: 2-Visual inspect pipe sumps
Monitoring Desc: 1-Continuous electronic sensing

Tank Construction

Cons Code: N
Cons Desc: Flow shut-Off

Cons Code: I
Cons Desc: Double wall

Cons Code: O
Cons Desc: Tight fill

Cons Code: M
Cons Desc: Spill containment bucket

Cons Code: E
Cons Desc: Fiberglass

Tank Information

Tank ID:	6	***Capacity:***	20000
Tank Status:	U - IN SERVICE	***Substance:***	D - Vehicular Diesel
Status Date:	01-OCT-2008	***Placement:***	UNDERGROUND
Installation Date:	01-OCT-2008	***Tank Vessel Indic:***	TANK
Tank Desc:	Double Walled		

Piping

Pipe Description:	C-Fiberglass
Pipe Description:	K-Dispenser liners
Pipe Description:	F-Double wall
Pipe Description:	J-Pressurized piping system

Monitoring

Monitoring Desc:	2-Visual inspect pipe sumps
Monitoring Desc:	F-Monitor dbl wall tank space
Monitoring Desc:	K-Monitor dbl wall pipe space
Monitoring Desc:	L-Automatic tank gauging - USTs
Monitoring Desc:	4-Visual inspect dispenser liners
Monitoring Desc:	1-Continuous electronic sensing
Monitoring Desc:	G-Electronic line leak detector

Tank Construction

Cons Code:	L
Cons Desc:	Compartmented
Cons Code:	O
Cons Desc:	Tight fill
Cons Code:	M
Cons Desc:	Spill containment bucket
Cons Code:	N
Cons Desc:	Flow shut-Off
Cons Code:	I
Cons Desc:	Double wall
Cons Code:	E
Cons Desc:	Fiberglass

Tank Information

Tank ID:	3	***Capacity:***	10000
Tank Status:	B - REMOVED FROM SITE	***Substance:***	B - Unleaded Gas
Status Date:	01-OCT-2008	***Placement:***	UNDERGROUND
Installation Date:	01-NOV-1989	***Tank Vessel Indic:***	TANK
Tank Desc:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank Information

Tank ID:	4	***Capacity:***	10000
Tank Status:	B - REMOVED FROM SITE	***Substance:***	B - Unleaded Gas
Status Date:	01-OCT-2008	***Placement:***	UNDERGROUND
Installation Date:	01-NOV-1989	***Tank Vessel Indic:***	TANK
Tank Desc:			

Tank Information

Tank ID:	1	***Capacity:***	10000
Tank Status:	B - REMOVED FROM SITE	***Substance:***	B - Unleaded Gas
Status Date:	01-OCT-2008	***Placement:***	UNDERGROUND
Installation Date:	01-NOV-1989	***Tank Vessel Indic:***	TANK
Tank Desc:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	3 of8	WNW	0.23 / 1,193.88	43.19 / 16	MOBIL-WINTER SPRINGS #731 1205 E STATE ROAD 434 WINTER SPRINGS FL 32708-2811	LST

Facility ID:	9045623	***Score:***	46
Facility Status:	OPEN	***Score Effctve Date:***	02/29/2008
Facility Type:	A - Retail Station	***Score when Ranked:***	30
Feature:		***Facility Name:***	MOBIL-WINTER SPRINGS #731
Method:	DPHO	***Address1:***	1205 E STATE ROAD 434
Rank:	4871	***Address2:***	
Operator:	RICK HERWEH	***City:***	WINTER SPRINGS
Phone:	(813)681-4279	***State:***	FL
Name Changed:	10/28/2013	***Zip5:***	32708
Address Changed:	10/25/2018	***Zip4:***	2811
Prim Related Party:	922	***District:***	CD
Primary RP Role:	ACCOUNT OWNER	***County:***	SEMINOLE
RP Begin Date:	10/28/2013	***County No:***	59
RP Name:	AUTOMATED PETROLEUM & ENERGY CO INC (APEC)	***Datum:***	0
RP Address1:	PO BOX 1110	***Lat DD:***	28
RP Address2:	ATTN: STORAGE TANK REGIS	***Lat MM:***	41
RP City:	Brandon	***Lat SS:***	44.6788
RP State:	FL	***Long DD:***	81
RP Zip5:	33509	***Long MM:***	15
RP Zip4:	1110	***Long SS:***	43.9905
Contact:	BILL MCKNIGHT | RICK HERWEH	***Section:***	031
RP Phone:	(813)681-4279	***Township:***	20S
RP Phone Ext.:	211	***Range:***	31E
RP Bad Addr Ind:	No		

Facility ID (Map):	9045623
Facility Type (Map):	Retail Station
Facility Status (Map):	OPEN
Facility Name (Map):	MOBIL-WINTER SPRINGS #731
Address (Map):	1205 E STATE ROAD 434
City (Map):	WINTER SPRINGS
Zip5 (Map):	32708
County (Map):	SEMINOLE
Lat DD (Map):	28
Lat MM (Map):	41
Lat SS (Map):	
Long DD (Map):	81
Long MM (Map):	15
Long SS (Map):	
Datum (Map):	HARN
Geometry (Map):	
Rel Feat (Map):	EXACT
Collection (Map):	DPHO
Collector (Map):	PERRY_JF59
Collection Date (Map):	7/23/2003
Document Link (Map):	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9045623/facility!search

Oculus Docs Inventory:	https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=9045623&CAT=11
Information Portal Fac URL:	http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=9045623
Information Portal Doc URL:	http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9045623/facility!search
Source:	DEP; Storage Tanks & Contamination Monitoring, Discharge Info.; FDEP Open Data, Petroleum Contamination Monitoring (PCTS) Discharges (Map)

Discharge Cleanup Summary

Discharge Date:	04/26/1993
Cleanup Required:	R - CLEANUP REQUIRED
Discharge Cleanup Status:	RA - RA ONGOING
Discharge Cleanup Stat Date:	05/10/2013
Eligibility Indicator:	E - ELIGIBLE
Site Manager:	PRESS_DM
Site Manager End Date:	
Tank Office:	PCLP48 - ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV

Contaminated Media

Contaminated Drinking Wells:	0
Contaminated Mntring Wells:	YES
Contaminated Soil:	NO
Contaminated Surface Water:	NO
Contaminated Ground Water:	NO
Pollutant:	B - Unleaded Gas
Other Description:	
Gallons Discharged:	25

Petroleum Cleanup Program Eligibility

Cleanup Program:	P - PETROLEUM LIABILITY AND RESTORATION INSURANCE PROGRAM
Eligibility Status:	ELIGIBLE

Task Info

SA Task ID:	84141	**SR Soil Treatment:**	
SA Cleanup Resp:	-	**SR Other Treatment:**	
SA Actual Cost:		**SR Alt Proc Rec:**	
SA Complete Date:		**RAP Task ID:**	
SA Payment Date:		**RAP Clean Resp ID:**	-
SR Task ID:		**RAP Actual Cost:**	
SR Cleanup Resp:	-	**RAP Complete Date:**	
SR Actual Cost:		**RAP Payment Date:**	
SR Complete Date:		**RAP Last Ord Appr:**	
SR Payment Date:		**RA Task ID:**	89795
SR Oral Date:		**RA Cleanup Resp:**	-
SR Written Date:		**RA Yrs to Complete:**	
SR Soil Removal:		**RA Actual Cost:**	
SR Free Prod Rmvl:		**Tank Office:**	PCLP48 - Orange County
SR Soil Ton Remove:			
SR Fund Elig Type:	-		
SA Fund Elig Type:	-		
RAP Fund Elig Type:	-		
RA Fund Elig Type:	-		
SR Alternate Procedure Status:			
SR Alt Procedure Status Dt:			
SR Alt Procedure Comment:			
SRC Action Type:	-		
SRC Submit Date:			
SRC Review Date:			
SRC Complete Status:	-		
SRC Comp Status Dt:			
SRC Issue Date:			
SRC Comments:			

Petroleum Cleanup Funding Cap Encumbrance to Date

FCFS:	$0.00
LPSPASM:	$0.00
SPASM:	$0.00
NPDES:	$0.00
Utility 1 Time Payments:	$0.00
All Wo Ta Co Pos Encumbered:	$29,147.47
Wo Ta Co Pos Exclu from Cap:	$0.00
Ttl Amnt Encumbered to Date:	$29,147.47
Ttl Amnt Encumbered Towar:	$29,147.47

Petroleum Cleanup PCT Facility Score

Related Party ID:	922
RP Contact:	BILL MCKNIGHT | RICK HERWEH
Facility Cleanup Status:	ONGO - ONGOING
Bad Address Indicator:	N

Contract

Contractor:	FRS ENVIRONMENTAL REMEDIATION, INC. DBA MONTROSE ENVIRONMENT
Score:	46
Facility Name:	MOBIL-WINTER SPRINGS #731
Address:	1205 E STATE ROAD 434
City:	WINTER SPRINGS
ZIP:	32708
District:	CD
County ID:	59
County:	SEMINOLE

Discharge Info (Map)

Discharge:	9484	***Eligibility:***	ELIGIBLE
Discharge 1:	26-Apr-1993	***Eligibility 1:***	PLIRP
Discharge 2:	46	***Report Pha:***	RA
Discharge 3:	RA	***Report Sub:***	SA
General Cl:	WORK UNDERWAY	***Report S 1:***	31-Mar-2020
Disch Clea:	10-May-2013	***Staff Assi:***	PRESS_DM
Tank Offic:	ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV		

Open Discharges

Program:	PLIRP
Eligibility:	ELIGIBLE
Elig Letter Sent:	10/23/2007
Discharge Date:	04/26/1993
Score:	46
Facility:	MOBIL-WINTER SPRINGS #731
Address:	1205 E STATE ROAD 434
City:	WINTER SPRINGS
State:	FL
Zip:	32708
County ID:	59
County:	SEMINOLE

AST UST Discharges

Dep Co:	P	***Long MM:***	15
CU Req:	R	***Long SS:***	43.85
Score:	00046	***Stat Desc:***	RA ONGOING

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Descrip:	CLEANUP REQUIRED	**Fac Name:**	MOBIL-WINTER SPRINGS #731
Discharge Date:	26-APR-93	**Fac Type:**	A
Score Date:	29-FEB-2008	**Type Desc:**	Retail Station
Stat Date:	10-MAY-2013	**Fac Addr:**	1205 E STATE ROAD 434
LL Meth:	DPHO	**Fac City:**	WINTER SPRINGS
Lat DD:	28	**Fac Zip:**	32708
Lat MM:	41	**County:**	59
Lat SS:	45.59	**Fac State:**	OPEN
Long DD:	81	**Fac Phone:**	8136814279
Prg Desc:	PETROLEUM LIABILITY AND RESTORATION INSURANCE PROGRAM		

Eligible Discharges

Program:	PLIRP
Current Status:	ACTIVE
Discharge Date:	04/26/1993
Score:	46
Facility:	MOBIL-WINTER SPRINGS #731
Address:	1205 E STATE ROAD 434
City:	WINTER SPRINGS
Zip:	32708
County:	SEMINOLE
Owner:	AUTOMATED PETROLEUM & ENERGY CO INC (APEC)
Owner Address:	PO BOX 1110
Owner City:	Brandon
Owner State:	FL
Owner Zip:	33509
Owner Phone:	(813)681-4279
Owner Email:	RICK@APECGAS.COM

8	***4 of8***	***WNW***	***0.23 / 1,193.88***	***43.19 / 16***	***MOBIL RS #10918 1205 W HWY 434 WINTER SPRINGS FL 32708***	***WELL SURVEILLANCE***

Facility ID:	9045623	**County:**	SEMINOLE
Project ID:	SUPER	**Longitude:**	-81.262235
Req No:		**Latitude:**	28.695738
Loc ID:	193775	**GPS Date:**	11/20/2007 0:00:00
GPS ID:	193775	**Datum:**	WS1984
Type:	PETROLEUM	**Software:**	Risk_Solo_v2
Insp CHD:	SEMINOLE	**Streetside:**	
HAE:	15.12	**Agency:**	DOH
Loc Method:	DGPS - Differentially Corrected GPS		
Insp F Name:	JOYCE		
Insp L Name:	BITTLE		
Comment:			

8	***5 of8***	***WNW***	***0.23 / 1,193.88***	***43.19 / 16***	***MOBIL-WINTER SPRINGS #731 1205 E STATE ROAD 434 WINTER SPRINGS FL 32708***	***DWM CONTAM***

Facility ID:	9045623	**Contact:**	
Site ID:	9045623	**Phone:**	
Program Area:		**Method:**	
Facility Type:		**Datum:**	
Fac Type:		**Related Party ID:**	
County ID:	59	**Primary RP Role:**	
Ftc1 Fac Type ID:	A	**RP Begin Date:**	
Stcm Facility Type:	A	**RP Address1:**	
District:	CD	**RP Address2:**	
Site Status:		**RP City:**	
Section:	31	**RP State:**	
Township:	20S	**RP Zip5:**	
County:	Seminole	**RP Zip4:**	
Range:	31E	**RP Phone:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Rank:		**RP Extension:**	
Operator:		**RP Bad Addr Ind:**	
Name Changed:		**RP Name:**	
Addr Changed:			
Facility Name:	MOBIL-WINTER SPRINGS #731		
Description:	Retail Station		

Program Details

Facility Status:		**Staff Assigned:**	
Offsite Contam:		**Priority:**	
Priority Score:	46	**Score Effective Dt:**	
Project Coordinato:		**Score When Ranked:**	
Program Eligible:		**District:**	
Ineligible:		**Datum:**	0
Program Area:	PETROLEUM	**Method:**	DPHO
Site Manager:	PRESS_DM	**Lat DD:**	28
Discharge Date:	4/26/1993	**Lat MM:**	41
Discharge Eligibil:	E	**Lat SS:**	45.59
Eligibility Progrm:	PLIRP	**Long DD:**	81
Cleanup Status:	OPEN-STCM	**Long MM:**	15
Closure Type:		**Long SS:**	43.85
Closure Date:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	6 of8	WNW	0.23 / 1,193.88	43.19 / 16	MOBIL R/S #10918 1205 E STATE ROAD 434 WINTER SPRINGS FL 32708	DWM CONTAM

Facility ID:	9045623	**Contact:**	
Site ID:		**Phone:**	
Program Area:	Petroleum	**Method:**	
Facility Type:		**Datum:**	
Fac Type:		**Related Party ID:**	
County ID:		**Primary RP Role:**	
Ftc1 Fac Type ID:		**RP Begin Date:**	
Stcm Facility Type:		**RP Address1:**	
District:		**RP Address2:**	
Site Status:		**RP City:**	
Section:		**RP State:**	
Township:		**RP Zip5:**	
County:	SEMINOLE	**RP Zip4:**	
Range:		**RP Phone:**	
Rank:		**RP Extension:**	
Operator:		**RP Bad Addr Ind:**	
Name Changed:		**RP Name:**	
Addr Changed:			
Facility Name:			
Description:			

Program Details

Facility Status:	ACTIVE	**Staff Assigned:**	
Offsite Contam:	U	**Priority:**	
Priority Score:	46	**Score Effective Dt:**	
Project Coordinato:	DURANT_RJ	**Score When Ranked:**	
Program Eligible:	Y	**District:**	PCLP59
Ineligible:		**Datum:**	HARN
Program Area:		**Method:**	DPHO
Site Manager:		**Lat DD:**	28
Discharge Date:		**Lat MM:**	41
Discharge Eligibil:		**Lat SS:**	44.6788
Eligibility Progrm:		**Long DD:**	81
Cleanup Status:		**Long MM:**	15
Closure Type:		**Long SS:**	43.9905
Closure Date:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	7 of8	WNW	0.23 / 1,193.88	43.19 / 16	7-ELEVEN STORE #34786 1205 E STATE ROAD 434 WINTER SPRINGS FL 32708	DWM CONTAM

Facility ID:	9045623	**Contact:**	
Site ID:		**Phone:**	
Program Area:	Petroleum	**Method:**	
Facility Type:		**Datum:**	
Fac Type:		**Related Party ID:**	
County ID:		**Primary RP Role:**	
Ftc1 Fac Type ID:		**RP Begin Date:**	
Stcm Facility Type:		**RP Address1:**	
District:		**RP Address2:**	
Site Status:		**RP City:**	
Section:		**RP State:**	
Township:		**RP Zip5:**	
County:	SEMINOLE	**RP Zip4:**	
Range:		**RP Phone:**	
Rank:		**RP Extension:**	
Operator:		**RP Bad Addr Ind:**	
Name Changed:		**RP Name:**	
Addr Changed:			
Facility Name:			
Description:			

Program Details

Facility Status:	ACTIVE	**Staff Assigned:**	
Offsite Contam:	U	**Priority:**	
Priority Score:	46	**Score Effective Dt:**	
Project Coordinato:	PRESS_DM	**Score When Ranked:**	
Program Eligible:	Y	**District:**	PCLP48
Ineligible:		**Datum:**	HARN
Program Area:		**Method:**	DPHO
Site Manager:		**Lat DD:**	28
Discharge Date:		**Lat MM:**	41
Discharge Eligibil:		**Lat SS:**	44.6788
Eligibility Progrm:		**Long DD:**	81
Cleanup Status:		**Long MM:**	15
Closure Type:		**Long SS:**	43.9905
Closure Date:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	8 of8	WNW	0.23 / 1,193.88	43.19 / 16	MOBIL-WINTER SPRINGS #731 1205 E STATE ROAD 434 WINTER SPRINGS FL 32708	STCS

Facility ID:	9045623	**Clnup Cd (OD):**	ONGO
Type:	A - Retail Station	**Fac Clnup Stat (OD):**	ONGOING
Status:	Open	**Clnup Dt (OD):**	2009/02/17
Status (OD):	REVIEWED	**Status (Map):**	REVIEWED
Fac Stat (OD):	OPEN	**Contam (Map):**	YES
Fac Code (OD):	A	**Fac Type (Map):**	Retail Station
Fac Type (OD):	Retail Station	**Fac Stat (Map):**	OPEN
Fac Name (OD):	MOBIL-WINTER SPRINGS #731		
Address (OD):	1205 E STATE ROAD 434		
City (OD):	WINTER SPRINGS		
County (OD):	SEMINOLE		
Zip5 (OD):	32708		
Name (Map):	MOBIL-WINTER SPRINGS #731		
Address (Map):	1205 E STATE ROAD 434		
City (Map):	WINTER SPRINGS		
County (Map):	59		
Zip4 (Map):	2811		
Zip5 (Map):	32708		
Address Line 1:	1205 E State Road 434		
Address Line 2:			

City:	Winter Springs
County:	SEMINOLE
State:	FL
Zip:	32708- 2811
Report Source:	FDEP Geospatial Open Data - Registered Tanks from Storage Tank Contamination Monitoring (STCM)(OD); FDEP Geospatial Open Data - Storage Tank Contamination Monitoring (STCM)(Map); Storage Tank Contaminated Facility Name and Address Search

FDEP Storage Tank Monitoring Open Data Details

Object ID:	32887	**Map Src:**	1994 doqs
X:	-81.2622195833348	**Map Scale:**	1010
Y:	28.6957441111145	**Elevation:**	
Regulated:	YES	**El Datum:**	
Col Meth:	DPHO	**El Resolut:**	
Col Name:	PERRY_JF59	**El Units:**	
Col Date:	23-Jul-2003	**ALB East:**	666983.66
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**ALB North:**	524026.19
Ver Meth:	DPHO	**Loc ID:**	18292
Ver Name:	WOEBER_A	**Lat DD:**	28
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Date:	09-Jun-2005	**Lat SS:**	
OOIC:	FACILITY	**Long DD:**	81
Rel Feat:	EXACT	**Long MM:**	15
Datum:	HARN	**Long SS:**	
Coord Acc:	4		
Col Aff:	CONTRACTOR		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Direct:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9045623/gis-facility!search		

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID:	18292	**Rel Feat:**	EXACT
Site Type:	Retail Station	**El Datum:**	
Contam Ind:		**El Resolut:**	
Phone:	8136814279	**El Units:**	
Operator:	RICK HERWEH	**Map Src:**	1994 doqs
Next action:	PLACARD 22-JUN-2023	**Map Scale:**	1010
Fin Respon:		**Coord Acc:**	4
Office:	CD	**Alb East:**	666983.66
OOIC:	FACILITY	**Alb North:**	524026.19
Col Meth:	DPHO	**Datum:**	HARN
Col Name:	PERRY_JF59	**Elevation:**	
Col Date:	7/23/2003	**Lat DD:**	28
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Meth:	DPHO	**Lat SS:**	
Ver Name:	WOEBER_A	**Long DD:**	81
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Long MM:**	15
Ver Date:	6/9/2005	**Long SS:**	
Object ID:	18292		
Col Aff:	CONTRACTOR		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/9045623/gis-facility!search		

Storage Tank Contaminated Facility Name & Address Search Details

Name:	Mobil-Winter Springs #731 1205 E State Road 434 Winter Springs, FL 32708- 2811
LL Method:	DPHO - Digital Aerial Photography with Ground Control
Account Owner:	Automated Petroleum & Energy Co Inc (Apec)
Contact:	Rick Herweh
Phone:	813-681-4279
District:	CD
County 1:	59 - Seminole

Latitude: 28:41:44.6788
Longitude: 81:15:43.9905

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 6
Size: 20000
Content: Vehicular Diesel
Installed: 10/01/2008
Placement: UNDER
Status: In Service
Construction: E - Fiberglass
I - Double Wall
L - Compartmented
M - Spill Containment Bucket
N - Flow Shut-Off
O - Tight Fill
Piping: C - Fiberglass
F - Double Wall
J - Pressurized Piping System
K - Dispenser Liners
Monitoring: 1 - Continuous Electronic Sensing
2 - Visual Inspect Pipe Sumps
4 - Visual Inspect Dispenser Liners
F - Monitor Dbl Wall Tank Space
G - Electronic Line Leak Detector
K - Monitor Dbl Wall Pipe Space
L - Automatic Tank Gauging - Usts

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 1
Size: 10000
Content: Unleaded Gas
Installed: 11/01/1989
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 5
Size: 20000
Content: Unleaded Gas
Installed: 10/01/2008
Placement: UNDER
Status: In Service
Construction: E - Fiberglass
I - Double Wall
M - Spill Containment Bucket
N - Flow Shut-Off
O - Tight Fill
Piping: C - Fiberglass
F - Double Wall
J - Pressurized Piping System
K - Dispenser Liners
Monitoring: 1 - Continuous Electronic Sensing
2 - Visual Inspect Pipe Sumps
4 - Visual Inspect Dispenser Liners
F - Monitor Dbl Wall Tank Space
G - Electronic Line Leak Detector
K - Monitor Dbl Wall Pipe Space
L - Automatic Tank Gauging - Usts

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 2
Size: 10000
Content: Unleaded Gas
Installed: 11/01/1989
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 4
Size: 10000
Content: Unleaded Gas
Installed: 11/01/1989
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 3
Size: 10000
Content: Unleaded Gas
Installed: 11/01/1989
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

9	1 of1	NW	0.23 / 1,211.30	41.10 / 14	1212 E. SR 434 DEBRIS STAGING AREA 1212 E. SR 434 WINTER SPRINGS FL 32708	SWF/LF

Facility ID: 98367
Fac Type (Geodata): Solid Waste
Fac Stat (Geodata): Inactive
Status Dt (Geodat): 2023/01/01 00:00:00+00
Ownership (Geodat): County
Zip4 (Geodata):
Zip5 (Geodata): 32708
District (Geodata): CD
Office (Geodata):
Resp Authority:
RA Address:
City1:
RA State:
Zip1:
RA Phone No.:
RA Email:
Site Supervisor:
SS Address:
City 1:
SS State:
Zip 1:
SS Phone No:
SS Email:
Land Owner:

District: CD
Section:
Township:
Range:
County ID (Geodat): 59
County (Geodata): Seminole
County: SEMINOLE
Latitude: 28:41:41
Longitude: 81:15:35

LO Address:
City 2:
LO State:
Zip 2:
LO Phone No:
Facility Name (Geodata): 1212 E. SR 434 DEBRIS STAGING AREA
Address (Geodata): 1212 E. SR 434
City (Geodata): Winter Springs
Documents (Geodata): https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/98367/gis-facility!search
Reports (Geodata): https://fldep.dep.state.fl.us/WWW_WACS/Reports/SW_Facility_Inventory_res2.asp?wacsid=98367
Info Portal Facility URL: http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=98367
Oculus Docs Inventory URL: https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=98367&CAT=8
Data Source: Solid Waste Facility Inventory Report; Florida DEP Geospatial Open Data

Class details

Class: DISASTER DEBRIS MANAGEMENT SITE
Class Status: INACTIVE (I)

Solid Waste Facility Inventory Geospatial Open Data

Object of Interest: Waste Processing Area
Accuracy Level: 6
Accuracy: 50 - 999.99 meters
QA Status: Not Reviewed
Datum ID: NAD83
X: 667229.674899825
Y: 523918.139000343
Lat DD: 28
Lat MM: 41
Lat SS:
Long DD: 81
Long MM: 15
Long SS:
Class: DISASTER DEBRIS MANAGEMENT SITE
Class Status: Inactive
Proximity ID: Approximate feature location
Coord Method ID: Unknown method

Solid Waste Facility Inventory Geospatial Open Data

Object of Interest: Facility
Accuracy Level: 6
Accuracy: 50 - 999.99 meters
QA Status: Not Reviewed
Datum ID: NAD83
X: 667229.674899825
Y: 523918.139000343
Lat DD: 28
Lat MM: 41
Lat SS:
Long DD: 81
Long MM: 15
Long SS:
Class:
Class Status:
Proximity ID: Approximate feature location
Coord Method ID: Unknown method

10	1 of2	SSW	0.26 / 1,360.53	42.26 / 15	L D PLANTE INC 2950 RAILROAD AVENUE OVIEDO FL 32765	INST

Facility ID No: STCM-8520795
Site ID: ERIC_7080
Boundary Key: 2
OIC Obj Inter ID: SWIM
VSC1 Verif Stat ID: REVIEWED
Control ID: IC-756
Begin Date: 4/21/2014
Previous Publish?: Yes
Site WMD: SJRWMD
Site Prog Type Key:
Site Dep Office: CD
Site ZIP4:
Site Name: L.D.PLANTE
All Site Names: L.D.PLANTE
Horizontal Referen: HARN
CMC2 Coord Meth ID: CSUR
PC2 Proximity ID: EXACT
Create User Name: ERIC_INIT_ICR_LOAD
Create Date/Time: 11/29/2018
Modify User Name: WILLIAMS_CA
Modify Date/Time: 1/14/2021
Collector User Nm: ERIC_INIT_ICR_LOAD
Collection Date: 11/29/2018
Area: 0
Len: 0

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site Managing Progr:
Control Name: L.D.PLANTE
Mechanism Counties: Seminole, Seminole, Seminole
Mechanism Category: Recorded ICs, Recorded ICs, Recorded ICs
Mechanism Types: Declaration of Restrictive Covenant, Declaration of Restrictive Covenant, Declaration of Restrictive Covenant
Mechanism Book No: 08246, 8246, 9347
Mechanism Page No: 1188, 1188-1192, 320
Mechanism Instr No:
Mechanism Effec Dt: 02-MAY-19, 21-APR-14, 21-APR-14
Restrictions: Dewatering, Digging, Groundwater Use, Soil Exposure, Stormwater Features
Contaminated Media: Groundwater, Soil
Contaminations: Aldrin, Antimony, Arsenic, Benzo(a)pyrene, Benzo(a)pyrene Equivalents, Benzo(b)fluoranthene, Cadmium, Chlordane (total), Chromium (total), Dibenz(a,h)anthracene, Dichloroethane, 1,1-, Dichloroethene, 1,1-, Dieldrin, Indeno(1,2,3-cd)pyrene, Isophorone, Lead, Mercury, Naphthalene, PCBs, PCE, PhOH, TCE, Total Xylenes, VOA-Volatile Organic Aromatics-Legacy
Engineering Controls: None, Permeable cap
Site Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/ERIC_7080/gis-facility!search
Description: GROUNDWATER USE RESTRICTION
Comments:

10	2 of2	SSW	0.26 / 1,360.53	42.26 / 15	**L D PLANTE INC** **2950 RAILROAD AVENUE** **OVIEDO FL 32765**	ENG

Facility ID No: STCM-8520795
Site ID: ERIC_7080
Boundary Key: 2
OIC Obj Inter ID: SWIM
VSC1 Verif Stat ID: REVIEWED
Control ID: IC-756
Begin Date: 4/21/2014
Previous Publish?: Yes
Site WMD: SJRWMD
Site Prog Type Key:
Site Dep Office: CD
Site ZIP4:
Horizontal Referen: HARN
CMC2 Coord Meth ID: CSUR
PC2 Proximity ID: EXACT
Create User Name: ERIC_INIT_ICR_LOAD
Create Date/Time: 11/29/2018
Modify User Name: WILLIAMS_CA
Modify Date/Time: 1/14/2021
Collector User Nm: ERIC_INIT_ICR_LOAD
Collection Date: 11/29/2018
Area: 0
Len: 0
Site Name: L.D.PLANTE
All Site Names: L.D.PLANTE
Site Managing Progr:
Control Name: L.D.PLANTE
Mechanism Counties: Seminole, Seminole, Seminole
Mechanism Category: Recorded ICs, Recorded ICs, Recorded ICs
Mechanism Types: Declaration of Restrictive Covenant, Declaration of Restrictive Covenant, Declaration of Restrictive Covenant
Mechanism Book No: 08246, 8246, 9347
Mechanism Page No: 1188, 1188-1192, 320
Mechanism Instr No:
Mechanism Effec Dt: 02-MAY-19, 21-APR-14, 21-APR-14
Restrictions: Dewatering, Digging, Groundwater Use, Soil Exposure, Stormwater Features
Contaminated Media: Groundwater, Soil
Contaminations: Aldrin, Antimony, Arsenic, Benzo(a)pyrene, Benzo(a)pyrene Equivalents, Benzo(b)fluoranthene, Cadmium, Chlordane (total), Chromium (total), Dibenz(a,h)anthracene, Dichloroethane, 1,1-, Dichloroethene, 1,1-, Dieldrin, Indeno(1,2,3-cd)pyrene, Isophorone, Lead, Mercury, Naphthalene, PCBs, PCE, PhOH, TCE, Total Xylenes, VOA-Volatile Organic Aromatics-Legacy
Engineering Controls: None, Permeable cap
Site Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/ERIC_7080/gis-facility!search
Description: GROUNDWATER USE RESTRICTION
Comments:

11	1 of1	WSW	0.30 / 1,602.74	40.72 / 14	**HI-FLAVOR MEATS INC** **401 TUSKAWILLA RD** **WINTER SPRINGS FL 32308**	STCS

Facility ID: 8520784
Type: C - Fuel User/Non-Retail
Status: Closed
Clnup Cd (OD):
Fac Clnup Stat (OD):
Clnup Dt (OD):

Status (OD):	REVIEWED	**Status (Map):**	REVIEWED
Fac Stat (OD):	CLOSED	**Contam (Map):**	
Fac Code (OD):	C	**Fac Type (Map):**	Fuel user/Non-retail
Fac Type (OD):	Fuel user/Non-retail	**Fac Stat (Map):**	CLOSED
Fac Name (OD):	HI-FLAVOR MEATS INC		
Address (OD):	401 TUSKAWILLA RD		
City (OD):	WINTER SPRINGS		
County (OD):	SEMINOLE		
Zip5 (OD):	32308		
Name (Map):	HI-FLAVOR MEATS INC		
Address (Map):	401 TUSKAWILLA RD		
City (Map):	WINTER SPRINGS		
County (Map):	59		
Zip4 (Map):	0		
Zip5 (Map):	32308		
Address Line 1:	401 Tuskawilla Rd		
Address Line 2:			
City:	Winter Springs		
County:	SEMINOLE		
State:	FL		
Zip:	32308		
Report Source:	FDEP Geospatial Open Data - Registered Tanks from Storage Tank Contamination Monitoring (STCM)(OD); FDEP Geospatial Open Data - Storage Tank Contamination Monitoring (STCM)(Map); Storage Tank Contaminated Facility Name and Address Search		

FDEP Storage Tank Monitoring Open Data Details

Object ID:	9155	**Map Src:**	1994 doqs
X:	-81.2629469166686	**Map Scale:**	2021
Y:	28.6928577500029	**Elevation:**	
Regulated:	NO	**El Datum:**	
Col Meth:	DPHO	**El Resolut:**	
Col Name:	PERRY_JF59	**El Units:**	
Col Date:	21-Jul-2003	**ALB East:**	666919.85
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**ALB North:**	523704.15
Ver Meth:	DPHO	**Loc ID:**	18606
Ver Name:	PERRY_JF59	**Lat DD:**	28
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Date:	21-Jul-2003	**Lat SS:**	
OOIC:	FACILITY	**Long DD:**	81
Rel Feat:	APPRX	**Long MM:**	15
Datum:	HARN	**Long SS:**	
Coord Acc:	4		
Col Aff:	CONTRACTOR		
Ver Aff:	CONTRACTOR		
Direct:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520784/gis-facility!search		

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID:	18606	**Rel Feat:**	APPRX
Site Type:	Fuel user/Non-retail	**El Datum:**	
Contam Ind:		**El Resolut:**	
Phone:	4076443720	**El Units:**	
Operator:	ROBBIE ONDICK	**Map Src:**	1994 doqs
Next action:		**Map Scale:**	2021
Fin Respon:		**Coord Acc:**	4
Office:	CD	**Alb East:**	666919.85
OOIC:	FACILITY	**Alb North:**	523704.15
Col Meth:	DPHO	**Datum:**	HARN
Col Name:	PERRY_JF59	**Elevation:**	
Col Date:	7/21/2003	**Lat DD:**	28
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Meth:	DPHO	**Lat SS:**	
Ver Name:	PERRY_JF59	**Long DD:**	81
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Long MM:**	15
Ver Date:	7/21/2003	**Long SS:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Object ID: 18606
Col Aff: CONTRACTOR
Ver Aff: CONTRACTOR
Documents: https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8520784/gis-facility!search

Storage Tank Contaminated Facility Name & Address Search Details

Name: Hi-Flavor Meats Inc
401 Tuskawilla Rd
Winter Springs, FL 32308
LL Method: DPHO - Autonomous GPS
Account Owner: Hi Flavor Meats Inc
Contact: Robbie Ondick
Phone: 407-644-3720
District: CD
County 1: 59 - Seminole
Latitude: 28:41:34.2879
Longitude: 81:15:46.6089

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 1
Size: 1000
Content: Vehicular Diesel
Installed:
Placement: ABOVE
Status: Removed from Site
Construction:
Piping:
Monitoring:

12	1 of5	NW	0.32 / 1,666.62	44.65 / 18	HANDY WAY FOOD STORE #3333 170 TUSCAWILLA RD WINTER SPRINGS FL 32708-3715	LST

Facility ID: 8516641
Facility Status: CLOSED
Facility Type: A - Retail Station
Feature:
Method: DPHO
Rank: 556
Operator: BRENT PUZAK
Phone: (904)327-1217
Name Changed:
Address Changed: 08/29/2000
Prim Related Party: 10563
Primary RP Role: ACCOUNT OWNER
RP Begin Date: 05/03/1999
RP Name: THE PANTRY INC
RP Address1: 305 Gregson Dr
RP Address2: ATTN: STORAGE TANK REGIS
RP City: Cary
RP State: NC
RP Zip5: 27511
RP Zip4: 6496
Contact: BRENT PUZAK | RAMON INCIONG (386) 916-6267
RP Phone: (919)774-6700
RP Phone Ext.: 6549
RP Bad Addr Ind: No
Facility ID (Map): 8516641
Facility Type (Map): Retail Station
Facility Status (Map): CLOSED
Facility Name (Map): HANDY WAY FOOD STORE #3333
Address (Map): 170 TUSCAWILLA RD
City (Map): WINTER SPRINGS

Score: 56
Score Effctve Date: 02/01/2013
Score when Ranked: 76
Facility Name: HANDY WAY FOOD STORE #3333
Address1: 170 TUSCAWILLA RD
Address2:
City: WINTER SPRINGS
State: FL
Zip5: 32708
Zip4: 3715
District: CD
County: SEMINOLE
County No: 59
Datum: 0
Lat DD: 28
Lat MM: 41
Lat SS: 47.7907
Long DD: 81
Long MM: 15
Long SS: 47.2791
Section: 036
Township: 020
Range: 030

Zip5 (Map):	32708
County (Map):	SEMINOLE
Lat DD (Map):	28
Lat MM (Map):	41
Lat SS (Map):	
Long DD (Map):	81
Long MM (Map):	15
Long SS (Map):	
Datum (Map):	HARN
Geometry (Map):	
Rel Feat (Map):	EXACT
Collection (Map):	DPHO
Collector (Map):	PERRY_JF59
Collection Date (Map):	10/14/2003
Document Link (Map):	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8516641/facility!search
Oculus Docs Inventory:	https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=8516641&CAT=11
Information Portal Fac URL:	http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=8516641
Information Portal Doc URL:	http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8516641/facility!search
Source:	DEP; Storage Tanks & Contamination Monitoring, Discharge Info.; FDEP Open Data, Petroleum Contamination Monitoring (PCTS) Discharges (Map)

Discharge Cleanup Summary

Discharge Date:	08/07/2000
Cleanup Required:	R - CLEANUP REQUIRED
Discharge Cleanup Status:	NFA - NFA COMPLETE
Discharge Cleanup Stat Date:	10/02/2013
Eligibility Indicator:	E - ELIGIBLE
Site Manager:	PRESS_DM
Site Manager End Date:	09/10/2013
Tank Office:	PCLP48 - ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV

Contaminated Media

Contaminated Drinking Wells:	
Contaminated Mntring Wells:	
Contaminated Soil:	
Contaminated Surface Water:	
Contaminated Ground Water:	YES
Pollutant:	B - Unleaded Gas
Other Description:	
Gallons Discharged:	

Petroleum Cleanup Program Eligibility

Cleanup Program:	S - SITE REHABILITATION FUNDING AGREEMENT
Eligibility Status:	NOT ELIGIBLE

Task Info

SA Task ID:	91160	***SR Soil Treatment:***	
SA Cleanup Resp:	-	***SR Other Treatment:***	
SA Actual Cost:		***SR Alt Proc Rec:***	
SA Complete Date:		***RAP Task ID:***	
SA Payment Date:		***RAP Clean Resp ID:***	-
SR Task ID:		***RAP Actual Cost:***	
SR Cleanup Resp:	-	***RAP Complete Date:***	
SR Actual Cost:		***RAP Payment Date:***	
SR Complete Date:		***RAP Last Ord Appr:***	
SR Payment Date:		***RA Task ID:***	90612
SR Oral Date:		***RA Cleanup Resp:***	ST - STATE
SR Written Date:		***RA Yrs to Complete:***	0
SR Soil Removal:		***RA Actual Cost:***	
SR Free Prod Rmvl:		***Tank Office:***	PCLP48 - Orange County

SR Soil Ton Remove:
SR Fund Elig Type: -
SA Fund Elig Type: -
RAP Fund Elig Type: -
RA Fund Elig Type: -
SR Alternate Procedure Status:
SR Alt Procedure Status Dt:
SR Alt Procedure Comment:
SRC Action Type: NFA - NO FURTHER ACTION
SRC Submit Date: 6/19/2013
SRC Review Date: 07-10-2013
SRC Complete Status: A - APPROVED
SRC Comp Status Dt: 07-10-2013
SRC Issue Date: 10-02-2013
SRC Comments:

Discharge Cleanup Summary

Discharge Date: 09/28/1987
Cleanup Required: R - CLEANUP REQUIRED
Discharge Cleanup Status: NFA - NFA COMPLETE
Discharge Cleanup Stat Date: 10/02/2013
Eligibility Indicator: E - ELIGIBLE
Site Manager: PRESS_DM
Site Manager End Date: 09/10/2013
Tank Office: PCLP48 - ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV

Contaminated Media

Contaminated Drinking Wells: 0
Contaminated Mntring Wells: NO
Contaminated Soil: YES
Contaminated Surface Water: NO
Contaminated Ground Water: YES
Pollutant: A - Leaded Gas
Other Description:
Gallons Discharged:

Petroleum Cleanup Program Eligibility

Cleanup Program: E - EARLY DETECTION INCENTIVE
Eligibility Status: ELIGIBLE

Task Info

SA Task ID: 23272
SA Cleanup Resp: RP - RESPONSIBLE PARTY
SA Actual Cost:
SA Complete Date: 01-17-1997
SA Payment Date:
SR Task ID: 23271
SR Cleanup Resp: RP - RESPONSIBLE PARTY
SR Actual Cost:
SR Complete Date:
SR Payment Date:
SR Oral Date:
SR Written Date:
SR Soil Removal: Yes
SR Free Prod Rmvl:
SR Soil Ton Remove:
SR Fund Elig Type: -
SA Fund Elig Type: -
RAP Fund Elig Type: -
RA Fund Elig Type: -
SR Soil Treatment: Yes
SR Other Treatment:
SR Alt Proc Rec:
RAP Task ID: 23273
RAP Clean Resp ID: RP - RESPONSIBLE PARTY
RAP Actual Cost:
RAP Complete Date:
RAP Payment Date:
RAP Last Ord Appr:
RA Task ID: 23274
RA Cleanup Resp: ST - STATE
RA Yrs to Complete: 0
RA Actual Cost:
Tank Office: PCLP48 - Orange County

SR Alternate Procedure Status:	
SR Alt Procedure Status Dt:	
SR Alt Procedure Comment:	
SRC Action Type:	NFA - NO FURTHER ACTION
SRC Submit Date:	6/19/2013
SRC Review Date:	07-10-2013
SRC Complete Status:	A - APPROVED
SRC Comp Status Dt:	07-10-2013
SRC Issue Date:	10-02-2013
SRC Comments:	

Petroleum Cleanup Funding Cap Encumbrance to Date

FCFS:	$94,480.23
LPSPASM:	$0.00
SPASM:	$0.00
NPDES:	$0.00
Utility 1 Time Payments:	$0.00
All Wo Ta Co Pos Encumbered:	$121,908.70
Wo Ta Co Pos Exclu from Cap:	$0.00
Ttl Amnt Encumbered to Date:	$216,388.93
Ttl Amnt Encumbered Towar:	$216,388.93

Petroleum Cleanup PCT Facility Score

Related Party ID:	10563
RP Contact:	BRENT PUZAK | RAMON INCIONG (386) 916-6267
Facility Cleanup Status:	CMPL - COMPLETED
Bad Address Indicator:	N

Discharge Info (Map)

Discharge:	53111	***Eligibility:***	ELIGIBLE
Discharge 1:	07-Aug-2000	***Eligibility 1:***	SRFA
Discharge 2:	56	***Report Pha:***	COMPLETED
Discharge 3:	NFA	***Report Sub:***	COMPLETED
General Cl:	CLOSURE	***Report S 1:***	02-Oct-2013
Disch Clea:	02-Oct-2013	***Staff Assi:***	
Tank Offic:	ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV		

Discharge Info (Map)

Discharge:	9778	***Eligibility:***	ELIGIBLE
Discharge 1:	28-Sep-1987	***Eligibility 1:***	EDI
Discharge 2:	56	***Report Pha:***	COMPLETED
Discharge 3:	NFA	***Report Sub:***	COMPLETED
General Cl:	CLOSURE	***Report S 1:***	02-Oct-2013
Disch Clea:	02-Oct-2013	***Staff Assi:***	
Tank Offic:	ORANGE COUNTY ENVIRONMENTAL PROTECTION DIV		

AST UST Discharges

Dep Co:	P	***Long MM:***	15
CU Req:	R	***Long SS:***	47.02
Score:	00056	***Stat Desc:***	NFA COMPLETE
Descrip:	CLEANUP REQUIRED	***Fac Name:***	HANDY WAY FOOD STORE #3333
Discharge Date:	28-SEP-87	***Fac Type:***	A
Score Date:	01-FEB-2013	***Type Desc:***	Retail Station
Stat Date:	02-OCT-2013	***Fac Addr:***	170 TUSCAWILLA RD
LL Meth:	DPHO	***Fac City:***	WINTER SPRINGS
Lat DD:	28	***Fac Zip:***	32708
Lat MM:	41	***County:***	59
Lat SS:	47.98	***Fac State:***	CLOSED

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Long DD:	81	**Fac Phone:**	9043271217
Prg Desc:	EARLY DETECTION INCENTIVE		

AST UST Discharges

Dep Co:	P	**Long MM:**	15
CU Req:	R	**Long SS:**	47.02
Score:	00056	**Stat Desc:**	NFA COMPLETE
Descrip:	CLEANUP REQUIRED	**Fac Name:**	HANDY WAY FOOD STORE #3333
Discharge Date:	07-AUG-00	**Fac Type:**	A
Score Date:	01-FEB-2013	**Type Desc:**	Retail Station
Stat Date:	02-OCT-2013	**Fac Addr:**	170 TUSCAWILLA RD
LL Meth:	DPHO	**Fac City:**	WINTER SPRINGS
Lat DD:	28	**Fac Zip:**	32708
Lat MM:	41	**County:**	59
Lat SS:	47.98	**Fac State:**	CLOSED
Long DD:	81	**Fac Phone:**	9043271217
Prg Desc:	SITE REHABILITATION FUNDING AGREEMENT		

Eligible Discharges

Program:	SRFA
Current Status:	CLOSED
Discharge Date:	08/07/2000
Score:	56
Facility:	HANDY WAY FOOD STORE #3333
Address:	170 TUSCAWILLA RD
City:	WINTER SPRINGS
Zip:	32708
County:	SEMINOLE
Owner:	THE PANTRY INC
Owner Address:	305 Gregson Dr
Owner City:	Cary
Owner State:	NC
Owner Zip:	27511
Owner Phone:	(919)774-6700
Owner Email:	GBIGGS@CIRCLEK.COM

Eligible Discharges

Program:	EDI
Current Status:	CLOSED
Discharge Date:	09/28/1987
Score:	56
Facility:	HANDY WAY FOOD STORE #3333
Address:	170 TUSCAWILLA RD
City:	WINTER SPRINGS
Zip:	32708
County:	SEMINOLE
Owner:	THE PANTRY INC
Owner Address:	305 Gregson Dr
Owner City:	Cary
Owner State:	NC
Owner Zip:	27511
Owner Phone:	(919)774-6700
Owner Email:	GBIGGS@CIRCLEK.COM

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
12	2 of5	NW	0.32 / 1,666.62	44.65 / 18	HANDY WAY FOOD STORE #3333 170 TUSCAWILLA RD WINTER SPRINGS FL 32708	DEL CONTAM SITE

Prgm Site ID:	8516641	**Record Date:**	
Remedi Status:	ACTIVE	**County:**	SEMINOLE
Priority Score:	76	**Method:**	DPHO
Program Area:	Petroleum	**Datum:**	HARN

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program Eligible:	Y	**Lat DD:**	28
Ineligible:		**Lat MM:**	41
Offsite Contam:	N	**Lat SS:**	47.7907
Dt Known Offsite:		**Long DD:**	81
Proj Manager:	SCHMIDT_JD	**Long MM:**	15
Office District:	PCLP59	**Long SS:**	47.2791
Original Source:	CS		
Record Date:	31-MAR-2015		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
12	3 of5	NW	0.32 / 1,666.62	44.65 / 18	HANDY WAY FOOD STORE #3333 170 TUSCAWILLA RD WINTER SPRINGS FL 32708	DWM CONTAM

Facility ID:	8516641	**Contact:**	
Site ID:		**Phone:**	
Program Area:	Petroleum	**Method:**	
Facility Type:		**Datum:**	
Fac Type:		**Related Party ID:**	
County ID:		**Primary RP Role:**	
Ftc1 Fac Type ID:		**RP Begin Date:**	
Stcm Facility Type:		**RP Address1:**	
District:		**RP Address2:**	
Site Status:		**RP City:**	
Section:		**RP State:**	
Township:		**RP Zip5:**	
County:	SEMINOLE	**RP Zip4:**	
Range:		**RP Phone:**	
Rank:		**RP Extension:**	
Operator:		**RP Bad Addr Ind:**	
Name Changed:		**RP Name:**	
Addr Changed:			
Facility Name:			
Description:			

Program Details

Facility Status:	ACTIVE	**Staff Assigned:**	
Offsite Contam:	N	**Priority:**	
Priority Score:	76	**Score Effective Dt:**	
Project Coordinato:	SCHMIDT_JD	**Score When Ranked:**	
Program Eligible:	Y	**District:**	PCLP59
Ineligible:		**Datum:**	HARN
Program Area:		**Method:**	DPHO
Site Manager:		**Lat DD:**	28
Discharge Date:		**Lat MM:**	41
Discharge Eligibil:		**Lat SS:**	47.7907
Eligibility Progrm:		**Long DD:**	81
Cleanup Status:		**Long MM:**	15
Closure Type:		**Long SS:**	47.2791
Closure Date:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
12	4 of5	NW	0.32 / 1,666.62	44.65 / 18	HANDY WAY FOOD STORE #3333 170 TUSCAWILLA RD WINTER SPRINGS FL 32708	STCS

Facility ID:	8516641	**Clnup Cd (OD):**	CMPL
Type:	A - Retail Station	**Fac Clnup Stat (OD):**	COMPLETED
Status:	Closed	**Clnup Dt (OD):**	2014/03/23
Status (OD):	REVIEWED	**Status (Map):**	REVIEWED
Fac Stat (OD):	CLOSED	**Contam (Map):**	
Fac Code (OD):	A	**Fac Type (Map):**	Retail Station
Fac Type (OD):	Retail Station	**Fac Stat (Map):**	CLOSED
Fac Name (OD):	HANDY WAY FOOD STORE #3333		
Address (OD):	170 TUSCAWILLA RD		
City (OD):	WINTER SPRINGS		

County (OD):	SEMINOLE
Zip5 (OD):	32708
Name (Map):	HANDY WAY FOOD STORE #3333
Address (Map):	170 TUSCAWILLA RD
City (Map):	WINTER SPRINGS
County (Map):	59
Zip4 (Map):	3715
Zip5 (Map):	32708
Address Line 1:	170 Tuscawilla Rd
Address Line 2:	
City:	Winter Springs
County:	SEMINOLE
State:	FL
Zip:	32708- 3715
Report Source:	FDEP Geospatial Open Data - Registered Tanks from Storage Tank Contamination Monitoring (STCM)(OD); FDEP Geospatial Open Data - Storage Tank Contamination Monitoring (STCM)(Map); Storage Tank Contaminated Facility Name and Address Search

FDEP Storage Tank Monitoring Open Data Details

Object ID:	8104	**Map Src:**	1999 doqs
X:	-81.2631330833355	**Map Scale:**	1010
Y:	28.6966085277811	**Elevation:**	
Regulated:	NO	**El Datum:**	
Col Meth:	DPHO	**El Resolut:**	
Col Name:	PERRY_JF59	**El Units:**	
Col Date:	14-Oct-2003	**ALB East:**	666892.46
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**ALB North:**	524120.18
Ver Meth:	DPHO	**Loc ID:**	18725
Ver Name:	WOEBER_A	**Lat DD:**	28
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Date:	08-Jun-2005	**Lat SS:**	
OOIC:	FACILITY	**Long DD:**	81
Rel Feat:	EXACT	**Long MM:**	15
Datum:	HARN	**Long SS:**	
Coord Acc:	4		
Col Aff:	CONTRACTOR		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Direct:			
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8516641/gis-facility!search		

FDEP Open Data - Storage Tank Contamination Monitoring (STCM)

Loc ID:	18725	**Rel Feat:**	EXACT
Site Type:	Retail Station	**El Datum:**	
Contam Ind:		**El Resolut:**	
Phone:	9043271217	**El Units:**	
Operator:	BRENT PUZAK	**Map Src:**	1999 doqs
Next action:	PLACARD 04-AUG-2000	**Map Scale:**	1010
Fin Respon:		**Coord Acc:**	4
Office:	CD	**Alb East:**	666892.46
OOIC:	FACILITY	**Alb North:**	524120.18
Col Meth:	DPHO	**Datum:**	HARN
Col Name:	PERRY_JF59	**Elevation:**	
Col Date:	10/14/2003	**Lat DD:**	28
Col Prog:	TANKS-PETROLEUM CONTAMINATION	**Lat MM:**	41
Ver Meth:	DPHO	**Lat SS:**	
Ver Name:	WOEBER_A	**Long DD:**	81
Ver Prog:	TANKS-PETROLEUM CONTAMINATION	**Long MM:**	15
Ver Date:	6/8/2005	**Long SS:**	
Object ID:	18725		
Col Aff:	CONTRACTOR		
Ver Aff:	DEPARTMENT OF ENVIRONMENTAL PR		
Documents:	https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/8516641/gis-facility!search		

Storage Tank Contaminated Facility Name & Address Search Details

Name: Handy Way Food Store #3333
170 Tuscawilla Rd
Winter Springs, FL 32708- 3715
LL Method: DPHO - Digital Aerial Photography with Ground Control
Account Owner: The Pantry Inc
Contact: Brent Puzak
Phone: 904-327-1217
District: CD
County 1: 59 - Seminole
Latitude: 28:41:47.7907
Longitude: 81:15:47.2791

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 4
Size: 10000
Content: Unleaded Gas
Installed: 05/01/1982
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 5
Size: 10000
Content: Unleaded Gas
Installed: 04/01/1995
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 1
Size: 10000
Content: Unleaded Gas
Installed: 05/01/1982
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Tank No: 2
Size: 10000
Content: Unleaded Gas
Installed: 05/01/1982
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

FDEP - Registered Tanks from Storage Tank Contamination Monitoring (STCM) Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank No: 3
Size: 12000
Content: Unleaded Gas
Installed: 04/01/1995
Placement: UNDER
Status: Removed from Site
Construction:
Piping:
Monitoring:

---

12 | **5 of5** | **NW** | **0.32 / 1,666.62** | **44.65 / 18** | **HANDY WAY FOOD STORE #3333**
170 TUSCAWILLA RD
WINTER SPRINGS FL 32708 | **DWM CONTAM**

Facility ID: 8516641
Site ID: 8516641
Program Area:
Facility Type:
Fac Type:
County ID: 59
Ftc1 Fac Type ID: A
Stcm Facility Type: A
District: CD
Site Status:
Section: 36
Township: 20
County: Seminole
Range: 30
Rank:
Operator:
Name Changed:
Addr Changed:
Facility Name: HANDY WAY FOOD STORE #3333
Description: Retail Station

Contact:
Phone:
Method:
Datum:
Related Party ID:
Primary RP Role:
RP Begin Date:
RP Address1:
RP Address2:
RP City:
RP State:
RP Zip5:
RP Zip4:
RP Phone:
RP Extension:
RP Bad Addr Ind:
RP Name:

Program Details

Facility Status:
Offsite Contam:
Priority Score: 56
Project Coordinato:
Program Eligible:
Ineligible:
Program Area: PETROLEUM
Site Manager:
Discharge Date: 8/7/2000
Discharge Eligibil: E
Eligibility Progrm: SRFA
Cleanup Status: CLOSED-STCM
Closure Type: NFA
Closure Date: 10/2/2013

Staff Assigned:
Priority:
Score Effective Dt:
Score When Ranked:
District:
Datum: 0
Method: DPHO
Lat DD: 28
Lat MM: 41
Lat SS: 47.98
Long DD: 81
Long MM: 15
Long SS: 47.02

Program Details

Facility Status:
Offsite Contam:
Priority Score: 56
Project Coordinato:
Program Eligible:
Ineligible:
Program Area: PETROLEUM
Site Manager:
Discharge Date: 9/28/1987
Discharge Eligibil: E
Eligibility Progrm: EDI
Cleanup Status: CLOSED-STCM

Staff Assigned:
Priority:
Score Effective Dt:
Score When Ranked:
District:
Datum: 0
Method: DPHO
Lat DD: 28
Lat MM: 41
Lat SS: 47.98
Long DD: 81
Long MM: 15

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Closure Type: NFA
Closure Date: 10/2/2013
Long SS: 47.02

---

13 | **1 of1** | **SW** | **0.41 / 2,168.64** | **46.66 / 20** | **TUSKAWILLA CROSSINGS DISASTER DEBRIS MANAGEMENT SITE**
395 TUSKAWILLA RD
WINTER SPRINGS FL 32708 | **SWF/LF**

Facility ID: 104855
Fac Type (Geodata): Solid Waste
Fac Stat (Geodata): Inactive
Status Dt (Geodat): 2018/01/22 00:00:00+00
Ownership (Geodat): Private
Zip4 (Geodata): 3710
Zip5 (Geodata): 32708
District (Geodata): CD
Office (Geodata): Seminole
Resp Authority:
RA Address:
City1:
RA State:
Zip1:
RA Phone No.:
RA Email:
Site Supervisor:
SS Address:
City 1:
SS State:
Zip 1:
SS Phone No:
SS Email:
Land Owner:
LO Address:
City 2:
LO State:
Zip 2:
LO Phone No:

District: CD
Section:
Township:
Range:
County ID (Geodat): 59
County (Geodata): Seminole
County: SEMINOLE
Latitude: 28:41:37.4955
Longitude: 81:15:44.14

Facility Name (Geodata): TUSKAWILLA CROSSINGS DISASTER DEBRIS MANAGEMENT SITE
Address (Geodata): 395 TUSKAWILLA RD
City (Geodata): Winter Springs
Documents (Geodata): https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/104855/gis-facility!search
Reports (Geodata): https://fldep.dep.state.fl.us/WWW_WACS/Reports/SW_Facility_Inventory_res2.asp?wacsid=104855
Info Portal Facility URL: http://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?pagination=true&facility.id=104855
Oculus Docs Inventory URL: https://erisservice7.ecologeris.com/ErisExt/flo/ocure.ashx?ID=104855&CAT=8
Data Source: Solid Waste Facility Inventory Report; Florida DEP Geospatial Open Data

Class details

Class: DISASTER DEBRIS MANAGEMENT SITE
Class Status: INACTIVE (I)

Solid Waste Facility Inventory Geospatial Open Data

Object of Interest: Facility
Accuracy Level: 3
Accuracy: 1.1 - 10 meters
QA Status: Reviewed
Datum ID: NAD83
X: 666984.526199825
Y: 523804.558000341
Class:
Class Status:
Proximity ID: Approximate feature location
Coord Method ID: Digital Aerial Photography

Lat DD: 28
Lat MM: 41
Lat SS:
Long DD: 81
Long MM: 15
Long SS:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Solid Waste Facility Inventory Geospatial Open Data

Object of Interest:	Waste Processing Area	***Lat DD:***	28
Accuracy Level:	3	***Lat MM:***	41
Accuracy:	1.1 - 10 meters	***Lat SS:***	
QA Status:	Reviewed	***Long DD:***	81
Datum ID:	NAD83	***Long MM:***	15
X:	666984.525099825	***Long SS:***	
Y:	523804.558200346		
Class:	DISASTER DEBRIS MANAGEMENT SITE		
Class Status:	Inactive		
Proximity ID:	Approximate feature location		
Coord Method ID:	Digital Aerial Photography		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
14	1 of1	ESE	0.77 / 4,071.78	14.88 / -12	SULLIVAN MATERIALS - TUSCAWILLA UNITS SEMINOLE COUNTY WINTER SPRINGS FL 32708	MRDS

Dep ID:	10306524	***I1:***	77
Dev Status:	PRODUCER	***Latitude:***	28.690125
Code List:	SD	***Longitude:***	-81.246399
Url:	http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10306524		

Commodity

I1:	19	***Line:***	1
Code:	SD	***Inserted By:***	woodruff
Commodity:	Sand	***Insert Date:***	03-JUL-2003 15:08:22
Commodity Type:	Non-metallic	***Updated By:***	
Commodity Group:	Sand	***Update Date:***	
Importance:	Primary		

Names

I1:	29	***Inserted By:***	woodruff
Status:	Current	***Insert Date:***	03-JUL-03
Site Name:	Sullivan Materials - Tuscawilla Uni	***Updated By:***	
Line:	1	***Update Date:***	

Unplottable Summary

Total: 3 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
DWM CONTAM	SCRIMSHER PARCEL	E SR 434 ***Facility ID:*** 138637	WINTER SPRINGS, FL	32708	895371120
ERNS		COUNTRY RD 419 STATE RD 434 ***NRC Report No:*** 966050	WINTERSPRINGS FL		807030320
FINDS/FRS	GRACIA COMMUNITY CHURCH	EAST 434 STATE ROAD ***Registry ID:*** 110071663111	WINTER SPRINGS FL	32708	923379010

Unplottable Report

Site: ***SCRIMSHER PARCEL***
E SR 434 WINTER SPRINGS, FL 32708

DWM CONTAM

Facility ID:	138637	***Contact:***	
Site ID:	ERIC_11188	***Phone:***	
Program Area:		***Method:***	
Facility Type:		***Datum:***	
Fac Type:		***Related Party ID:***	
County ID:	59	***Primary RP Role:***	
Ftc1 Fac Type ID:		***RP Begin Date:***	
Stcm Facility Type:	FIESTA	***RP Address1:***	
District:	CD	***RP Address2:***	
Site Status:		***RP City:***	
Section:		***RP State:***	
Township:		***RP Zip5:***	
County:	Seminole	***RP Zip4:***	
Range:		***RP Phone:***	
Rank:		***RP Extension:***	
Operator:		***RP Bad Addr Ind:***	
Name Changed:		***RP Name:***	
Addr Changed:			
Facility Name:	SCRIMISHER PARCEL		
Description:			

Program Details

Facility Status:		***Staff Assigned:***	
Offsite Contam:		***Priority:***	
Priority Score:		***Score Effective Dt:***	
Project Coordinato:		***Score When Ranked:***	
Program Eligible:		***District:***	
Ineligible:		***Datum:***	NAD83
Program Area:	RESPONSPARTY	***Method:***	DPHO
Site Manager:	George Houston	***Lat DD:***	28
Discharge Date:		***Lat MM:***	41
Discharge Eligibil:		***Lat SS:***	37.4926
Eligibility Progrm:		***Long DD:***	81
Cleanup Status:	Closed-ERIC	***Long MM:***	15
Closure Type:		***Long SS:***	38.2828
Closure Date:			

Site:
COUNTRY RD 419 STATE RD 434 WINTERSPRINGS FL

ERNS

NRC Report No:	966050	***Latitude Degrees:***	
Type of Incident:	FIXED	***Latitude Minutes:***	
Incident Cause:	UNKNOWN	***Latitude Seconds:***	
Incident Date:	29-Jan-2011 21:15:00	***Longitude Degrees:***	
Incident Location:		***Longitude Minutes:***	
Incident Dtg:	OCCURRED	***Longitude Seconds:***	
Distance from City:		***Lat Quad:***	
Distance Units:		***Long Quad:***	
Direction from City:		***Location Section:***	
Location County:	SEMINOLE	***Location Township:***	
Potential Flag:	Yes	***Location Range:***	
Year:	Year 2011 Reports		
Description of Incident:	CALLER IS REPORTING THAT A SCRAP YARD NEAR HIS HOME HAD A FIRE DUE TO AN UNKNOWN CAUSE AND HE IS CONCERNED ABOUT THE CHEMICALS THAT MIGHT BE RELEASED. CALLER STATED THAT THE FIRE SEEMS TO BE UNDER CONTROL HOWEVER BLACK SMOKE IS COVERING THE SKY.		

Material Spill Information

Chris Code:	UNK	***Unit of Measure:***	UNKNOWN AMOUNT
CAS No:	000000-00-0	***If Reached Water:***	UNKNOWN
UN No:		***Amount in Water:***	0
Name of Material:	UNKNOWN MATERIAL	***Unit Reach Water:***	UNKNOWN AMOUNT
Amount of Material:	0		

Calls Information

Date Time Received:	29-Jan-2011 22:51:03	***Responsible City:***	WINTERSPRINGS
Date Time Complete:	29-Jan-2011 23:01:42	***Responsible State:***	FL
Call Type:	INC	***Responsible Zip:***	
Resp Company:	419 SCRAP YARD	***Source:***	TELEPHONE
Resp Org Type:	PRIVATE ENTERPRISE		

Incident Information

Tank ID:		***Building ID:***	
Tank Regulated:	U	***Location Area ID:***	
Tank Regulated By:		***Location Block ID:***	
Capacity of Tank:		***OCSG No:***	
Capacity Tank Units:		***OCSP No:***	
Description of Tank:		***State Lease No:***	
Actual Amount:		***Pier Dock No:***	
Actual Amount Units:		***Berth Slip No:***	
Tank Above Ground:	ABOVE	***Brake Failure:***	U
NPDES:		***Airbag Deployed:***	U
NPDES Compliance:	U	***Transport Contain:***	U
Init Contin Rel No:		***Location Subdiv:***	
Contin Rel Permit:		***Platform Rig Name:***	
Contin Release Type:		***Platform Letter:***	
Aircraft ID:		***Allision:***	U
Aircraft Runway No:		***Type of Structure:***	
Aircraft Spot No:		***Structure Name:***	
Aircraft Type:		***Structure Oper:***	U
Aircraft Model:		***Transit Bus Flag:***	
Aircraft Fuel Cap:		***Date Time Norm Serv:***	
Aircraft Fuel Cap U:		***Serv Disrupt Time:***	
Aircraft Fuel on Brd:		***Serv Disrupt Units:***	
Aircraft Fuel OB U:		***CR Begin Date:***	
Aircraft Hanger:		***CR End Date:***	
Road Mile Marker:		***CR Change Date:***	
Power Gen Facility:	N	***FBI Contact:***	
Generating Capacity:		***FBI Contact Dt Tm:***	
Type of Fixed Obj:	OTHER	***Passenger Handling:***	
Type of Fuel:		***Passenger Route:***	XXX
DOT Crossing No:		***Passenger Delay:***	XXX
DOT Regulated:	U	***Sub Part C Test Req:***	XXX
Pipeline Type:		***Conductor Test:***	
Pipeline Abv Ground:	ABOVE	***Engineer Test:***	
Pipeline Covered:	U	***Trainman Test:***	
Exposed Underwater:	N	***Yard Foreman Test:***	
Railroad Hotline:		***RCL Operator Test:***	
Railroad Milepost:		***Brakeman Test:***	
Grade Crossing:	U	***Train Dispat Test:***	
Crossing Device Ty:		***Signalman Test:***	
Ty Vehicle Involved:		***Oth Employee Test:***	
Device Operational:	U	***Unknown Test:***	

Incident Details Information

Release Secured:	U	***State Agen Report No:***	NONE
Release Rate:		***State Agen on Scene:***	NONE
Release Rate Unit:		***State Agen Notified:***	POLICE, FIRE
Release Rate Rate:		***Fed Agency Notified:***	NONE
Est Duration of Rel:		***Oth Agency Notified:***	
Desc Remedial Act:	NONE.	***Body of Water:***	

Fire Involved:	Y	***Tributary of:***	
Fire Extinguished:	U	***Near River Mile Make:***	
Any Evacuations:	N	***Near River Mile Mark:***	
No Evacuated:		***Offshore:***	N
Who Evacuated:		***Weather Conditions:***	CLEAR
Radius of Evac:		***Air Temperature:***	58
Any Injuries:	N	***Wind Direction:***	
No. Injured:		***Wind Speed:***	0
No. Hospitalized:		***Wind Speed Unit:***	
No. Fatalities:		***Water Supp Contam:***	U
Any Fatalities:	N	***Water Temperature:***	
Any Damages:	N	***Wave Condition:***	
Damage Amount:		***Current Speed:***	
Air Corridor Closed:	N	***Current Direction:***	
Air Corridor Desc:		***Current Speed Unit:***	
Air Closure Time:		***EMPL Fatality:***	
Waterway Closed:	N	***Pass Fatality:***	
Waterway Desc:		***Community Impact:***	
Waterway Close Time:		***Passengers Transfer:***	NO
Road Closed:	Y	***Passenger Injuries:***	
Road Desc:	COUNTRY RD 419	***Employee Injuries:***	
Road Closure Time:	2	***Occupant Fatality:***	
Road Closure Units:		***Sheen Size:***	
Closure Direction:	ALL	***Sheen Size Units:***	
Major Artery:	No	***Sheen Size Length:***	
Track Closed:	N	***Sheen Size Length U:***	
Track Desc:		***Sheen Size Width:***	
Track Closure Time:		***Sheen Size Width U:***	
Track Closure Units:		***Sheen Color:***	
Track Close Dir:		***Dir of Sheen Travel:***	
Media Interest:	NONE	***Sheen Odor Desc:***	
Medium Desc:	AIR	***Duration Unit:***	
Addl Medium Info:	ATMOSPHERE	***Additional Info:***	NO ADDITIONAL INFORMATION.

Site: ***GRACIA COMMUNITY CHURCH***
EAST 434 STATE ROAD WINTER SPRINGS FL 32708

FINDS/FRS

Registry ID:	110071663111
FIPS Code:	
HUC Code:	
Site Type Name:	BROWNFIELDS SITE
Location Description:	
Supplemental Location:	
Create Date:	12-MAR-24
Update Date:	
Interest Types:	BROWNFIELDS PROPERTY
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	
Census Block Code:	
EPA Region Code:	04
County Name:	SEMINOLE
US/Mexico Border Ind:	
Latitude:	
Longitude:	
Reference Point:	
Coord Collection Method:	
Accuracy Value:	
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071663111
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

ACRES:257095

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

Deleted NPL: DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool.

Government Publication Date: May 22, 2024

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: May 22, 2024

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Apr 8, 2024

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Apr 8, 2024

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Apr 8, 2024

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Apr 8, 2024

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Apr 8, 2024

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made availabe by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jun 26, 2024

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jun 26, 2024

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: Apr 22, 2024

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Apr 28, 2024

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Feb 7, 2024

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: Jan 9, 2024

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jan 9, 2024

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Jun 6, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from the Federal Communications Commission Data hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Jun 6, 2024

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: May 22, 2024

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Mar 27, 2024

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

Superfund Waste Cleanup & State-Funded Action Sites: SHWS

List of hazardous waste cleanup sites participating in various federal and state funded cleanup programs. Florida's State-Funded Action Sites and Superfund Waste Cleanup Sites lists are maintained and made available by the Florida Department of Environmental Protection (FDEP). This database is state equivalent CERCLIS.

Government Publication Date: Jul 19, 2024

Delisted State-Funded Action Sites: DELISTED SHWS

This database contains a list of closed hazardous waste sites of various federal and state funded cleanup programs that were removed from the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Jul 19, 2024

ERIC Waste Cleanup: ERIC

Environmental Restoration Integrated Cleanup (ERIC) is a single database for tracking contaminated site cleanup activities in the Florida Department of Environmental Protection (DEP)'s Division of Waste Management (DWM). Includes records from 11 different DEP data systems, allowing tracking of a contaminated site throughout the course of cleanup regardless of which program area took the lead.
Government Publication Date: May 28, 2024

Florida Department of Environmental Protection Cleanup Sites: CLEANUP DEP
The Cleanup Sites layer feeds the FDEP's Contamination Locator Map (CLM). It provides locations and document links for sites currently in the cleanup process and sites awaiting cleanup funding. Cleanup programs include: Brownfields, Petroleum, EPA Superfund (CERCLA), Drycleaning, Responsible Party Cleanup, State Funded Cleanup, State Owned Lands Cleanup and Hazardous Waste Cleanup.
Government Publication Date: May 29, 2024

Waste Cleanup Responsible Party Sites: WCRPS
List of Open, Closed, and Inactive Waste Cleanup Responsible Party sites made available by the Florida Department of Environmental Protection.
Government Publication Date: Apr 11, 2021

Delisted Waste Cleanup Sites: DELISTED WCP
List of sites which once appeared on - and have since been removed from - the list of Waste Cleanup Sites made available by the Florida Department of Environmental Protection.
Government Publication Date: May 28, 2024

Solid Waste Facilities and Landfills: SWF/LF
The Solid Waste Facility Inventory Report made available by the Florida Department of Environmental Protection (FDEP) includes all types of authorized and unauthorized facilities: municipal solid waste, landfills, dumps, construction and demolition disposal, recycling facilities, and more.
Government Publication Date: Jun 12, 2024

Leaking Tanks: LST
The Storage Tank Regulation Section is part of the Petroleum Restoration Program in the Florida Department of Environmental Protection (FDEP)s Division of Waste Management. In 1983, Florida was one of the first states in the union to pass legislation and adopt rules for underground and aboveground storage tank systems. Since then, over 28,000 facilities have reported discharges of petroleum products from storage tank systems. Florida relies on groundwater for about 92 percent of its drinking water needs, and has some of the most stringent rules in the country.
Government Publication Date: Apr 22, 2024

Delisted Leaking Tanks: DELISTED LST
Whereas Leaking Tanks (LST) includes only facilities which currently have contamination as recorded by the Florida Department of Environmental Protection, this list contains facilities which were once included in LST data but no longer appear on the list made available by FDEP. Facilities may be removed from the current LST list because the discharge has been cleaned up, or the discharge is not required for 62-770.
Government Publication Date: Jun 4, 2024

Underground Storage Tanks: UST
List of Underground Storage Tank facilities made available by the Florida Department of Environmental Protection (FL DEP). Includes facilities tracked for active storage tanks, storage tank history, or petroleum cleanup activity. In an effort to minimize the occurrence and environmental risks of releases and discharges, FDEP administers standards pertaining to the construction, installation, operation, maintenance, repair, closure, and disposal of underground storage tank systems that store regulated substances.
Government Publication Date: May 30, 2024

Aboveground Storage Tanks: AST
List of Aboveground Storage Tank facilities made available by the Florida Department of Environmental Protection (FL DEP). Includes facilities tracked for active storage tanks, storage tank history, or petroleum cleanup activity.The Florida Department of Environmental Protection (FDEP) provides standards for aboveground storage tanks (ASTs) that have individual storage tank capacities greater than 550 gallons. The state also regulates the registration, construction, installation, operation, maintenance, repair, closure, and disposal of storage tank systems that store regulated substances.
Government Publication Date: May 30, 2024

Storage Tank Facilities: TANK
List of storage tank facilities made available by the Florida Department of Environmental Protection (FL DEP) for which tank information is not available. In the case of closed facilities - where all tanks have been removed or closed, and there is also no petroleum discharge or on-going cleanup activity - the owner data may not be current, but rather would represent the most recent information made available to FL DEP.
Government Publication Date: May 30, 2024

Delisted AST UST Storage Tanks: DEL UST AST TANK

This database contains a list of closed UST and AST storage tank sites that were removed from the Florida Department of Environmental Protection (FDEP) storage tank database.

Government Publication Date: Jul 2, 2015

Delisted Storage Tanks: DEL STORAGE TANK

List of sites that once appeared on - and have since been removed from - the list of UST and AST storage tank facilities made available by the Florida Department of Environmental Protection.

Government Publication Date: Jul 4, 2024

Federal Facilities Listing: FF TANKS

The Florida Department of Environmental Protection (FDEP) Storage Tank Program registers facilities and storage tanks where aboveground or underground storage tanks store pollutants, hazardous substances, and/or mineral acid substances regulated by Chapter 62-761, Florida Administrative Code, or when aboveground storage tanks or compression vessels store a hazardous substance which requires registration according to Chapter 376, Florida Statutes.

Government Publication Date: Jul 4, 2024

Storage Tank/Contaminated Facility Search: STCS

List of facilities and tanks in the Florida Department of Environmental Protection (FDEP) Bureau of Petroleum Storage Systems Storage Tank/Contaminated Facility Search. Note that tank details do not appear for facilities for which all tanks have been removed.

Government Publication Date: Apr 24, 2024

Institutional Controls Registry: INST

The Institutional Controls registry is maintained by the Florida Department of Environmental Protection (FDEP). The registry aims to help preserve adequate protection of contaminated soil regions and help to minimize any chances of exposure.

Government Publication Date: Jun 19, 2024

Engineering Controls: ENG

A listing of all engineering controls that are in place to eliminate or reduce the potential for contaminant migration and exposure to contaminants. These controls may include caps, barriers, guards or fences. The list is maintained by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Jun 19, 2024

Voluntary Cleanup Sites: VCP

A listing of active and closed voluntary cleanup sites registered by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: Jul 1, 2022

Brownfield Sites: BROWNFIELDS

Brownfields are defined by the Florida Department of Environmental Protection (FDEP) as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. This is a list of sites within designated Brownfield Areas within Florida where Brownfield Site Rehabilitation Agreement (BSRA)s have been executed between FDEP and a responsible party.

Government Publication Date: Jan 16, 2024

Brownfield Areas: BROWNFIELD AREA

Brownfields are defined by the Florida Department of Environmental Protection (FDEP) as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. This is a list of Brownfield Areas, defined by the FDEP as contiguous areas of one or more brownfield sites, some of which may not be contaminated, that have been designated as such by a local government resolution. Such areas may include all or portions of community redevelopment areas, enterprise zones, empowerment zones, other such designated economically deprived communities and areas, and Environmental Protection Agency (EPA) designated brownfield pilot projects. Because a variety of sources and methods were used to derive information for this data, locations are approximate.

Government Publication Date: Apr 2, 2024

Hazardous Waste Facility List: HAZ WASTE FAC

List of Hazardous Waste Financial Assurance Facilities made available by the Division of Waste Management of the Florida Department of Environmental Protection (FDEP). The FDEP's Hazardous waste financial responsibility requirements exist to ensure that certain hazardous waste facilities and transporters have the financial resources available to provide for closure, postclosure and corrective action requirements and/or pay for bodily injury or property damage that might result from accidents, spills or other unexpected events, known as liabilities. These closure, postclosure, corrective action and liability requirements are called financial assurance.

Government Publication Date: Jul 3, 2024

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 4, which includes Florida, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 14, 2024

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 4, which includes Florida, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 14, 2024

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.

Government Publication Date: Aug 5, 2024

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Apr 4, 2024

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Apr 26, 2024

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Jun 20, 2024

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2024. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Apr 1, 2024

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Jun 27, 2024

National Response Center PFAS Spills: ERNS PFAS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam, "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Aug 5, 2024

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Jul 29, 2024

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data: PFAS WATER

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Jul 22, 2024

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest : PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Jul 23, 2024

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Jul 1, 2024

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: May 29, 2024

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Jul 24, 2024

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Apr 13, 2024

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 5, 2024

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 5, 2024

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: May 6, 2024

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Feb 5, 2024

Surface Mining Control and Reclamation Act Sites: SMCRA

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: May 20, 2024

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 12, 2023

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Apr 30, 2024

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Jun 26, 2024

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 29, 2024

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: May 23, 2024

State

Historic Potential Business Activity Risk: HIST RISK

Proprietary list of sites identified as potentially having engaged in business activity that poses a higher-than-normal risk of contamination. Records originate from historical city directories, and are included in this list based on broad business categories Potentially Hazardous Chemical Users and Fuel and Automotive, including but not limited to Dry Cleaners and Fuel Stations, Garages, etc. Inclusion in this listing does not indicate that there is or ever has been contamination; rather, sites are included in this list due to their potential for having engaged in a business activity presenting an elevated risk of contamination. The list was compiled from various city directories including Polks, Millers, Mullin Kille, Interstate Directory, and State Directory Co; spanning roughly 1920s through 1960 depending on information available by city.

Government Publication Date: Jan 1, 1960

Priority Ranking List: PRIORITYCLEAN

The Florida Legislature has established a state-funded program to cleanup properties that are contaminated as a result of the operations of a drycleaning facility or wholesale supply facility (Chapter 376, Florida Statutes). The program is administered by the Florida Department of Environmental Protection (FDEP). The statute was sponsored by the drycleaning industry to address environmental, economic, and liability issues resulting from drycleaning solvent contamination. The program provides limited liability protection to the owner, operator and real property owner of drycleaning or wholesale supply facilities for cleanup of drycleaning solvent contamination if the parties meet the eligibility conditions stated in the law.

Government Publication Date: Mar 8, 2024

Dry Cleaning Facilities: DRYCLEANERS

A listing of dry cleaning facilities registered with the Florida Department of Environmental Protection (FDEP). The information contains facility identification number, site location information, related party (owner) information, and facility type and status. Data is taken from the Storage Tank & Contamination Monitoring database, the registration repository of dry cleaner facility data.

Government Publication Date: Apr 29, 2024

Delisted Dry Cleaning Facilities: DELISTED DRYCLEANERS

List of sites removed from the drycleaners database made available by the Florida Department of Environmental Conservation (DEC).

Government Publication Date: Apr 29, 2024

Historical Dry Cleaners: HISTORICAL DRYC

The Florida Department of Environmental Protection (FDEP) provided this historical database of regulated and non-regulated dry cleaning facilities. These facilities were at one time tracked and registered by the FDEP OCULUS Electronic Document Management System as "drums" in the underground storage tank database.

Government Publication Date: Aug 2, 2013

Oil and Hazardous Materials Incidents: SPILLS

Statewide listing of oil and hazardous materials spills and incidents recorded by the Florida Department of Environmental Protection (FDEP).

Government Publication Date: May 30, 2024

Contaminated Sites: DWM CONTAM

Florida Department of Environmental Protection (FDEP) Division of Waste Management (DWM) listing of active or known sites that include sites requiring cleanup but are not actively being worked on due to the agency's lack of funding (primarily petroleum and drycleaning).

Government Publication Date: Jul 14, 2023

Delisted Contaminated Sites: DEL CONTAM SITE

List of sites which were once included on the Florida Department of Environmental Protection (FDEP) Division of Waste Management (DWM)'s Contaminated Sites list. As sites on the Contaminated Sites (CS) list are cleaned up or closed under risk based corrective action, they are removed from the CS list.

Government Publication Date: Sep 30, 2015

Aqueous Film Forming Foam (AFFF): PFAS AFFF

A list of fire fighter training facilities that use or possibly used Aqueous Film Forming Foam (AFFF). This list is made available by the Florida Department of Environmental Protection (DEP).

Government Publication Date: Jan 30, 2024

PFAS Investigation at Federal Facilities: PFAS

List of sites - including Federal Facilities - in Florida at which either a) there has been confirmed or suspected usage of Aqueous Film Forming Foam (AFFF), or b) the Division of Waste Management has identified as a potential source or environmental impact related to per- and polyfluoroalkyl substances (PFAS). The Florida Department of Environmental Protection (DEP) is committed to the protection of the groundwater resources of the state and the public health and safety of residents. The DEP will continue its efforts to investigate and understand PFAS in the environment and the ecological and human health risks associated with PFAS contamination. Listings made available by the Florida Department of Environmental Protection (DEP).

Government Publication Date: Mar 11, 2024

Ground Water Contamination Areas: GW CONTAM

List of areas of known groundwater contamination made available by the Florida Department of Environmental Protection (DEP). 38 counties have been delineated primarily for the agricultural pesticide ethylene dibromide (EDB), and to a much lesser extent, volatile organic and petroleum contaminants. Permitted water wells in these areas must meet specific well construction criteria and water testing prior to well use. This dataset only indicates the presence or absence of specific groundwater contaminants and does not represent all known sources of groundwater contamination in the state of Florida.

Government Publication Date: Jul 12, 2023

Underground Injection Control Wells: UIC

Class I Underground Injection Control (UIC) wells that are currently or were previously active, as well as proposed sites, regulated by the Florida Department of Environmental Protection (FDEP). Class I UIC wells are used to inject nonhazardous waste, hazardous waste (new hazardous waste wells were banned in 1983), or municipal waste below the lowermost underground source of drinking water.

Government Publication Date: May 28, 2024

Well Surveillance Program Facilities: WELL SURVEILLANCE

List of facilities made available by the Florida Health Well Surveillance group. The Well Surveillance group manages several programs to identify and monitor areas in Florida where contaminated drinking water is suspected and may pose a threat to public health. The section coordinates with the County Health Departments (CHDs) to locate potable wells and conduct water sampling for contaminants of concern. The Well Surveillance Section is composed of the State Underground Petroleum Environmental Response Act (SUPER Act), Drinking Water Toxics Program (Toxics), Drycleaner Solvent Cleanup Program (DSCP). Includes locations of known cattle dipping vats.

Government Publication Date: May 31, 2024

Cattle Dip Vats: CDV SOUTHEAST

A list of Cattle Dip Vats in Southeast Florida made available by the Florida Department of Environmental Protection.

Government Publication Date: Jan 19, 2017

Tier 2 Report: TIER 2

A list of Tier 2 facilities in the state of Florida. The list tracks the inventory of chemicals within a particular facility. This list is provided by the Florida Division of Emergency Management.

Government Publication Date: Apr 2, 2024

Delisted County Records: DELISTED COUNTY

Records removed from county databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: May 15, 2024

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental databases were selected to be included in the search.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX E

Supporting Historical Documentation

Project Property:	The Learning Experience
	SR 434 and Michael Blake Boulevard
	Winter Springs FL 32708
Project No:	4420424-0006043.00
Requested By:	NV5
Order No:	24090500255
Date Completed:	September 05, 2024

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2021	7.5
2015	7.5
1994	7.5
1980	7.5
1972	7.5
1970	7.5
1962	7.5

Topographic Map Symbology for the maps may be available in the following documents:

Pre-1947

Page 223 of 1918 Topographic Instructions

Page 130 of 1928 Topographic Instructions

1947-2009

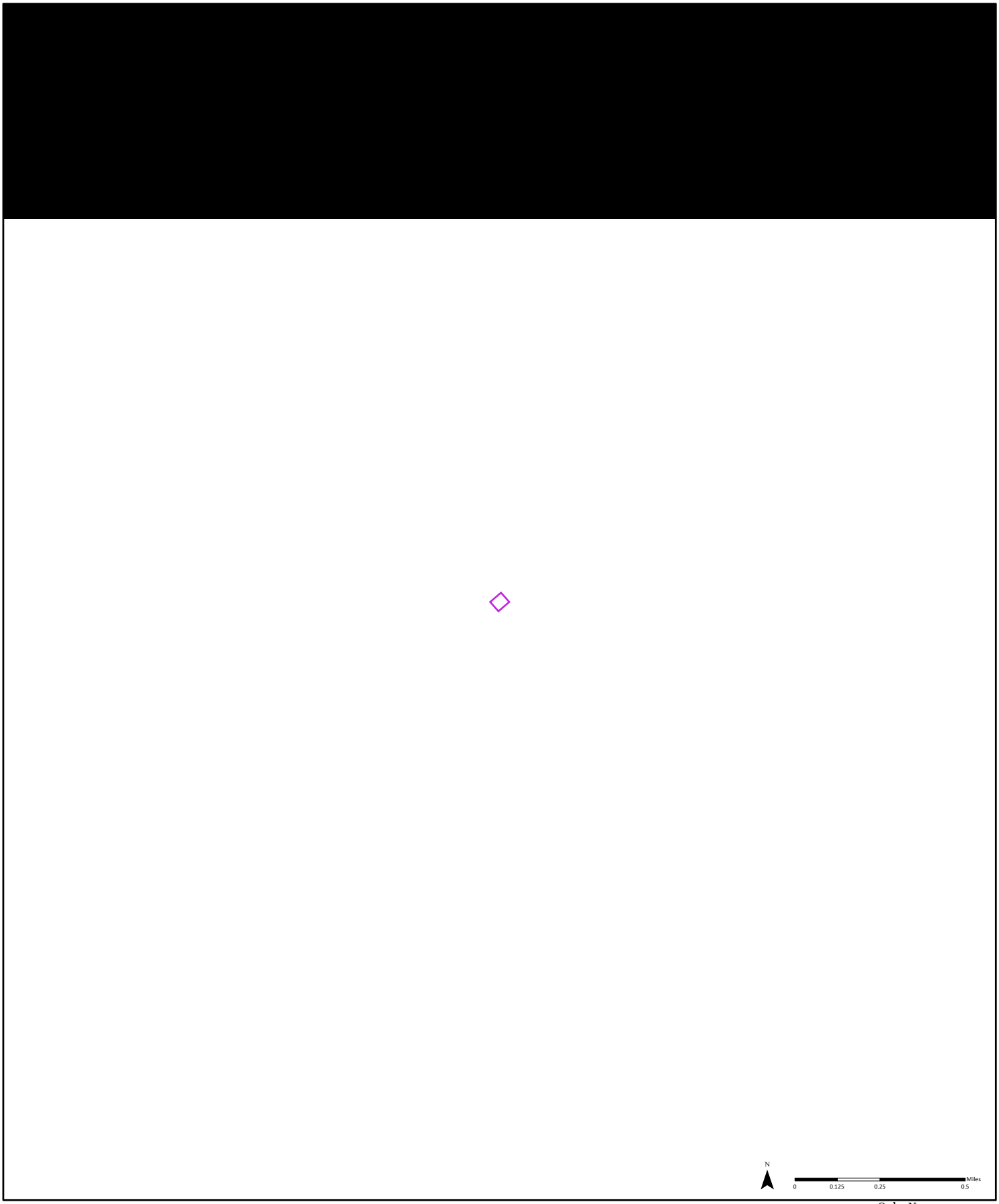
Topographic Map Symbols

2009-present

US Topo Map Symbols

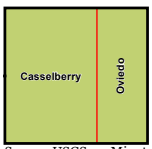
Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.
No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.

[redacted]



2021

Order No. 24090500255



Available Quadrangle(s): Casselberry, FL
Oviedo, FL

Source: USGS 7.5 Minute Topographic Map

[redacted]

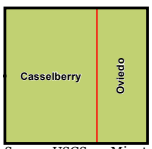
[redacted]

N

0 0.125 0.25 0.5 Miles

Order No. 24090500255

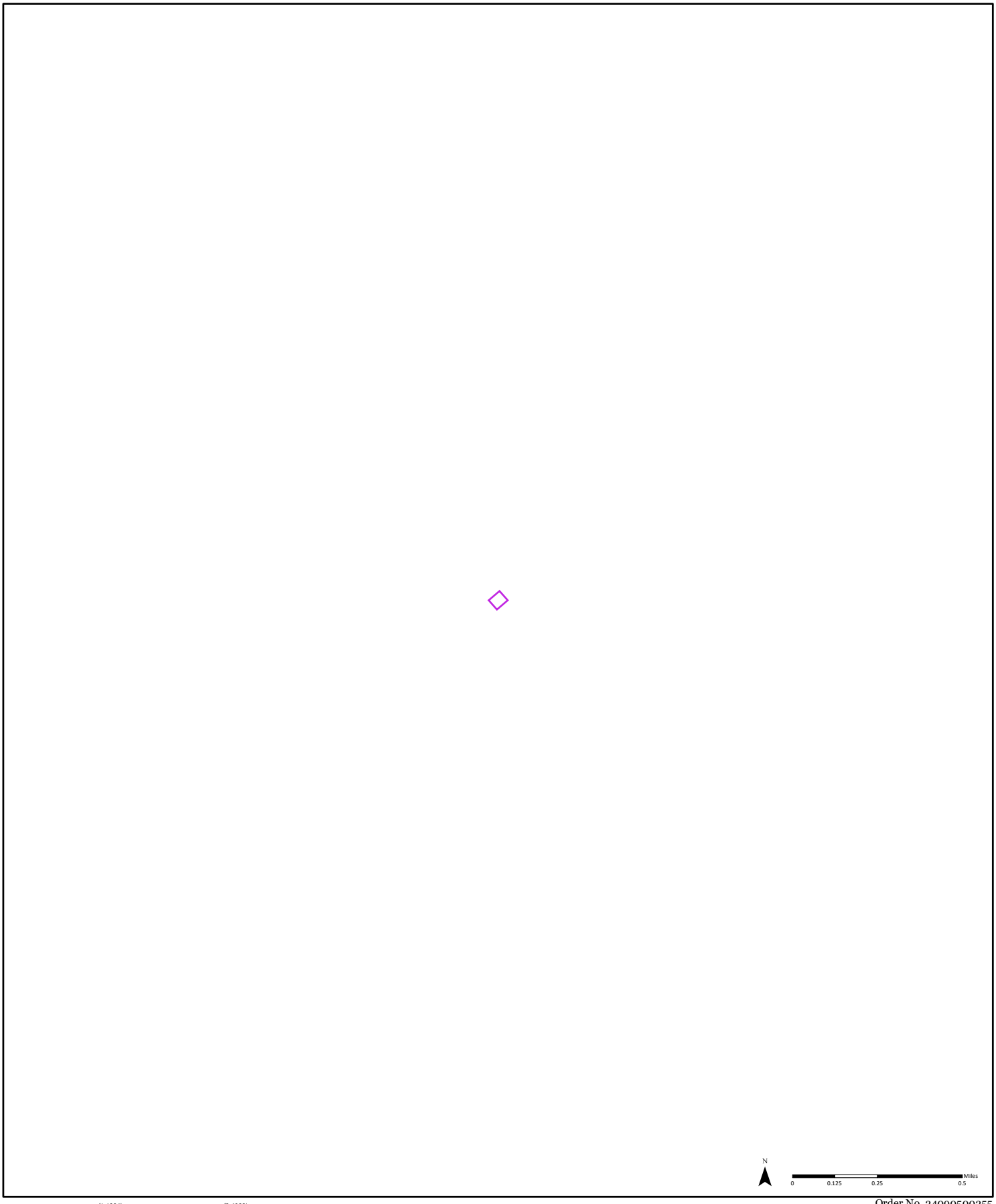
2015



Available Quadrangle(s): Casselberry, FL
Oviedo, FL

Source: USGS 7.5 Minute Topographic Map

[redacted]

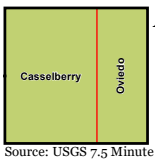


1994

(1-1994)
Aerial Photo Year: 1994

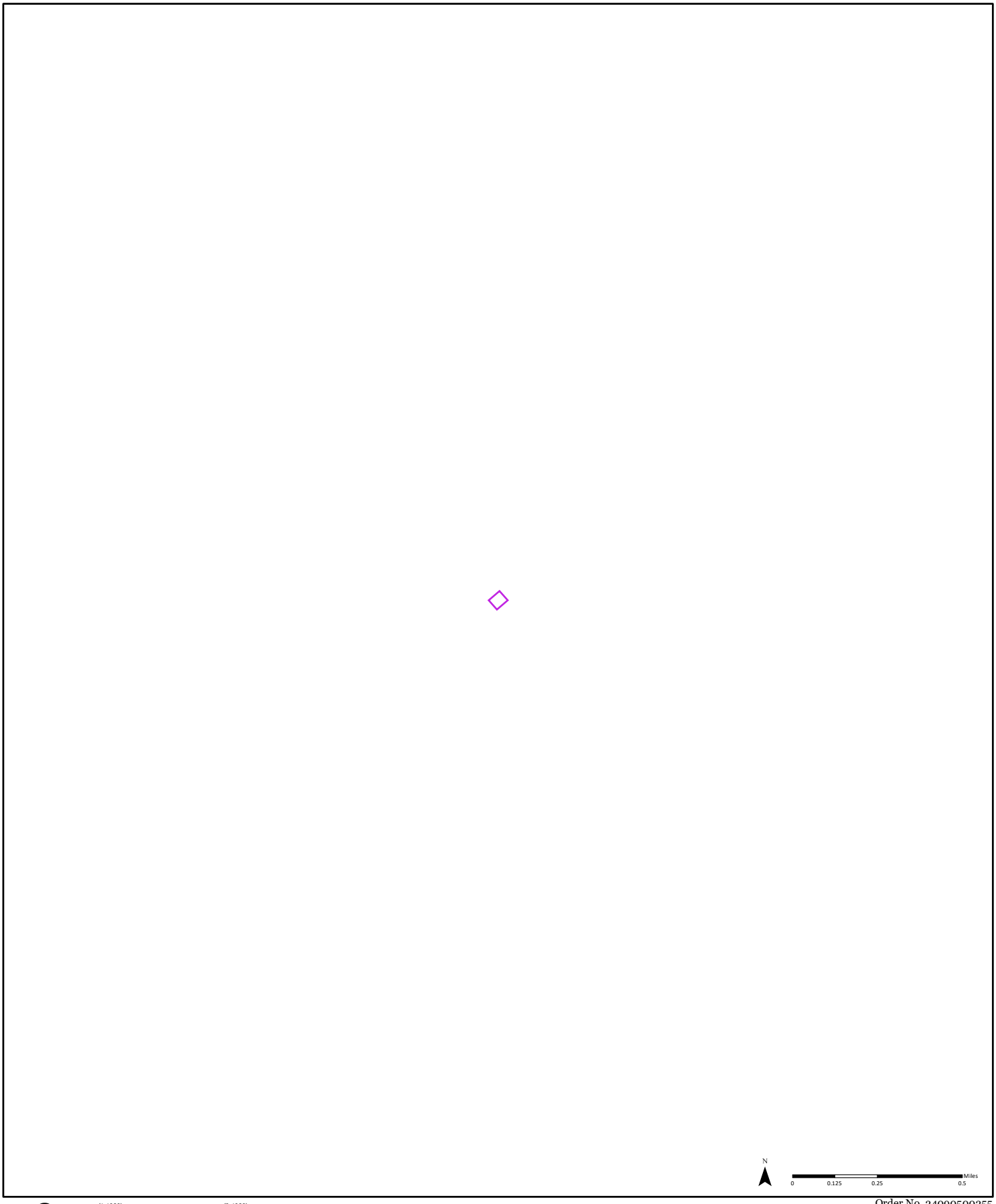
(2-1980)
Aerial Photo Year: 1977
Photo Revision Year: 1980

Order No. 24090500255



Available Quadrangle(s): Casselberry, FL(1-1994)
Oviedo, FL(2-1980)

Source: USGS 7.5 Minute Topographic Map

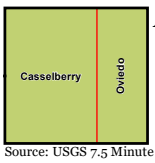


1980

(1-1980)
Aerial Photo Year: 1977
Photo Revision Year: 1980

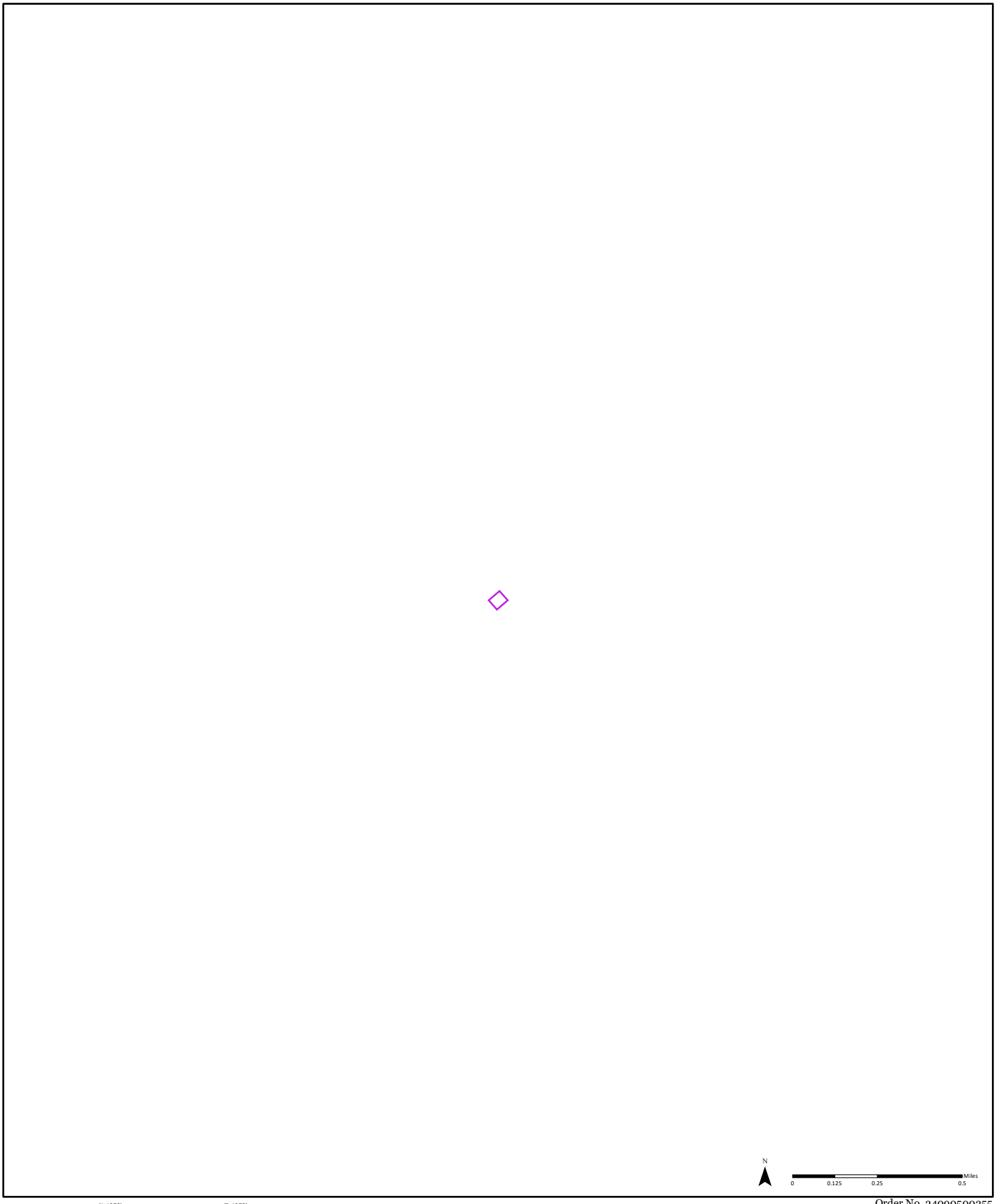
(2-1980)
Aerial Photo Year: 1977
Photo Revision Year: 1980

Order No. 24090500255



Available Quadrangle(s): Casselberry, FL(1-1980)
Oviedo, FL(2-1980)

Source: USGS 7.5 Minute Topographic Map

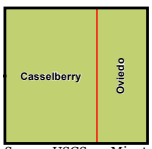


1972

(1-1970)
Aerial Photo Year: 1970
Photo Revision Year: 1970

(2-1972)
Aerial Photo Year: 1970
Photo Revision Year: 1972

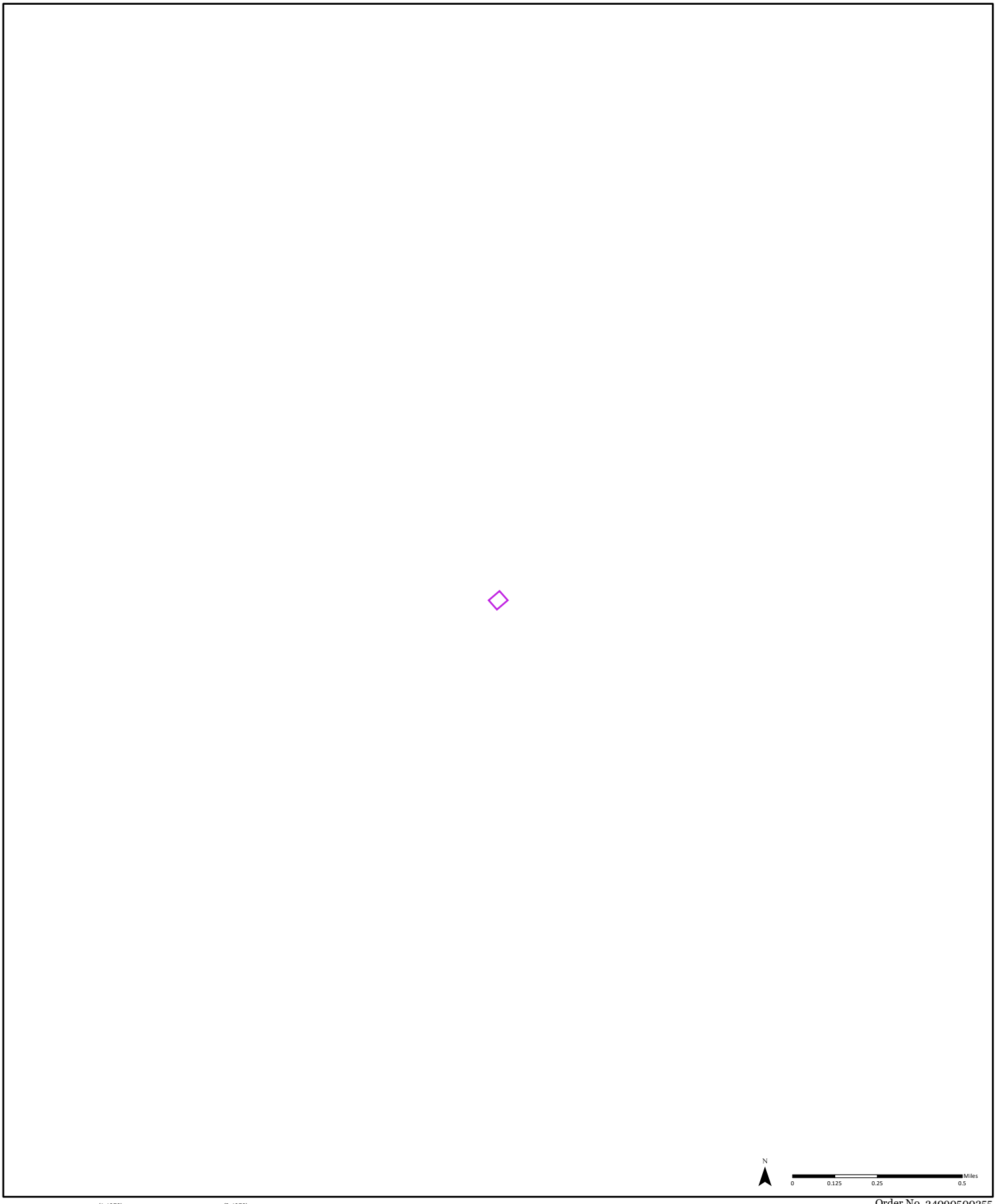
Order No. 24090500255



Available Quadrangle(s): Casselberry, FL(2-1972)
Oviedo, FL(1-1970)

Source: USGS 7.5 Minute Topographic Map

[redacted]

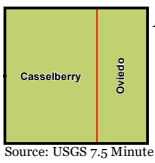


1970

(1-1970)
Aerial Photo Year: 1970
Photo Revision Year: 1970

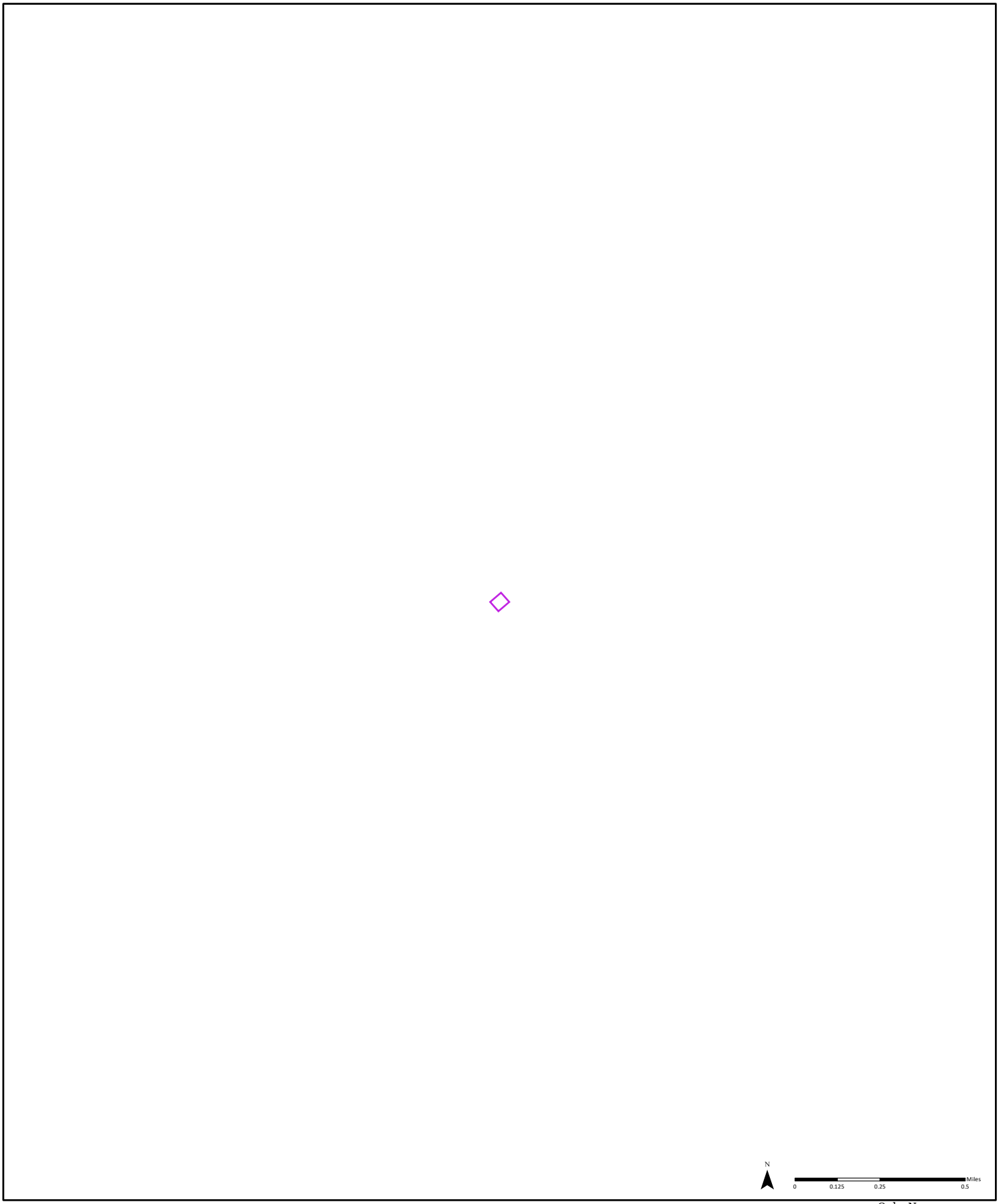
(2-1970)
Aerial Photo Year: 1970
Photo Revision Year: 1970

Order No. 24090500255



Available Quadrangle(s): Casselberry, FL(1-1970)
Oviedo, FL(2-1970)

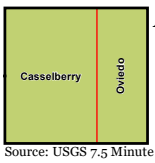
Source: USGS 7.5 Minute Topographic Map



1962 *(1-1962)*

Aerial Photo Year: 1958

Order No. 24090500255



Available Quadrangle(s): Casselberry, FL(1-1962)

Source: USGS 7.5 Minute Topographic Map

CITY DIRECTORY

Project Property:	*The Learning Experience* *SR 434 and Michael Blake Boulevard* *Winter Springs,FL 32708*
Project No:	*4420424-0006043.00*
Requested By:	*NV5*
Order No:	*24090500255*
Date Completed:	*September 12, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

September 12, 2024
RE: CITY DIRECTORY RESEARCH
SR 434 and Michael Blake Boulevard
Winter Springs,FL 32708

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:
All of Michael Blake Blvd
1220-1900 of State Rd 434
Search Notes:
State Road 434 is also known as Longwood-Oviedo Rd NE in Winter Springs.

Search Results Summary

Date	Source	Comment
2023	DIGITAL BUSINESS DIRECTORY	
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2007	DIGITAL BUSINESS DIRECTORY	
2003	DIGITAL BUSINESS DIRECTORY	
2000	DIGITAL BUSINESS DIRECTORY	
1996	CITY PUBLISHING CO	
1990	CITY PUBLISHING CO	
1986	POLKS	
1981	POLKS	
1976	POLKS	
1972	POLKS	
1968	POLKS	

2023 MICHAEL BLAKE BLVD

SOURCE: DIGITAL BUSINESS DIRECTORY

80 **SAVOY GRACIOUS RETIRE LIVING**...*RESIDENTIAL CARE HOMES*
151 **BLAKE APARTMENTS**...*REAL ESTATE INVESTMENTS*
324 **MICHAEL WHITE**...*RESIDENTIAL*
396 **BETHANY MC CABE**...*RESIDENTIAL*

2023 STATE RD 434

SOURCE: DIGITAL BUSINESS DIRECTORY

1220 **STARBUCKS**...*COFFEE SHOPS*
1491 **ADVENTURE CYCLING**...*BICYCLES-REPAIRING*
1491 **ADVENTURE CYCLING**...*BICYCLES-DEALERS*
1491 **CHINA WOK**...*CATERERS*
1491 **CHINA WOK**...*RESTAURANTS*
1491 **CIRCLE CHRISTIAN SCHOOL**...*SCHOOLS*
1491 **CIRCLE CHRISTIAN SCHOOL**...*SCHOOLSUNIVERSITIES & COLLEGES ACADEMIC*
1491 **CIRCLE CHRISTIAN SCHOOL**...*E-COMMERCE*
1491 **KYS CAPITAL LLC**...*CLEANERS*
1491 **METRO CHURCH**...*MISSIONS*
1491 **METRO CHURCH**...*CHURCHES*
1491 **METRO CHURCH ALARM**...*CHURCHES*
1491 **PATHWAY COUNSELING MINISTRIES**...*COUNSELING SERVICES*
1491 **WISE, CHARLES A**...*COUNSELORSCOUPLES*
1491 **WISE, CHARLES A**...*COUNSELORS*
1495 **FIRST NATIONAL BANK OF MT DORA**...*BANKS*
1501 **DUNKIN' DONUTS**...*DOUGHNUTS*
1501 **SPEEDWAY**...*CONVENIENCE STORES*
1511 **ACMP**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **ACTOVOICE INC**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **ALPHA EMC**...*ENVIRONMENTAL & ECOLOGICAL SERVICES*
1511 **CHANGE MANAGEMENT PRO ASSN**...*ASSOCIATIONS*
1511 **DATANAUTIX**...*CONSULTANTS-BUSINESS NEC*
1511 **DOTNET EVERYTHING CATHOLIC**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **EXAM PLUS**...*EMPLOYEE ASSISTANCE PROGRAMS*
1511 **FRESHORIZE**...*AIR FRESHENERS-MANUFACTURERS*
1511 **INTEGRATION WIRING**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **IRBLICH SCHOOLS LLC**...*SCHOOLS-NURSERY & KINDERGARTEN ACADEMIC*
1511 **IROC HOLDINGS LLC**...*HOLDING COMPANIES (NON-BANK)*
1511 **MOSAIC WEALTH MANAGEMENT GROUP**...*FINANCIAL PLANNING CONSULTANTS*
1511 **MOSAIC WEALTH MANAGEMENT GROUP**...*ACCOUNTANTS*
1511 **N R ELECTRONICS LLC**...*ELECTRONIC EQUIPMENT & SUPPLIES-RETAIL*
1511 **PINNACLE FAMILY-DIABETES MED**...*CLINICS*
1511 **RESTIRES.COM**...*ADVERTISING-COMPUTER*
1511 **REYES, BELKIS A**...*PATHOLOGISTS*
1511 **SOUTHERN MARKETING ASSOC**...*MANUFACTURERS-AGENTS & REPRESENTATIVES*
1511 **SPORTZCAST INC**...*SCOREBOARDS (WHLS)*
1511 **U V S JUNCTION**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **UCF INCUBATOR**...*BUSINESS SERVICES NEC*
1511 **WINTER SPRINGS CAR ACCIDENT**...*ATTORNEYS*
1511 **WINTER SPRINGS FL TOP MOVERS**...*MOVERS*

2020 MICHAEL BLAKE BLVD

SOURCE: DIGITAL BUSINESS DIRECTORY

151 **BLAKE APARTMENTS**...*REAL ESTATE INVESTMENTS*
324 **MICHAEL WHITE**...*RESIDENTIAL*
396 **BETHANY MC CABE**...*RESIDENTIAL*

2020 STATE RD 434

SOURCE: DIGITAL BUSINESS DIRECTORY

1220 **STARBUCKS**...*COFFEE SHOPS*
1491 **ADVENTURE CYCLING**...*BICYCLES-DEALERS*
1491 **ADVENTURE CYCLING**...*BICYCLES-REPAIRING*
1491 **CHINA WOK**...*CATERERS*
1491 **CHINA WOK**...*RESTAURANTS*
1491 **KYS CAPITAL LLC**...*CLEANERS*
1491 **METRO CHURCH**...*CHURCHES*
1491 **METRO CHURCH**...*MISSIONS*
1491 **METRO CHURCH ALARM**...*CHURCHES*
1491 **PATHWAY COUNSELING MINISTRIES**...*COUNSELING SERVICES*
1491 **WISE, CHARLES A**...*COUNSELORSCOUPLES*
1491 **WISE, CHARLES A**...*COUNSELORS*
1501 **DUNKIN' DONUTS**...*DOUGHNUTS*
1501 **SPEEDWAY**...*CONVENIENCE STORES*
1511 **ACMP**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **ACTOVOICE INC**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **ALPHA EMC**...*ENVIRONMENTAL & ECOLOGICAL SERVICES*
1511 **CHANGE MANAGEMENT PRO ASSN**...*ASSOCIATIONS*
1511 **DATANAUTIX**...*CONSULTANTS-BUSINESS NEC*
1511 **DOTNET EVERYTHING CATHOLIC**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **EXAM PLUS FL CORP**...*E-COMMERCE*
1511 **FRESHORIZE**...*AIR FRESHENERS-MANUFACTURERS*
1511 **IROC HOLDINGS LLC**...*HOLDING COMPANIES (NON-BANK)*
1511 **MOSAIC WEALTH MANAGEMENT GROUP**...*FINANCIAL PLANNING CONSULTANTS*
1511 **MOSAIC WEALTH MANAGEMENT GROUP**...*ACCOUNTANTS*
1511 **N R ELECTRONICS LLC**...*ELECTRONIC EQUIPMENT & SUPPLIES-RETAIL*
1511 **NEXGEN GLOBAL TECHNOLOGIES LLC**...*FEDERAL GOVERNMENT CONTRACTORS*
1511 **PINNACLE PROPERTY MANAGEMENT**...*REAL ESTATE*
1511 **PINNACLE PROPERTY MANAGEMENT**...*REAL ESTATE MANAGEMENT*
1511 **REYES, BELKIS A**...*PATHOLOGISTS*
1511 **SOUTHERN MARKETING ASSOC**...*MANUFACTURERS-AGENTS & REPRESENTATIVES*
1511 **U V S JUNCTION**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **UCF INCUBATOR**...*BUSINESS SERVICES NEC*
1511 **WINTER SPRINGS CAR ACCIDENT**...*ATTORNEYS*
1511 **WINTER SPRINGS FL TOP MOVERS**...*MOVERS*

2016 MICHAEL BLAKE BLVD

SOURCE: DIGITAL BUSINESS DIRECTORY

304 **RAMABUJJAYYA TALLURI**...*RESIDENTIAL*
356 **CHRISTA VAUGHAN**...*RESIDENTIAL*
396 **BETHANY MC CABE**...*RESIDENTIAL*
396 **DON MC CABE**...*RESIDENTIAL*

2016 STATE RD 434

SOURCE: DIGITAL BUSINESS DIRECTORY

1491 **ADVENTURE CYCLING**...*BICYCLES-DEALERS*
1491 **ADVENTURE CYCLING**...*BICYCLES-REPAIRING*
1491 **CHINA WOK**...*RESTAURANTS*
1491 **CHINA WOK**...*CATERERS*
1491 **DAVIDS HEART CHRISTIAN STORE**...*BOOK DEALERS-RETAIL*
1491 **FASHION NAILS**...*COSMETICS & PERFUMES-RETAIL*
1491 **METRO CHURCH**...*CHURCHES*
1491 **PATHWAY COUNSELING MINISTRIES**...*COUNSELING SERVICES*
1495 **BB&T**...*BANKS*
1501 **BLIMPIE SUBS & SALADS**...*FOODS-CARRY OUT*
1501 **BLIMPIE SUBS & SALADS**...*RESTAURANTS*
1501 **DUNKIN' DONUTS**...*DOUGHNUTS*
1501 **GODFATHER'S PIZZA**...*PIZZA*
1501 **GODFATHER'S PIZZA**...*RESTAURANTS*
1501 **HESS EXPRESS**...*SERVICE STATIONS-GASOLINE & OIL*
1511 **CENTERLINE HOMES**...*HOME BUILDERS*
1511 **CHANGE MANAGEMENT PRO ASSN**...*ASSOCIATIONS*
1511 **EXAM PLUS FL CORP**...*E-COMMERCE*
1511 **FIDELITY SECURITY AGENCY LLC**...*UNCLASSIFIED ESTABLISHMENTS*
1511 **IRBLICH SCHOOLS LLC**...*CHILD DAY CARE SERVICES*
1511 **MOSAIC WEALTH MANAGEMENT GROUP**...*FINANCIAL PLANNING CONSULTANTS*
1511 **N R ELECTRONICS LLC**...*ELECTRONIC EQUIPMENT & SUPPLIES-RETAIL*
1511 **OVIEDO PATIENT CTR**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **OVIEDO WINTER SPG REGL CHAMBER**...*CHAMBERS OF COMMERCE*
1511 **PINNACLE PROPERTY MANAGEMENT**...*REAL ESTATE MANAGEMENT*
1511 **RV HIT**...*RECREATIONAL VEHICLES*
1511 **UCF INCUBATOR**...*BUSINESS SERVICES NEC*
1511 **WINTER SPRINGS CAR ACCIDENT**...*ATTORNEYS*
1511 **WINTER SPRINGS FL TOP MOVERS**...*MOVERS*

2012 MICHAEL BLAKE BLVD

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2012 STATE RD 434

SOURCE: DIGITAL BUSINESS DIRECTORY

1491	**A PUPPIES LOVE**...*PET SHOPS*
1491	**ADVENTURE CYCLING**...*SPORTING GOODS STORES*
1491	**ADVENTURE CYCLING**...*BICYCLES-DEALERS*
1491	**CHINA ACE RESTAURANT**...*FULL-SERVICE RESTAURANTS*
1491	**CHINA ACE RESTAURANT**...*ORIENTAL MENU*
1491	**CHINA WOK**...*RESTAURANTS*
1491	**CONGRESSIONAL HOMES**...*LAND SUBDIVISION*
1491	**FASHION NAILS**...*NAIL SALONS*
1491	**FASHION NAILS**...*COSMETICS & PERFUMES-RETAIL*
1491	**FASHION NAILS**...*BEAUTY SHOP*
1491	**METRO CHURCH**...*CHURCHES*
1491	**MOTHER KIM'S CLEANERS**...*CLEANERS*
1491	**MOTHER KIMS CLEANERS**...*DRYCLEANING & LAUNDRY SVCS*
1491	**PET RESCUE & SUPPLY INC**...*PETS,PET SUPPS*
1491	**SEMINOLE TRAIL ANIMAL HOSPITAL**...*VETERINARY SVCS*
1491	**SOUTH SEMINOLE CHRISTIAN CHR**...*SCHOOLS-NURSERY & KINDERGARTEN ACADEMIC*
1491	**SOUTH SEMINOLE CHRISTIAN PRSCH**...*NURSERY SCHOOL*
1491	**XTRANET SOLUTIONS**...*DATA PROC & PREP*
1491	**XTRANET SOLUTIONS**...*CUSTOM COMPUTER PROGRAMMING SVCS*
1491	**ZIMMER GROUP INC**...*NONCLASSIFIED ESTABLISHMENTS*
1501	**BLIMPIE SUBS & SALADS**...*FULL-SERVICE RESTAURANTS*
1501	**BLIMPIE SUBS & SALADS**...*RESTAURANTS*
1501	**BLIMPIES RESTAURANT**...*QUICK SERV SANDWICH/DELI*
1501	**GODFATHER'S PIZZA**...*PIZZA*
1501	**GODFATHERS PIZZA**...*PIZZA*
1501	**GODFATHERS PIZZA**...*FULL-SERVICE RESTAURANTS*
1501	**GODFATHERS PIZZA**...*QUICK SERV PIZZA PARLOR*
1501	**HESS EXPRESS**...*OTHER GASOLINE STATIONS*
1501	**HESS EXPRESS**...*RESTAURANTS*
1501	**HESS EXPRESS**...*GASOLINE SV STATION*
1501	**PNC ATM**...*AUTOMATED TELLER MACHINES*
1511	**CENTERLINE HOMES**...*HOME BUILDERS*
1511	**CENTERLINE HOMES**...*NEW CONST 1-FAM HOUSE*
1511	**CLEARTALK TELECOM**...*ALL OTHER TELECOMMUNICATIONS*
1511	**PINNACLE PROPERTY MANAGEMENT**...*REAL ESTATE MANAGEMENT*
1511	**PINNACLE PROPERTY MANAGEMENT**...*OFFICES OF REAL ESTATE AGENTS & BROKERS*
1511	**PRO FILE SYSTEMS**...*NONCLASSIFIED ESTABLISHMENTS*
1511	**SNAP ON TOOLS**...*MFG HAND/EDGE TOOLS*
1511	**SNAP ON TOOLS**...*HARDWARE STORES*
1511	**SNAP ON TOOLS CO**...*TOOLS (WHOLESALE)*
1511	**SNAP ON TOOLS CO**...*HAND TOOLS*
1511	**UCF INCUBATOR**...*BUSINESS SERVICES NEC*
1511	**VISTAWILLA OFFICE CTR**...*REAL ESTATE LEAS/RENT*
1511	**VISTAWILLA OFFICE CTR**...*NONRESIDENTIAL PROPERTY MANAGERS*
1511	**WINTER SPRINGS FL TOP MOVERS**...*MOVERS*
1800	**INFRASTRUCTURE ENGINEERS INC**...*ENGINEERS*

2007 MICHAEL BLAKE BLVD

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2007 STATE RD 434

SOURCE: DIGITAL BUSINESS DIRECTORY

1491 **A PUPPIES LOVE**...*PET SHOPS*
1491 **ADVENTURE CYCLING**...*BICYCLES-DEALERS*
1491 **CHINA ACE RESTAURANT**...*ORIENTAL MENU*
1491 **CHINA ACE RESTAURANT**...*FULL-SERVICE RESTAURANTS*
1491 **CHINA WOK**...*RESTAURANTS*
1491 **FASHION NAILS**...*COSMETICS & PERFUMES-RETAIL*
1491 **METRO CHURCH**...*CHURCHES*
1491 **MOTHER KIM'S CLEANERS**...*CLEANERS*
1491 **N'KARRY KASH**...*RESIDENTIAL*
1501 **BLIMPIE SUBS & SALADS**...*RESTAURANTS*
1501 **BLIMPIE SUBS & SALADS**...*FULL-SERVICE RESTAURANTS*
1501 **BLIMPIES RESTAURANT**...*QUICK SERV SANDWICH/DELI*
1501 **GODFATHER'S PIZZA**...*PIZZA*
1501 **GODFATHERS PIZZA**...*PIZZA*
1501 **GODFATHERS PIZZA**...*FULL-SERVICE RESTAURANTS*
1501 **HESS EXPRESS**...*RESTAURANTS*
1501 **PNC ATM**...*AUTOMATED TELLER MACHINES*
1511 **CENTERLINE HOMES**...*HOME BUILDERS*
1511 **PINNACLE PROPERTY MANAGEMENT**...*REAL ESTATE MANAGEMENT*
1511 **PRO FILE SYSTEMS**...*NONCLASSIFIED ESTABLISHMENTS*
1511 **UCF INCUBATOR**...*BUSINESS SERVICES NEC*
1511 **WINTER SPRINGS FL TOP MOVERS**...*MOVERS*
1800 **INFRASTRUCTURE ENGINEERS INC**...*ENGINEERS*

2003 MICHAEL BLAKE BLVD

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2003 STATE RD 434

SOURCE: DIGITAL BUSINESS DIRECTORY

1491 **DAVIDS HEART CHRISTIAN STORE**
1491 **FASHION NAILS**...*BEAUTY SCHOOLS*
1491 **LIJING CHINESE RESTAURANT**...*STEAK AND BARBECUE RESTAURANTS*
1491 **SEMINOLE TRAIL ANIMAL HOSPITAL**
1491 **ZIMMER GROUP INC**
1501 **BLIMPIE SALAD & SANDWICHES**...*STEAK AND BARBECUE RESTAURANTS*
1501 **GODFATHER'S PIZZA**
1501 **HESS EXPRESS**...*STEAK AND BARBECUE RESTAURANTS*

2000 MICHAEL BLAKE BLVD

SOURCE: DIGITAL BUSINESS DIRECTORY

NO LISTING FOUND

2000 STATE RD 434

SOURCE: DIGITAL BUSINESS DIRECTORY

1501 **HESS EXPRESS**...*STEAK AND BARBECUE RESTAURANTS*

1996 MICHAEL BLAKE BLVD

SOURCE: CITY PUBLISHING CO

STREET NOT LISTED

1996 STATE RD 434

SOURCE: CITY PUBLISHING CO

RANGE NOT LISTED

1990 MICHAEL BLAKE BLVD

SOURCE: CITY PUBLISHING CO

STREET NOT LISTED

1990 STATE RD 434

SOURCE: CITY PUBLISHING CO

RANGE NOT LISTED

1986 MICHAEL BLAKE BLVD

SOURCE: POLKS

STREET NOT LISTED

1986 STATE RD 434

SOURCE: POLKS

RANGE NOT LISTED

1981 MICHAEL BLAKE BLVD

SOURCE: POLKS

STREET NOT LISTED

1976 MICHAEL BLAKE BLVD

SOURCE: POLKS

STREET NOT LISTED

1976 STATE RD 434

SOURCE: POLKS

RANGE NOT LISTED

1972 MICHAEL BLAKE BLVD

SOURCE: POLKS

STREET NOT LISTED

1972 STATE RD 434

SOURCE: POLKS

RANGE NOT LISTED

1968 MICHAEL BLAKE BLVD

SOURCE: POLKS

STREET NOT LISTED

1968 STATE RD 434

SOURCE: POLKS

RANGE NOT LISTED

APPENDIX F

Qualifications of Environmental Professionals



ENVIRONMENTAL
Orlando, FL
Scott.Graf@NV5.com
813.952.8747

EDUCATION
BA, Geology/Environmental Science, Thiel College

EXPERIENCE
33 years

REGISTRATIONS
Professional Geologist (PG), Florida, No. PG1879

Licensed Mold Assessor, Florida, No. MRSA1337

CERTIFICATIONS
Occupational Safety and Health Administration (OSHA) 40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER)

OSHA 8-Hours Site Supervisor

AHERA Asbestos Inspector

Respiratory Protection Certification

* = indicates a project that was performed while employed at a different firm.

SCOTT D. GRAF, PG

Project Manager

Scott has over 33 years of experience in the environmental consulting field. His experience includes geological and hydrogeological evaluations, due diligence assessments, contamination assessment and remediation, solid waste groundwater monitoring plans, indoor air quality evaluations, lead-based paint evaluations, and asbestos surveys. Scott has served as a Department Manager or Office Manager since 1998 and he has extensive experience in all aspects of project and contract management for projects and contracts ranging from several thousand dollars to $3M+.

Project Experience

ENVIRONMENTAL ENGINEERING SERVICES CONTRACT*
CITY OF CLEARWATER, FLORIDA

Mr. Graf served as Project Manager for this multi-year environmental services contract. The projects typically involved various environmental assessments and evaluations required for funding under the Community Development Block Grant Program (CDBG). Projects included Phase I and II ESAs, Environmental Assessments for HUD-assisted projects, Historic Preservation Evaluations, Archeological Evaluations, and Asbestos Surveys.

ENVIRONMENTAL ENGINEERING SERVICES CONTRACT*
PINELLAS COUNTY, FLORIDA

Mr. Graf served as Project Manager for this multi-year environmental services contract. Projects included Phase I and II ESAs, soil assessments, landfill gas monitoring, and groundwater assessment and remediation.

ENVIRONMENTAL ENGINEERING SERVICES CONTRACT*
CITY OF TAMPA, FLORIDA

Mr. Graf served as Project Manager for this multi-year environmental services contract. Projects included Phase I and II ESAs, site assessment and remediation of contaminated soil and groundwater, and review/approval of Voluntary Cleanup Tax Credit applications under the Florida Brownfield Program.

EPA FEDERAL BROWNFIELD ASSESSMENT GRANTS*
FLORIDA

Project Manager for three separate federal Brownfield Assessment Grants in Florida from 2014 through 2022 with grant fees ranging from $300-$600K. Grant scope included Phase I and II ESAs, Generic and Site-Specific Quality Assurance Project Plans (SSQAPPs), Analysis of Brownfield Cleanup Alternatives (ABCAs), asbestos surveys, and wetland assessments.

Project Experience (Cont'd)

BLOCK 75 REDEVELOPMENT*

TAMPA, FL

Senior Project Reviewer and client point of contact for $3M remediation project in the heart of downtown Tampa across from City Hall with two separate petroleum facilities/discharges remediated prior to property redevelopment for a mid-rise hotel. The project included $1M in Advanced Cleanup for Redevelopment (ACR) funding through the FDEP and Scott assisted in obtaining the maximum Voluntary Cleanup Tax Credit (VCTC) reimbursement through the Florida Brownfield Program. He presented this project at the 2019 Environmental Permitting Summer School and the 2019 Florida Remediation Conference, and the presentation was then used by the FDEP Tallahassee for internal training in early 2020.

PHASE I ENVIRONMENTAL SITE ASSESSMENTS*

FLORIDA, GEORGIA, LOUISIANA, MISSISSIPPI

Project Manager/ Senior Project Reviewer for 1,000+ environmental assessments on residential, commercial, industrial and military properties throughout Florida and the Southeast U.S.

PHASE II ENVIRONMENTAL SITE ASSESSMENTS*

FLORIDA, GEORGIA, LOUISIANA, MISSISSIPPI

Project Manager or Senior Project Reviewer for hundreds of Phase II ESAs including soil, groundwater and/or sediment testing on residential, commercial, and industrial properties throughout Florida and the Southeast U.S.

CONTAMINATION ASSESSMENT REPORTS (CARS)/SITE ASSESSMENT REPORTS (SARS)*

FLORIDA, GEORGIA, NORTH CAROLINA, SOUTH CAROLINA

Project Manager/Senior Project Reviewer for hundreds of contamination assessment projects at commercial, industrial and military properties throughout Florida and the Southeast U.S. Contaminants included petroleum, chlorinated solvents, pesticides, and metals.

ASSESSMENT, REMEDIATION, MONITORING AND TANK COMPLIANCE PROJECTS*

SOUTHEASTERN UNITED STATES

Project Manager at over forty 7-Eleven stores located throughout Florida, Georgia, North Carolina and South Carolina. Scott was responsible for managing and supervising assessment, remediation, monitoring and tank compliance projects, and obtaining regulatory approval. He was also responsible for project budget tracking, cost projections, and proposed approach to regulatory closure, and was required to present a summary for each project during quarterly client meetings.

STORAGE TANK REMOVALS*

FLORIDA

Scott has been responsible for all aspects of petroleum storage tank removals at various sites throughout Florida. The project scopes included preparation of bid specifications, subcontractor selection, tank removal oversight, closure assessment, and reporting. Some of these tank removal projects also involved replacement with new petroleum storage systems.

CHLORINATED SOLVENT CLEANUP SITES*

ORLANDO & JACKSONVILLE, FL

Scott served as Senior Project Manager for two "guaranteed" cleanup contracts for commercial properties contaminated by chlorinated solvents from dry cleaning operations. These projects involved site assessments, remedial action plans, remedial system installation and subsequent system operation and maintenance.

ASBESTOS SURVEYS*

FLORIDA

Scott has completed over 100 asbestos surveys for due diligence purposes and pre-demolition/renovation NESHAP asbestos surveys and various residential and commercial facilities.

LANDFILL PROJECTS*

FLORIDA

Scott has been responsible for groundwater monitoring plans, permit renewals, and groundwater/surface water monitoring at Class III and C&D Landfills. The groundwater/surface water monitoring involved the testing of monitoring wells and surface water, a comparison of results to state action levels, and the preparation of semi-annual and annual monitoring reports.

INDOOR AIR QUALITY ASSESSMENTS*

FLORIDA

Scott has completed indoor air quality assessments for residential, commercial and public facilities. These assessments involved the collection of air, culture plate, swab and/or bulk samples, interpretation of laboratory and field monitoring results, preparation of a summary report, and recommendations for remediation, if necessary.



EHS | ENVIRONMENTAL
Miami Lakes, FL
Stephen.Crotty@NV5.com
305.666.3563

EDUCATION
BS, Earth Sciences, Norwich University, VT

EXPERIENCE
38 years

REGISTRATIONS
Professional Geologist, Florida, No. PG2394, 07.31.2024

Professional Geologist, Alabama, No. 1470, 07.20.2017, 07.30.2023

AFFILIATIONS
EPA AHERA Respiratory Protection Certified

STEPHEN J. CROTTY, P.G.

Senior Project Manager

Mr. Crotty has 38 years of experience in providing environmental consulting services to both private and municipal clients. The environmental consulting services Mr. Crotty provides include management services, both administrative and technical aspects involving Phase I and II environmental site assessments (ESA) activities; including the qualifications to be designated an environmental professional under 40 CFR Part 312, Standards and Practices for All Appropriate Inquires and ASTM method 1527-13; soil and groundwater management plans; site development and entitlement consulting; contamination studies, asbestos, lead, radon, indoor air quality (IAQ), and OSHA compliance monitoring.

Mr. Crotty has extensive experience in environmental consulting including developing action programs, preparation of bid documents, proposals, implementation of remediation procedures, project close-out and report preparation. Additionally, Mr. Crotty has supervised and managed large-scale assessment activities including equipment operators and laborers engaged in sub-surface soil explorations for material sources and roadway foundation design. He has also provided Construction management to environmental construction projects. As a Geologist for the New Hampshire DOT, Mr. Crotty assisted the research geologist in sub-surface explorations for roadway and bridge foundations to include the use of seismic equipment, boring data, and test-pits to interpret the soils and bedrock condition. Mr. Crotty is familiar with EPA, RCRA, CERCLA, OSHA, SARA, NPDES, ASTM, and numerous other federal, state, and local regulations and guidelines affecting environmental management. Mr. Crotty, as a Professional Geologist, has experience in providing reasonable assurance reports (RAR) for permitting requirements for various classes of deep injection wells used for storm and sanitary sewers. He also has been engaged to provide expert testimony services.

Project Experience

CLASS V DEEP WELL PERMITS, MIAMI-DADE COUNTY PORT OF MIAMI

MIAMI-DADE COUNTY, FL

Responsible for the geology and permit approval for a Class V Permit for four (4) deep stormwater injection wells to be place on the port's property to facilitate the port's stormwater drainage system. Responsibilities included management and oversight of the precursory soil borings required to determine site geology, development of proposed well design criteria and the completion of the reasonable assurance report for FDEP review and permit approval.

Project Experience

MIAMI-DADE COUNTY SCHOOL BOARD STATE SCHOOL "LLL" NORTH MIAMI BEACH

MIAMI-DADE COUNTY, FL

Responsible for the geology and permit approval for a Class V Permit for three (3) deep stormwater injection wells to be placed on the school property to facilitate the school's stormwater drainage system. Responsibilities included management and oversight of the precursory soil borings required to determine site geology, development of proposed well design criteria and the completion of the reasonable assurance report for FDEP review and permit approval.

PHASE I ESA AND SAR, HIALEAH GARDENS COMMERCIAL DEVELOPMENT SITE

MIAMI-DADE COUNTY, FL

Consulting geologist. Conducted a Phase I Environmental Site Assessment, soil and groundwater sampling and prepared a Site Assessment Report for this approximately 10-acre parcel in Hialeah Gardens. Miami-Dade County requested a Site Assessment Report to be prepared for the Site based on the Site's history as a former demolition debris landfill. Provided oversight for the installation of over 40 groundwater wells and collected soil samples. Prepared the Site Assessment Report for the project documenting the extents of aluminum, iron and TDS.

SOIL AND GROUNDWATER ASSESSMENT, BCAD-12/MARINA MILE SOUTH

DANIA BEACH, FL

Project manager and consulting geologist. Provided preliminary site assessment activities of the property. A Site Assessment was completed using sub-surface exploration methodologies to assess soils and groundwater. Based on the findings of the laboratory analytical results, areas were further delineated to maximize soil removal efforts and minimize cost to the client. In concurrence with the site assessment activities, quarterly monitoring of the groundwater was completed to assist in conditional closure of the property through restrictive covenants.

MULTIFACETED ENVIRONMENTAL ASSESSMENT, MULTI-FAMILY RESIDENTIAL LOW-INCOME HOUSING

MIAMI-DADE, FL

Project Manager and Consulting Geologist for Due Diligence activities for refinancing and renovations for a 300+ unit apartment complex. Responsibilities included assessment activities to soil and groundwater impacts related to the known impacted adjoining properties. Additional responsibilities included, asbestos identification surveys and asbestos abatement activities, radon screenings and implementation of radon mitigation systems as well post testing. Lead in drinking water studies, mold assessments and mitigation plans were also provided. Coordinated with county and state regulatory bodies to ensure site compliance in accordance to both County Codes and State Regulations.

SOIL ASSESSMENT AND REMEDIATION, ATLANTIC PACIFIC WEST CYPRESS HOUSING

BROWARD COUNTY, FL

Project Manager and Consulting Geologist for the assessment and management of impacted soils prior to site development of a thirty-building apartment complex. Reviewed previous studies and designed and implemented a supplemental assessment strategy to delineate and address arsenic and dieldrin impacted soils. Supervised the removal, transport and disposal of 20,000 tons of soil. Completed post remediation sampling to document that the impacted soil was properly addressed.

SOIL AND GROUNDWATER ASSESSMENT AND REMEDIATION, RE-DEVELOPED FORMER GASOLINE SERVICE STATION

INDIAN RIVER COUNTY, FL

Project Manager and Consulting Geologist for Due Diligence activities for purchasing a gasoline dispensing station for decommissioning and re-development into a retail pad ready parcel. Responsibilities included assessment activities to soil and groundwater impacts related to the present and past use of the gasoline dispensing station prior to development. The design and implementation of the remediation plan to include tank and soil removal along with groundwater monitoring. Coordinated with county and state regulatory bodies to ensure site compliance in accordance with both County Codes and State Regulations.

FDOT DISTRICT 6 – MIAMI INTERMODAL CENTER DEMOLITION AND ASBESTOS ABATEMENT CONSULTING SERVICES

MIAMI-DADE COUNTY, FL

Program Manager. Provided environmental consulting services in regards to potential asbestos and other airborne dust emissions during the acquisition, assessment and demolitions of commercial structures required to be removed in order to provide pad ready parcels for the construction of the Miami Intermodal Center. The project consisted of the inspection of commercial structures procured by the FDOT District 6 for Asbestos and additional hazardous materials that would be affected by building demolition. Developed remedial plans to mitigate the identified hazardous materials and conduct monitoring during removal of the hazardous materials and building demolition. Supervised staff preparation of inspection reports, sample collection and analysis and report preparation. The main point of contact with all regulatory agencies involved in the project and provided QA/QC of all work products.

FDOT DISTRICT 6 – DISTRICT WIDE RIGHT OF WAY (ROW) DEMOLITION AND ASBESTOS ABATEMENT CONSULTING SERVICES

MIAMI-DADE COUNTY, FL

Program Manager. The project consisted of the inspection of commercial and residential structures procured by the FDOT District 6 for Asbestos and additional hazardous materials that would be affected by building demolition. Developed remedial plans to mitigate the identified hazardous materials and conduct monitoring during removal of the hazardous materials and building demolition. Supervised staff preparation of inspection reports, sample collection and analysis and report preparation.

SE REGIONAL BULK FUEL DISTRIBUTOR REGULATORY COMPLIANCE

FLORIDA

Program Manager for regulatory compliance and site improvement projects for multiple bulk fuel facilities: Mr. Crotty was the emergency spill first contact and responsible for response, assessment, and remediation activities. As Program Manager provided Multi-Sector General Permit compliance including storm water monitoring, SWPPP, and SPCC plan design and implementation. Prepared reports required by operating permits including annual waste characterization, surface water and site discharge monitoring.

SITE ASSESSMENT AND STORAGE TANK REMOVAL AND MAINTENANCE, BOCA RATON INNOVATION CAMPUS

BOCA RATON, FL

Project Manager for regulatory compliance and site improvement projects for a 2 million square foot structure on a multi-acre campus in Boca Raton, Florida. Responsible for site assessment activities and remediation oversight. Coordinated the removal of a 20,000-gallon capacity above ground storage tank (AST) and installation of a new 4,000-gallon AST. Prepared and implemented the properties spill prevention counter control measure documents for multiple ASTs which also provided guidance in maintaining three, 30,000-gallon capacity underground storage tanks (USTs). Prepared reports required by operating permits including annual waste characterization, surface water and site discharge monitoring.

GEOTECHNICAL ENGINEERING REPORT

The Learning Experience

Winter Springs Town Center
SR 434 & Michael Blake Boulevard
Winter Springs, Orange County, Florida
September 16, 2024

Prepared for:

Richard Kerper
KW Partners, LLC
2420 Enterprise Road, Suite 201
Clearwater, FL 33763

N|V|5

6200 Lee Vista Blvd., Ste. 400
Orlando, FL 32822

EXECUTIVE SUMMARY

A geotechnical exploration was performed for the proposed The Learning Experience - Winter Springs located at SR 434 & Michael Blake Boulevard in Winter Springs, Orange County, Florida. A site vicinity map is presented on **Drawing No. 1** of **Appendix A**.

Based on the field explorations performed on site, which included seven (7) Standard Penetration Test (SPT) borings advanced to depths of 10 to 20 feet below grade, the proposed site development, and our experience with the site general subsoil conditions and similar developments, the following summarizes our main geotechnical recommendations:

- The encountered subsoil conditions consisted of loose to medium dense fine sand, clayey sand, and silty sand to depths of 23.5 feet below the existing grade followed by stiff clay to the termination depth of 25 feet.

- Potentially expansive clay-rich soils were encountered approximately 23 feet below the existing ground surface in borings SPT-1, 2, and 3. Although we do not anticipate the highly plastic clays encountered at this depth to affect foundation performance, other pockets of expansive clay may be encountered on site. It is current industry standard to provide a minimum of 4 feet of separation from the bottom of the foundation to the top of the expansive clay-rich soils and support a structure on conventional shallow foundations. These site preparation techniques have performed well in the area. It appears that the site grading will provide this separation, therefore conventional shallow foundations without over-excavation and replacement should perform similarly well over the life of the structure.

- The groundwater table was encountered in the top of 0.1 feet below the existing ground surface, and based on the borings, we anticipate the season high groundwater level to be near or at the existing ground surface elevation. Some engineered fill will need to be placed to reach the requirement of having a minimum distance of 2 feet below the pavement section to the estimated seasonal high groundwater level. Typical pavement sections are provided later in the report.

- The subsoil conditions are considered suitable to adequately support the proposed one-story building on conventional shallow foundations in the form of spread/strip footings and/or monolithic slab foundation supported on site soil or structural fill. Bearing pressures in the order of 2,000 to 3,000 psf are recommended with minimum footing width of 3 feet and minimum embedment depth of 3 feet assuming the 2 feet below the foundation level are compacted to 95% of modified Proctor Density. Total settlement is expected to be less than 1 inch. Detailed foundation design and construction recommendations are presented later in the report.

This report should be read in its entirety so that the recommendations presented herein are fully understood and properly implemented in the project geotechnical design.

TABLE OF CONTENTS

1.0 PROJECT INFORMATION 1
2.0 PURPOSE 1
3.0 FIELD EXPLORATION 1
4.0 GENERAL POTENTIAL FOR SINKHOLE DEVELOPMENT 2
5.0 SOIL AND GROUNDWATER CONDITONS 2
5.1 SOIL SURVEY 2
5.2 SUBSURFACE CONDITIONS 3
5.3 GROUNDWATER 3
6.0 CONCLUSIONS AND RECOMMENDATIONS 3
6.1 FOUNDATIONS 3
6.2 GROUND FLOOR SLABS 5
6.3 EARTHWORK 5
6.3.1 Site Preparation 5
6.3.2 Fill Material and compaction requirements 5
6.3.3 Grading and Drainage 6
6.3.4 Earthwork Construction Consideration 6
6.4 EXCAVATION AND DEWATERING 6
6.5 PAVEMENT 7
6.5.1 Light Duty- Passenger Cars Only 7
6.5.2 Heavy Duty Driveways and Areas Accessed by Truck Traffic 7
7.0 LIMITATIONS 8
8.0 CLOSURE 9

ATTACHMENTS

Drawing No. 1 Topographic Vicinity Map
Drawing No. 2 USDA Soils Map
Drawing No. 3 Boring Location Plan
Attachment No. 1 Borings Logs
Attachment No. 2 General Notes
Attachment No. 3 GBA Guidelines for Geotechnical Report

1.0 PROJECT INFORMATION

The proposed development of The Learning Experience - Winter Springs is planned to be situated at SR 434 & Michael Blake Blvd., in Winter Springs, Orange County, Florida. The site vicinity map can be found **on Drawing No. 1** of the Attachments. The site elevations in the vicinity of this project are estimated to be around 35 feet NGVD.

Based on the proposed site plan, the designated land will be developed with an approximately 10,000 square foot single-story building, accompanied by surface parking and driveways that are essential for the operation of the business. Building loads were not provided at the time of this report. We assume the finished floor elevation would be near the existing grade with some minimal fill.

2.0 PURPOSE

The purpose of our services on this project is to explore the shallow subsurface in order to provide geotechnical engineering recommendations for:

- Subsurface soil conditions
- Groundwater conditions
- Earthwork and excavation
- Foundation design and construction
- Floor slab design and construction
- Pavement design and construction

3.0 FIELD EXPLORATION

The subsurface conditions at the site were explored with 7 test borings; three (3) SPT borings advanced to depths of 10 feet below grade and four (4) SPT borings advanced to depths of 20 feet below grade at the approximate locations shown on **Drawing No. 3** of **Attachments**. The boring locations were marked and identified in the field using a GPS unit.

The seven (7) Standard Penetration Test Borings (SPT) were drilled to depths of 10 to 20 feet below the existing ground surface with a truck-mounted drill rig utilizing the rotary wash method. Samples of the subsurface materials were recovered at two-foot intervals within the upper 10 feet of the boring and at roughly five-foot intervals thereafter using a Standard Penetration Test split-spoon sampler (SPT) in substantial accordance with ASTM D-1586, "Standard Test Method for Standard Penetration Test and Split-Barrel Sampling of Soils." This test procedure drives a 1.4-inch I.D. split-tube sampler into the subsurface profile using a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler the second and third six-inch increments is the SPT N-value, in blows per foot, and is an indication of material strength. Upon completion of the borings, the boreholes were backfilled to the ground surface with soil cuttings.

The soil samples recovered from the borings were classified by a geotechnical engineer. The collected samples were later re-examined to confirm field classifications. Visual soil classifications were made in accordance with ASTM D2487 and ASTM D2488. Conditions encountered at each boring location are indicated on the individual boring logs shown in **Attachment No. 1** of **Appendix A**. Strata contacts shown on these boring logs are approximate. The boring data reflects conditions at the specific test location only, and at the time the borings were drilled.

4.0 GENERAL POTENTIAL FOR SINKHOLE DEVELOPMENT

Sinkhole development occurs in Florida and varies geographically from areas with almost no potential or a very low potential to areas with a high potential where sinkholes occur frequently. The subject property is in an area considered most favorable for sinkhole formation based on a map titled *Sinkhole Type, Development, and Distribution in Florida* prepared by the United States Geological Survey (USGS).

Our geotechnical work scope is not intended to specifically address sinkhole potential. However, during our limited shallow explorations, we did not detect any of the subsurface or geologic indicators typically associated with potential sinkhole development including abnormal downward pore water pressure gradients, obvious raveled zones, surface depressions, etc.

If the sinkhole potential of the site is to be formally evaluated, additional site-specific data must be obtained. This might include using geophysical methods such as electrical resistivity tests and additional geotechnical tests such as cone penetrometer test (CPT) soundings, as well as more or deeper Standard Penetration Test borings. Interpretation of the test data should be done by a professional geologist/engineer familiar with the use of these tests under local conditions.

However, it should be noted that even if indicators of sinkhole activity are found, it is impossible to predict if, when, or precisely where a sinkhole may occur. If requested, NV5 can assist in assessing the sinkhole potential at the location of the proposed construction.

5.0 SOIL AND GROUNDWATER CONDITONS

5.1 SOIL SURVEY

The USDA Soil Survey of Orange County, Florida, as shown on **Drawing No. 2**, was reviewed for a general description of the near-surface soil types that may be anticipated at the site. It should be noted that the Soil Survey is not intended as a substitute for site-specific geotechnical exploration; rather it is a useful tool in planning a project scope in that it provides information on soil types likely to be encountered. The major shallow subsurface profile at the project site is represented in the following:

> ***27 – Pomello, fine sand, 0 to 5 percent slopes:*** – This is a moderately well drained soil found on sandy marine deposits. Slopes are convex and linear. The water table is about 24 to 42 inches below the surface. Surface runoff is low with low ponding. Permeability in the surface and subsurface layers is moderately high to high.
>
> The surface layer is fine sand about 4 inches thick. The subsurface layer is fine sand to a depth of 55 inches. The subsoil extends to a depth of 80 inches of fine sand. Organic matter content is low to moderately low in the surface layer
>
> ***29 – St. Johns and EauGallie, fine sands, 0 to 2 percent slopes***: - This is a poorly drained soil found on sandy and loamy marine deposits. Slopes are convex and linear. The water table is about 6 to 18 inches below the surface. Surface runoff is high with low ponding. Permeability in the surface and subsurface layers are moderately low to high.

The surface layer is fine sand about 3 inches thick. The subsurface layer is fine sand to a depth of 16 inches. The subsoil extends to a depth of 72 inches of sandy clay loam and a depth of 80 inches of loamy sand. Organic matter content is low to moderately low in the surface layer

5.2 SUBSURFACE CONDITIONS

Based on the results of the SPT borings, the encountered subsoil conditions consisted of a layer of medium dense fine sand, silty sand, and clayey sand to 23.5 feet below existing grade. High plasticity clay was encountered from 23.5 feet below existing grade on SPT-1, 2 and 3.

Conditions encountered at each boring location are indicated on the individual boring logs shown in **Attachment No. 1**. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual.

5.3 GROUNDWATER

The borings were observed during drilling for the presence and level of groundwater. Groundwater was encountered in all seven borings approximately 0.1 to 0.3 feet below the existing ground surface. We estimate seasonal high groundwater table to be at the existing ground surface of the subject property. It should be recognized that fluctuations of the groundwater table will occur due to seasonal variations in the amount of rainfall, runoff, and other factors not evident at the time the boring was performed. Therefore, groundwater levels during construction or at other times in the future may be higher or lower than the levels indicated on the boring logs.

Our estimates of the seasonal groundwater conditions are based on the USDA Soil Survey, the encountered soil types and groundwater and do not represent the temporary rise in water table occurs immediately following a storm events.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on the project characteristics previously described, the data obtained from our field explorations, and our experience with similar subsurface conditions and construction types. If subsurface conditions different from those disclosed by the borings are encountered during construction, we should be notified immediately so that we might review the following recommendations considering such changes.

6.1 FOUNDATIONS

Potentially expansive clay-rich soils were encountered in borings SPT-1, 2, and 3 at a depth of approximately 23 feet below the existing ground surface. Although we do not anticipate the highly plastic clays encountered at this depth to affect foundation performance, other pockets of expansive clay may be encountered on site. It is current industry standard to provide a minimum of 4 feet of separation from the bottom of the foundation to the top of the expansive clay-rich soils and support a structure on conventional shallow foundations. These site preparation techniques have performed well in this area. It appears that the site grading will provide this separation, therefore conventional shallow foundations without over-excavation and replacement should perform similarly well over the life of the structure.

However, in some cases, it is our experience that clay-rich soils as deep as 10 to 15 feet can affect foundation performance of conventional shallow foundations and cause aesthetic type and nuisance cracking if fluctuations in the moisture content of the clay-rich soils occur. We wish to point out that the recommendations provided in this report are intended to reduce the risk that differential foundation and slab movement will occur from volume changes in the clay-rich soils. These recommendations are not a guarantee that differential foundation movement will not occur. Any structure supported by shallow foundations that bear over expansive soils has some risk for differential movement caused by volume changes of the clay-rich soils. It is our opinion that the following recommendations are a reasonable approach to reducing this risk, and this approach has been successful on sites with similar subsurface conditions. If this risk is unacceptable, we would be happy to provide recommendations for a stiffened waffle type slab foundation or a post-tensioned slab foundation and/or associated subgrade improvements at your request.

Assuming the site is prepared as recommended in Earthwork section of this report, in our opinion, the proposed development can be supported by shallow foundation system in the form of spread/strip footings and/or monolithic slab foundation, bearing on native soil or newly placed fill extending to native soil. We anticipate the proposed building will be framed with concrete masonry units and structural concrete. Design structural loads for the proposed building were not provided at the time of this report. Design recommendations for shallow foundations for the proposed development buildings are presented below:

- For shallow spread footings: we recommend using a net allowable bearing pressure of 3,000 psf to size the column footings. Footings should be embedded to a minimum of 30 inches below lowest adjacent grades and should be at least 30 inches wide.
- For shallow strip/wall footings: we recommend using a net allowable bearing pressure of 2,500 psf to size the strip/wall footings. Footings should be embedded to a minimum of 30 inches below lowest adjacent grades and should be at least 24 inches wide.
- For monolithic slab foundation: we recommend using a net allowable bearing pressure of 2,000 psf to size the edge beams of the monolithic slab foundation. The edge beams should be embedded to a minimum of 18 inches below lowest adjacent grades and should be at least 12 inches wide.
- Total settlement of recommended shallow foundations is expected to be less than 1 inch. Differential settlement is expected to be less than ½ inch between column footing, less than ½ inch over 40 feet for strip footing, and less than ½ inch over 40 feet for monolithic slab foundation.
- Footing subgrade soils should be approved by the geotechnical engineer or his representative prior to placement of concrete and steel. As a minimum acceptance criterion, the footing subgrade soils should be compacted to a minimum density of 95% of the soils modified Proctor maximum dry density to a depth of 24 inches under foundation level.
- A minimum of one field density to a minimum depth of 1 foot below the footing subgrade per column footing and per 50 linear feet for wall and monolithic slab foundation should be performed.
- The base of all foundation excavations should be free of water and loose soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Should the soils at bearing level become excessively dry, disturbed or

saturated, the affected soil should be moisture conditioned and re-compacted or removed prior to placing concrete. Place a lean concrete mud-mat over the bearing soils if the excavations must remain open overnight or for an extended period of time. It is recommended that the geotechnical engineer be retained to observe and test the soil foundation bearing materials.

- NV5 anticipates hand-operated compaction equipment will be utilized, as necessary, in footing cuts, following any mass grading. If unsuitable bearing soils are encountered in footing excavations, the excavation should be extended deeper to suitable soils and the footing could bear directly on these soils at the lower level or on suitable backfill placed in the excavations. Over-excavation for compacted backfill placement below footings should extend laterally beyond all edges of the footings. The over-excavation should then be backfilled up to the footing base elevation per the preceding general earthwork specifications, using hand operated compaction equipment in footing cuts.

6.2 GROUND FLOOR SLABS

Ground floor slabs may be supported on grade or engineered fill. Slab subgrades should be properly prepared as recommended above under Site Preparation and Grading and Drainage.

Slabs on grade may be designed using a modulus of subgrade reaction of 100 pounds per cubic inch (pci). Slabs should be reinforced for the loads that they will sustain, and construction joints should be provided at frequent intervals.

Slabs in contact with soil are subject to movement of moisture from the soil upward through the slab. To prevent such moisture vapor transmission, a moisture barrier should be placed on the slab subgrade and should be protected from damage during construction. Construction joints should be provided with water stops in any permanently submerged areas.

6.3 EARTHWORK

6.3.1 Site Preparation

Geotechnical site preparation for construction should consist of removal of all existing structures, foundations, pavements, underground utilities, landscape, and other deleterious materials within proposed building and pavement footprints. Any voids created by the removal of these deleterious materials should be properly backfilled as described in the paragraphs below.

After preparation as described above, areas for structures that will have slabs on grade or pavements should be proof rolled with a heavy roller (with vibrator turned off) or loaded truck. The proof rolling should be observed by the geotechnical engineer to identify and mitigate any weak subgrade conditions evidenced by yielding or rutting at the wheels of the roller or truck.

The site preparation recommended above should include the planned structure and pavement footprints plus a five-foot perimeter.

6.3.2 Fill Material and compaction requirements

In general, fill soils should consist of either inorganic, non-plastic sand having less than 12% material passing the No. 200 sieve. In particular, fill soils placed within the upper 12 inches of the subgrade of

building grade slabs on grade should consist of either sand with less than 10% passing the number 200 sieve.

Based on our boring data the near-surface sand should satisfy the fill criteria but might require localized sorting and moisture-conditioning prior to re-use. In any event, representative samples of the fill soils should be collected for classification and compaction testing. The maximum dry density, optimum moisture content, gradation, and plasticity should be determined. These tests are needed for quality control of the compacted fill.

Fill soils should be placed with loose lift thicknesses of not more than 12 inches, moisture-conditioned to within two (2) percent of the optimum moisture content based on ASTM D-1557 and compacted to a minimum of 95 percent relative compaction. One test should be performed for each 2,500 square feet of fill area per lift of fill soils. If during the compaction process fill shows evidence of yielding under the weight of the roller, it should be scarified and re-compacted, or removed and replaced with fill described above.

The vibrations produced by the operation of the compactor should be monitored for potential adverse effects on adjacent existing structures, pavements, and utilities. If nearby structures will be affected by the vibration of the compactor, the compaction procedure may require modification as approved by the geotechnical engineer.

6.3.3 Grading and Drainage

Final surrounding grades should be sloped away from the structure on all sides to prevent ponding of water. Roof drainage should discharge to the stormwater system or a minimum of 10 feet beyond the footprint of the proposed structures where there are pervious surfaces. Site grades should be set considering the estimated seasonal high groundwater.

6.3.4 Earthwork Construction Consideration

Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and re-compacted prior to floor slab and pavement construction.

Installation of landscape drains should be considered around the back sides of curbs to collect and control landscape irrigation and other water entering through landscaping from entering the sides of the pavement sections, reducing the potential for water-related damage. Landscape drains should be routed to the stormwater collection or other positive outfall, away from the pavement.

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proof-rolling; placement and compaction of controlled compacted fills; backfilling of excavations into the completed subgrade, and just prior to construction of building floor slabs.

6.4 EXCAVATION AND DEWATERING

Groundwater levels were encountered in the drilled boreholes at depths from 0.1 to 0.3 feet below the existing ground. The Site may require dewatering to facilitate installation depending on the footings

and utility invert elevations and the time of year of construction. Localized dewatering, if required, may be achieved with pumps and sumps. Dewatering for deeper excavations including installation of utility systems and appurtenances for storm drains and sewer lines might require well points around those excavations. All dewatering and subsequent effluent discharge should meet the requirements of the local jurisdictional agencies. During dewatering the adjacent properties must be monitored for adverse impacts from dewatering drawdown. The dewatering subcontractor should submit a proposed design for dewatering operations to the owner for review and approval prior to commencing work.

Shallow excavations into the near-surface materials will likely stand vertical for short periods of time only. The excavation sides will unravel over time as they are exposed to weather and construction traffic. Deeper excavations, especially those that extend below the groundwater table, as well as excavations that will remain open for longer periods of time will require support in the form of temporary shoring or sliding trench boxes to prevent instability of excavation walls and to protect workers from injury. All excavations should comply with Occupational Safety and Health Administration (OSHA) design and safety requirements. Shoring designs should be signed and sealed by a Florida-licensed professional engineer and should be provided for the Owner's review.

6.5 PAVEMENT

The near surface soil in most of the project site consisted of clean fine sands, which are suitable as a subgrade material for conventional pavement sections. Soils containing construction debris should be removed and replaced prior to use. The groundwater table was encountered 0.1 to 0.3 below the existing ground surface. Engineered fill will need to be placed to reach the requirement of having a minimum distance of 2 feet below the pavement section to the estimated seasonal high groundwater level. Traffic loads are not given yet, but are anticipated to consist mostly of passenger cars, light pick-up trucks, and occasional large trash collection trucks. Based on the above information and assumptions, the minimum recommend pavement sections are as follows:

6.5.1 Light Duty- Passenger Cars Only

- 1.5 inches of asphaltic concrete structural course according to FDOT Specifications Section 330, 331 (Marshall).
- 6 inches of limerock base compacted to at least 98 percent of the Modified Proctor maximum dry density (AASHTO T-180 or ASTM D-1557). Limerock base courses should be mined from a Florida Department of Transportation (FDOT) approved source, should have a minimum LBR value of 100.
- 12 inches of compacted natural subgrade stabilized to a minimum Limerock Bearing Ratio (LBR; Florida Method of Test Designation FM 5-515) value of 40. Stabilization of the sub-base should be accomplished using coarse aggregate as well-graded crushed concrete or FDOT-approved limerock stabilization material. The subgrade should be compacted to at least 98 percent of the Modified Proctor maximum dry density (AASHTO T-180 or ASTM D-1557).

6.5.2 Heavy Duty Driveways and Areas Accessed by Truck Traffic

- 2 inches of asphaltic concrete structural course according to FDOT Specifications Section 330, 331 (Marshall).
- 8 inches of limerock base compacted to at least 98 percent of the Modified Proctor maximum dry density (AASHTO T-180 or ASTM D-1557). Limerock base courses should be

mined from a Florida Department of Transportation (FDOT) approved source, should have a minimum LBR value of 100.

- 12 inches of compacted natural subgrade stabilized to a minimum Limerock Bearing Ratio (LBR; Florida Method of Test Designation FM 5-515) value of 40. Stabilization of the sub-base should be accomplished using coarse aggregate as well-graded crushed concrete or FDOT-approved limerock stabilization material. The subgrade should be compacted to at least 98 percent of the Modified Proctor maximum dry density (AASHTO T-180 or ASTM D-1557).

7.0 LIMITATIONS

This report has been prepared for the exclusive use of the Owner and other members of the design/construction team for the specific projects discussed in this report. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied.

The evaluation and recommendations submitted in this report are based in part upon the data collected from the field exploration. The nature or extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to evaluate our recommendations as provided in this report. In the event changes are made in the nature, design or locations of the proposed project construction, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed, and conclusions modified or verified in writing by NV5.

During the design development phase of the project, it is recommended that NV5 be retained to provide consultation to the ownership and design team, to review final foundation specification and review foundation design drawings, and to ensure that its recommendations have been correctly interpreted and implemented. Furthermore, NV5 should be retained to provide inspections during geotechnical construction. If the client does not provide NV5 with the opportunity to participate in the installation of the foundation, as is recommended in this report, then the client acknowledges and agrees that NV5 has no responsibility for the interpretation of the recommendations made in this report or for the performance of the foundation.

8.0 CLOSURE

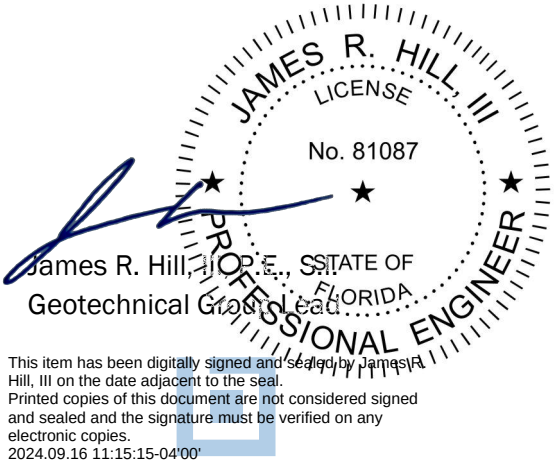
We appreciate the opportunity to provide geotechnical engineering services on this project. In the event that you have any questions concerning the contents of this report, or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,

NV5, Inc.



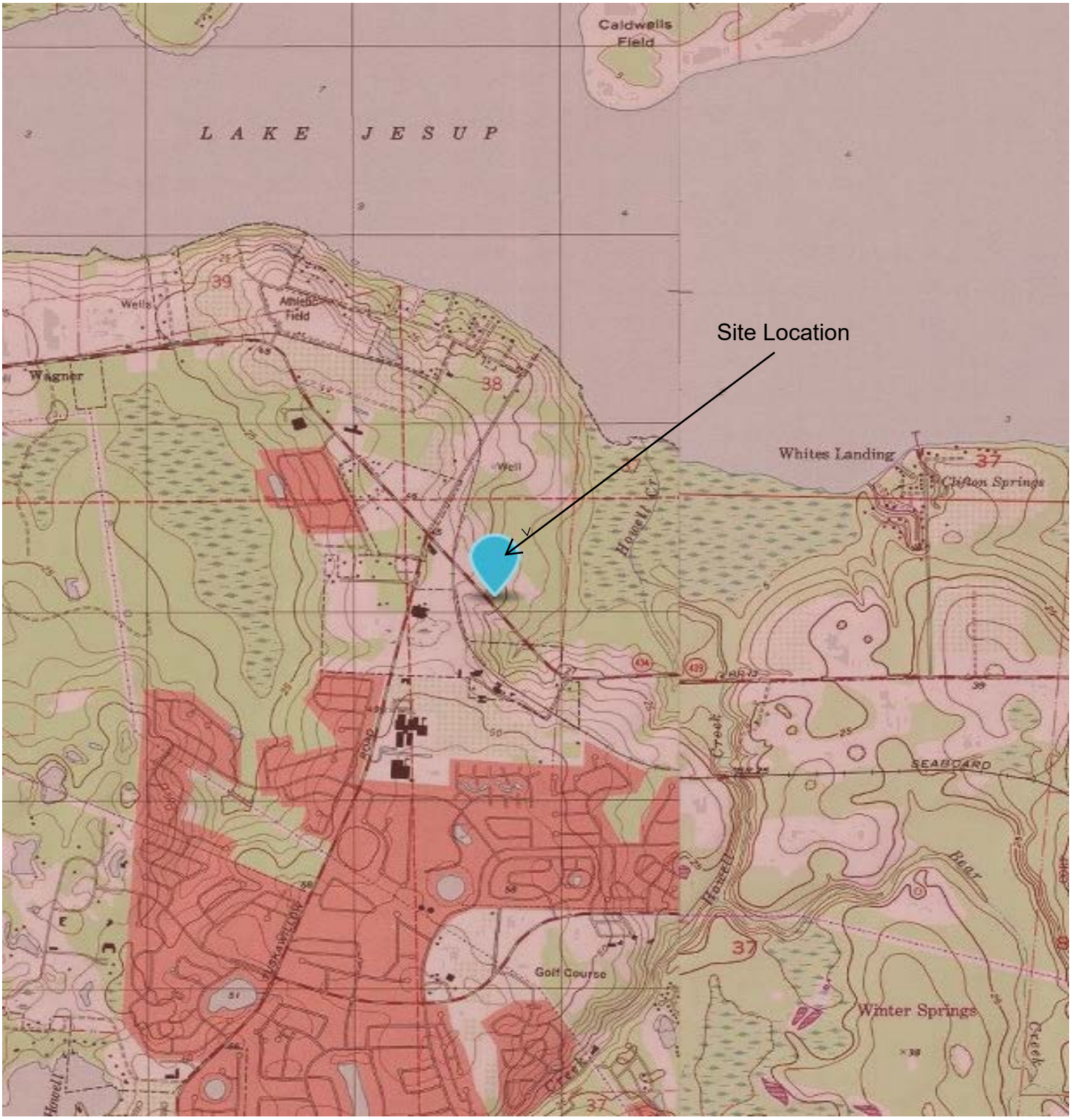
Kevin Khadar
Project Manager



James R. Hill, III, P.E., S.I.
Geotechnical Group Lead

This item has been digitally signed and sealed by James R. Hill, III on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
2024.09.16 11:15:15-04'00'

ATTACHMENTS



Topographic map Courtesy of the U.S Geological Survey
Quadrangles Include Winter Springs Florida, (1964)

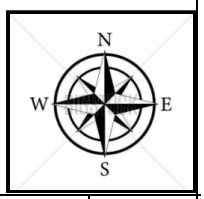
N
W E
S

Project No.:	1290724-0024056.20	NV5	**TOPOGRAPHIC MAP**	Drawing No.
Drawn By:	K.K			
Approved By:	J.H.			
Date:	09/12/2024	6200 Lee Vista Boulevard, Suite 400 | Orlando, FL 32822	The Learning Experience SR 434 & Michael Blake Blvd. Winter Springs, FL 32708	1
Scale:	NTS	P: 407-275-5120 F: 407-275-5268		



SOILS MAP INDEX- U.S.D.A SOIL SURVEY SEMINOLE COUNTY, FLORIDA

27 - Pomello, fine sand, 0 to 5 percent slopes
29 - St. Johns and EauGallie, fine sand, 0 to 2 percent slopes



Project No.:	1290724-0024056.20	NV5	**U.S.D.A. SOIL MAP**	Drawing NO.
Designed By:	K.K.			
Approved By:	J.H.		The Learning Experience SR 434 & Michael Blake Blvd. Winter Springs, FL 32708	2
Date:	09/12/2024	6200 Lee Vista Boulevard, Suite 400 | Orlando, FL 32822		
Scale:	NTS	P: 407.896.3317 F: 407.896.9167		



LEGEND

- Approximate location of SPT borings to 20 feet
- Approximate location of SPT borings to 10 feet

N
W E
S

Project No.:	1290724-00240566.20	NV5	**Boring Locations Plan**	Drawing No.
Drawn By:	K.K.			
Approved By:	J.H.		The Learning Experience SR 434 & Michael Blake Blvd. Winter Springs, FL 32708	3
Date:	09/12/2024	6200 Lee Vista Boulevard, Suite 400 | Orlando, FL 32822		
Scale:	NTS	P: 407-275-5120 F: 407-275-5268		

Attachment No. 1

Borings Logs

Date	Project Number	Project	Boring No.
Started: 09/10/24 Completed: 09/10/24	1290724-0024056.20	The Learning Experience Winter Springs	B-01
Hammer Type: Auto	Drilling Method: SPT	Logged By: Reliable	Reviewed By: JH
Latitude: 28.6935826396724°	Longitude: -81.2591413380238°	Surface Elevation:	

Location: See Drawing 3

Sample Type
G - Bulk / Grab Sample
SPT - 2" O.D. 1.4" I.D. Tube Sample
MC - 3 " O.D. 2.4" I.D. Ring Sample
NR - No Recovery
* - Uncorrected Blow Counts

Groundwater

Depth (ft)	Hour	Date
0.3	during	9-10-24

Groundwater Depth (ft.)	Depth (ft.)	Graphical Log	Sample Taken	Sample ID	SPT N-Value	Moisture Content (%)	% Passing No. 200	Other Tests and Remarks	USCS Class.	Visual Classification
▼	0									SILTY SAND (SM), dark brown, loose, fine grained with roots
				SPT- 1	2-2-3-4 N=7				SM	
										2.0'
				SPT- 2	5-7-9-10 N=19				SP-SM	SILTY SAND (SP-SM), brown, medium dense, fine grained with silt
										4.0'
	5			SPT- 3	8-10-13-12 N=25	20	23			CLAYEY SAND (SC), brown, medium dense, fine grained
									SC	
				SPT- 4	7-6-6-8 N=14					Medium brown at 6.0 feet
										8.0'
				SPT- 5	6-7-7-8 N=15					SILTY SAND (SP-SM), brown, medium dense, fine grained with silt
	10									
				SPT- 6	7-7-8 N=15					
	15								SP-SM	
				SPT- 7	7-7-8 N=15					
	20									
										23.5'
				SPT- 8	4-5-5 N=10	49	94	LL= 118 PI= 98	CH	CLAY (CH), gray, stiff
	25									25.0'

Notes:
Boring terminated at depth of (25.0').

Boring latitude and longitude were approximated, not surveyed.
Borehole backfilled with soil cuttings.

Date	Project Number	Project	Boring No.
Started: 09/10/24 Completed: 09/10/24	1290724-0024056.20	The Learning Experience Winter Springs	B-02
Hammer Type: Auto	Drilling Method: SPT	Logged By: Reliable	Reviewed By: JH
Latitude: 28.6935316506832°	Longitude: -81.258958452003°	Surface Elevation:	

Location: See Drawing 3

Sample Type
G - Bulk / Grab Sample
SPT - 2" O.D. 1.4" I.D. Tube Sample
MC - 3 " O.D. 2.4" I.D. Ring Sample
NR - No Recovery
* - Uncorrected Blow Counts

Groundwater

Depth (ft)	Hour	Date
0.1	during	9-10-24

Groundwater Depth (ft.)	Depth (ft.)	Graphical Log	Sample Taken	Sample ID	SPT N-Value	Moisture Content (%)	% Passing No. 200	Other Tests and Remarks	USCS Class.	Visual Classification
▼	0									SAND (SP), dark brown, loose, fine grained
				SPT- 1	2-3-3-3 N=6	28	6			
				SPT- 2	4-5-5-6 N=11				SP	Brown, medium dense at 2.0 feet
	5			SPT- 3	4-5-5-5 N=10					Loose to medium dense at 4.0 feet
										6.0'
				SPT- 4	6-6-7-7 N=14	22	22			CLAYEY SAND (SC), tan, medium dense
				SPT- 5	7-10-10-11 N=21				SC	
	10									
										13.5'
				SPT- 6	6-7-10 N=17					SAND (SP), tan, medium dense
	15								SP	
										18.5'
				SPT- 7	6-7-11 N=18					SILTY SAND (SP-SM), tan, medium dense with silt
	20								SP-SM	
										23.5'
				SPT- 8	4-5-5 N=10				CH	CLAY (CH), gray, stiff
	25									25.0'

Notes:
Boring terminated at depth of (25.0').

Boring latitude and longitude were approximated, not surveyed.
Borehole backfilled with soil cuttings.

Date	Project Number	Project	Boring No.
Started: 09/10/24 Completed: 09/10/24	1290724-0024056.20	The Learning Experience Winter Springs	B-03
Hammer Type: Auto	Drilling Method: SPT	Logged By: Reliable	Reviewed By: JH
Latitude: 28.6934569938994°	Longitude: -81.2587973415391°	Surface Elevation:	

Location: See Drawing 3

Sample Type
G - Bulk / Grab Sample
SPT - 2" O.D. 1.4" I.D. Tube Sample
MC - 3 " O.D. 2.4" I.D. Ring Sample
NR - No Recovery
* - Uncorrected Blow Counts

Groundwater

Depth (ft)	Hour	Date
0.1	during	9-10-24

Groundwater Depth (ft.)	Depth (ft.)	Graphical Log	Sample Taken	Sample ID	SPT N-Value	Moisture Content (%)	% Passing No. 200	Other Tests and Remarks	USCS Class.	Visual Classification
▼	0									SILTY SAND (SM), dark brown, loose, fine grained with roots and wood chips
				SPT- 1	2-2-3-3 N=6				SM	2.0'
				SPT- 2	4-5-5-5 N=10					SAND (SP), light brown, loose to medium dense with trace roots
	5			SPT- 3	4-5-6-9 N=15	19	12		SP	Brown, medium dense at 4.0 feet
										6.0'
				SPT- 4	7-8-8-10 N=18	13	24		SC	CLAYEY SAND (SC), tan, medium dense, fine grained
										8.0'
				SPT- 5	6-6-7-8 N=15					SAND (SP), tan, medium dense, fine grained
	10									
				SPT- 6	6-6-7 N=13					Light tan at 13.5 feet
	15								SP	
				SPT- 7	7-7-9 N=16					
	20									
										23.5'
				SPT- 8	4-4-5 N=9				CH	CLAY (CH), gray, stiff
	25									25.0'

Notes:
Boring terminated at depth of (25.0').

Boring latitude and longitude were approximated, not surveyed.
Borehole backfilled with soil cuttings.

Date	Project Number	Project	Boring No.
Started: 09/11/24 Completed: 09/11/24	1290724-0024056.20	The Learning Experience Winter Springs	B-04
Hammer Type: Auto	Drilling Method: SPT	Logged By: Reliable	Reviewed By: JH
Latitude: 28.6937142923129°	Longitude: -81.2588201482274°	Surface Elevation:	

Location: See Drawing 3

Sample Type
G - Bulk / Grab Sample
SPT - 2" O.D. 1.4" I.D. Tube Sample
MC - 3 " O.D. 2.4" I.D. Ring Sample
NR - No Recovery
* - Uncorrected Blow Counts

Groundwater

Depth (ft)	Hour	Date
0.1	during	9-11-24

Groundwater Depth (ft.)	Depth (ft.)	Graphical Log	Sample Taken	Sample ID	SPT N-Value	Moisture Content (%)	% Passing No. 200	Other Tests and Remarks	USCS Class.	Visual Classification
▼	0			SPT- 1	2-2-3-4 N=7	28	9		SM	SILTY SAND (SM), medium brown, loose, fine grained
										2.0'
				SPT- 2	3-4-4-4 N=8				SP	SAND (SP), medium brown, loose with some roots
										4.0'
	5			SPT- 3	4-5-5-6 N=11				SP-SM	SILTY SAND (SP-SM), brown, medium dense, fine grained with silt
										6.0'
				SPT- 4	5-5-5-6 N=11				SC	CLAYEY SAND (SC), brown, medium dense
										8.0'
				SPT- 5	4-4-5-5 N=10				SP-SM	SILTY SAND (SP-SM), dark brown, loose to medium dense, fine grained with silt
	10									10.0'

Notes:
Boring terminated at depth of (10.0').

Boring latitude and longitude were approximated, not surveyed.
Borehole backfilled with soil cuttings.

Date	Project Number	Project	Boring No.
Started: 09/11/24 Completed: 09/11/24	1290724-0024056.20	The Learning Experience Winter Springs	B-05

Hammer Type: Auto	Drilling Method: SPT	Logged By: Reliable	Reviewed By: JH
Latitude: 28.6939164563683°	Longitude: -81.2588501731752°	Surface Elevation:	

Location: See Drawing 3

Sample Type
G - Bulk / Grab Sample
SPT - 2" O.D. 1.4" I.D. Tube Sample
MC - 3 " O.D. 2.4" I.D. Ring Sample
NR - No Recovery
* - Uncorrected Blow Counts

Groundwater

Depth (ft)	Hour	Date
0.2	during	9-11-24

Groundwater Depth (ft.)	Depth (ft.)	Graphical Log	Sample Taken	Sample ID	SPT N-Value	Moisture Content (%)	% Passing No. 200	Other Tests and Remarks	USCS Class.	Visual Classification
▼	0			SPT- 1	1-2-3-3 N=6					SAND (SP), gray, loose
				SPT- 2	4-5-5-6 N=11	29	4		SP	Dark brown, medium dense with silt at 2.0 feet
	5			SPT- 3	5-6-7-7 N=14					6.0'
				SPT- 4	7-8-10-14 N=24				SM	SILTY SAND (SM), dark brown, medium dense, fine grained 8.0'
				SPT- 5	5-6-6-5 N=11				SP-SM	SILTY SAND (SP-SM), brown, medium dense, fine grained with silt
	10									10.0'

Notes:
Boring terminated at depth of (10.0').

Boring latitude and longitude were approximated, not surveyed.
Borehole backfilled with soil cuttings.

Date	Project Number	Project	Boring No.
Started: 09/11/24 Completed: 09/11/24	1290724-0024056.20	The Learning Experience Winter Springs	B-06
Hammer Type: Auto	Drilling Method: SPT	Logged By: Reliable	Reviewed By: JH
Latitude: 28.6938127837563°	Longitude: -81.2586596104716°	Surface Elevation:	

Location: See Drawing 3

Sample Type
G - Bulk / Grab Sample
SPT - 2" O.D. 1.4" I.D. Tube Sample
MC - 3 " O.D. 2.4" I.D. Ring Sample
NR - No Recovery
* - Uncorrected Blow Counts

Groundwater

Depth (ft)	Hour	Date
0.1	during	9-11-24

Groundwater Depth (ft.)	Depth (ft.)	Graphical Log	Sample Taken	Sample ID	SPT N-Value	Moisture Content (%)	% Passing No. 200	Other Tests and Remarks	USCS Class.	Visual Classification
▼	0			SPT- 1	2-3-3-4 N=7					SILTY SAND (SM), dark brown, loose with trace roots
				SPT- 2	3-4-5-5 N=10	29	9			Loose to medium dense, trace root at 2.0 feet
	5			SPT- 3	6-8-8-7 N=15				SM	Medium dense at 4.0 feet
				SPT- 4	6-8-9-9 N=18					
				SPT- 5	8-9-4-10 N=14					
	10									10.0'

Notes:
Boring terminated at depth of (10.0').

Boring latitude and longitude were approximated, not surveyed.
Borehole backfilled with soil cuttings.

Date	Project Number	Project	Boring No.
Started: 09/10/24 Completed: 09/10/24	1290724-0024056.20	The Learning Experience Winter Springs	B-07
Hammer Type: Auto	Drilling Method: SPT	Logged By: Reliable	Reviewed By: JH
Latitude: 28.6936284471055°	Longitude: -81.2585598370601°	Surface Elevation:	

Location: See Drawing 3

Sample Type
G - Bulk / Grab Sample
SPT - 2" O.D. 1.4" I.D. Tube Sample
MC - 3 " O.D. 2.4" I.D. Ring Sample
NR - No Recovery
* - Uncorrected Blow Counts

Groundwater

Depth (ft)	Hour	Date
0.1	during	9-10-24

Groundwater Depth (ft.)	Depth (ft.)	Graphical Log	Sample Taken	Sample ID	SPT N-Value	Moisture Content (%)	% Passing No. 200	Other Tests and Remarks	USCS Class.	Visual Classification
▼	0			SPT- 1	2-3-3-4 N=7				SM	SILTY SAND (SM), dark brown, loose with wood chunks
										2.0'
				SPT- 2	4-5-5-5 N=10	40	4		SP	SAND (SP), tan, loose to medium dense with roots
										4.0'
	5			SPT- 3	5-6-6-6 N=12					SILTY SAND (SM), dark brown, medium dense
				SPT- 4	6-7-7-8 N=15				SM	
				SPT- 5	7-7-8-11 N=19					
	10									10.0'

Notes:
Boring terminated at depth of (10.0').

Boring latitude and longitude were approximated, not surveyed.
Borehole backfilled with soil cuttings.

Attachment No. 2

General Notes

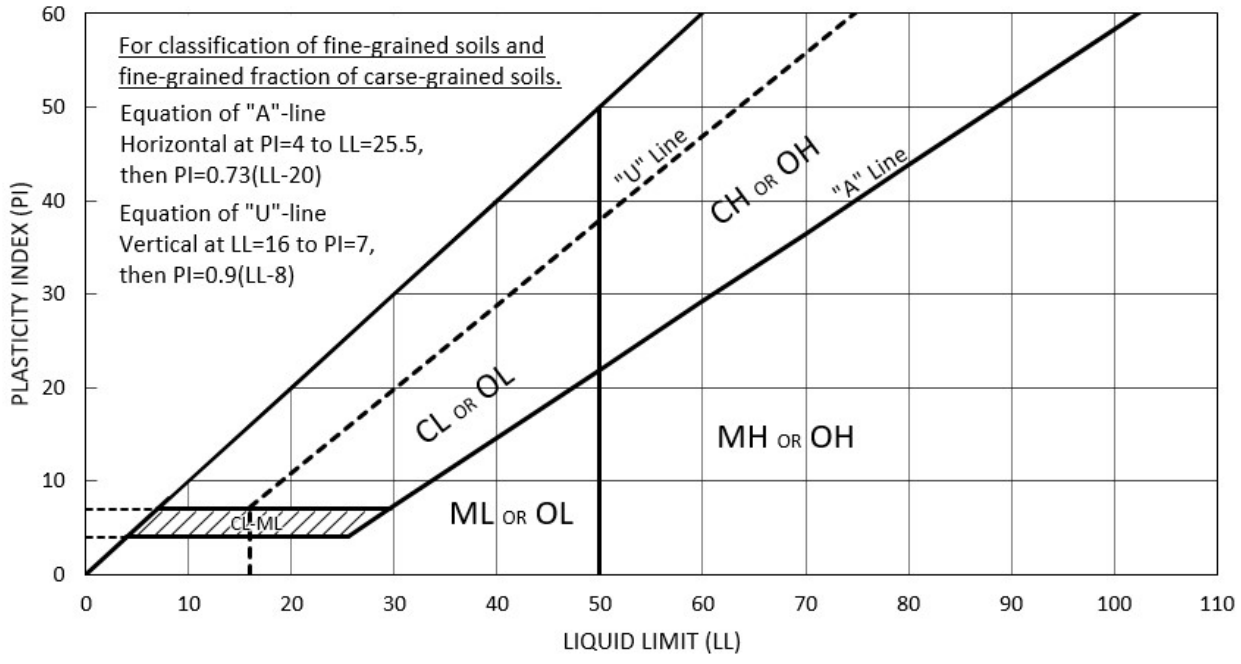
GENERAL NOTES
Standard Penetration Test (SPT)

Evaluation of the apparent density of coarse-grained soil (more than 50% retained on No. 200 sieve)		Evaluation of the consistency of fine-grained soils (50% or more passed the No. 200 sieve)	
N_{60}	Apparent Density	N_{60}	Consistency
0 - 4	Very loose	<2	Very soft
>4 - 10	Loose	2 - 4	Soft
>10 - 30	Medium dense	4 - 8	Medium stiff
>30 - 50	Dense	8 - 15	Stiff
>50	Very dense	15 - 30	Very stiff
		>30	Hard

Grain size terminology	
Major components of sample	Particle size
Boulders	Over 12 inch (300mm)
Cobbles	12 inch to 3 inch (300mm to75 mm)
Gravel	3inch to #4 sieve (75mm to 4.75mm)
Sand	#4 to #200 sieve3 (4.75mm to 0.075mm)
Silt or clay	Passing #200 sieve (0.075mm)

Plasticity description	
Plasticity Range	Adjective
0	Nonplastic
1-10	Low plasticity
>10-20	Medium plasticity
>20-40	High plasticity
>40	Very plastic

Plasticity Chart for Unified Soil Classification System (ASTM D2487)



References

Samtani, N.C., Nowatzki, E.A., (2006). "NHI Couse No. 132012, Soils and Foundations, Reference Manual – Volume I, Report No. FHWA-NHI-06-088," Federal Highway Administration, U.S. Department of Transportation.

Attachment No. 3

ASFE Guidelines for Geotechnical Report

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

Copyright 2019 by Geoprofessional Business Association (GBA). Duplication, reproduction, or copying of this document, in whole or in part, by any means whatsoever, is strictly prohibited, except with GBA's specific written permission. Excerpting, quoting, or otherwise extracting wording from this document is permitted only with the express written permission of GBA, and only for purposes of scholarly research or book review. Only members of GBA may use this document or its wording as a complement to or as an element of a report of any kind. Any other firm, individual, or other entity that so uses this document without being a GBA member could be committing negligent

TRAFFIC IMPACT STUDY FOR

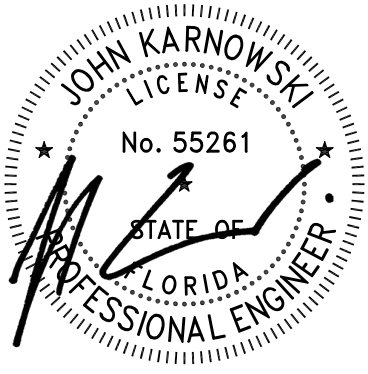
The Learning Experience Development

DATE:
June 6, 2025

LOCATION:
Winter Springs, Florida

PREPARED FOR:
KW Partners, LLC

PREPARED BY:
NV5, Inc.
6200 Lee Vista Blvd, Suite 400, Orlando, FL 32822
407.896.3317



NV5
nv5.com

PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with NV5, Inc., a corporation authorized to operate as an engineering business, EB-29065, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: The Learning Center
LOCATION: Winter Springs, Florida
CLIENT: KW Partners, LLC

ENGINEER OF RECORD: John Karnowski, PE, Florida License #55261
I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

EXECUTIVE SUMMARY

A Traffic Impact Study was conducted for a proposed daycare center located along SR 434 in Winter Springs, Florida. The development will consist of a single 10,000 square-foot building with primary site access provided via the north leg of the SR 434 and Michael Blake Boulevard intersection. The project is anticipated to generate a net total of 476 daily trips, including 110 trips during the AM peak hour (58 inbound, 52 outbound) and 111 trips during the PM peak hour (52 inbound, 59 outbound).

Intersection analysis indicates that while overall LOS at the study intersections are satisfactory, the northbound and southbound minor street approaches along SR 434 operate at unsatisfactory LOS during peak hours. The long delay is attributed to signal coordination favoring the heavy traffic volume along SR 434, resulting in delays on the minor approaches. However, volume-to-capacity (v/c) ratios remain well below 1.0, indicating that these delays are not caused by capacity deficiencies.

The LOS patterns seen in the Existing Conditions remain consistent for the 2028 Build Condition. All study intersections experience an overall satisfactory LOS, except for the SR 434 and Tuskawilla Road intersection during the PM peak hour. The unsatisfactory LOS for the northbound and southbound minor movements remains consistent with Existing conditions for all study intersections.

The intersection of SR 434 and Tuskawilla Road is projected to operate at a failing LOS during the PM peak hour under 2028 Build conditions. Although outside of the scope of the Learning Experience development project, potential mitigation measures have been identified that could improve intersection performance to an acceptable LOS. These include the addition of right-turn deceleration lanes on the westbound approach of SR 434 and the northbound approach of Tuskawilla Road, the addition of left- and right-turn lanes on the southbound approach of Tuskawilla Road, and the implementation of a 120-second signal cycle with protected-permissive phasing for the southbound left-turn movement.

TABLE OF CONTENTS

EXECUTIVE SUMMARY i
A. Introduction 4
B. Existing Conditions 6
B.1. Transportation Facilities 6
B.2. Traffic Counts 7
C. Future Conditions 10
C.1. Background Data Collection 10
C.2. Project Trip Generation 10
C.3. Trip Distribution and Assignment 10
D. Roadway Segment Capacity Analysis 17
D.1. Existing Roadway Segment Capacity Analysis 17
D.2. 2028 Build Conditions Capacity Analysis 18
E. Intersection Impact Analysis 20
E.1. Existing Intersection Capacity Analysis 21
E.2. 2028 Build Capacity Analysis 22
E.3. 2028 Mitigated Build Capacity Analysis 23
F. Conclusions 24
APPENDIX A: Site Plan ..... A
APPENDIX B: Traffic Count Data ..... B
APPENDIX C: Growth Rate Calculation and Trip Generation C
APPENDIX D: Capacity Analysis Report ..... D

LIST OF TABLES

Table 1: Project Trip Generation 10
Table 2: Existing Daily Roadway Capacity Analysis 17
Table 3: Existing Peak Hour Roadway Segment Capacity Analysis 18
Table 4: Build Daily Roadway Segment Capacity Analysis 19
Table 5: Build AM Peak Hour Roadway Segment Capacity Analysis 19
Table 6: Build PM Peak Hour Roadway Segment Capacity Analysis 20
Table 7: Existing Intersection Capacity Analysis 21
Table 8: 2028 Build Capacity Analysis 22
Table 9: 2028 Mitigated Build Capacity Analysis 23

LIST OF FIGURES

Figure 1. Vicinity Map 5
Figure 2. Site Location Aerial 5
Figure 3: Study Roadway Segments 6
Figure 4: Existing Intersection Traffic Volumes 8
Figure 5: Existing Roadway Segment Traffic Volumes 9
Figure 6: Trip Distribution 12
Figure 7: Total Development Intersection Trips 13
Figure 8: Total Development Roadway Segment Trips 14
Figure 9: 2028 Build Intersection Traffic Volumes 15
Figure 10: 2028 Build Roadway Segment Traffic Volumes 16

A. Introduction

A new daycare facility is proposed for construction along SR 434 in Winter Springs, Florida. The proposed development will include a 10,000 square foot building and will serve as an addition to the previously completed Winter Springs Town Center development. Primary access to the daycare facility will be provided by the north leg of the SR 434 and Michael Blake Boulevard intersection. This traffic study analyzes of new traffic added to the local roadways upon the occupancy of the daycare facility development and includes an analysis of the following scenarios:

- 2025 Existing Conditions
- 2028 Build Conditions

The following are the road segments proposed for study:

1. SR 434
   - Central Winds Drive to Tuskawilla Road
   - Tuskawilla Road to Michael Blake Boulevard
   - Michael Blake Boulevard to Tuscora Drive
2. Tuskawilla Road
   - Trotwood Boulevard to SR 434
   - SR 434 to Blumberg Boulevard
3. Michael Blake Boulevard
   - SR 434 to Tuskawilla Road

The following are the intersections proposed for study:

1. SR 434 and Bear Springs Drive
2. SR 434 and Tuskawilla Road
3. SR 434 and Michael Blake Boulevard

The report summarizes background and projected traffic at the study locations, analysis of traffic impacts including level of service (LOS), and conclusions and recommendations from the analysis.

Figure 1 shows the project site in Winter Springs. Figure 2 presents the site aerial with the study intersections, and Figure 3 displays the study roadway segments. The development concept plan is provided in Appendix A

Figure 1. Vicinity Map

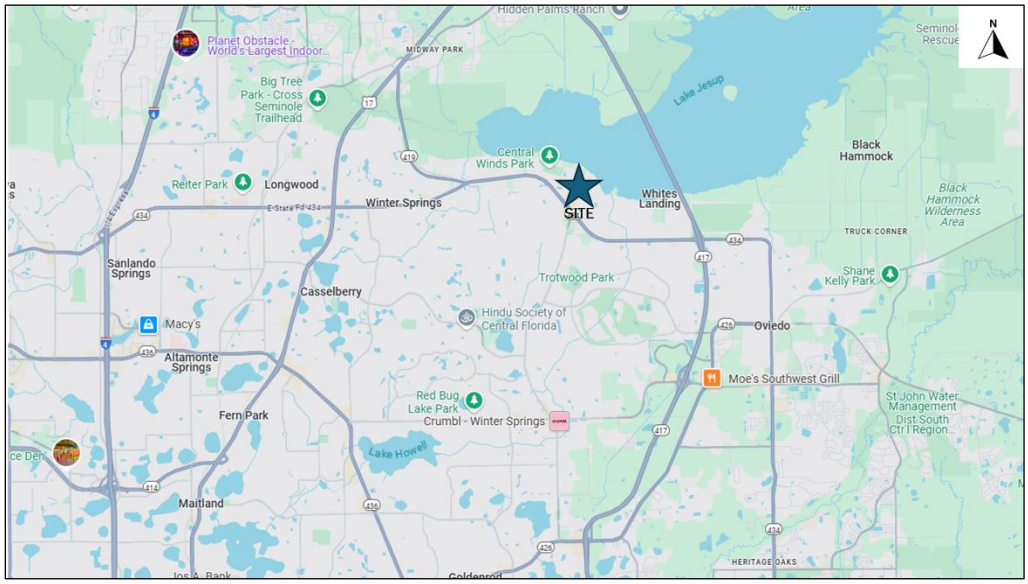


Figure 2. Site Location Aerial

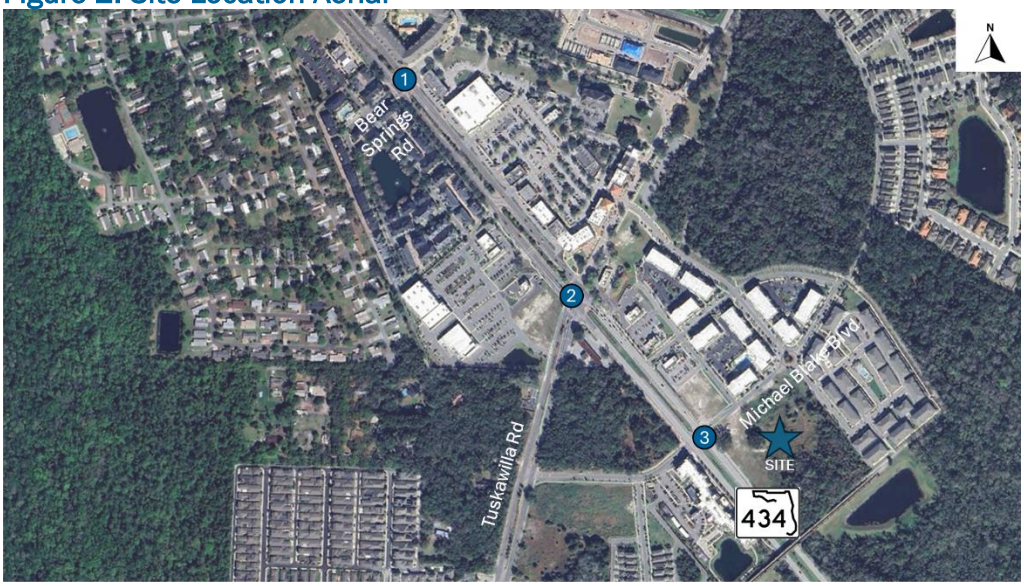
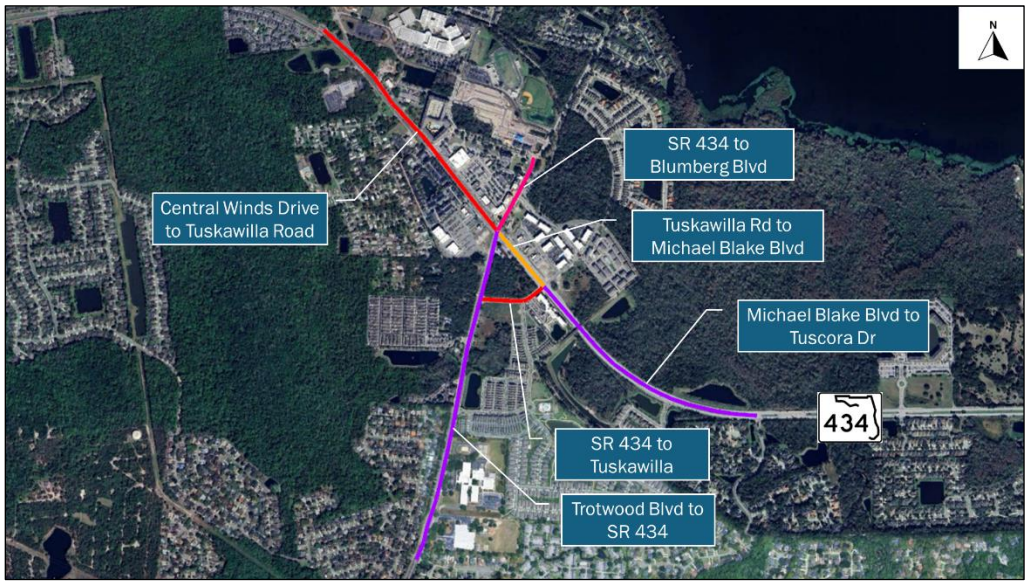


Figure 3: Study Roadway Segments



B. Existing Conditions

B.1. Transportation Facilities

State Route (SR) 434 is a four-lane, median-divided Urban Principal Arterial with a posted speed limit of 50 MPH within the study area. The surrounding land uses in the study area are primarily residential and commercial. SR 434 extends approximately 28.5 miles.

Tuskawilla Road is a four-lane, median-divided Urban Minor Arterial with a posted speed limit of 45 MPH in the vicinity of the study area. Within the Winter Springs city limits, the roadway extends approximately 5.7 miles north–south, serving as a key connector between SR 434 and SR 426. Surrounding land uses are predominantly residential and commercial.

Michael Blake Boulevard is a two-lane Urban Local Road with a posted speed limit of 25 MPH in the vicinity of the study area. The roadway is primarily residential, consisting of single-family homes within the Winter Springs Village community. The roadway accommodates both vehicular and pedestrian travel and provides residential access to the Cross Seminole Trail.

Bear Springs Drive is a two-lane Urban Local Road with a posted speed limit of 25 MPH in the vicinity of the study area. The roadway is primarily residential, consisting of single-family homes within the Winter Springs Village community.

B.2. Traffic Counts

Intersection turning movement counts (TMSs) at the three study intersections were collected on May 22, 2025, while schools were in session. In addition to the turning movement counts, a 24-hour traffic count was taken on each of the study roadway segments. The AM peak hour was determined to be 7:30 – 8:30 AM and the PM peak hour was determined to be 5:00 – 6:00 PM. Figure 4 and Figure 5 shows the resulting existing traffic volumes for the study intersections and roadway segments respectively.

Figure 4: Existing Intersection Traffic Volumes

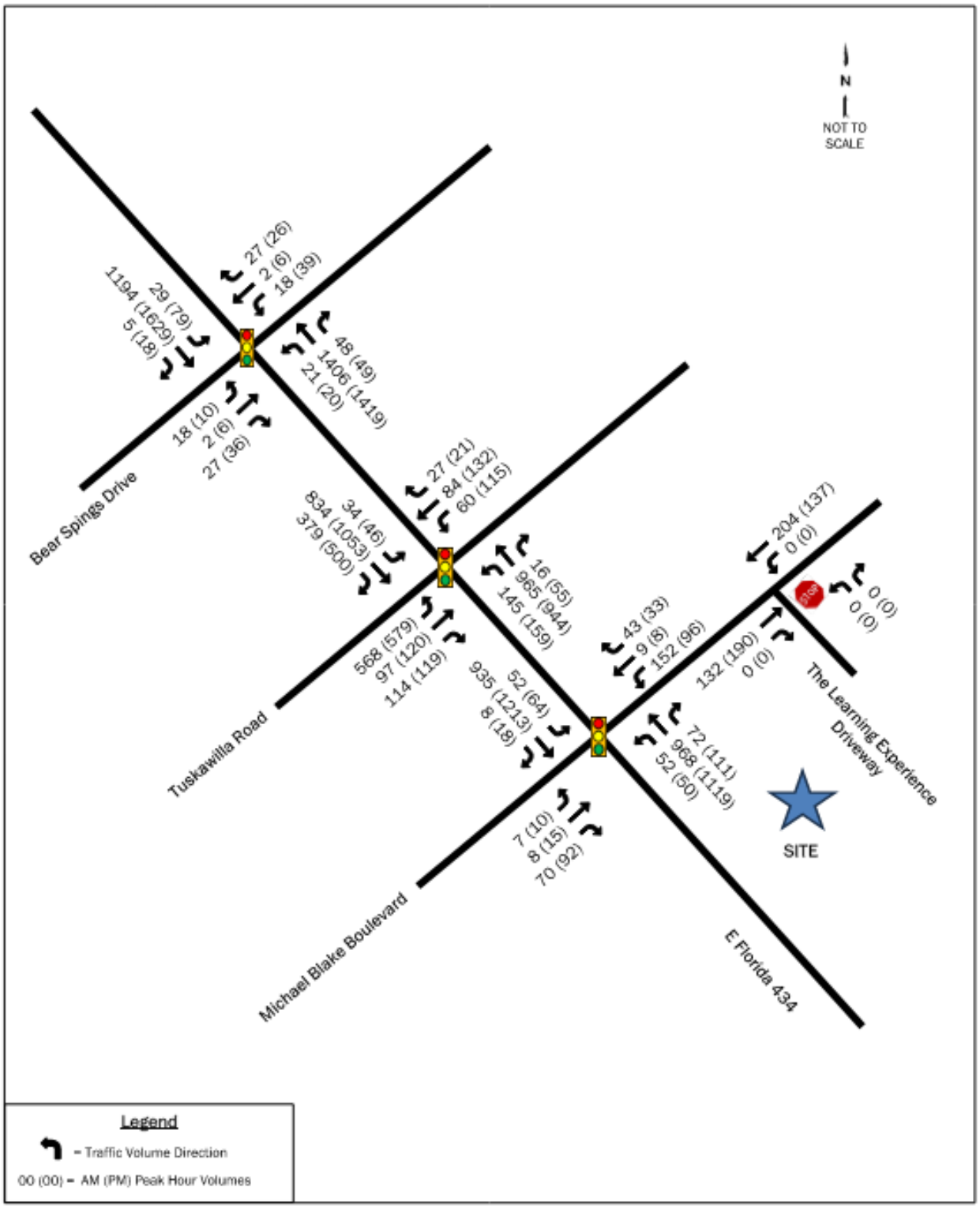
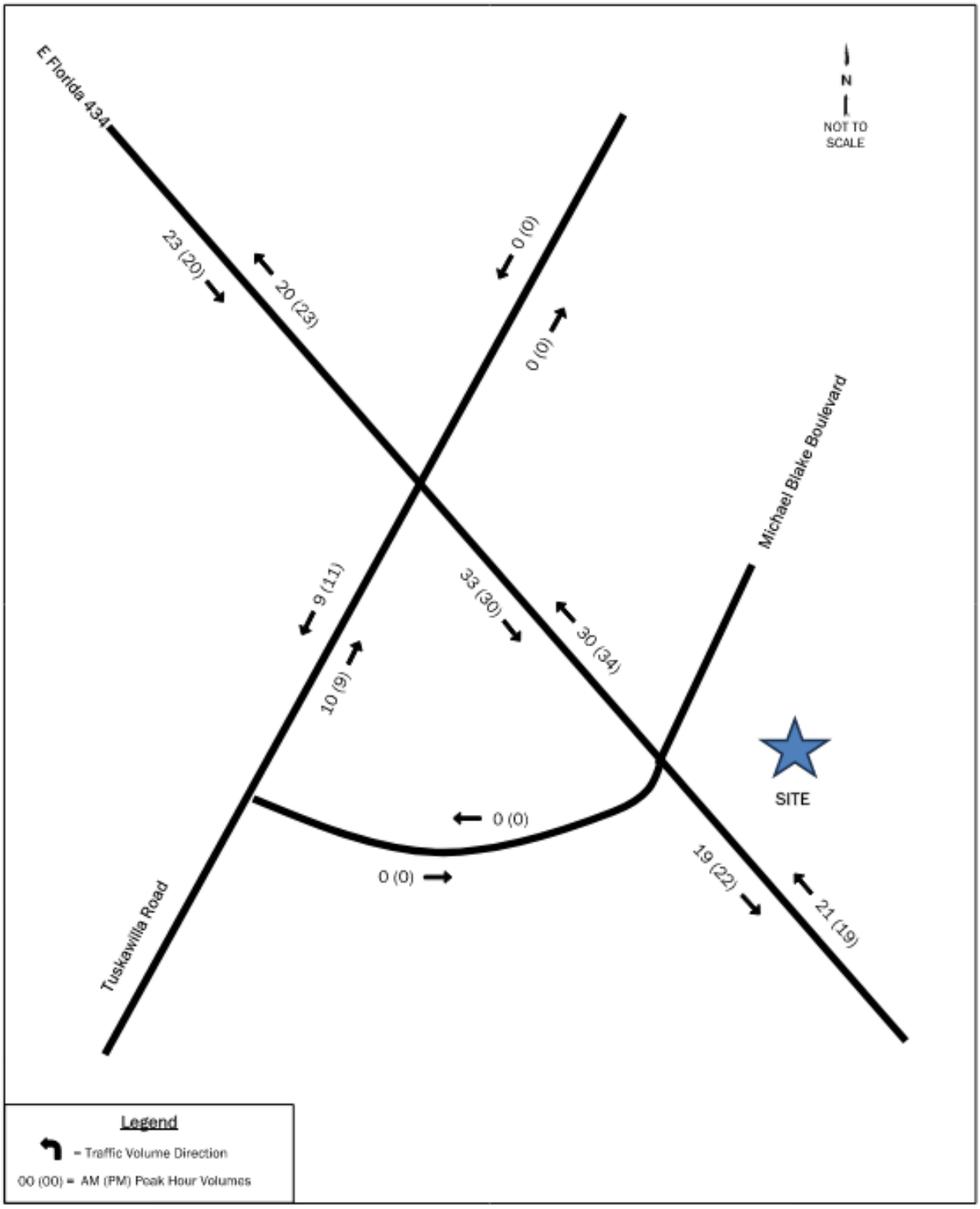


Figure 5: Existing Roadway Segment Traffic Volumes



C. Future Conditions

C.1. Background Data Collection

The growth rate for the study area is based on an analysis of historical traffic counts collected by the Florida Department of Transportation (FDOT). The project has an expected build out in 2028. To account for ambient growth in the area, the existing traffic counts was grown by a conservative rate of 2% per year for three years. There are no known infrastructure improvements or developments within the study area. The growth rate development worksheet is included in Appendix C.

C.2. Project Trip Generation

The proposed development will consist of one 10,000 square foot building. The anticipated trips generated by the development were estimated using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition, 2021. Table 1 summarizes the project trips to and from the new development. The trip generation can be found in Appendix C.

Table 1: Project Trip Generation

LAND USE	PERIOD	TOTAL	IN	OUT
Day Care Center, LUC 565 (10,000 Square Feet)	Daily	476	238	238
	AM Peak Hr	110	58	52
	PM Peak Hr	111	52	59

C.3. Trip Distribution and Assignment

The proposed distribution pattern was derived using MetroPlan's year 2020 LRTP of the OUATS model. The model outputs were obtained from a previously completed Traffic Impact Study for the Winter Springs Town Center development. The Traffic Impact Study was prepared by Traffic Planning and Design, Inc. for NV5, Inc., and certified by Turgut Dervish, P.E., in 2019. The trip distribution for the proposed development is as follows:

- Approximately 37% of the traffic is expected to travel to/from the east on SR 434.
- Approximately 35% of the traffic is expected to travel to/from the west on SR 434.
- Approximately 2% of the traffic is expected to travel to/from the north on Bear springs Drive.
- Approximately 2% of the traffic is expected to travel to/from the south on Bear springs Drive.
- Approximately 18% of the traffic is expected to travel to/from the south on Tuskawilla Road.
- Approximately 6% of the traffic is expected to travel to/from the north on Michael Blake Boulevard.

Trip distribution per study intersection is depicted in Figure 6. Total development trips for each study intersection and roadway segment is depicted in Figure 7 and Figure 8. The No-Build plus project trips (Build volumes) for the study intersections and roadway segments are presented in Figure 9 and Figure 10.

Figure 6: Trip Distribution

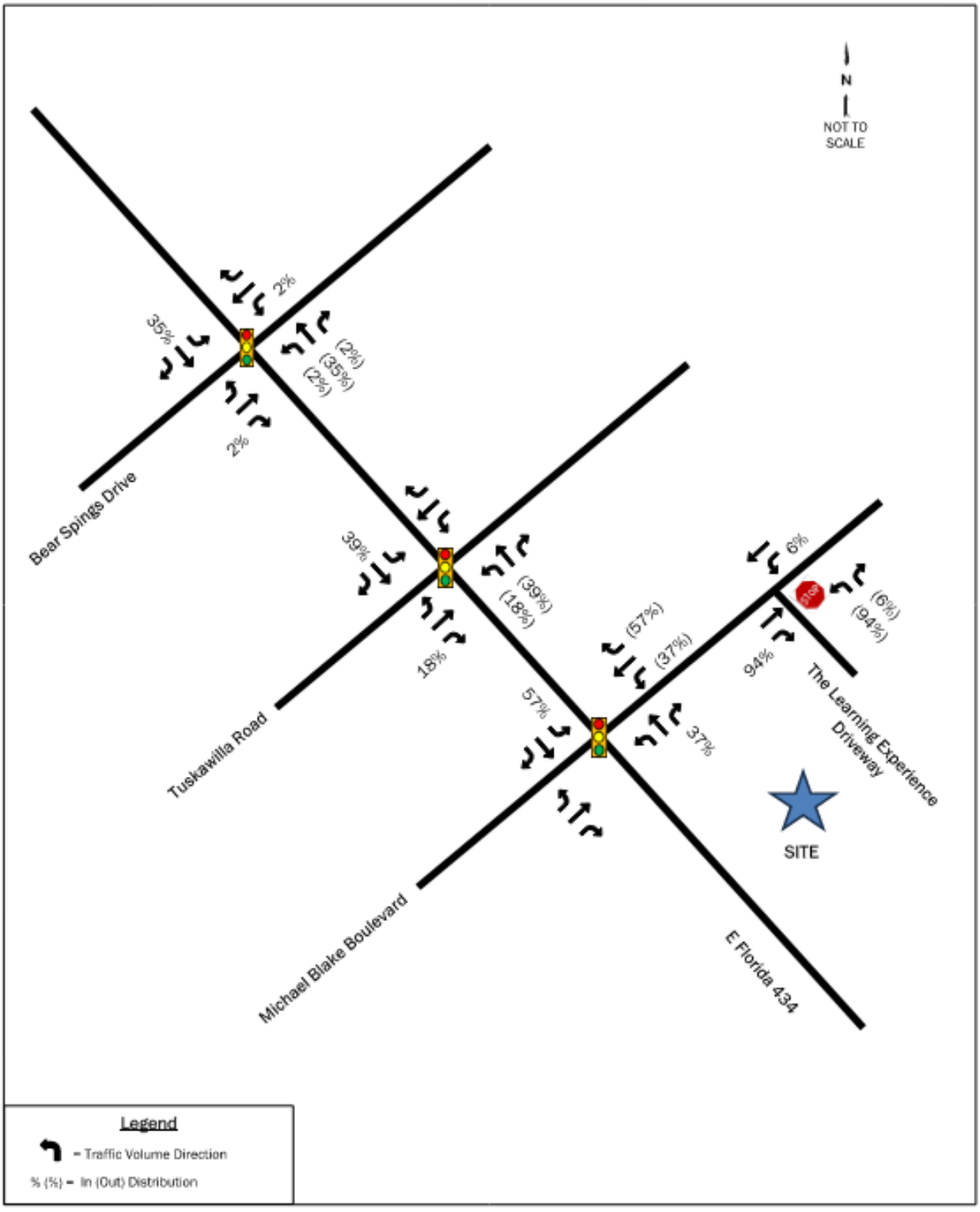


Figure 7: Total Development Intersection Trips

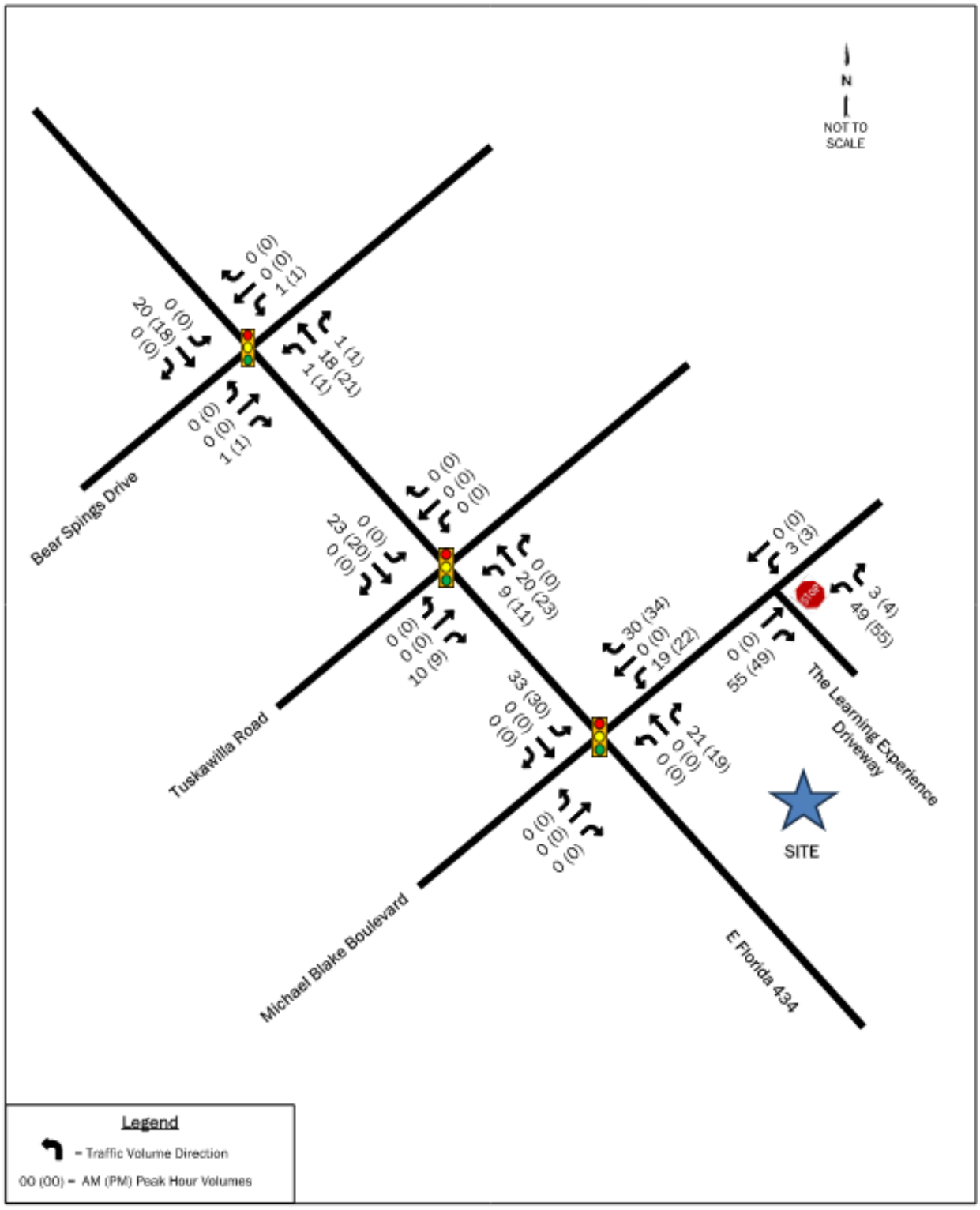


Figure 8: Total Development Roadway Segment Trips

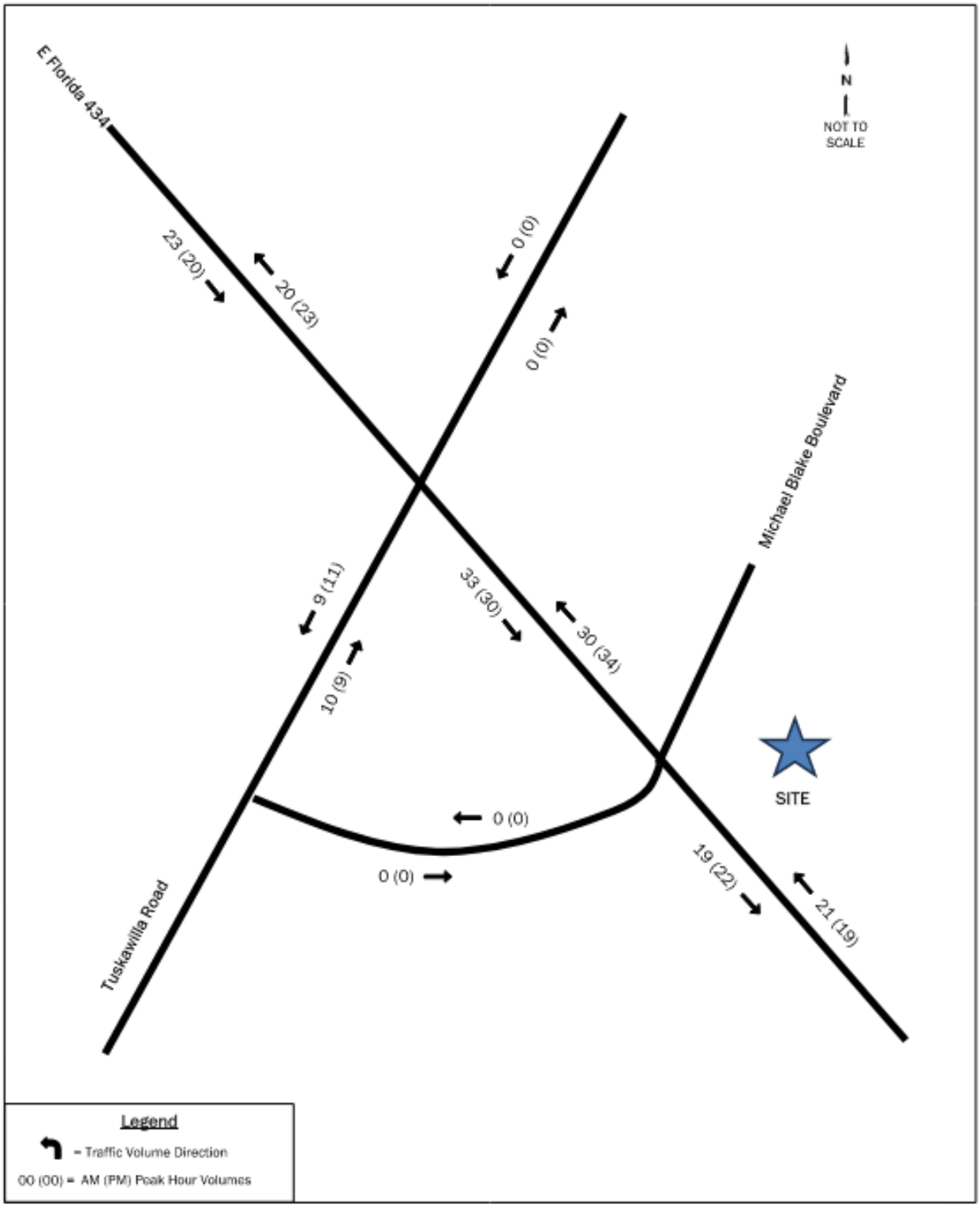


Figure 9: 2028 Build Intersection Traffic Volumes

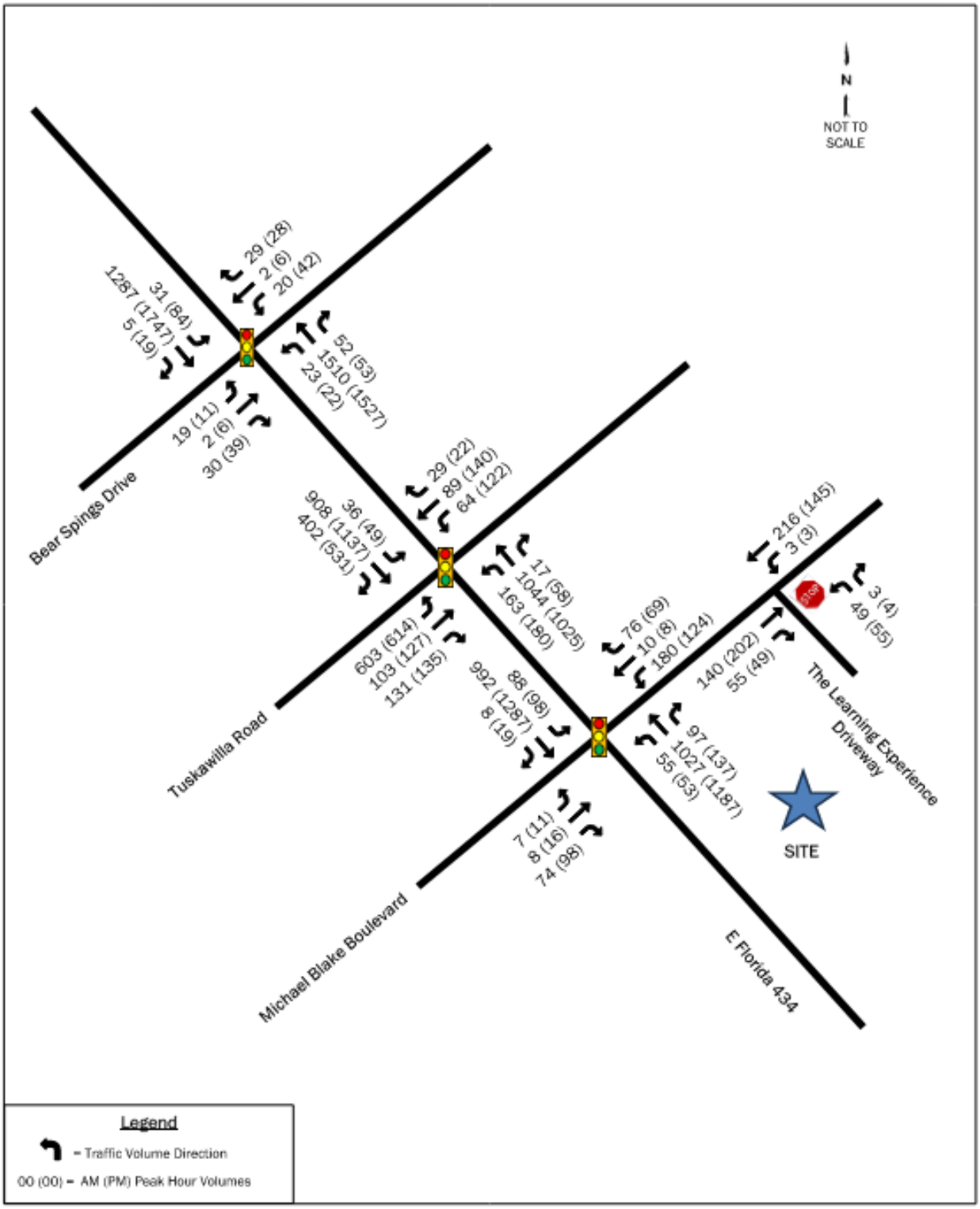
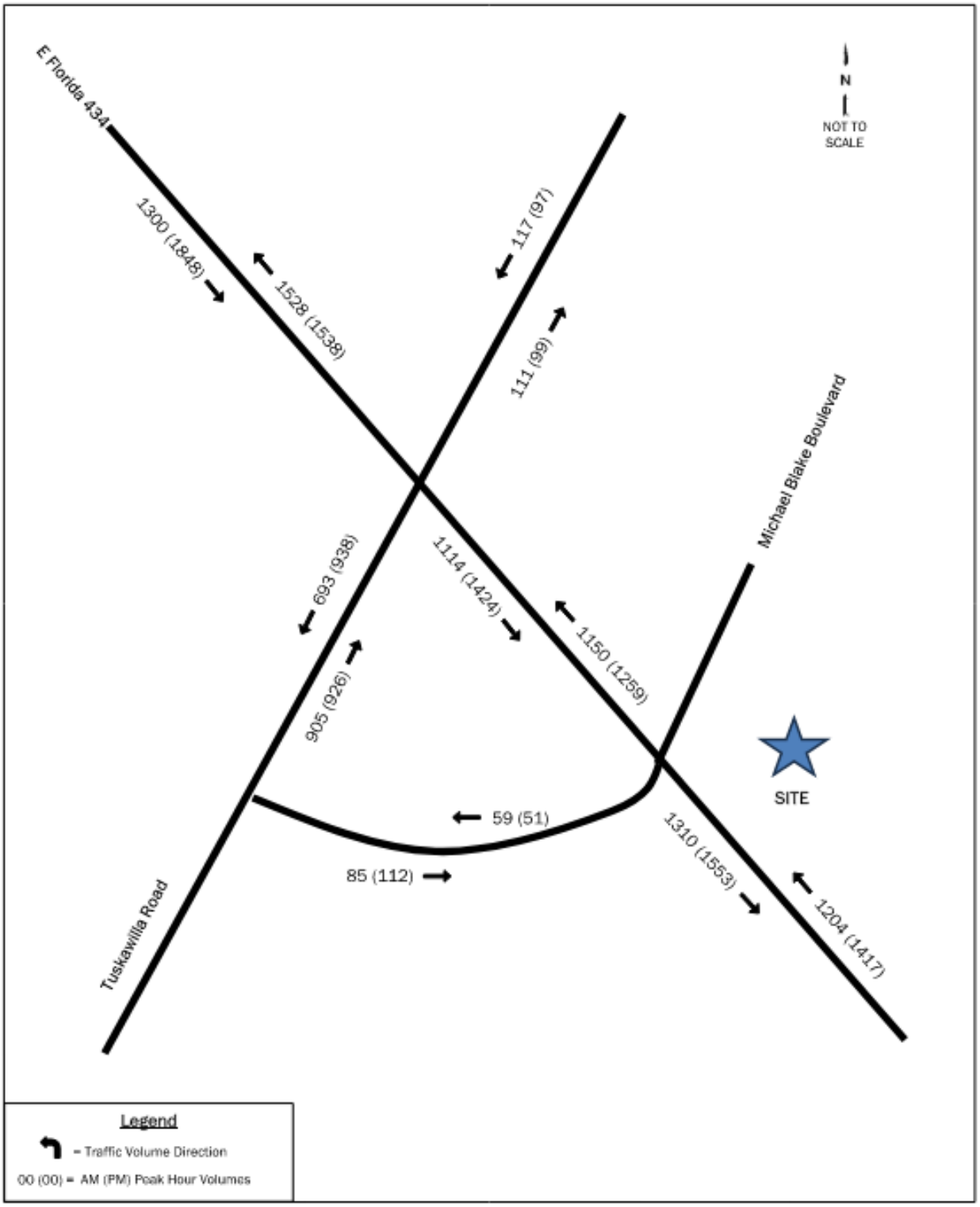


Figure 10: 2028 Build Roadway Segment Traffic Volumes



D. Roadway Segment Capacity Analysis

The capacity analysis for the roadway segments was performed for each of the scenarios using the existing 24-hour counts collected on May 22, 2025 and comparing them against their respective capacities at the adopted Level of Service (LOS) standard from FDOT. The daily capacity for each segment is based on FDOT's 2023 Generalized Service Volume Tables. All roadways are classified as C4 arterials based on the FDOT functional classification system.

D.1. Existing Roadway Segment Capacity Analysis

The results of Existing capacity analyses for the roadway segments are shown in the tables below. Table 2 shows the results of the Existing Daily capacity analyses and Table 3 shows the results of the Existing peak hour capacity analyses.

Table 2: Existing Daily Roadway Capacity Analysis

Roadway Segment	No. of Lanes	LOS Standard	Daily Capacity	Existing ADT	LOS
SR 434					
Central Winds Drive to Tuskawilla Road	4LD	E	40,800	35,144	C
Tuskawilla Road to Michael Blake Boulevard	4LD	E	40,800	27,419	C
Michael Blake Boulevard to Tuscora Drive	4LD	E	40,800	29,763	C
Tuskawilla Road					
Trotwood Boulevard to SR 434	4LD	E	36,720	21,265	C
SR 434 to Blumberg Boulevard	2LU	D	15,840	2,795	C
Michael Blake Boulevard					
SR 434 to Tuskawilla Road	2LU	D	15,840	1,642	D

Table 3: Existing Peak Hour Roadway Segment Capacity Analysis

Roadway Segment	No. of Lanes	Adopted		AM Peak Hour			PM Peak Hour		
		LOS Standard	Peak Hour Capacity	Volume	Peak Direction	LOS	Volume	Peak Direction	LOS
SR 434									
Central Winds Drive to Tuskawilla Road	4LD	E	3,310	1,421	WB	C	1,723	EB	C
Tuskawilla Road to Michael Blake Boulevard	4LD	E	3,310	1,055	WB	C	1,314	EB	C
Michael Blake Boulevard to Tuscora Drive	4LD	E	3,310	1,217	EB	C	1,443	EB	C
Tuskawilla Road									
Trotwood Boulevard to SR 434	4LD	E	2,979	843	NB	C	874	SB	C
SR 434 to Blumberg Boulevard	2LU	D	1,611	110	SB	C	93	NB	C
Michael Blake Boulevard									
SR 434 to Tuskawilla Road	2LU	D	1,611	80	EB	C	106	EB	C

As shown in Table 2 and Table 3, the overall operations along the study roadway segments operate at satisfactory levels of service under existing conditions during both daily and peak periods.

D.2. 2028 Build Conditions Capacity Analysis

A roadway segment analysis was conducted by comparing projected traffic volumes to the respective capacities of the study roadway segments based on adopted LOS standards. The results indicate that all study roadway segments are expected to operate within their adopted capacity under Build Conditions. The results of the 2028 Build conditions intersection capacity analysis for the Daily, AM, and PM peak hours are shown in Table 4, Table 5, and Table 6, respectively.

Table 4: Build Daily Roadway Segment Capacity Analysis

Roadway Segment	No. of Lanes	LOS Standard	Daily Capacity	Future ADT	Project Trips	Total ADT	LOS
SR 434							
Central Winds Drive to Tuskawilla Road	4LD	E	40,800	37,295	186	37,481	D
Tuskawilla Road to Michael Blake Boulevard	4LD	E	40,800	29,097	271	29,368	C
Michael Blake Boulevard to Tuscora Drive	4LD	E	40,800	1,743	176	1,919	C
Tuskawilla Road							
Trotwood Boulevard to SR 434	4LD	E	36,720	22,567	86	22,653	C
SR 434 to Blumberg Boulevard	2LU	D	15,840	2,966	0	2,966	C
Michael Blake Boulevard							
SR 434 to Tuskawilla Road	2LU	D	15,840	1,743	0	1,743	C

Table 5: Build AM Peak Hour Roadway Segment Capacity Analysis

Roadway Segment	No. of Lanes	Adopted		AM Peak Hour				
		LOS Standard	Peak Hour Capacity	Peak Direction	Future ADT	Project Trips	Total ADT	LOS
SR 434								
Central Winds Drive to Tuskawilla Road	4LD	E	3,310	WB	1508	20	1528	C
Tuskawilla Road to Michael Blake Boulevard	4LD	E	3,310	WB	1120	30	1150	C
Michael Blake Boulevard to Tuscora Drive	4LD	E	3,310	EB	1291	19	1310	C
Tuskawilla Road								
Trotwood Boulevard to SR 434	4LD	E	2,979	NB	895	10	905	C
SR 434 to Blumberg Boulevard	2LU	D	1,611	SB	117	0	117	C
Michael Blake Boulevard								
SR 434 to Tuskawilla Road	2LU	D	1,611	EB	85	0	85	C

Table 6: Build PM Peak Hour Roadway Segment Capacity Analysis

Roadway Segment	No. of Lanes	Adopted		PM Peak Hour				
		LOS Standard	Peak Hour Capacity	Peak Direction	Future ADT	Project Trips	Total ADT	LOS
SR 434								
Central Winds Drive to Tuskawilla Road	4LD	E	3,310	EB	1828	20	1848	C
Tuskawilla Road to Michael Blake Boulevard	4LD	E	3,310	EB	1394	30	1424	C
Michael Blake Boulevard to Tuscora Drive	4LD	E	3,310	EB	1531	22	1553	C
Tuskawilla Road								
Trotwood Boulevard to SR 434	4LD	E	2,979	SB	927	11	938	C
SR 434 to Blumberg Boulevard	2LU	D	1,611	NB	99	0	99	C
Michael Blake Boulevard								
SR 434 to Tuskawilla Road	2LU	D	1,611	EB	112	0	112	C

E. Intersection Impact Analysis

The capacity analysis and queuing analysis in each of the scenarios were performed using the traffic analysis software Synchro® 12. Average vehicular delays are calculated and reported as LOS as defined by the Highway Capacity Manual, 7th Edition (HCM 7), where LOS A is best, and LOS F is worst. LOS A through LOS D is considered acceptable LOS and LOS E and LOS F are considered unacceptable LOS and may require mitigation. Signal timing parameters for each intersection were input into Synchro based on field-observed split durations. The Capacity Worksheets are included in Appendix F.

E.1. Existing Intersection Capacity Analysis

The results of the Existing capacity analysis are shown in Table 7.

Table 7: Existing Intersection Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	SR 434 and Bear Springs Drive	Signal	**Overall**	**B**	**12.0**	**B**	**15.4**
			EB	A	8.3	A	8.9
			WB	B	10.2	A	7.9
			NB	F	92.3	F	95.5
			SB	F	92.3	F	275.8
2	SR 434 and Tuskawilla Road	Signal	**Overall**	**D**	**45.7**	**E**	**75.5**
			EB	C	31.5	D	47.9
			WB	C	31.4	D	42.9
			NB	E	73.5	F	156.9
			SB	F	89.9	F	133.7
3	SR 434 and Michael Blake Boulevard	Signal	**Overall**	**C**	**20.1**	**B**	**14.7**
			EB	A	9.0	A	4.6
			WB	A	8.8	A	4.1
			NB	E	65.9	E	77.0
			SB	F	11.5.9	F	155.7

The intersection capacity analysis indicates that overall LOS at the study intersections is satisfactory. However, the northbound and southbound approaches operate at unsatisfactory LOS due to the coordinated signal system prioritizing green time for the higher traffic volumes on SR 434. This results in extended delays for minor street movements. Despite these delays, the volume-to-capacity (v/c) ratios at each intersection remain well below 1.0, indicating that the unsatisfactory LOS is due to signal delay rather than a capacity constraint.

E.2. 2028 Build Capacity Analysis

The results of the 2028 Build conditions intersection capacity analysis are shown in Table 8 below.

Table 8: 2028 Build Capacity Analysis

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	SR 434 and Bear Springs Drive	Signal	**Overall**	**B**	**12.9**	**B**	**16.6**
			EB	A	8.9	A	9.9
			WB	B	10.9	A	8.4
			NB	F	93.8	F	96.4
			SB	F	96.7	F	296.9
2	SR 434 and Tuskawilla Road	Signal	**Overall**	**D**	**48.2**	**F**	**82.4**
			EB	D	36.0	D	52.7
			WB	C	34.4	D	44.9
			NB	E	79.2	F	175.1
			SB	F	89.2	F	143.3
3	SR 434 and Michael Blake Boulevard	Signal	**Overall**	**C**	**25.8**	**C**	**22.4**
			EB	A	9.2	A	4.9
			WB	A	9.1	A	4.2
			NB	E	66.1	E	79.1
			SB	F	154.9	F	233.7

The analysis indicates that all study intersections are projected to operate at acceptable overall Levels of Service (LOS) under Build conditions, with the exception of the SR 434 and Tuskawilla Road intersection during the PM peak hour. Consistent with existing conditions, minor street approaches at each intersection are expected to experience unacceptable LOS during peak periods due to the coordinated signal system prioritizing traffic flow along SR 434. While signal timing optimization was considered, adjustments would result in unacceptable LOS across all approaches and increased overall intersection delay. As such, signal retiming is not recommended.

E.3. 2028 Mitigated Build Capacity Analysis

In the 2028 Build Capacity Analysis, the intersection of SR 434 and Tuskawilla Road is projected to operate at a failing LOS during the PM peak hour. While improvements to this intersection fall outside the scope of the Learning Experience development, it is worth noting that potential mitigation measures could enhance operational performance and bring the intersection to an acceptable LOS.

The recommended improvements include:

- Install a right turn deceleration lane for the westbound approach on SR 434.
- Install a right turn deceleration lane for the northbound approach on Tuskawilla Road.
- Install a left turn lane and right turn deceleration lane for the southbound approach on Tuskawilla Road.
- Implement a 120 second cycle length with protective permissive left turn movements for the southbound left turn lane on Tuskawilla Road.

The projected LOS from the proposed intersection improvements are shown in Table 9.

Table 9: 2028 Mitigated Build Capacity Analysis

ID	Intersection	Mitigation Measure	Movement	AM		PM	
				LOS	Delay	LOS	Delay
2	SR 434 and Tuskawilla Road	Retime Signal / Add Additional Storage Lanes	**Overall**	**C**	**34.2**	**D**	**45.9**
			EB	C	30.4	D	49.6
			WB	C	24.7	C	34.2
			NB	D	49.3	D	53.9
			SB	E	56.9	D	51.8

As shown in Table 9, implementation of the proposed mitigation measures is expected to improve intersection operations from LOS D to LOS C during the AM peak hour, and from LOS F to LOS D during the PM peak hour under 2028 Build conditions.

F. Conclusions

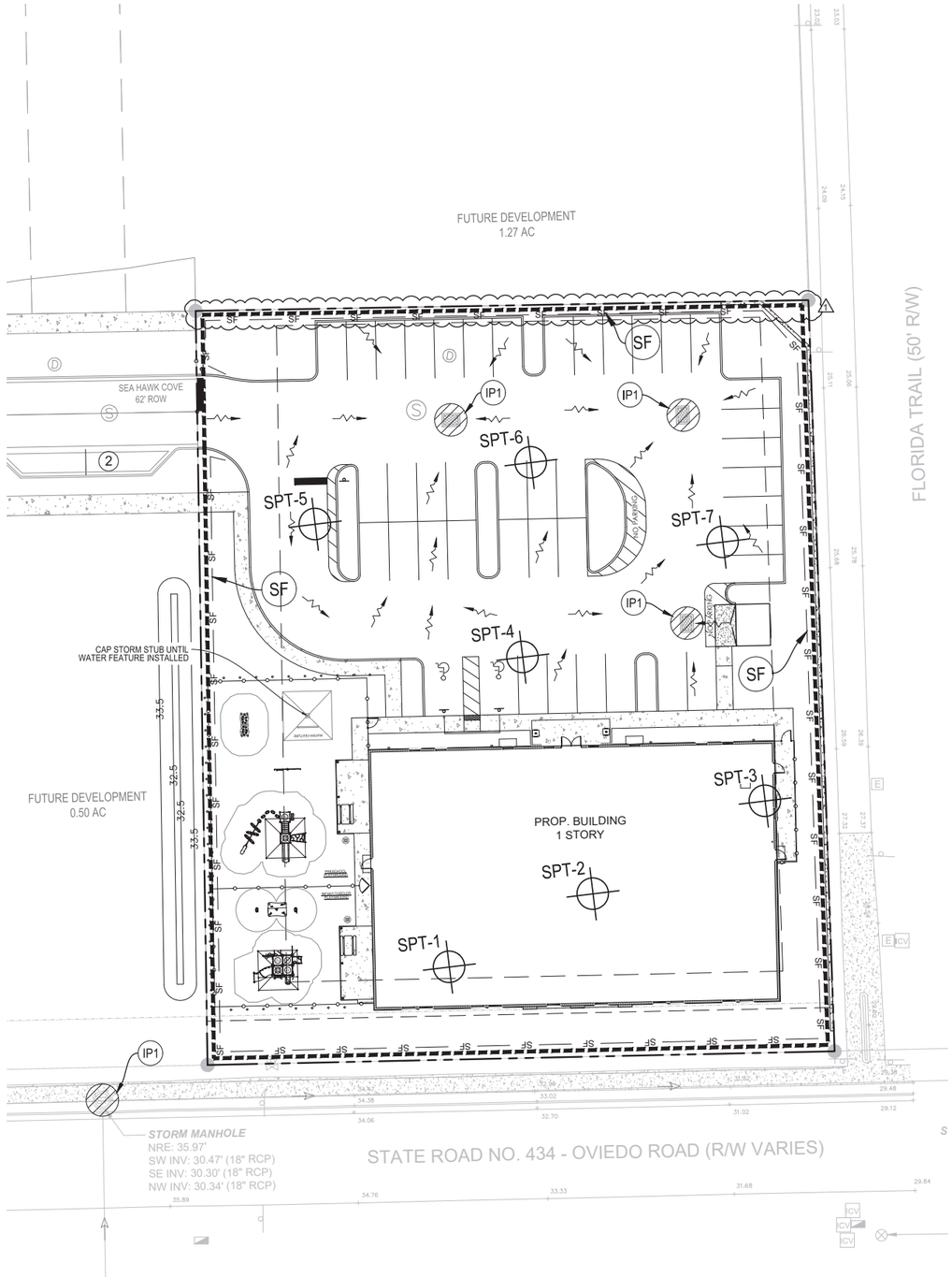
A new daycare center development is planned for construction along SR 434 in Winter Springs, Florida. The development will consist of a single 10,000 square-foot building. Primary access to the daycare facility will be provided by the north leg of the SR 434 and Michael Blake Boulevard intersection. The site is expected to generate a net total of 476 daily trips with 110 occurring during the AM peak hour (58 inbound, 52 outbound) and 111 occurring during the PM peak hour (52 inbound, 59 outbound).

Traffic operations at study intersections operate at unsatisfactory LOS for the northbound and southbound minor street approaches due to the coordinated signal system prioritizing the high traffic volumes on SR 434 causing delay on the minor streets. Despite these delays, the volume-to-capacity (v/c) ratios at each intersection remain well below 1.0, indicating that the unsatisfactory LOS is due to signal delay rather than a capacity constraint.

The LOS patterns seen in the Existing Conditions remain consistent for the 2028 Build Condition. All study intersections experience an overall satisfactory LOS, except for the SR 434 and Tuskawilla Road intersection during the PM peak hour. The unsatisfactory LOS for the northbound and southbound minor movements remains consistent with Existing for all study intersections.

The intersection of SR 434 and Tuskawilla Road is projected to operate at a failing LOS during the PM peak hour under 2028 Build conditions. Although outside of the scope of the Learning Experience development project, potential mitigation measures have been identified that could improve intersection performance to an acceptable LOS. These include the addition of right-turn deceleration lanes on the westbound approach of SR 434 and the northbound approach of Tuskawilla Road, the addition of left- and right-turn lanes on the southbound approach of Tuskawilla Road, and the implementation of a 120-second signal cycle with protected-permissive phasing for the southbound left-turn movement.

APPENDIX A: Site Plan



NORTH

SCALE: 1" = 20'

0 20 40

SITE LEGEND

- SF — TEMPORARY SILT FENCE (SEE DETAIL 3, SHEET C10.0)
- CE — TEMPORARY CONSTRUCTION ENTRANCE
- PROPERTY LINE (ALONG SILT FENCE)
- PROPOSED LIMITS OF DISTURBANCE
- FLOW ARROW
- IP1 — INLET PROTECTION (SEE DETAIL 4, SHEET C10.0)
- IP2 — INLET PROTECTION (SEE DETAIL 7, SHEET C10.0)
- SPT-3 — GEOTECH BORING LOCATION

JOB # 24056.20 | PRJ. MGR: FAP | DESIGNER: SCK | CHECKED: JPM

ENGINEER
FRANKLIN A. PORTER, P.E.
FL. LIC. #69092

DATE: Mar. 10, 2025

NO.	DATE	REVISIONS
3	03/11/25	SITE PLAN REVIEW COMMENTS 03/04/25

THE LEARNING EXPERIENCE
AT
SR 434 & MICHAEL BLAKE BLVD
WINTER SPRINGS, FLORIDA
FOR
KW PARTNERS, LLC

SWPPP PHASE 2 PLAN

NV5
6200 LEE VISTA BLVD.
SUITE 400
ORLANDO, FL
(407) 896-3317
WWW.NV5.COM
CERTIFICATE OF AUTHORIZATION # 29065

SHEET
C03.0

\\nv5.com\panzura\VNF\NF-East\FL\ORL\civil\civil2\24056.20\CONST\C03.0 SWPPP PHASE 2.dwg - Mar 10, 2025 - 6:35pm

APPENDIX B: Traffic Count Data

National Data & Surveying Services

Intersection Turning Movement Count

Location: McLeod's Way/Bear Springs Dr & SR 434/SR 419
City: Winter Springs
Control: Signalized

Project ID: 25-130175-001
Date: 5/22/2025

Data - Total

NS/EW Streets:	McLeod's Way/Bear Springs Dr				McLeod's Way/Bear Springs Dr				SR 434/SR 419				SR 434/SR 419				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	2	3	0	26	1	8	0	16	225	2	0	2	244	41	2	575
7:15 AM	3	0	7	0	11	0	6	0	5	303	0	0	2	304	15	3	659
7:30 AM	3	0	8	0	9	0	6	0	7	300	1	0	2	370	13	2	721
7:45 AM	6	1	3	0	7	1	7	0	5	274	1	0	12	371	14	6	708
8:00 AM	4	1	7	0	13	1	6	0	7	287	2	3	3	315	12	5	666
8:15 AM	5	0	9	0	5	0	8	0	10	333	1	1	4	350	9	3	738
8:30 AM	2	1	6	1	13	0	6	0	11	324	0	0	0	305	12	8	689
8:45 AM	4	0	5	0	6	1	5	0	21	309	0	1	8	260	21	4	645
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	30	5	48	1	90	4	52	0	82	2355	7	5	33	2519	137	33	5401
APPROACH %'s :	35.71%	5.95%	57.14%	1.19%	61.64%	2.74%	35.62%	0.00%	3.35%	96.16%	0.29%	0.20%	1.21%	92.54%	5.03%	1.21%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	18	2	27	0	34	2	27	0	29	1194	5	4	21	1406	48	16	2833
PEAK HR FACTOR :	0.750	0.500	0.750	0.000	0.654	0.500	0.844	0.000	0.725	0.896	0.625	0.333	0.438	0.947	0.857	0.667	0.960
	0.839				0.788				0.893				0.925				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	0	7	0	15	0	4	0	9	300	2	2	5	264	8	6	628
4:15 PM	2	1	6	0	11	0	4	0	15	316	2	0	2	331	4	6	700
4:30 PM	2	1	4	0	11	0	8	0	14	334	2	0	3	321	12	6	718
4:45 PM	4	1	2	0	10	2	7	0	13	282	2	0	3	379	10	7	722
5:00 PM	3	1	9	0	9	0	5	0	18	410	3	0	7	359	8	9	841
5:15 PM	2	2	7	0	16	1	8	0	23	392	4	0	5	401	22	6	889
5:30 PM	2	1	9	0	6	5	7	0	21	441	1	1	3	318	12	6	833
5:45 PM	3	2	11	0	8	0	6	0	17	386	10	0	5	341	7	10	806
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	24	9	55	0	86	8	49	0	130	2861	26	3	33	2714	83	56	6137
APPROACH %'s :	27.27%	10.23%	62.50%	0.00%	60.14%	5.59%	34.27%	0.00%	4.30%	94.74%	0.86%	0.10%	1.14%	94.04%	2.88%	1.94%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	10	6	36	0	39	6	26	0	79	1629	18	1	20	1419	49	31	3369
PEAK HR FACTOR :	0.833	0.750	0.818	0.000	0.609	0.300	0.813	0.000	0.859	0.923	0.450	0.250	0.714	0.885	0.557	0.775	0.947
	0.813				0.710				0.930				0.875				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Tuskawilla Rd & SR 434/SR 419
City: Winter Springs
Control: Signalized

Project ID: 25-130175-002
Date: 5/22/2025

Data - Total

NS/EW Streets:	Tuskawilla Rd				Tuskawilla Rd				SR 434/SR 419				SR 434/SR 419				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	111	47	14	0	30	50	5	0	5	178	81	2	23	177	7	1	731
7:15 AM	107	14	18	0	14	23	3	0	5	216	102	5	29	222	4	0	762
7:30 AM	145	24	39	0	17	26	1	0	4	201	88	2	38	274	3	0	862
7:45 AM	164	34	39	0	12	15	8	0	12	189	76	7	31	244	4	1	836
8:00 AM	108	10	15	0	16	22	12	0	12	244	89	7	35	220	4	0	794
8:15 AM	151	29	21	0	15	21	6	0	6	200	126	3	41	227	5	0	851
8:30 AM	138	24	28	0	15	29	7	0	3	186	133	5	47	222	5	0	842
8:45 AM	128	27	33	0	23	26	10	0	16	217	135	2	37	169	4	0	827
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1052	209	207	0	142	212	52	0	63	1631	830	33	281	1755	36	2	6505
APPROACH %'s :	71.66%	14.24%	14.10%	0.00%	34.98%	52.22%	12.81%	0.00%	2.46%	63.79%	32.46%	1.29%	13.55%	84.62%	1.74%	0.10%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	568	97	114	0	60	84	27	0	34	834	379	19	145	965	16	1	3343
PEAK HR FACTOR :	0.866	0.713	0.731	0.000	0.882	0.808	0.563	0.000	0.708	0.855	0.752	0.679	0.884	0.880	0.800	0.250	0.970
	0.822				0.855				0.899				0.894				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	116	26	32	0	29	34	5	0	4	176	120	9	43	161	6	1	762
4:15 PM	159	38	33	0	20	33	9	0	7	222	108	9	35	185	11	0	869
4:30 PM	141	34	30	0	20	27	7	0	11	180	108	4	49	229	11	2	853
4:45 PM	131	32	20	0	21	24	6	0	10	239	90	13	54	274	11	1	926
5:00 PM	156	38	29	0	26	30	1	0	8	238	136	6	38	241	13	3	963
5:15 PM	154	33	29	0	28	34	9	0	7	289	127	14	40	278	20	1	1063
5:30 PM	141	29	33	0	32	32	4	0	14	278	118	9	40	210	8	0	948
5:45 PM	128	20	28	0	29	36	7	0	17	248	119	10	41	215	14	2	914
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1126	250	234	0	205	250	48	0	78	1870	926	74	340	1793	94	10	7298
APPROACH %'s :	69.94%	15.53%	14.53%	0.00%	40.76%	49.70%	9.54%	0.00%	2.65%	63.43%	31.41%	2.51%	15.20%	80.15%	4.20%	0.45%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	582	132	111	0	107	120	20	0	39	1044	471	42	172	1003	52	5	3900
PEAK HR FACTOR :	0.933	0.868	0.841	0.000	0.836	0.882	0.556	0.000	0.696	0.903	0.866	0.750	0.796	0.902	0.650	0.417	0.917
	0.925				0.870				0.913				0.906				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Michael Blake Boulevard & SR 434/SR 419
City: Winter Springs
Control: Signalized

Project ID: 25-130175-003
Date: 5/22/2025

Data - Total

NS/EW Streets:	Michael Blake Boulevard				Michael Blake Boulevard				SR 434/SR 419				SR 434/SR 419				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	7	20	0	28	4	8	0	8	196	2	2	3	172	38	0	492
7:15 AM	1	3	11	0	33	4	6	0	12	235	3	1	14	234	25	1	583
7:30 AM	1	2	11	0	49	2	12	0	9	228	2	2	7	261	11	0	597
7:45 AM	2	5	26	0	37	4	10	0	16	237	2	3	16	241	21	0	620
8:00 AM	4	1	18	0	37	1	10	0	15	257	3	2	12	229	20	1	610
8:15 AM	0	0	15	0	29	2	11	0	12	213	1	3	17	237	20	1	561
8:30 AM	0	2	15	0	28	1	11	0	22	220	1	5	18	237	21	0	581
8:45 AM	3	3	18	0	27	5	9	0	20	238	1	0	14	191	23	0	552
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	15	23	134	0	268	23	77	0	114	1824	15	18	101	1802	179	3	4596
APPROACH %'s :	8.72%	13.37%	77.91%	0.00%	72.83%	6.25%	20.92%	0.00%	5.78%	92.54%	0.76%	0.91%	4.84%	86.43%	8.59%	0.14%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	8	11	66	0	156	11	38	0	52	957	10	8	49	965	77	2	2410
PEAK HR FACTOR :	0.500	0.550	0.635	0.000	0.796	0.688	0.792	0.000	0.813	0.931	0.833	0.667	0.766	0.924	0.770	0.500	0.972
	0.644				0.813				0.927				0.979				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	5	23	0	15	3	8	0	14	224	2	3	10	192	18	0	519
4:15 PM	3	4	33	0	8	1	6	0	12	256	3	6	17	212	16	0	577
4:30 PM	0	3	24	0	26	1	7	0	15	217	1	3	6	318	29	0	650
4:45 PM	1	0	12	0	14	1	5	0	11	263	0	2	5	276	32	0	622
5:00 PM	4	3	5	0	23	1	8	0	8	276	5	1	12	302	27	0	675
5:15 PM	1	6	29	0	21	2	9	0	27	315	7	2	8	294	35	1	757
5:30 PM	4	2	41	0	37	2	10	0	11	336	1	2	16	248	26	0	736
5:45 PM	1	4	17	0	15	3	6	0	18	286	5	1	14	275	23	0	668
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	16	27	184	0	159	14	59	0	116	2173	24	20	88	2117	206	1	5204
APPROACH %'s :	7.05%	11.89%	81.06%	0.00%	68.53%	6.03%	25.43%	0.00%	4.97%	93.14%	1.03%	0.86%	3.65%	87.77%	8.54%	0.04%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	10	15	92	0	96	8	33	0	64	1213	18	6	50	1119	111	1	2836
PEAK HR FACTOR :	0.625	0.625	0.561	0.000	0.649	0.667	0.825	0.000	0.593	0.903	0.643	0.750	0.781	0.926	0.793	0.250	0.937
	0.622				0.699				0.927				0.939				

Prepared by National Data & Surveying Services

VOLUME

SR 434/SR 419 Bet Central Winds Dr/Heritage Park St & Tuskawilla Rd

Day: Thursday
Date: 5/22/2025

City: Winter Springs
Project #: FL25_130176_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,804	17,340	35,144

15-Minutes Interval

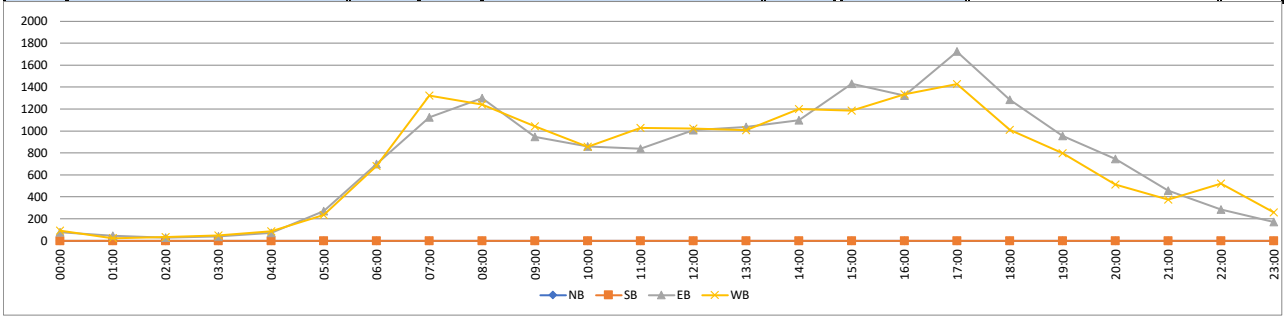
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			34	40	74	12:00			249	273	522
0:15			19	14	33	12:15			256	244	500
0:30			14	20	34	12:30			240	255	495
0:45			12	18	30	12:45			261	251	512
1:00			18	8	26	13:00			251	247	498
1:15			9	9	18	13:15			275	247	522
1:30			11	5	16	13:30			275	267	542
1:45			7	3	10	13:45			235	246	481
2:00			8	9	17	14:00			258	249	507
2:15			5	8	13	14:15			304	325	629
2:30			6	13	19	14:30			255	296	551
2:45			10	3	13	14:45			280	329	609
3:00			10	8	18	15:00			299	260	559
3:15			8	18	26	15:15			352	253	605
3:30			13	12	25	15:30			400	377	777
3:45			10	10	20	15:45			379	295	674
4:00			8	5	13	16:00			318	271	589
4:15			14	21	35	16:15			340	340	680
4:30			15	23	38	16:30			338	331	669
4:45			34	36	70	16:45			325	393	718
5:00			40	33	73	17:00			419	362	781
5:15			57	57	114	17:15			445	402	847
5:30			68	56	124	17:30			448	324	772
5:45			104	90	194	17:45			411	340	751
6:00			140	102	242	18:00			397	302	699
6:15			145	138	283	18:15			339	256	595
6:30			206	196	402	18:30			274	207	481
6:45			207	244	451	18:45			273	246	519
7:00			245	261	506	19:00			261	231	492
7:15			317	310	627	19:15			234	226	460
7:30			296	372	668	19:30			236	167	403
7:45			265	380	645	19:45			225	173	398
8:00			293	311	604	20:00			230	130	360
8:15			349	358	707	20:15			183	122	305
8:30			330	303	633	20:30			155	128	283
8:45			328	269	597	20:45			176	131	307
9:00			270	249	519	21:00			128	123	251
9:15			221	317	538	21:15			125	96	221
9:30			238	250	488	21:30			98	77	175
9:45			216	225	441	21:45			106	79	185
10:00			236	208	444	22:00			88	101	189
10:15			183	248	431	22:15			73	132	205
10:30			212	205	417	22:30			52	133	185
10:45			227	195	422	22:45			72	156	228
11:00			203	229	432	23:00			47	95	142
11:15			225	260	485	23:15			52	65	117
11:30			202	234	436	23:30			32	49	81
11:45			208	306	514	23:45			39	49	88
TOTALS	0	0	6296	6689	12985	TOTALS	0	0	11508	10651	22159
SPLIT %	0%	0%	48%	52%	37%	SPLIT %	0%	0%	52%	48%	63%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			79	92	171
01:00	02:00			45	25	70
02:00	03:00			29	33	62
03:00	04:00			41	48	89
04:00	05:00			71	85	156
05:00	06:00			269	236	505
06:00	07:00			698	680	1378
07:00	08:00			1123	1323	2446
08:00	09:00			1300	1241	2541
09:00	10:00			945	1041	1986
10:00	11:00			858	856	1714
11:00	12:00			838	1029	1867
12:00	13:00			1006	1023	2029
13:00	14:00			1036	1007	2043
14:00	15:00			1097	1199	2296
15:00	16:00			1430	1185	2615
16:00	17:00			1321	1335	2656
17:00	18:00			1723	1428	3151
18:00	19:00			1283	1011	2294
19:00	20:00			956	797	1753
20:00	21:00			744	511	1255
21:00	22:00			457	375	832
22:00	23:00			285	522	807
23:00	00:00			170	258	428

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			6296	6689	12985
Peak Hour			8:00	7:30	7:30
Peak Volume			1300	1421	2624
Peak Hour Factor			0.931	0.935	0.928
Peak Period	12:00	to	00:00		
Volume			11508	10651	22159
Peak Hour			17:00	16:30	17:00
Peak Volume			1723	1488	3151
Peak Hour Factor			0.961	0.925	0.930
Peak Period	07:00	to	09:00		
Volume			2423	2564	4987
Peak Hour			8:00	7:30	7:30
Peak Volume			1300	1421	2624
Peak Hour Factor			0.931	0.935	0.928
Peak Period	16:00	to	18:00		
Volume			3044	2763	5807
Peak Hour			17:00	16:30	17:00
Peak Volume			1723	1488	3151
Peak Hour Factor			0.961	0.925	0.930



Prepared by National Data & Surveying Services

VOLUME

SR 434/SR 419 Bet Tuskawilla Rd & Michael Blake Blvd

Day: Thursday
Date: 5/22/2025

City: Winter Springs
Project #: FL25_130176_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,066	13,353	27,419

DAILY TOTALS

15-Minutes Interval

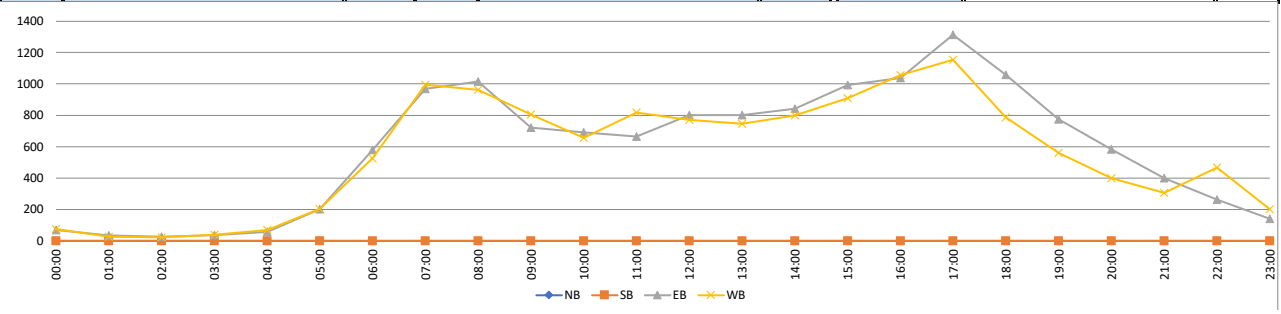
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			28	26	54	12:00			190	199	389
0:15			18	20	38	12:15			199	191	390
0:30			11	14	25	12:30			186	197	383
0:45			11	15	26	12:45			226	184	410
1:00			13	11	24	13:00			178	172	350
1:15			11	6	17	13:15			230	198	428
1:30			7	5	12	13:30			204	188	392
1:45			3	3	6	13:45			189	187	376
2:00			6	7	13	14:00			208	197	405
2:15			8	3	11	14:15			210	199	409
2:30			6	9	15	14:30			212	176	388
2:45			6	3	9	14:45			211	226	437
3:00			14	7	21	15:00			205	174	379
3:15			5	15	20	15:15			267	238	505
3:30			9	6	15	15:30			270	252	522
3:45			8	10	18	15:45			250	246	496
4:00			5	2	7	16:00			246	210	456
4:15			14	13	27	16:15			275	229	504
4:30			12	16	28	16:30			238	308	546
4:45			26	37	63	16:45			278	309	587
5:00			32	37	69	17:00			298	311	609
5:15			44	48	92	17:15			352	309	661
5:30			46	50	96	17:30			352	268	620
5:45			79	69	148	17:45			312	266	578
6:00			119	82	201	18:00			316	255	571
6:15			131	110	241	18:15			297	201	498
6:30			174	131	305	18:30			207	177	384
6:45			154	203	357	18:45			238	154	392
7:00			219	196	415	19:00			226	152	378
7:15			241	242	483	19:15			187	125	312
7:30			251	285	536	19:30			176	150	326
7:45			258	272	530	19:45			186	134	320
8:00			280	246	526	20:00			180	93	273
8:15			230	252	482	20:15			149	105	254
8:30			244	260	504	20:30			123	105	228
8:45			262	205	467	20:45			131	96	227
9:00			193	221	414	21:00			111	106	217
9:15			195	207	402	21:15			99	77	176
9:30			168	170	338	21:30			96	58	154
9:45			165	208	373	21:45			94	65	159
10:00			173	169	342	22:00			79	91	170
10:15			149	183	332	22:15			73	135	208
10:30			190	157	347	22:30			52	126	178
10:45			178	148	326	22:45			58	115	173
11:00			167	182	349	23:00			40	73	113
11:15			191	196	387	23:15			39	49	88
11:30			160	198	358	23:30			25	39	64
11:45			147	242	389	23:45			37	41	78
TOTALS	0	0	5061	5197	10258	TOTALS	0	0	9005	8156	17161
SPLIT %	0%	0%	49%	51%	37%	SPLIT %	0%	0%	52%	48%	63%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			68	75	143
01:00	02:00			34	25	59
02:00	03:00			26	22	48
03:00	04:00			36	38	74
04:00	05:00			57	68	125
05:00	06:00			201	204	405
06:00	07:00			578	526	1104
07:00	08:00			969	995	1964
08:00	09:00			1016	963	1979
09:00	10:00			721	806	1527
10:00	11:00			690	657	1347
11:00	12:00			665	818	1483
12:00	13:00			801	771	1572
13:00	14:00			801	745	1546
14:00	15:00			841	798	1639
15:00	16:00			992	910	1902
16:00	17:00			1037	1056	2093
17:00	18:00			1314	1154	2468
18:00	19:00			1058	787	1845
19:00	20:00			775	561	1336
20:00	21:00			583	399	982
21:00	22:00			400	306	706
22:00	23:00			262	467	729
23:00	00:00			141	202	343

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			5061	5197	10258
Peak Hour			7:15	7:30	7:15
Peak Volume			1030	1055	2075
Peak Hour Factor			0.920	0.925	0.968
Peak Period	12:00	to	00:00		
Volume			9005	8156	17161
Peak Hour			17:15	16:30	16:45
Peak Volume			1332	1237	2477
Peak Hour Factor			0.946	0.994	0.937
Peak Period	07:00	to	09:00		
Volume			1985	1958	3943
Peak Hour			7:15	7:30	7:15
Peak Volume			1030	1055	2075
Peak Hour Factor			0.920	0.925	0.968
Peak Period	16:00	to	18:00		
Volume			2351	2210	4561
Peak Hour			17:00	16:30	16:45
Peak Volume			1314	1237	2477
Peak Hour Factor			0.933	0.994	0.937



Prepared by National Data & Surveying Services

VOLUME

SR 434/SR 419 Bet Michael Blake Blvd & Tuscora Dr

Day: Thursday
Date: 5/22/2025

City: Winter Springs
Project #: FL25_130176_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,190	14,573	29,763

15-Minutes Interval

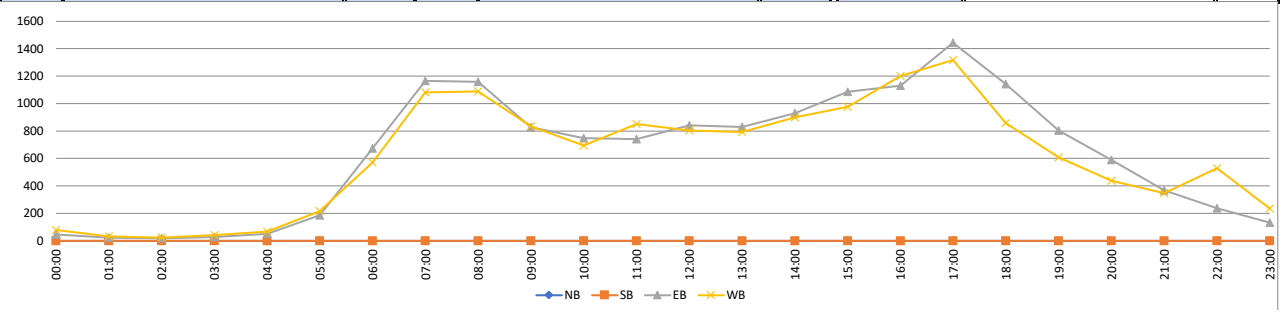
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			13	26	39	12:00			182	214	396
0:15			11	22	33	12:15			215	198	413
0:30			13	18	31	12:30			200	204	404
0:45			8	12	20	12:45			243	187	430
1:00			6	15	21	13:00			190	184	374
1:15			8	7	15	13:15			212	214	426
1:30			5	8	13	13:30			226	194	420
1:45			4	2	6	13:45			201	200	401
2:00			2	7	9	14:00			231	210	441
2:15			9	3	12	14:15			231	235	466
2:30			4	11	15	14:30			243	213	456
2:45			5	3	8	14:45			224	242	466
3:00			12	8	20	15:00			252	204	456
3:15			3	13	16	15:15			275	237	512
3:30			6	8	14	15:30			275	272	547
3:45			6	12	18	15:45			283	262	545
4:00			5	1	6	16:00			264	251	515
4:15			9	12	21	16:15			290	258	548
4:30			10	18	28	16:30			292	364	656
4:45			26	36	62	16:45			283	326	609
5:00			27	35	62	17:00			306	359	665
5:15			40	43	83	17:15			378	347	725
5:30			43	59	102	17:30			425	298	723
5:45			76	78	154	17:45			334	313	647
6:00			118	89	207	18:00			343	269	612
6:15			160	117	277	18:15			288	218	506
6:30			198	134	332	18:30			262	196	458
6:45			196	231	427	18:45			249	175	424
7:00			240	232	472	19:00			234	159	393
7:15			284	278	562	19:15			198	150	348
7:30			330	276	606	19:30			194	164	358
7:45			311	294	605	19:45			178	135	313
8:00			311	279	590	20:00			192	101	293
8:15			265	266	531	20:15			140	117	257
8:30			300	276	576	20:30			138	110	248
8:45			283	266	549	20:45			120	110	230
9:00			213	216	429	21:00			110	117	227
9:15			235	218	453	21:15			84	89	173
9:30			199	183	382	21:30			91	64	155
9:45			179	217	396	21:45			83	76	159
10:00			181	168	349	22:00			73	103	176
10:15			166	184	350	22:15			72	153	225
10:30			212	177	389	22:30			45	136	181
10:45			189	165	354	22:45			48	137	185
11:00			199	199	398	23:00			42	92	134
11:15			205	192	397	23:15			34	50	84
11:30			178	183	361	23:30			23	47	70
11:45			159	277	436	23:45			32	45	77
TOTALS	0	0	5662	5574	11236	TOTALS	0	0	9528	8999	18527
SPLIT %	0%	0%	50%	50%	38%	SPLIT %	0%	0%	51%	49%	62%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			45	78	123
01:00	02:00			23	32	55
02:00	03:00			20	24	44
03:00	04:00			27	41	68
04:00	05:00			50	67	117
05:00	06:00			186	215	401
06:00	07:00			672	571	1243
07:00	08:00			1165	1080	2245
08:00	09:00			1159	1087	2246
09:00	10:00			826	834	1660
10:00	11:00			748	694	1442
11:00	12:00			741	851	1592
12:00	13:00			840	803	1643
13:00	14:00			829	792	1621
14:00	15:00			929	900	1829
15:00	16:00			1085	975	2060
16:00	17:00			1129	1199	2328
17:00	18:00			1443	1317	2760
18:00	19:00			1142	858	2000
19:00	20:00			804	608	1412
20:00	21:00			590	438	1028
21:00	22:00			368	346	714
22:00	23:00			238	529	767
23:00	00:00			131	234	365

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			5662	5574	11236
Peak Hour			7:15	7:15	7:15
Peak Volume			1236	1127	2363
Peak Hour Factor			0.936	0.958	0.975
Peak Period	12:00	to	00:00		
Volume			9528	8999	18527
Peak Hour			17:15	16:30	17:00
Peak Volume			1480	1396	2760
Peak Hour Factor			0.871	0.959	0.952
Peak Period	07:00	to	09:00		
Volume			2324	2167	4491
Peak Hour			7:15	7:15	7:15
Peak Volume			1236	1127	2363
Peak Hour Factor			0.936	0.958	0.975
Peak Period	16:00	to	18:00		
Volume			2572	2516	5088
Peak Hour			17:00	16:30	17:00
Peak Volume			1443	1396	2760
Peak Hour Factor			0.849	0.959	0.952



Prepared by National Data & Surveying Services

VOLUME

Tuskawilla Rd Bet Trotwood Blvd & SR 434/SR 419

Day: Thursday
Date: 5/22/2025

City: Winter Springs
Project #: FL25_130176_004

DAILY TOTALS	NB	SB	EB	WB	Total
	10,839	10,426	0	0	21,265

15-Minutes Interval

TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	25	21			46	12:00	209	148			357
0:15	25	26			51	12:15	177	164			341
0:30	5	9			14	12:30	194	157			351
0:45	4	6			10	12:45	171	183			354
1:00	1	8			9	13:00	174	160			334
1:15	6	2			8	13:15	141	162			303
1:30	6	7			13	13:30	173	182			355
1:45	3	3			6	13:45	171	158			329
2:00	6	6			12	14:00	181	155			336
2:15	4	2			6	14:15	216	190			406
2:30	7	1			8	14:30	195	220			415
2:45	1	4			5	14:45	185	172			357
3:00	3	1			4	15:00	191	161			352
3:15	7	7			14	15:15	173	235			408
3:30	8	4			12	15:30	200	209			409
3:45	9	5			14	15:45	176	218			394
4:00	5	3			8	16:00	221	199			420
4:15	13	4			17	16:15	246	202			448
4:30	11	10			21	16:30	207	209			416
4:45	29	5			34	16:45	218	173			391
5:00	19	17			36	17:00	216	228			444
5:15	27	17			44	17:15	209	222			431
5:30	27	27			54	17:30	245	218			463
5:45	50	28			78	17:45	194	206			400
6:00	46	59			105	18:00	174	215			389
6:15	75	58			133	18:15	176	161			337
6:30	119	70			189	18:30	153	139			292
6:45	180	96			276	18:45	138	152			290
7:00	194	159			353	19:00	135	150			285
7:15	136	170			306	19:15	143	132			275
7:30	210	167			377	19:30	122	137			259
7:45	275	129			404	19:45	101	140			241
8:00	164	147			311	20:00	95	115			210
8:15	194	202			396	20:15	99	106			205
8:30	189	207			396	20:30	83	85			168
8:45	181	224			405	20:45	80	93			173
9:00	208	209			417	21:00	65	82			147
9:15	237	172			409	21:15	69	72			141
9:30	164	152			316	21:30	56	57			113
9:45	120	157			277	21:45	51	52			103
10:00	109	143			252	22:00	42	49			91
10:15	145	140			285	22:15	40	31			71
10:30	149	148			297	22:30	49	40			89
10:45	133	141			274	22:45	46	39			85
11:00	140	139			279	23:00	27	31			58
11:15	147	131			278	23:15	30	26			56
11:30	154	151			305	23:30	27	25			52
11:45	170	153			323	23:45	15	19			34
TOTALS	4140	3747	0	0	7887	TOTALS	6699	6679	0	0	13378
SPLIT %	52%	48%	0%	0%	37%	SPLIT %	50%	50%	0%	0%	63%

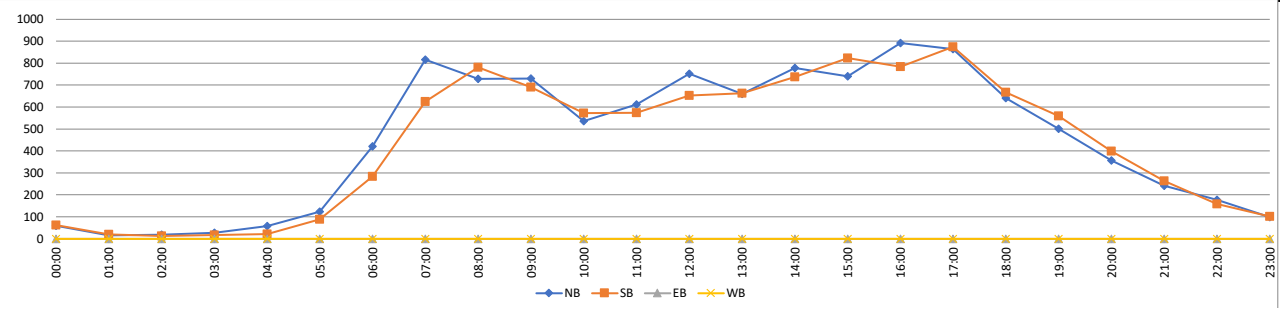
DAILY TOTALS

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	59	62			121
01:00	02:00	16	20			36
02:00	03:00	18	13			31
03:00	04:00	27	17			44
04:00	05:00	58	22			80
05:00	06:00	123	89			212
06:00	07:00	420	283			703
07:00	08:00	815	625			1440
08:00	09:00	728	780			1508
09:00	10:00	729	690			1419
10:00	11:00	536	572			1108
11:00	12:00	611	574			1185
12:00	13:00	751	652			1403
13:00	14:00	659	662			1321
14:00	15:00	777	737			1514
15:00	16:00	740	823			1563
16:00	17:00	892	783			1675
17:00	18:00	864	874			1738
18:00	19:00	641	667			1308
19:00	20:00	501	559			1060
20:00	21:00	357	399			756
21:00	22:00	241	263			504
22:00	23:00	177	159			336
23:00	00:00	99	101			200

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	4140	3747			7887
Peak Hour	7:30	8:15			8:30
Peak Volume	843	842			1627
Peak Hour Factor	0.766	0.940			0.975
Peak Period	12:00	to	00:00		
Volume	6699	6679			13378
Peak Hour	16:00	17:00			17:00
Peak Volume	892	874			1738
Peak Hour Factor	0.907	0.958			0.938
Peak Period	07:00	to	09:00		
Volume	1543	1405			2948
Peak Hour	7:30	8:00			8:00
Peak Volume	843	780			1508
Peak Hour Factor	0.766	0.871			0.931
Peak Period	16:00	to	18:00		
Volume	1756	1657			3413
Peak Hour	16:00	17:00			17:00
Peak Volume	892	874			1738
Peak Hour Factor	0.907	0.958			0.938



Prepared by National Data & Surveying Services

VOLUME

Tuskawilla Rd Bet SR 434/SR 419 & Blumberg Blvd

Day: Thursday
Date: 5/22/2025

City: Winter Springs
Project #: FL25_130176_005

DAILY TOTALS	NB	SB	EB	WB	Total
	1,316	1,479	0	0	2,795

DAILY TOTALS

15-Minutes Interval

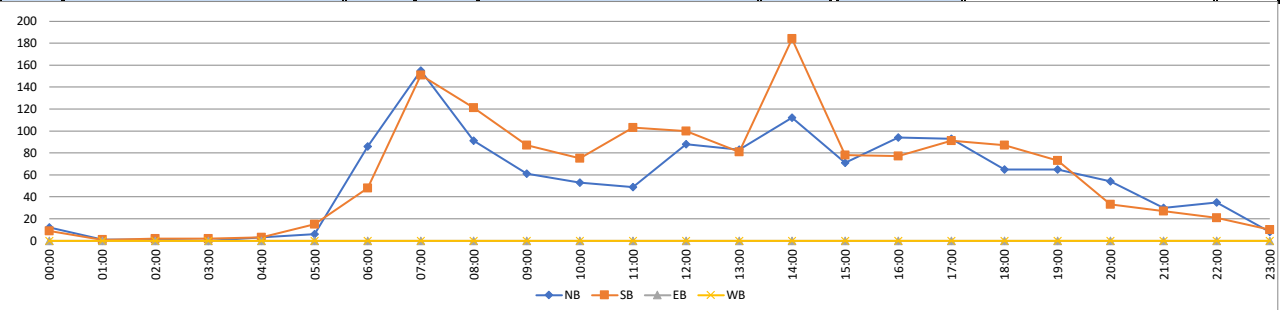
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	3	0			3	12:00	29	15			44
0:15	6	6			12	12:15	20	36			56
0:30	1	1			2	12:30	25	24			49
0:45	2	2			4	12:45	14	25			39
1:00	0	1			1	13:00	25	24			49
1:15	0	0			0	13:15	16	17			33
1:30	0	0			0	13:30	17	23			40
1:45	1	0			1	13:45	25	17			42
2:00	0	1			1	14:00	35	22			57
2:15	0	0			0	14:15	36	65			101
2:30	1	0			1	14:30	22	71			93
2:45	0	1			1	14:45	19	26			45
3:00	0	1			1	15:00	14	16			30
3:15	0	1			1	15:15	20	17			37
3:30	0	0			0	15:30	18	27			45
3:45	0	0			0	15:45	19	18			37
4:00	0	0			0	16:00	20	19			39
4:15	1	1			2	16:15	22	21			43
4:30	1	1			2	16:30	26	21			47
4:45	1	1			2	16:45	26	16			42
5:00	1	6			7	17:00	29	23			52
5:15	0	1			1	17:15	28	26			54
5:30	1	4			5	17:30	21	19			40
5:45	4	4			8	17:45	15	23			38
6:00	6	5			11	18:00	16	21			37
6:15	8	10			18	18:15	17	21			38
6:30	10	6			16	18:30	16	18			34
6:45	62	27			89	18:45	16	27			43
7:00	85	74			159	19:00	24	20			44
7:15	14	31			45	19:15	17	27			44
7:30	18	22			40	19:30	13	16			29
7:45	38	24			62	19:45	11	10			21
8:00	22	33			55	20:00	17	9			26
8:15	27	31			58	20:15	9	10			19
8:30	24	26			50	20:30	13	4			17
8:45	18	31			49	20:45	15	10			25
9:00	15	20			35	21:00	4	7			11
9:15	18	28			46	21:15	7	5			12
9:30	20	22			42	21:30	8	8			16
9:45	8	17			25	21:45	11	7			18
10:00	10	16			26	22:00	9	4			13
10:15	19	21			40	22:15	11	6			17
10:30	9	20			29	22:30	11	9			20
10:45	15	18			33	22:45	4	2			6
11:00	14	25			39	23:00	2	4			6
11:15	11	18			29	23:15	2	1			3
11:30	14	26			40	23:30	2	2			4
11:45	10	34			44	23:45	2	3			5
TOTALS	518	617	0	0	1135	TOTALS	798	862	0	0	1660
SPLIT %	46%	54%	0%	0%	41%	SPLIT %	48%	52%	0%	0%	59%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	12	9			21
01:00	02:00	1	1			2
02:00	03:00	1	2			3
03:00	04:00	0	2			2
04:00	05:00	3	3			6
05:00	06:00	6	15			21
06:00	07:00	86	48			134
07:00	08:00	155	151			306
08:00	09:00	91	121			212
09:00	10:00	61	87			148
10:00	11:00	53	75			128
11:00	12:00	49	103			152
12:00	13:00	88	100			188
13:00	14:00	83	81			164
14:00	15:00	112	184			296
15:00	16:00	71	78			149
16:00	17:00	94	77			171
17:00	18:00	93	91			184
18:00	19:00	65	87			152
19:00	20:00	65	73			138
20:00	21:00	54	33			87
21:00	22:00	30	27			57
22:00	23:00	35	21			56
23:00	00:00	8	10			18

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	518	617			1135
Peak Hour	6:45	6:45			6:45
Peak Volume	179	154			333
Peak Hour Factor	0.526	0.520			0.524
Peak Period	12:00	to	00:00		
Volume	798	862			1660
Peak Hour	13:45	14:00			14:00
Peak Volume	118	184			296
Peak Hour Factor	0.819	0.648			0.733
Peak Period	07:00	to	09:00		
Volume	246	272			518
Peak Hour	7:00	7:00			7:00
Peak Volume	155	151			306
Peak Hour Factor	0.456	0.510			0.481
Peak Period	16:00	to	18:00		
Volume	187	168			355
Peak Hour	16:30	17:00			16:30
Peak Volume	109	91			195
Peak Hour Factor	0.940	0.875			0.903



Prepared by National Data & Surveying Services

VOLUME

Michael Blake Blvd Bet SR 434/SR 419 & Tuskawilla Rd

Day: Thursday
Date: 5/22/2025

City: Winter Springs
Project #: FL25_130176_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,025	617	1,642

15-Minutes Interval

TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			1	1	2	12:00			20	12	32
0:15			1	2	3	12:15			16	8	24
0:30			0	2	2	12:30			12	8	20
0:45			0	0	0	12:45			18	12	30
1:00			0	0	0	13:00			15	3	18
1:15			0	1	1	13:15			16	7	23
1:30			0	0	0	13:30			17	6	23
1:45			0	0	0	13:45			8	10	18
2:00			1	0	1	14:00			12	4	16
2:15			1	0	1	14:15			17	17	34
2:30			0	1	1	14:30			19	8	27
2:45			0	0	0	14:45			14	10	24
3:00			0	0	0	15:00			21	1	22
3:15			0	1	1	15:15			30	16	46
3:30			0	0	0	15:30			24	11	35
3:45			1	0	1	15:45			17	14	31
4:00			0	0	0	16:00			25	7	32
4:15			1	0	1	16:15			35	17	52
4:30			1	1	2	16:30			18	5	23
4:45			1	1	2	16:45			15	5	20
5:00			1	0	1	17:00			11	10	21
5:15			2	0	2	17:15			29	11	40
5:30			1	2	3	17:30			45	15	60
5:45			1	3	4	17:45			21	12	33
6:00			6	4	10	18:00			19	14	33
6:15			4	5	9	18:15			18	8	26
6:30			10	2	12	18:30			23	10	33
6:45			18	11	29	18:45			14	10	24
7:00			13	7	20	19:00			19	7	26
7:15			9	18	27	19:15			16	9	25
7:30			15	14	29	19:30			8	9	17
7:45			32	13	45	19:45			14	6	20
8:00			15	12	27	20:00			11	6	17
8:15			18	17	35	20:15			3	3	6
8:30			17	20	37	20:30			6	4	10
8:45			19	16	35	20:45			7	5	12
9:00			12	15	27	21:00			6	4	10
9:15			23	9	32	21:15			13	8	21
9:30			16	14	30	21:30			5	2	7
9:45			9	8	17	21:45			4	1	5
10:00			12	7	19	22:00			2	3	5
10:15			14	9	23	22:15			2	3	5
10:30			13	9	22	22:30			2	0	2
10:45			9	10	19	22:45			2	2	4
11:00			18	8	26	23:00			3	1	4
11:15			14	9	23	23:15			3	3	6
11:30			11	4	15	23:30			1	1	2
11:45			9	13	22	23:45			0	0	0
TOTALS	0	0	349	269	618	TOTALS	0	0	676	348	1024
SPLIT %	0%	0%	56%	44%	38%	SPLIT %	0%	0%	66%	34%	62%

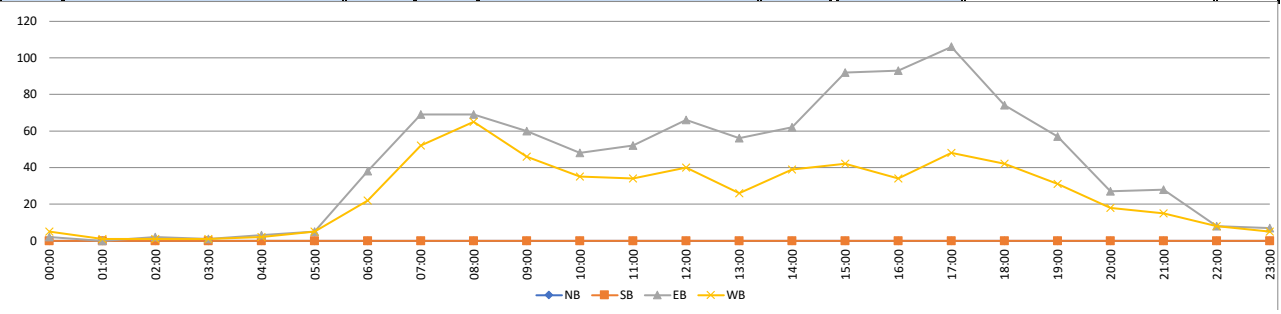
DAILY TOTALS

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			2	5	7
01:00	02:00			0	1	1
02:00	03:00			2	1	3
03:00	04:00			1	1	2
04:00	05:00			3	2	5
05:00	06:00			5	5	10
06:00	07:00			38	22	60
07:00	08:00			69	52	121
08:00	09:00			69	65	134
09:00	10:00			60	46	106
10:00	11:00			48	35	83
11:00	12:00			52	34	86
12:00	13:00			66	40	106
13:00	14:00			56	26	82
14:00	15:00			62	39	101
15:00	16:00			92	42	134
16:00	17:00			93	34	127
17:00	18:00			106	48	154
18:00	19:00			74	42	116
19:00	20:00			57	31	88
20:00	21:00			27	18	45
21:00	22:00			28	15	43
22:00	23:00			8	8	16
23:00	00:00			7	5	12

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			349	269	618
Peak Hour			7:45	8:15	7:45
Peak Volume			82	68	144
Peak Hour Factor			0.641	0.850	0.800
Peak Period	12:00	to	00:00		
Volume			676	348	1024
Peak Hour			17:15	17:15	17:15
Peak Volume			114	52	166
Peak Hour Factor			0.633	0.867	0.692
Peak Period	07:00	to	09:00		
Volume			138	117	255
Peak Hour			7:45	8:00	7:45
Peak Volume			82	65	144
Peak Hour Factor			0.641	0.813	0.800
Peak Period	16:00	to	18:00		
Volume			199	82	281
Peak Hour			17:00	17:00	17:00
Peak Volume			106	48	154
Peak Hour Factor			0.589	0.800	0.642



APPENDIX C: Growth Rate Calculation and Trip Generation

HISTORICAL TRAFFIC COUNTS
Winter Springs TLE TIS
Winter Springs, Florida

Location	Cosite						Forecast		Compounded Growth Rate	
		2020	2021	2022	2023	2024	2025	2028	2025-2028	Percent
SR 434 from Shore Rd to Tuskawilla Rd	771002	34,000	34,000	36,500	38,500	34,500	37,150	38,800	1.46%	40.42%
SR 434 from Tuskawilla Rd to Tuscora Dr	770278	26,500	27,500	24,000	25,000	27,500	25,950	25,800	-0.19%	26.88%
SR 434 from Tuscora Dr	770285	23,500	23,500	25,000	26,000	27,500	28,250	31,400	3.59%	32.71%
							91,350	96,000	1.7%	100.00%

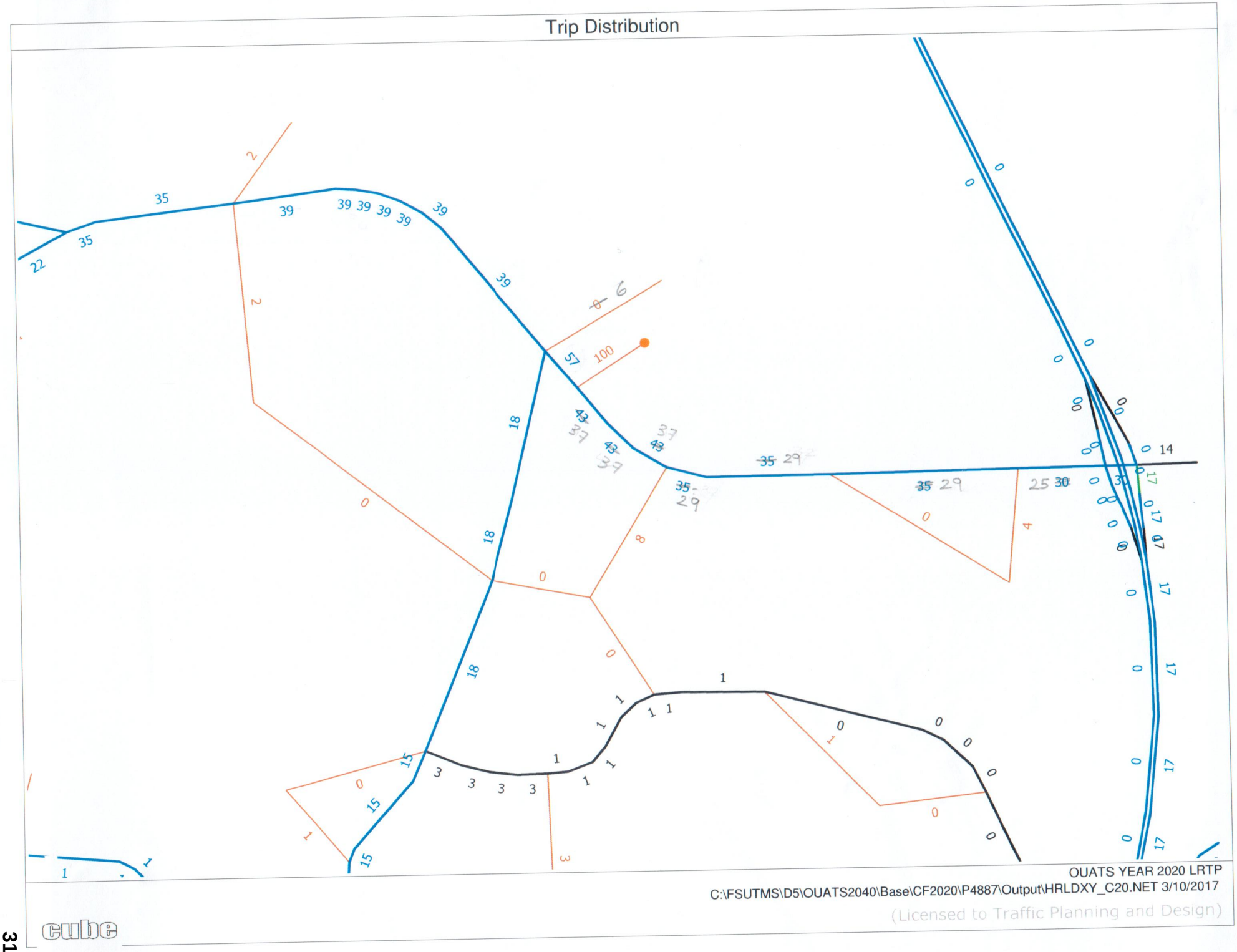
Day Care Center (565)

Based upon methodology from ITE's Trip Generation, 11th Edition (2021)

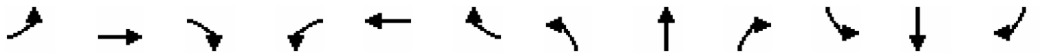
Project Land Use	Project Density	Project Trips			ITE Code	Variable	Equation Used[1]	In/Out Distribution		Average Rate
		Total	Inbound	Outbound						
Day Care Center	10,000 S.F.				565	1,000 S.F.				
Daily		**476**	238	238			T = 47.62 * X/1000	50%	50%	47.62
AM Peak Hour		**110**	58	52			T = 11 * X/1000	53%	47%	11.00
PM Peak Hour		**111**	52	59			T = 11.12 * X/1000	47%	53%	11.12
Reductions for Pass-By Trips										
Daily		**0**	0	0						
AM Peak Hour		**0**	0	0						
PM Peak Hour	44%	**49**	23	26						
TOTAL PROJECT TRIPS										
Daily		**476**	238	238						
AM Peak Hour		**110**	58	52						
PM Peak Hour		**62**	29	33						

Note: Pass-By Percentages are from the ITE 11th Edition Apendices (2021)

[1] Where: T = Trips; X = Density by Variable


Trip Distribution
OUATS YEAR 2020 LRTP
C:\FSUTMS\D5\OUATS2040\Base\CF2020\P4887\Output\HRLDXY_C20.NET 3/10/2017
(Licensed to Traffic Planning and Design)
cube

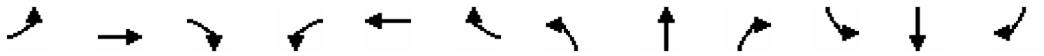
APPENDIX D: Capacity Analysis Report



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	1194	5	21	1406	48	18	2	27	18	2	27
Future Volume (veh/h)	29	1194	5	21	1406	48	18	2	27	18	2	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	30	1244	5	22	1465	50	19	2	28	19	2	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	276	2781	11	358	2650	90	35	2	185	35	2	185
Arrive On Green	0.02	0.78	0.78	0.02	0.77	0.77	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1753	3572	14	1753	3451	118	0	17	1560	0	17	1560
Grp Volume(v), veh/h	30	609	640	22	741	774	21	0	28	21	0	28
Grp Sat Flow(s),veh/h/ln	1753	1749	1838	1753	1749	1820	17	0	1560	17	0	1560
Q Serve(g_s), s	0.7	23.0	23.0	0.5	33.1	33.3	0.0	0.0	3.1	0.0	0.0	3.1
Cycle Q Clear(g_c), s	0.7	23.0	23.0	0.5	33.1	33.3	23.0	0.0	3.1	23.0	0.0	3.1
Prop In Lane	1.00		0.01	1.00		0.06	0.90		1.00	0.90		1.00
Lane Grp Cap(c), veh/h	276	1361	1431	358	1343	1397	37	0	185	37	0	185
V/C Ratio(X)	0.11	0.45	0.45	0.06	0.55	0.55	0.56	0.00	0.15	0.56	0.00	0.15
Avail Cap(c_a), veh/h	348	1361	1431	371	1343	1397	37	0	185	37	0	185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.75	0.75	0.75	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	7.3	7.3	5.7	9.1	9.1	94.8	0.0	76.7	94.8	0.0	76.7
Incr Delay (d2), s/veh	0.2	1.1	1.0	0.1	1.2	1.2	17.8	0.0	0.4	17.8	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	8.0	8.4	0.2	11.7	12.2	1.3	0.0	1.3	1.3	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.7	8.4	8.3	5.7	10.3	10.3	112.6	0.0	77.1	112.6	0.0	77.1
LnGrp LOS	A	A	A	A	B	B	F		E	F		E
Approach Vol, veh/h		1279			1537			49			49	
Approach Delay, s/veh		8.3			10.2			92.3			92.3	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	157.0		29.0	10.0	155.0		29.0				
Change Period (Y+Rc), s	4.5	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	149.0		23.0	12.0	131.0		9.0				
Max Q Clear Time (g_c+I1), s	2.5	25.0		25.0	2.7	35.3		25.0				
Green Ext Time (p_c), s	0.0	9.7		0.0	0.0	14.4		0.0				

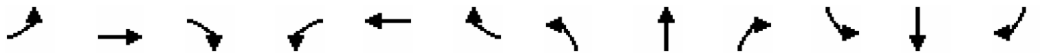
Intersection Summary												
HCM 7th Control Delay, s/veh			12.1									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	834	379	145	965	16	568	97	114	60	84	27
Future Volume (veh/h)	34	834	379	145	965	16	568	97	114	60	84	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	35	860	391	149	995	16	586	100	118	62	87	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	310	1793	800	167	2253	36	640	234	277	105	127	45
Arrive On Green	0.51	0.51	0.51	0.09	0.63	0.63	0.19	0.30	0.30	0.08	0.08	0.08
Sat Flow, veh/h	553	3526	1572	1767	3551	57	3428	776	915	870	1509	539
Grp Volume(v), veh/h	35	860	391	149	494	517	586	0	218	94	0	83
Grp Sat Flow(s),veh/h/ln	553	1763	1572	1767	1763	1845	1714	0	1691	1326	0	1592
Q Serve(g_s), s	6.5	30.1	30.9	15.8	27.0	27.0	31.9	0.0	19.6	13.3	0.0	9.5
Cycle Q Clear(g_c), s	9.6	30.1	30.9	15.8	27.0	27.0	31.9	0.0	19.6	13.3	0.0	9.5
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.54	0.66		0.34
Lane Grp Cap(c), veh/h	310	1793	800	167	1119	1171	640	0	511	143	0	134
V/C Ratio(X)	0.11	0.48	0.49	0.89	0.44	0.44	0.92	0.00	0.43	0.66	0.00	0.62
Avail Cap(c_a), veh/h	310	1793	800	195	1119	1171	794	0	511	227	0	235
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	30.3	30.5	85.1	17.6	17.6	75.8	0.0	53.1	85.8	0.0	84.1
Incr Delay (d2), s/veh	0.7	0.8	2.0	31.8	1.2	1.1	13.3	0.0	0.6	5.1	0.0	4.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	12.8	12.1	8.6	11.0	11.5	15.1	0.0	8.4	4.7	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.8	31.2	32.5	116.8	18.8	18.8	89.1	0.0	53.7	90.9	0.0	88.7
LnGrp LOS	C	C	C	F	B	B	F		D	F		F
Approach Vol, veh/h		1286			1160			804			177	
Approach Delay, s/veh		31.5			31.4			79.5			89.9	
Approach LOS		C			C			E			F	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	23.9	102.6	41.5	22.0		126.6		63.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	21.0	73.0	44.0	28.0		84.0		44.0				
Max Q Clear Time (g_c+I1), s	17.8	32.9	33.9	15.3		29.0		21.6				
Green Ext Time (p_c), s	0.1	8.6	1.6	0.7		6.8		1.1				

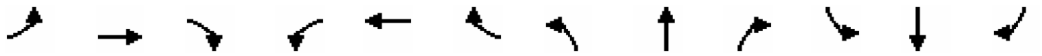
Intersection Summary	
HCM 7th Control Delay, s/veh	45.7
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	935	8	52	968	72	7	8	70	152	9	43
Future Volume (veh/h)	52	935	8	52	968	72	7	8	70	152	9	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	54	964	8	54	998	74	7	8	72	157	9	44
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	412	2583	21	448	2542	1134	44	23	207	167	7	227
Arrive On Green	0.03	0.73	0.73	0.03	0.73	0.73	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1753	3555	29	1753	3497	1560	1330	158	1426	858	49	1560
Grp Volume(v), veh/h	54	474	498	54	998	74	7	0	80	166	0	44
Grp Sat Flow(s),veh/h/ln	1753	1749	1835	1753	1749	1560	1330	0	1584	907	0	1560
Q Serve(g_s), s	1.3	16.8	16.8	1.3	18.0	2.2	0.0	0.0	7.5	16.5	0.0	4.1
Cycle Q Clear(g_c), s	1.3	16.8	16.8	1.3	18.0	2.2	24.0	0.0	7.5	24.0	0.0	4.1
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.90	0.95		1.00
Lane Grp Cap(c), veh/h	412	1271	1334	448	2542	1134	44	0	230	174	0	227
V/C Ratio(X)	0.13	0.37	0.37	0.12	0.39	0.07	0.16	0.00	0.35	0.95	0.00	0.19
Avail Cap(c_a), veh/h	417	1271	1334	453	2542	1134	44	0	230	174	0	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	8.4	8.4	6.1	8.6	6.5	82.5	0.0	63.4	75.9	0.0	62.0
Incr Delay (d2), s/veh	0.1	0.7	0.7	0.1	0.5	0.1	1.7	0.0	0.9	54.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	5.9	6.2	0.4	6.2	0.7	0.3	0.0	3.1	9.8	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.3	9.2	9.1	6.2	9.1	6.6	84.2	0.0	64.3	130.1	0.0	62.4
LnGrp LOS	A	A	A	A	A	A	F		E	F		E
Approach Vol, veh/h		1026			1126			87			210	
Approach Delay, s/veh		9.0			8.8			65.9			115.9	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	125.9		30.0	9.1	125.9		30.0				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	5.0	119.0		24.0	5.0	16.0		11.0				
Max Q Clear Time (g_c+I1), s	3.3	18.8		26.0	3.3	20.0		26.0				
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	0.0		0.0				

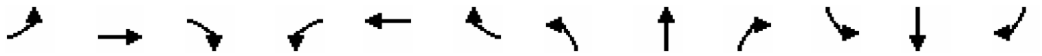
Intersection Summary												
HCM 7th Control Delay, s/veh			20.1									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	1629	18	20	1419	49	10	6	36	39	6	26
Future Volume (veh/h)	79	1629	18	20	1419	49	10	6	36	39	6	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	83	1715	19	21	1494	52	11	6	38	41	6	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	292	2879	32	238	2779	97	28	10	133	32	3	133
Arrive On Green	0.02	0.81	0.81	0.02	0.81	0.81	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1753	3543	39	1753	3448	120	0	112	1560	0	30	1560
Grp Volume(v), veh/h	83	845	889	21	756	790	17	0	38	47	0	27
Grp Sat Flow(s),veh/h/ln	1753	1749	1834	1753	1749	1819	112	0	1560	30	0	1560
Q Serve(g_s), s	1.8	37.0	37.2	0.5	31.2	31.4	0.0	0.0	4.8	0.0	0.0	3.4
Cycle Q Clear(g_c), s	1.8	37.0	37.2	0.5	31.2	31.4	18.0	0.0	4.8	18.0	0.0	3.4
Prop In Lane	1.00		0.02	1.00		0.07	0.65		1.00	0.87		1.00
Lane Grp Cap(c), veh/h	292	1421	1490	238	1409	1466	38	0	133	34	0	133
V/C Ratio(X)	0.28	0.59	0.60	0.09	0.54	0.54	0.45	0.00	0.29	1.36	0.00	0.20
Avail Cap(c_a), veh/h	375	1421	1490	350	1409	1466	38	0	133	34	0	133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.4	7.2	7.2	6.6	7.0	7.0	95.7	0.0	90.5	104.2	0.0	89.8
Incr Delay (d2), s/veh	0.5	1.8	1.8	0.1	0.9	0.9	8.2	0.0	1.2	278.1	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	12.5	13.1	0.1	10.5	11.0	1.0	0.0	2.0	4.6	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.9	9.0	9.0	6.7	7.9	7.9	104.0	0.0	91.6	382.3	0.0	90.6
LnGrp LOS	A	A	A	A	A	A	F		F	F		F
Approach Vol, veh/h		1817			1567			55			74	
Approach Delay, s/veh		8.9			7.9			95.5			275.8	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	177.5		24.0	11.0	176.0		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	17.0	137.0		18.0	15.0	160.0		8.0				
Max Q Clear Time (g_c+I1), s	2.5	39.2		20.0	3.8	33.4		20.0				
Green Ext Time (p_c), s	0.0	19.8		0.0	0.1	15.1		0.0				

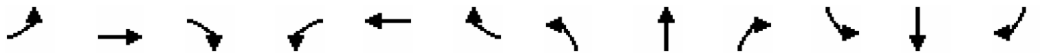
Intersection Summary			
HCM 7th Control Delay, s/veh		15.4	
HCM 7th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1053	500	159	944	55	579	120	119	115	132	21
Future Volume (veh/h)	46	1053	500	159	944	55	579	120	119	115	132	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	50	1145	543	173	1026	60	629	130	129	125	143	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	280	1824	813	186	2184	128	556	264	262	153	191	32
Arrive On Green	0.52	0.52	0.52	0.11	0.65	0.65	0.16	0.31	0.31	0.12	0.12	0.12
Sat Flow, veh/h	515	3526	1572	1767	3385	198	3428	855	848	1023	1535	255
Grp Volume(v), veh/h	50	1145	543	173	534	552	629	0	259	143	0	148
Grp Sat Flow(s),veh/h/ln	515	1763	1572	1767	1763	1820	1714	0	1703	1171	0	1643
Q Serve(g_s), s	14.5	61.5	67.5	25.7	40.9	40.9	43.0	0.0	32.8	32.3	0.0	23.0
Cycle Q Clear(g_c), s	21.5	61.5	67.5	25.7	40.9	40.9	43.0	0.0	32.8	32.3	0.0	23.0
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.50	0.87		0.16
Lane Grp Cap(c), veh/h	280	1824	813	186	1137	1174	556	0	527	171	0	205
V/C Ratio(X)	0.18	0.63	0.67	0.93	0.47	0.47	1.13	0.00	0.49	0.84	0.00	0.72
Avail Cap(c_a), veh/h	280	1824	813	220	1137	1174	556	0	527	171	0	205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	45.7	47.2	117.6	23.9	23.9	111.0	0.0	74.5	115.7	0.0	111.6
Incr Delay (d2), s/veh	1.1	1.3	3.4	36.3	1.3	1.2	79.5	0.0	0.7	28.5	0.0	11.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	27.3	27.3	13.8	17.5	18.1	25.4	0.0	14.5	11.3	0.0	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.1	47.0	50.6	153.9	25.2	25.2	190.5	0.0	75.2	144.2	0.0	123.5
LnGrp LOS	D	D	D	F	C	C	F		E	F		F
Approach Vol, veh/h		1738			1259			888			291	
Approach Delay, s/veh		47.9			42.9			156.9			133.7	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	33.9	143.1	49.0	39.0		177.0		88.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	33.0	132.0	43.0	33.0		147.0		43.0				
Max Q Clear Time (g_c+I1), s	27.7	69.5	45.0	34.3		42.9		34.8				
Green Ext Time (p_c), s	0.2	15.0	0.0	0.0		7.7		0.8				

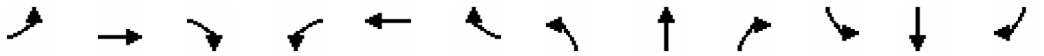
Intersection Summary												
HCM 7th Control Delay, s/veh			75.5									
HCM 7th LOS			E									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	1213	18	50	1119	111	10	15	92	96	8	33
Future Volume (veh/h)	64	1213	18	50	1119	111	10	15	92	96	8	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	1290	19	53	1190	118	11	16	98	102	9	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	2977	44	352	2951	1316	43	26	162	100	5	184
Arrive On Green	0.83	0.83	0.83	0.83	0.83	0.83	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	421	3585	53	420	3554	1585	1362	227	1392	511	45	1585
Grp Volume(v), veh/h	68	639	670	53	1190	118	11	0	114	111	0	35
Grp Sat Flow(s),veh/h/ln	421	1777	1861	420	1777	1585	1362	0	1620	556	0	1585
Q Serve(g_s), s	8.3	16.0	16.0	6.4	14.3	2.3	0.0	0.0	11.2	8.3	0.0	3.4
Cycle Q Clear(g_c), s	22.6	16.0	16.0	22.5	14.3	2.3	19.5	0.0	11.2	19.5	0.0	3.4
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.86	0.92		1.00
Lane Grp Cap(c), veh/h	356	1475	1545	352	2951	1316	43	0	188	106	0	184
V/C Ratio(X)	0.19	0.43	0.43	0.15	0.40	0.09	0.26	0.00	0.61	1.05	0.00	0.19
Avail Cap(c_a), veh/h	356	1475	1545	352	2951	1316	43	0	188	106	0	184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.5	3.8	3.8	6.8	3.6	2.6	84.0	0.0	70.6	81.5	0.0	67.1
Incr Delay (d2), s/veh	0.9	0.7	0.6	0.9	0.4	0.1	3.1	0.0	5.5	102.0	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.4	4.6	0.6	3.9	0.6	0.5	0.0	5.0	7.6	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.4	4.5	4.4	7.7	4.0	2.7	87.1	0.0	76.1	183.5	0.0	67.6
LnGrp LOS	A	A	A	A	A	A	F		E	F		E
Approach Vol, veh/h		1377			1361			125			146	
Approach Delay, s/veh		4.6			4.1			77.0			155.7	
Approach LOS		A			A			E			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		144.0		24.0		144.0		24.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		139.5		15.5		139.5		19.5				
Max Q Clear Time (g_c+I1), s		24.6		21.5		24.5		21.5				
Green Ext Time (p_c), s		12.8		0.0		12.8		0.0				

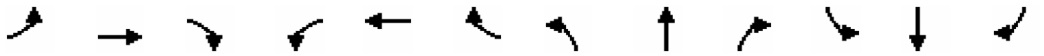
Intersection Summary												
HCM 7th Control Delay, s/veh			14.7									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1287	5	23	1510	52	19	2	30	20	2	29
Future Volume (veh/h)	31	1287	5	23	1510	52	19	2	30	20	2	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	32	1341	5	24	1573	54	20	2	31	21	2	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	248	2779	10	327	2648	91	35	2	185	36	2	185
Arrive On Green	0.02	0.78	0.78	0.02	0.77	0.77	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1753	3574	13	1753	3450	118	0	16	1560	0	15	1560
Grp Volume(v), veh/h	32	656	690	24	795	832	22	0	31	23	0	30
Grp Sat Flow(s),veh/h/ln	1753	1749	1838	1753	1749	1819	16	0	1560	15	0	1560
Q Serve(g_s), s	0.8	25.9	25.9	0.6	37.6	38.0	0.0	0.0	3.5	0.0	0.0	3.4
Cycle Q Clear(g_c), s	0.8	25.9	25.9	0.6	37.6	38.0	23.0	0.0	3.5	23.0	0.0	3.4
Prop In Lane	1.00		0.01	1.00		0.06	0.91		1.00	0.91		1.00
Lane Grp Cap(c), veh/h	248	1360	1430	327	1342	1396	37	0	185	37	0	185
V/C Ratio(X)	0.13	0.48	0.48	0.07	0.59	0.60	0.59	0.00	0.17	0.62	0.00	0.16
Avail Cap(c_a), veh/h	320	1360	1430	339	1342	1396	37	0	185	37	0	185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.71	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	7.7	7.7	6.1	9.6	9.7	95.0	0.0	76.9	95.2	0.0	76.8
Incr Delay (d2), s/veh	0.2	1.2	1.2	0.1	1.4	1.3	22.0	0.0	0.4	26.8	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	9.1	9.5	0.2	13.3	14.0	1.4	0.0	1.4	1.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.8	8.9	8.8	6.1	11.0	11.0	117.1	0.0	77.3	122.0	0.0	77.2
LnGrp LOS	A	A	A	A	B	B	F		E	F		E
Approach Vol, veh/h		1378			1651			53			53	
Approach Delay, s/veh		8.9			10.9			93.8			96.7	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	156.9		29.0	10.1	154.9		29.0				
Change Period (Y+Rc), s	4.5	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	149.0		23.0	12.0	131.0		9.0				
Max Q Clear Time (g_c+I1), s	2.6	27.9		25.0	2.8	40.0		25.0				
Green Ext Time (p_c), s	0.0	11.2		0.0	0.0	16.9		0.0				

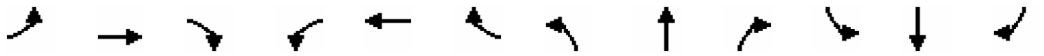
Intersection Summary												
HCM 7th Control Delay, s/veh			12.9									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	908	402	163	1044	17	603	103	131	64	89	29
Future Volume (veh/h)	36	908	402	163	1044	17	603	103	131	64	89	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	936	414	168	1076	18	622	106	135	66	92	30
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	270	1702	759	185	2197	37	674	235	300	109	133	48
Arrive On Green	0.48	0.48	0.48	0.10	0.62	0.62	0.20	0.32	0.32	0.09	0.09	0.09
Sat Flow, veh/h	511	3526	1572	1767	3548	59	3428	741	944	865	1489	538
Grp Volume(v), veh/h	37	936	414	168	535	559	622	0	241	99	0	89
Grp Sat Flow(s),veh/h/ln	511	1763	1572	1767	1763	1845	1714	0	1686	1300	0	1592
Q Serve(g_s), s	8.1	35.5	35.1	17.9	31.5	31.5	33.8	0.0	21.6	14.3	0.0	10.2
Cycle Q Clear(g_c), s	13.7	35.5	35.1	17.9	31.5	31.5	33.8	0.0	21.6	14.3	0.0	10.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.56	0.66		0.34
Lane Grp Cap(c), veh/h	270	1702	759	185	1091	1142	674	0	535	148	0	142
V/C Ratio(X)	0.14	0.55	0.55	0.91	0.49	0.49	0.92	0.00	0.45	0.67	0.00	0.62
Avail Cap(c_a), veh/h	270	1702	759	195	1091	1142	794	0	535	223	0	235
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.6	34.6	34.5	84.1	19.8	19.8	74.9	0.0	51.6	85.3	0.0	83.4
Incr Delay (d2), s/veh	1.0	1.2	2.5	36.4	1.4	1.4	14.7	0.0	0.6	5.2	0.0	4.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	15.3	13.9	9.9	13.0	13.5	16.1	0.0	9.2	5.0	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.5	35.8	37.0	120.6	21.2	21.2	89.6	0.0	52.2	90.5	0.0	87.8
LnGrp LOS	C	D	D	F	C	C	F		D	F		F
Approach Vol, veh/h		1387			1262			863			188	
Approach Delay, s/veh		36.0			34.4			79.2			89.2	
Approach LOS		D			C			E			F	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	25.9	97.7	43.4	23.0		123.6		66.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	21.0	73.0	44.0	28.0		84.0		44.0				
Max Q Clear Time (g_c+I1), s	19.9	37.5	35.8	16.3		33.5		23.6				
Green Ext Time (p_c), s	0.0	9.5	1.5	0.7		7.6		1.2				

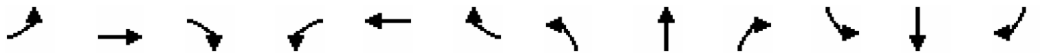
Intersection Summary	
HCM 7th Control Delay, s/veh	48.2
HCM 7th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	992	8	55	1027	97	7	8	74	180	10	76
Future Volume (veh/h)	88	992	8	55	1027	97	7	8	74	180	10	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	91	1023	8	57	1059	100	7	8	76	186	10	78
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	385	2584	20	425	2535	1130	44	22	208	164	7	227
Arrive On Green	0.03	0.73	0.73	0.03	0.72	0.72	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1753	3557	28	1753	3497	1560	1288	151	1432	836	45	1560
Grp Volume(v), veh/h	91	503	528	57	1059	100	7	0	84	196	0	78
Grp Sat Flow(s),veh/h/ln	1753	1749	1836	1753	1749	1560	1288	0	1583	881	0	1560
Q Serve(g_s), s	2.2	18.2	18.2	1.4	19.7	3.1	0.0	0.0	7.9	16.1	0.0	7.4
Cycle Q Clear(g_c), s	2.2	18.2	18.2	1.4	19.7	3.1	24.0	0.0	7.9	24.0	0.0	7.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.90	0.95		1.00
Lane Grp Cap(c), veh/h	385	1270	1334	425	2535	1130	44	0	230	171	0	227
V/C Ratio(X)	0.24	0.40	0.40	0.13	0.42	0.09	0.16	0.00	0.36	1.15	0.00	0.34
Avail Cap(c_a), veh/h	385	1270	1334	428	2535	1130	44	0	230	171	0	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.7	8.7	8.7	6.3	9.0	6.7	82.5	0.0	63.6	76.5	0.0	63.4
Incr Delay (d2), s/veh	0.2	0.7	0.7	0.1	0.5	0.2	1.7	0.0	1.0	114.5	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.4	6.7	0.5	6.9	1.0	0.3	0.0	3.3	12.8	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.9	9.4	9.3	6.4	9.5	6.8	84.2	0.0	64.6	191.0	0.0	64.3
LnGrp LOS	A	A	A	A	A	A	F		E	F		E
Approach Vol, veh/h		1122			1216			91			274	
Approach Delay, s/veh		9.2			9.1			66.1			154.9	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	125.9		30.0	9.4	125.6		30.0				
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0				
Max Green Setting (Gmax), s	5.0	119.0		24.0	5.0	16.0		11.0				
Max Q Clear Time (g_c+I1), s	3.4	20.2		26.0	4.2	21.7		26.0				
Green Ext Time (p_c), s	0.0	7.0		0.0	0.0	0.0		0.0				

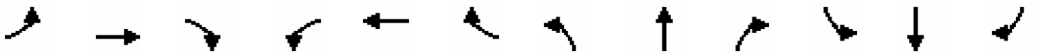
Intersection Summary												
HCM 7th Control Delay, s/veh			25.8									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	1747	19	22	1527	53	11	6	39	42	6	28
Future Volume (veh/h)	84	1747	19	22	1527	53	11	6	39	42	6	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	88	1839	20	23	1607	56	12	6	41	44	6	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	262	2877	31	213	2779	97	28	9	133	32	2	133
Arrive On Green	0.02	0.81	0.81	0.02	0.81	0.81	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1753	3544	38	1753	3448	120	0	102	1560	0	28	1560
Grp Volume(v), veh/h	88	906	953	23	813	850	18	0	41	50	0	29
Grp Sat Flow(s),veh/h/ln	1753	1749	1834	1753	1749	1819	102	0	1560	28	0	1560
Q Serve(g_s), s	1.9	42.7	43.0	0.5	35.6	36.0	0.0	0.0	5.2	0.0	0.0	3.7
Cycle Q Clear(g_c), s	1.9	42.7	43.0	0.5	35.6	36.0	18.0	0.0	5.2	18.0	0.0	3.7
Prop In Lane	1.00		0.02	1.00		0.07	0.67		1.00	0.88		1.00
Lane Grp Cap(c), veh/h	262	1420	1489	213	1409	1466	37	0	133	34	0	133
V/C Ratio(X)	0.34	0.64	0.64	0.11	0.58	0.58	0.48	0.00	0.31	1.45	0.00	0.22
Avail Cap(c_a), veh/h	346	1420	1489	323	1409	1466	37	0	133	34	0	133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.54	0.54	0.54	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.6	7.8	7.8	7.9	7.4	7.5	97.0	0.0	90.7	104.3	0.0	89.9
Incr Delay (d2), s/veh	0.7	2.2	2.1	0.1	0.9	0.9	9.4	0.0	1.3	312.3	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	14.5	15.3	0.2	11.9	12.5	1.1	0.0	2.2	4.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.4	10.0	9.9	8.0	8.4	8.4	106.5	0.0	91.9	416.5	0.0	90.8
LnGrp LOS	A	A	A	A	A	A	F		F	F		F
Approach Vol, veh/h		1947			1686			59			79	
Approach Delay, s/veh		9.9			8.4			96.4			296.9	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	177.3		24.0	11.0	176.0		24.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	17.0	137.0		18.0	15.0	160.0		8.0				
Max Q Clear Time (g_c+I1), s	2.5	45.0		20.0	3.9	38.0		20.0				
Green Ext Time (p_c), s	0.0	23.8		0.0	0.1	18.0		0.0				

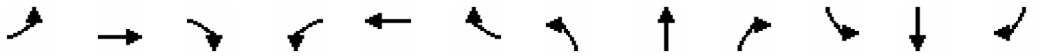
Intersection Summary	
HCM 7th Control Delay, s/veh	16.6
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	1137	531	180	1025	58	614	127	135	122	140	22
Future Volume (veh/h)	49	1137	531	180	1025	58	614	127	135	122	140	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	1236	577	196	1114	63	667	138	147	133	152	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	250	1779	794	208	2189	124	556	254	271	151	190	31
Arrive On Green	0.50	0.50	0.50	0.12	0.65	0.65	0.16	0.31	0.31	0.12	0.12	0.12
Sat Flow, veh/h	473	3526	1572	1767	3392	192	3428	822	876	1010	1525	248
Grp Volume(v), veh/h	53	1236	577	196	579	598	667	0	285	150	0	159
Grp Sat Flow(s),veh/h/ln	473	1763	1572	1767	1763	1821	1714	0	1698	1139	0	1644
Q Serve(g_s), s	17.7	70.9	76.1	29.2	45.9	46.0	43.0	0.0	36.9	33.0	0.0	24.8
Cycle Q Clear(g_c), s	26.4	70.9	76.1	29.2	45.9	46.0	43.0	0.0	36.9	33.0	0.0	24.8
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.52	0.89		0.15
Lane Grp Cap(c), veh/h	250	1779	794	208	1137	1175	556	0	525	167	0	205
V/C Ratio(X)	0.21	0.69	0.73	0.94	0.51	0.51	1.20	0.00	0.54	0.90	0.00	0.78
Avail Cap(c_a), veh/h	250	1779	794	220	1137	1175	556	0	525	167	0	205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.6	50.1	51.3	116.0	24.8	24.8	111.0	0.0	75.9	116.9	0.0	112.4
Incr Delay (d2), s/veh	1.4	1.7	4.3	40.8	1.5	1.4	106.0	0.0	1.1	41.2	0.0	17.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	31.5	30.9	15.8	19.7	20.3	27.5	0.0	16.4	12.4	0.0	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.1	51.7	55.6	156.7	26.3	26.3	217.0	0.0	77.1	158.1	0.0	129.4
LnGrp LOS	D	D	E	F	C	C	F		E	F		F
Approach Vol, veh/h		1866			1373			952			309	
Approach Delay, s/veh		52.7			44.9			175.1			143.3	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2	3	4		6		8				
Phs Duration (G+Y+Rc), s	37.3	139.7	49.0	39.0		177.0		88.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0		6.0				
Max Green Setting (Gmax), s	33.0	132.0	43.0	33.0		147.0		43.0				
Max Q Clear Time (g_c+I1), s	31.2	78.1	45.0	35.0		48.0		38.9				
Green Ext Time (p_c), s	0.1	16.9	0.0	0.0		8.8		0.6				

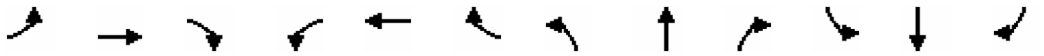
Intersection Summary												
HCM 7th Control Delay, s/veh			82.4									
HCM 7th LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	1287	19	53	1187	137	11	16	98	124	8	69
Future Volume (veh/h)	98	1287	19	53	1187	137	11	16	98	124	8	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	1369	20	56	1263	146	12	17	104	132	9	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	2977	43	325	2951	1316	43	26	162	96	4	184
Arrive On Green	0.83	0.83	0.83	0.83	0.83	0.83	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	382	3585	52	389	3554	1585	1316	228	1392	468	32	1585
Grp Volume(v), veh/h	104	678	711	56	1263	146	12	0	121	141	0	73
Grp Sat Flow(s),veh/h/ln	382	1777	1861	389	1777	1585	1316	0	1620	500	0	1585
Q Serve(g_s), s	16.5	17.6	17.6	7.7	15.7	2.9	0.0	0.0	12.0	7.5	0.0	7.2
Cycle Q Clear(g_c), s	32.3	17.6	17.6	25.4	15.7	2.9	19.5	0.0	12.0	19.5	0.0	7.2
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.86	0.94		1.00
Lane Grp Cap(c), veh/h	324	1475	1545	325	2951	1316	43	0	188	99	0	184
V/C Ratio(X)	0.32	0.46	0.46	0.17	0.43	0.11	0.28	0.00	0.64	1.42	0.00	0.40
Avail Cap(c_a), veh/h	324	1475	1545	325	2951	1316	43	0	188	99	0	184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	3.9	3.9	7.4	3.8	2.7	84.0	0.0	70.9	81.8	0.0	68.8
Incr Delay (d2), s/veh	1.7	0.7	0.6	1.1	0.5	0.2	3.5	0.0	7.3	236.6	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.8	5.0	0.7	4.2	0.7	0.6	0.0	5.4	10.9	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.7	4.6	4.6	8.5	4.2	2.8	87.5	0.0	78.2	318.4	0.0	70.2
LnGrp LOS	A	A	A	A	A	A	F		E	F		E
Approach Vol, veh/h		1493			1465			133			214	
Approach Delay, s/veh		4.9			4.2			79.1			233.7	
Approach LOS		A			A			E			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		144.0		24.0		144.0		24.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		139.5		15.5		139.5		19.5				
Max Q Clear Time (g_c+I1), s		34.3		21.5		27.4		21.5				
Green Ext Time (p_c), s		16.1		0.0		14.6		0.0				

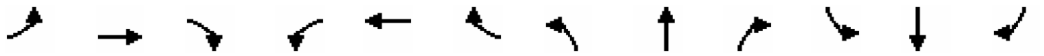
Intersection Summary												
HCM 7th Control Delay, s/veh			22.4									
HCM 7th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	908	402	163	1044	17	603	103	131	64	89	29
Future Volume (veh/h)	36	908	402	163	1044	17	603	103	131	64	89	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	936	414	168	1076	18	622	106	135	66	92	30
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	259	1465	654	194	2029	905	709	440	373	217	126	106
Arrive On Green	0.42	0.42	0.42	0.11	0.58	0.58	0.21	0.24	0.24	0.05	0.07	0.07
Sat Flow, veh/h	511	3526	1572	1767	3526	1572	3428	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	37	936	414	168	1076	18	622	106	135	66	92	30
Grp Sat Flow(s),veh/h/ln	511	1763	1572	1767	1763	1572	1714	1856	1572	1767	1856	1572
Q Serve(g_s), s	5.7	25.3	25.1	11.2	22.4	0.6	21.1	5.5	8.6	4.1	5.8	2.2
Cycle Q Clear(g_c), s	8.9	25.3	25.1	11.2	22.4	0.6	21.1	5.5	8.6	4.1	5.8	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	1465	654	194	2029	905	709	440	373	217	126	106
V/C Ratio(X)	0.14	0.64	0.63	0.86	0.53	0.02	0.88	0.24	0.36	0.30	0.73	0.28
Avail Cap(c_a), veh/h	259	1465	654	206	2029	905	943	619	524	313	278	236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	27.9	27.8	52.5	15.6	10.9	46.1	37.1	38.2	49.0	54.9	53.2
Incr Delay (d2), s/veh	1.0	1.9	4.2	26.7	0.9	0.0	7.5	0.3	0.6	0.8	7.9	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	10.4	9.7	6.2	8.3	0.2	9.4	2.5	3.3	1.8	2.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.2	29.8	32.0	79.3	16.5	11.0	53.6	37.3	38.8	49.8	62.8	54.6
LnGrp LOS	C	C	C	E	B	B	D	D	D	D	E	D
Approach Vol, veh/h		1387			1262			863			188	
Approach Delay, s/veh		30.4			24.7			49.3			56.9	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	19.2	55.9	30.8	14.1		75.1	10.5	34.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		6.0	5.0	6.0				
Max Green Setting (Gmax), s	14.0	31.0	33.0	18.0		51.0	12.0	40.0				
Max Q Clear Time (g_c+I1), s	13.2	27.3	23.1	7.8		24.4	6.1	10.6				
Green Ext Time (p_c), s	0.0	2.4	1.7	0.3		7.7	0.0	0.9				

Intersection Summary	
HCM 7th Control Delay, s/veh	34.2
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	1137	531	180	1025	58	614	127	135	122	140	22
Future Volume (veh/h)	49	1137	531	180	1025	58	614	127	135	122	140	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	1236	577	196	1114	63	667	138	147	133	152	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	213	1337	597	191	1896	846	756	183	155	437	186	157
Arrive On Green	0.38	0.38	0.38	0.11	0.54	0.54	0.22	0.10	0.10	0.21	0.10	0.10
Sat Flow, veh/h	473	3526	1572	1767	3526	1572	3428	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	53	1236	577	196	1114	63	667	138	147	133	152	24
Grp Sat Flow(s),veh/h/ln	473	1763	1572	1767	1763	1572	1714	1856	1572	1767	1856	1572
Q Serve(g_s), s	10.2	40.2	43.2	13.0	25.6	2.3	22.6	8.7	8.6	3.3	9.6	1.7
Cycle Q Clear(g_c), s	16.9	40.2	43.2	13.0	25.6	2.3	22.6	8.7	8.6	3.3	9.6	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	1337	597	191	1896	846	756	183	155	437	186	157
V/C Ratio(X)	0.25	0.92	0.97	1.02	0.59	0.07	0.88	0.75	0.95	0.30	0.82	0.15
Avail Cap(c_a), veh/h	213	1337	597	191	1896	846	1000	631	535	437	278	236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	35.6	36.5	53.5	18.7	13.4	45.2	52.7	31.8	37.7	52.9	49.4
Incr Delay (d2), s/veh	2.0	9.4	24.5	68.4	1.2	0.2	7.4	6.1	22.9	0.4	11.2	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	17.8	19.7	9.2	9.8	0.8	10.1	4.3	4.2	3.1	5.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.9	45.0	61.0	121.9	20.0	13.5	52.7	58.8	54.6	38.0	64.1	49.8
LnGrp LOS	C	D	E	F	B	B	D	E	D	D	E	D
Approach Vol, veh/h		1866			1373			952			309	
Approach Delay, s/veh		49.6			34.2			53.9			51.8	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	19.0	51.5	31.5	18.0		70.5	31.6	17.8				
Change Period (Y+Rc), s	6.0	6.0	5.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s	13.0	31.0	35.0	18.0		50.0	11.2	40.8				
Max Q Clear Time (g_c+I1), s	15.0	45.2	24.6	11.6		27.6	5.3	10.7				
Green Ext Time (p_c), s	0.0	0.0	1.9	0.4		7.8	0.1	1.2				

Intersection Summary	
HCM 7th Control Delay, s/veh	45.9
HCM 7th LOS	D

July 31, 2025

John Rabon
Senior Planner
City of Winter Springs
1126 East State Road 434

RE: Winter Springs Town Center – The Learning Experience – Parking Justification

Mr. Rabon,

NV5 presents the following analysis and justification for the anticipated parking needs for the proposed Learning Experience project located on SR 434 & Michael Blake Boulevard in Winter Springs, FL. The site is zoned Town Center T-5.

Developments within the Town Center do not have a specific parking ratio requirement and require a statement of justification for the amount of parking spaces proposed. This justification provides a comparison between the City's code-required parking for this land use as well as the Institute of Transportation Engineers (ITE) *Parking Generation Manual 6th Edition*.

The proposed Learning Experience is a 10,000 SF daycare facility. They anticipate to have a total of 30 teachers and staff present on-site at peak daily operations. There will be approximately 174 students.

City Code-Required Parking

Sec. 9-277 of City Code does not have a use directly corelated with a daycare facility. Similar uses listed in City Code that could be applicable include "Welfare Institution/Orphanage" (Sec. 9-277.13), "Community Centers" (Sec. 9-277.14) or "Schools/Elementary" (Sec. 9-277.22). Those uses and their calculated required parking are listed in Table 1 below:

Table 1

Use per Code Sec. 9-277	Code Requirement	Total Parking Required
Welfare Institution/Orphanage	One (1) parking space for each doctor (staff or visiting) associated with the institution, plus additional parking spaces equal to seventy-five (75) percent of the number of employees, plus such additional space for business and social visitors as shall be determined by the planning and zoning board to be necessary in light of the needs of the particular institution.	0 doctors associated with the institution + 75% x 30 employees + 12 visitors at peak daily operation = **35 parking spaces**

Community Centers	Spaces equal in number to seventy-five (75) percent of the number of employees, plus additional parking spaces for visitors as shall be found by the planning and zoning board to be necessary in the light of the particular needs and circumstances of the institution.	75% x 30 employees + 12 visitors at peak daily operation = **35 parking spaces**
Schools/Elementary	One (1) parking space for every one thousand (1,000) square feet of floor space plus sufficient off-street parking space for safe and convenient loading and unloading of students.	10,000 SF / 1,000S SF + 12 visitors at peak daily operation = **22 parking spaces**

Institute of Transportation Engineers (ITE) *Parking Generation Manual 6th Edition*

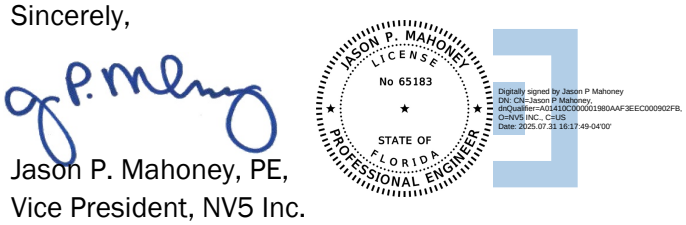
ITE Parking Generation Manual 6th Edition includes "Day Care Center" as a defined use (Land Use Code 565). The calculated required parking for that use is listed in Table 2 below:

Table 2		
ITE Land Use Code 565	**Code Requirement**	**Total Parking Required**
Day Care Center	85th percentile parking demand per 1,000 SF of gross floor area (GFA) = 3.42	3.42 x 10,000/1,000 = **35 parking spaces**

Conclusion

Upon review of City Code and ITE Parking Generation Manual 6th Edition, the proposed parking supply of **42 parking spaces** will be sufficient for parking demand at the proposed Learning Experience.

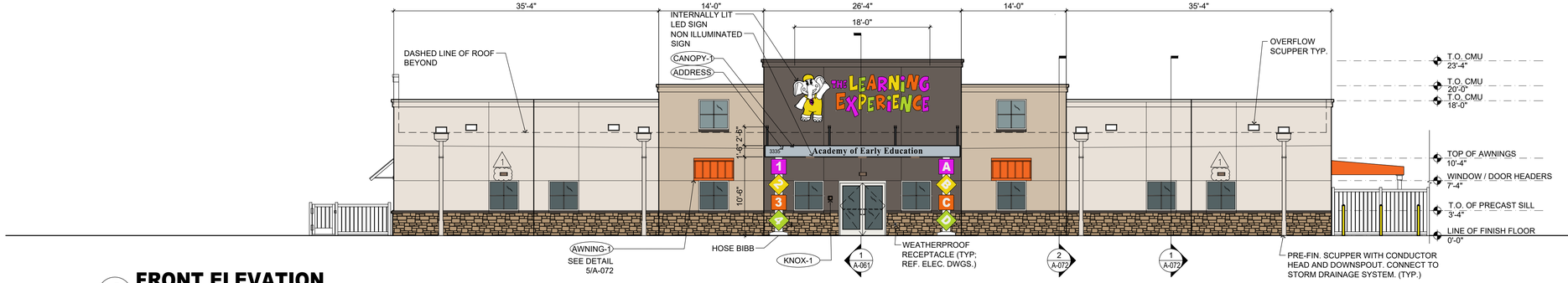
Sincerely,



Jason P. Mahoney, PE,
Vice President, NV5 Inc.

FISCAL IMPACT:

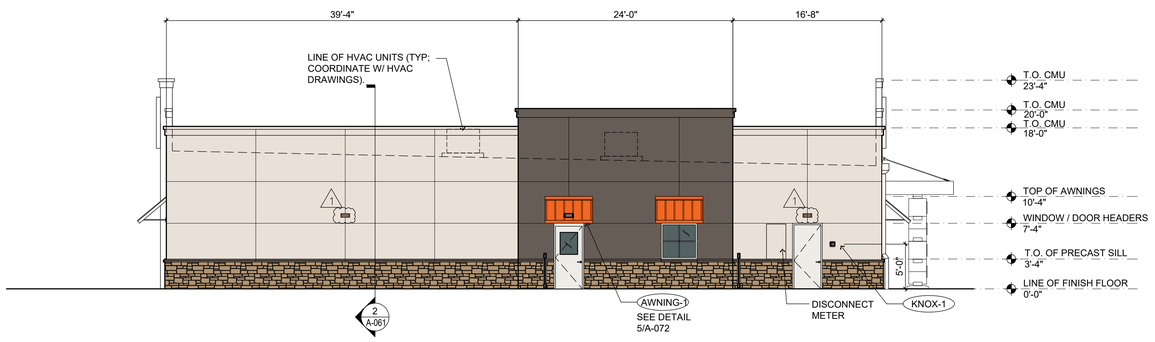
Approval of the Final Engineering Plan and Aesthetic Review allows the subject property to be developed into a 10,000 sq ft childcare center. Development of the subject property is anticipated to provide 20+/- jobs and increase the City's taxable value. The potential tax revenue of the proposed development is estimated to be approximately $30,000.



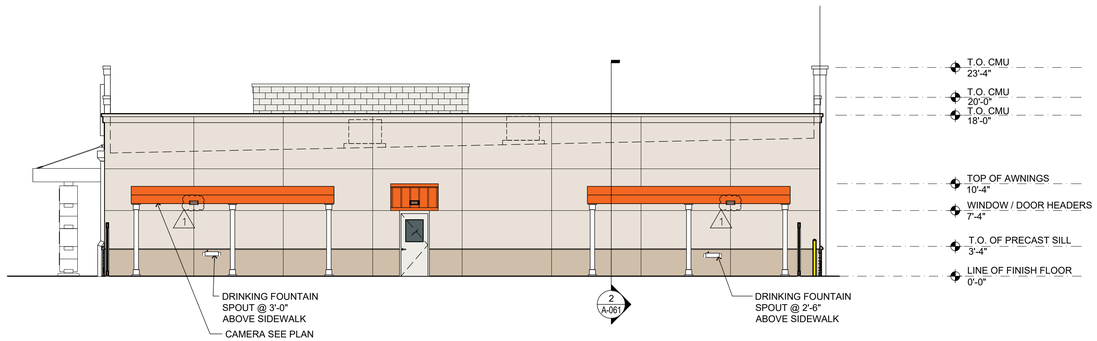
1 FRONT ELEVATION
SCALE: 1/8"=1'-0"



2 REAR ELEVATION
SCALE: 1/8"=1'-0"



3 SIDE ELEVATION
SCALE: 1/8"=1'-0"



4 SIDE ELEVATION
SCALE: 1/8"=1'-0"

EXTERIOR MATERIAL SCHEDULE

LABEL	MANUFACTURER	SIZE / TYPE	FINISH / COLOR	
STOREFRONT	KAWNEER	IMPACT RESISTANT	BONE WHITE	
DOOR	-	PER DOOR SCHEDULE	FACTORY PRIMED- FINISH PAINT COLOR: WHITE	
FIXED WINDOW	KAWNEER	IMPACT RESISTANT	BONE WHITE	
MCJ			MASONRY CONTROL JOINT	
STONE	QUARRY MILL	STONE VENEER	CASCADE EARTHY BROWNS TUMBLED ASHLAR STYLE	
SILL-1		3 3/4"Hx6"W W/ 2" FLAT W/ 1/4" DRIP EDGE	COLOR: MANOR HOUSE SW7505	
STUCCO-1	STUCCO	SHERWIN WILLIAMS	SAND FINISH- ACCENT COLOR: MANOR HOUSE SW7505	
STUCCO-2	STUCCO	SHERWIN WILLIAMS	SAND FINISH- ACCENT COLOR: MALABAR SW9110	
STUCCO-3	STUCCO	SHERWIN WILLIAMS	SAND FINISH- FIELD COLOR: SNOWBOUND SW7004	
GUTTER-1	-	5" X5" ALUMINUM CONDUCTOR AND DOWNSPOUT	MATCH COLOR: SNOWBOUND SW700	
CANOPY-1	-	CUSTOM ALUMINUM	COLOR: ANODIZED ALUMINUM	
AWNING-1	-	CUSTOM ALUMINUM	SW POWDURA COLOR: GOLDEN CORN PYS9-C0000	
AWNING-2	SERGE FERRARI SOLTIS	CUSTOM ALUMINUM	COLOR: 502V2-8204C, ORANGE	
COPING-1	FABRAL (OR EQUAL)	BREAK METAL	COLOR: MATCH ADJACENT COLOR	
KNOX-1	KNOX BOX	3200 SERIES W/ RECESSED MOUNT FLANGE, HINGE DOOR, & TAMPER SWITCH	DARK BRONZE (REF. NOTE 2 BELOW)	

FINISH SCHEDULE NOTES:
1. G.C. SHALL VERIFY KNOX BOX MODEL(S) AND LOCATION(S) WITH AUTHORITY HAVING JURISDICTION PRIOR TO ORDERING AND INSTALLATION.
2. G.C. SHALL ENSURE ALL EXTERIOR FINISHES ARE INSTALLED AND FINISHED IN COMPLIANCE WITH MANUFACTURERS' WARRANTY REQUIREMENTS.

GENERAL NOTES:
1. HOSE BIBB IN PLAYGROUND TO BE LOCATED AT PERPENDICULAR INTERIOR WALL.
2. DRINKING FOUNTAINS IN PLAYGROUND TO BE LOCATED AT PERPENDICULAR WALL.
3. SEE P-200 FOR HOSE BIBB SPEC A1321.
4. ADDRESS IDENTIFICATION SHALL BE PROVIDED AND COMPLY WITH LOCAL AHJ

1. GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK. GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL MEANS. GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER CONSTRUCTION PROCEDURES, TECHNIQUES, SEQUENCES, AND FOR JOB SITE SAFETY.

2. GENERAL CONTRACTOR MUST PROVIDE AND INSTALL ALL PRODUCTS PER PLANS. SUBSTITUTED PRODUCTS NEED TO BE SUBMITTED TO THE ARCHITECT AND THE LEARNING EXPERIENCE FOR APPROVAL. UNAPPROVED SUBSTITUTIONS WILL BE REPLACED AT THE EXPENSE OF THE GENERAL CONTRACTOR.

3. VERBAL REPRESENTATION HAS NO VALUE AND ALL REQUESTS TO DEVIATE FROM CONTRACT SPECIFICATIONS AND PLANS, MUST BE SUBMITTED IN WRITING TO THE ARCHITECT AND THE LEARNING EXPERIENCE FOR APPROVAL.

ARC3 architecture
6699 13th Avenue North, Suite 4A
St. Petersburg, FL 33710
(727) 381-5220

SR434 & MICHAEL BLAKE BLVD.
WINTER SPRINGS, FLORIDA
TLE SITE ID: 1FL0134

THE LEARNING EXPERIENCE
ACADEMY OF EARLY EDUCATION

REVISION

NO.	DATE	DESCRIPTION
1	3/19/25	AERV COMMENTS

ISSUE

NO.	DATE	DESCRIPTION
1	8-9-24	CONCEPT SITE PLAN
2	10-31-24	REVISED PER WS ARCH GUIDLINES
3	12-2-24	REV SD PER TLE 3rd COMMENTS
4	1-17-25	CITY OF WS AESTHETIC REVIEW
5		

24022
PROJECT NUMBER

SV
DRAWN BY

APPROVED BY

STATE OF FLORIDA · STEVEN J. VINCI · AR0017036 · REGISTERED ARCHITECT
Steven Vinci
Digitally signed by Steven Vinci
DN: c=US, st=Vinci, l=Clearwater, o=Arc3 architecture, cn=Steven Vinci
Date: 2025.03.19 09:59:37 -04'00'

EXTERIOR ELEVATIONS

A-051

This document contains confidential and proprietary information belonging to The Learning Experience (TLE) and Arc3 architecture. The architectural drawings is specified solely for a Office Building and not to be used for any other purpose, in any manner, or extended to any other work. The architect makes no warranty as to the accuracy, sufficiency or use of any part of this information for any purpose other than that for which it is prepared. If these plans are scaled by any party, the architect assumes no responsibility for the accuracy of the scaled dimensions. The architect shall not be responsible for any use of the plans on any other project, any extensions of this project, or any modifications of the plans unless such use, extension or modification is authorized in writing by the architect. Any such use, extension or modification without written authorization of the architect will be at the user's sole risk and without liability to the architect and the user shall indemnify and hold harmless the architect from all claims, damages, losses and expenses including attorney's fees arising out of or resulting therefrom.



Conceptual Renders

TLE Winter Springs Orlando

CONCEPT DESIGN
PROPOSAL SHEET
A

NOT TO SCALE
JANUARY 15, 2025

ARC3 architecture



Conceptual Renders

TLE Winter Springs Orlando

CONCEPT DESIGN PROPOSAL SHEET **B**

NOT TO SCALE
JANUARY 15, 2025

ARC3 architecture



Conceptual Renders

TLE Winter Springs Orlando

CONCEPT DESIGN PROPOSAL SHEET C

NOT TO SCALE
JANUARY 15, 2025

ARC3 architecture



Conceptual Renders

TLE Winter Springs Orlando

CONCEPT DESIGN PROPOSAL SHEET D

NOT TO SCALE
JANUARY 15, 2025

ARC3 architecture



Conceptual Renders

TLE Winter Springs Orlando

CONCEPT DESIGN PROPOSAL SHEET E

NOT TO SCALE
JANUARY 15, 2025

ARC3 architecture



Conceptual Renders

TLE Winter Springs Orlando

CONCEPT DESIGN PROPOSAL SHEET F

NOT TO SCALE
JANUARY 15, 2025

ARC3 architecture

December 11, 2024

Winter Springs City Hall
Planning Division
1126 E State Rd 434
Winter Springs, FL 32708

Re: Ch 20 Art. V Sec. 20-465, SR 434 Building Setback Waiver General Description
Project Name: The Learning Experience

City of Winter Springs,

A waiver is requested from Winter Springs City Code Section 20-465 to allow The Learning Experience, a proposed daycare center, a minimum building setback of 15' from SR 434 ROW in lieu of the current 25' minimum building setback that is outlined in the previously mentioned code section. The current building setback requirement of 25' from the SR 434 ROW poses a challenge for meeting minimum parking requirements as well as meeting fire access requirements while still providing the space required for a proposed daycare building footprint.

If you have any questions, feel free to contact me at james.herbert@nv5.com.

Sincerely,



James Herbert, E.I. - Project Engineer

April 28, 2025

Winter Springs City Hall
Planning Division
1126 E State Rd 434
Winter Springs, FL 32708

Re: Ch 20, Sec. 20-324, SR 434 Rear Face Waiver General Description
Project Name: The Learning Experience

City of Winter Springs,

A waiver is requested from Winter Springs City Code Chapter 20, Section 324(11)(c) to allow the proposed building to face the proposed vehicular access point rather than SR 434, as required. Vehicular access from SR 434 is not permitted, and strict enforcement of City Code would result in a dysfunctional site layout, including ADA accessibility issues and compromised vehicle circulation. Orienting the building toward the access point ensures compliance with the broader goals of the City's Code and Comprehensive Plan while addressing the site's unique constraints.

If you have any questions, feel free to contact me at james.herbert@nv5.com.

Sincerely,

James Herbert, E.I. - Project Engineer

July 01, 2025

Winter Springs City Hall
Planning Division
1126 E State Rd 434
Winter Springs, FL 32708

Re: Ch 20, Sec. 20-601, SR 434 Streetscape Waiver
Project Name: The Learning Experience

City of Winter Springs,

A waiver is requested from Winter Springs City Code Chapter 20, Section 601 to allow the The Learning Experience streetscape within the SR 434 ROW to consist of (1) 7.5 foot landscape and treescape area for planting canopy trees, (2) 6 foot sidewalk, and (3)13.5 foot landscape area in lieu of (1) 16 foot landscape and treescape area for planting canopy trees, (2) 6 foot sidewalk, and (3) 5 foot landscape area. The FDOT controlled right-of-way adjacent to SR 434 measures only 13.5' in width and the FDOT sidewalk must remain within the right-of-way, thereby limiting design flexibility. The modified streetscape proposed meets the overall intent of Code Section 20-601 while keeping the sidewalk within FDOT right-of-way.

If you have any questions, feel free to contact me at james.herbert@nv5.com.

Sincerely,

James Herbert, E.I. - Project Engineer

December 17, 2024

Winter Springs City Hall
Planning Division
1126 E State Rd 434
Winter Springs, FL 32708

Re: The Learning Experience – Conditional Use Application Justification Narrative
Project Name: The Learning Experience

City of Winter Springs,

Per Sec. 20-323. - Permitted uses., Day Care Centers are a Conditional Use for T5 Zoning. The proposed Day Care Center will be compatible and harmonious with adjacent land uses, will not adversely impact land use activities in the immediate vicinity, will have a positive impact on the local economy and property values, and will have a positive impact on housing and social conditions. The Site Plan submitted with this application demonstrates the day care center has been designed to meet all applicable City Town Center Code to prevent adverse impacts to adjacent and surrounding uses and properties.

If you have any questions, feel free to contact me at james.herbert@nv5.com.

Sincerely,

James Herbert, E.I. - Project Engineer

THIS INSTRUMENT WAS PREPARED BY
AND SHOULD BE RETURNED TO:

Anthony A. Garganese
City Attorney of Winter Springs
Garganese, Weiss, D'Agresta & Salzman, P.A.
111 N. Orange Avenue, Suite 2000
Orlando, FL 32802
(407) 425-9566

FOR RECORDING DEPARTMENT USE ONLY

FIRST MODIFICATION TO DEVELOPMENT AGREEMENT

TUSKAWILLA RETAIL PARTNERS II, LLC

(Lot 3 Commercial Development - The Learning Experience)

THIS FIRST MODIFICATION TO DEVELOPMENT AGREEMENT ("Agreement") is made and executed this _____ day of _____, 2025, by and between the **CITY OF WINTER SPRINGS**, a Florida Municipal Corporation ("City"), whose address is 1126 East S.R. 434, Winter Springs, Florida 32708, and **TUSKAWILLA RETAIL PARTNERS II, LLC**, a Florida Limited Liability Company with its principal address at 880 Glenwood Ave, Suite H, Atlanta, GA 30316 ("Developer").

WITNESSETH

WHEREAS, Developer is the fee simple owner of certain real property located in the City of Winter Springs consisting of 8.11 acres, more or less, located Southeast of the corner of Michael Blake Boulevard and East State Road 434, as more particularly described herein (the "Property"); and

WHEREAS, the Property is subject to that certain Development Agreement dated March 10, 2015, and recorded in the Official Records of Seminole County at Official Record Book 8446 Page 1131, as modified by the First Modification of Development Agreement dated January 9, 2017, and recorded in the Official Records of Seminole County at Official Record Book 8852 Page 1719 (the "Original Development Agreements"), and the Property remains subject to the Original Development Agreements; and

WHEREAS, the Property is also subject to that certain Development Agreement dated _____, and recorded in the Official Records of Seminole County at Official Record Book ____ Page _____ (the "Development Agreement"), executed in association with the City

Commission's approval of the Sea Hawk Cove Extension Final Engineering Plans/The Blake Commons final plat on June 23, 2025; and

WHEREAS, the Developer previously received City Commission approval on June 23, 2025 of the Sea Hawk Cove Extension Final Engineering Plans/The Blake Commons final plat to commence and construct site clearing and grading activities and the common infrastructure for the commercial development to be located on the frontage of the Property, including utilities extensions, stormwater collection facilities, and the extension of Sea Hawk Cove for access and to further to subdivide the Property into three commercial frontage lots (Lots 1-3) and a fourth lot intended for future residential development; and

WHEREAS, Developer has separately applied for or authorized application for the Conditional Use Approval, a Final Engineering/Site Plan Approval, Aesthetic Plan Approval, and Waivers from the City Code to construct The Learning Experience daycare on Lot 3 of the Blake Commons plat, an approximately 1.02-acre portion of the Property located at the southwestern corner of the Property (the "Project Area"); and

WHEREAS, the Developer desires to construct The Learning Experience daycare on Lot 3 as one of the individual sites in the commercial development; and

WHEREAS, pursuant to Chapter 20 Zoning, Article II, Division 1, Section 20-29.1 of the Winter Springs City Code ("City Code"), public hearing notices were mailed to all owners of real property adjacent to and within approximately five-hundred (500) feet of the subject property and all Homeowner's Associations on file within the City of Winter Springs on June 10, 2025, and a Community Workshop for the Project was held on June 18, 2025; and

WHEREAS, Section 20-29(c) of the City Code requires that all conditional uses, site plans and waivers shall be binding on the use of the subject property and, further, that as a condition of approval by the City Commission, all development projects requiring a community workshop pursuant to Section 20-29.1 of the City Code shall be required to be memorialized in a binding Development Agreement; and

WHEREAS, this Development Agreement shall be recorded against the Project Area (Lot 3) so that the terms and conditions of approval related to the Project shall run with the land; and

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties mutually agree as follows:

1.0 Recitals. The foregoing recitals are true and correct and are hereby incorporated herein by this reference.

2.0 Authority. This Agreement is entered into pursuant to the Florida Municipal Home Rule Powers Act.

3.0 The Project Area. The real property subject to this Agreement consists of Lot 3 of the Blake Commons plat and is legally described in **EXHIBIT "A",** attached hereto and fully incorporated herein by this reference (the "Project Area").

4.0 Project Description and Requirements. Developer shall, at its expense, design, permit and construct an approximately 10,000 square foot daycare facility with outdoor play area and associated parking at the Project Area.

(Hereinafter the daycare project description and requirements are referred to as the **"Project"** or the **"Daycare"**).

The supporting infrastructure for the Project shall be constructed in accordance with the Sea Hawk Cove Extension/Blake Commons final engineering plans approved by the City Commission on June 23, 2025, and as approved in the Development Agreement for the Blake Commons in a single phase and simultaneously with the Daycare.

The Developer shall construct the Project in a manner consistent with the approved Final Engineering/Site Plans, Aesthetic Plans, Conditional Use and Waivers that are on file with the City with the following file numbers and consistent with the requirements contained in this Agreement:

File No.: AERV-2025-0004

File No.: CONU-2024-0002

File No.: DVAG-2025-0008

File No.: FEDP-2024-0010

File No.: WAIV-2024-0003

File No.: WAIV-2025-0010

File No.: WAIV-2025-0012

For convenience, a copy of the Overall Site Plan is attached hereto and fully incorporated herein by this reference as **EXHIBIT "B."**

The City and Developer agree that the Winter Springs Comprehensive Plan, Multimodal Transportation Element, Policy 1.11.3, requires the Developer of the Project to provide one (1) mobility credit based on the net, new average daily trip generation projected for the Learning Experience Project. In addition, the City and Developer agree that the Winter Springs Comprehensive Plan, Multimodal Transportation Element, Policy 1.11.6, requires new development, regardless of size, to provide operational improvements to the City's transportation system to mitigate their impacts on the system, to ensure smooth traffic flow, and to aid in the elimination of hazards, which may include contributions to the City's multimodal system. The

Developer has elected to provide a bicycle parking rack as a multimodal improvement to satisfy the required mobility credit in accordance with the above-referenced Policies.

Specific conditions of approval for the above-referenced Site/Final Engineering Plans, Aesthetic Review, Conditional Use, and Waivers include the following, which are also addressed in the staff report for the Final Engineering/Site Plans, Aesthetic Plans, Conditional Use, and Waivers:

1. Approval of the Project is conditioned upon and contingent upon approval of the Sea Hawk Cove Extension/Blake Commons final engineering plans, which provide for access, utilities, and stormwater drainage to the subject site.

2. An Economic Impact Analysis Report as required by the Town Center Design standards shall be reviewed and approved prior to the project being heard before the City Commission.

3. Illuminated wall signage located above the entrance to the building and facing Lot 4 of the Blake Commons plat must be turned off when the Daycare facility is not open.

4. All grass areas on the Property shall use Bahia grass. No St. Augustine grass or grass types with low drought tolerance shall be permitted.

5.0 **Future Permitting.** Developer shall be required to receive building permits and substantially commence vertical construction of buildings, which shall at minimum include building foundations, for the Project on Lot 3 within two (2) years of the Effective Date of this Agreement.

6.0 **Representations of the Parties**. The City and Developer hereby each represent and warrant to the other that it has the power and authority to execute, deliver and perform the terms and provisions of this Agreement and has taken all necessary action to authorize the execution, delivery and performance of this Agreement. This Agreement will, when duly executed and delivered by the City and Developer, constitute a legal, valid and binding obligation enforceable against the parties hereto. Upon recording of this Agreement in the Public Records of Seminole County, Florida, the Agreement shall be a binding obligation upon the Project Area in accordance with the terms and conditions of this Agreement. Developer represents that it has voluntarily and willfully executed this Agreement for purposes of binding himself and the Project Area to the terms and conditions set forth in this Agreement.

7.0 **Successors and Assigns**. This Agreement shall automatically be binding upon and shall inure to the benefit of the City and Developer and their respective successors and assigns. The terms and conditions of this Agreement similarly shall be binding upon the Project Area, and shall run with title to the same upon being duly recorded against the Project Area by the City.

8.0 **Applicable Law; Venue**. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida. The venue of any litigation arising out of this

Agreement shall be in Seminole County, Florida or, for federal court actions, in the Middle District of Florida, Orlando Division.

9.0 Amendments. This Agreement shall not be modified or amended except by written agreement duly executed by both parties hereto (or their successors or assigns) and approved by the City Commission.

10.0 Entire Agreement; Exhibits. This Agreement and all attached exhibits hereto supersede any other agreement, oral or written, regarding the Project Area, except as otherwise provided herein, and contain the entire agreement between the City and Developer as to the subject matter hereof. The Exhibits attached hereto and referenced herein are hereby fully incorporated herein by this reference.

11.0 Severability. If any provision of this Agreement shall be held to be invalid or unenforceable to any extent by a court of competent jurisdiction, the same shall not affect in any respect the validity or enforceability of the remainder of this Agreement.

12.0 Effective Date. This Agreement shall become effective upon approval by the City Commission and execution of this Agreement by both parties hereto.

13.0 Recordation. Upon full execution by the Parties, this Agreement shall be recorded in the Public Records of Seminole County, Florida by the City. The Developer shall be responsible for all recording fees associated with this Agreement.

14.0 Relationship of the Parties. The relationship of the parties to this Agreement is contractual and Developer is an independent contractor and not an agent of the City. Nothing herein shall be deemed to create a joint venture or principal-agent relationship between the parties, and neither party is authorized to, nor shall either party act toward third persons or the public in any manner, which would indicate any such relationship with the other.

15.0 Sovereign Immunity. The City intends to avail itself of sovereign immunity and other applicable limitations on City liability whenever deemed applicable by the City. Therefore, notwithstanding any other provision set forth in this Agreement, nothing contained in this Agreement shall be construed as a waiver of the City's right to sovereign immunity under section 768.28, Florida Statutes, or other limitations imposed on the City's potential liability under state or federal law. As such, the City shall not be liable under this Agreement for punitive damages or interest for the period before judgment. Further, the City shall not be liable for any claim or judgment, or portion thereof, to any one person for more than two hundred thousand dollars ($200,000.00), or any claim or judgment, or portion thereof, which, when totaled with all other claims or judgments paid by the State or its agencies and subdivisions arising out of the same incident or occurrence, exceeds the sum of three hundred thousand dollars ($300,000.00).

16.0 City's Police Power. Developer agrees and acknowledges that the City hereby reserves all police powers granted to the City by law. In no way shall this Agreement be construed as the City bargaining away or surrendering its police powers.

17.0 Interpretation. The parties hereby agree and acknowledge that they have both participated equally in the drafting of this Agreement and no party shall be favored or disfavored regarding the interpretation to this Agreement in the event of a dispute between the parties.

18.0 Third-Party Rights. This Agreement is not a third-party beneficiary contract and shall not in any way whatsoever create any rights on behalf of any third party.

19.0 Specific Performance and Enforcement. Strict compliance shall be required with each and every provision of this Agreement. The parties agree that failure to perform the obligations provided by this Agreement shall result in irreparable damage and that specific performance of these obligations may be obtained by a suit in equity. The failure to timely comply with any mandatory condition of this Agreement shall further constitute a violation of the City's Code of Ordinances and shall be subject to enforcement action as described therein including, but not limited to, enforcement before the City's Code Enforcement Board under Chapter 2, Article III, Division 2. – Code Enforcement.

20.0 Attorney's Fees. In connection with any arbitration or litigation arising out of this Agreement, each party shall be responsible for their own attorney's fees and costs.

21.0 Development Permits. Nothing herein shall limit the City's authority to grant or deny any development permit applications or requests subsequent to the effective date of this Agreement in accordance with the criteria of the City Code and the requirements of this Agreement. The failure of this Agreement to address any particular City, County, State and/or Federal permit, condition, term or restriction shall not relieve Developer or the City of the necessity of complying with the law governing said permitting requirement, condition, term or restriction. Without imposing any limitation on the City's police powers, the City reserves the right to withhold, suspend or terminate any and all certificates of occupancy for any building, trailer, structure or unit if Developer is in breach of any term and condition of this Agreement.

22.0 Default. Failure by either party to perform each and every one of its obligations hereunder shall constitute a default, entitling the non-defaulting party to pursue whatever remedies are available to it under Florida law or equity including, without limitation, termination of this Agreement, an action for specific performance, and/or injunctive relief. Prior to any party filing any action as a result of a default under this Agreement, the non-defaulting party shall first provide the defaulting party with written notice of said default. Upon receipt of said notice, the defaulting party shall be provided a thirty (30) day opportunity in which to cure the default to the reasonable satisfaction of the non-defaulting party prior to filing said action.

23.0 Termination. The City shall have the unconditional right, but not obligation, to terminate this Agreement, without notice or penalty, if Developer fails to receive building permits and substantially commence vertical construction of buildings, which shall at minimum include building foundations, for the Project within two (2) years of the effective date of this Agreement. The Developer may apply to the City Commission for an extension of this Agreement, which may be granted upon good cause shown. In addition, the City shall have the right, but not obligation, to terminate the Agreement if Developer permanently abandons construction of the Project, provided, however, the City shall first deliver written notice and an opportunity to cure to the

defaulting party as set forth in Section 22 above. If the City terminates this Agreement, the City shall record a notice of termination against the Property in the public records of Seminole County, Florida.

24.0 Indemnification and Hold Harmless. Developer shall be solely responsible for designing, permitting, constructing, operating and maintaining this Project. As such, Developer hereby agrees to indemnify, release, and hold harmless the City and its commissioners, employees and attorneys from and against all claims, losses, damages, personal injuries (including, but not limited to, death), or liability (including reasonable attorney's fees and costs through all appellate proceedings), directly or indirectly arising from, out of, or caused by Developer and Developer's contractor's and subcontractor's performance of design, permit and construction, and maintenance activities in furtherance of constructing the Project and maintaining the improvements of this Project. This indemnification shall survive the termination of this Agreement.

25.0 Force Majeure. The parties agree that in the event that the failure by either party to accomplish any action required hereunder within a specified time period ("Time Period") constitutes a default under the terms of this Agreement and, if any such failure is due to acts of God, acts of government authority (other than the City's own acts), acts of public enemy or war, riots, civil disturbances, power failure, shortages of labor or materials, injunction or other court proceedings beyond the control of such party, or severe adverse weather conditions ("Force Majeure Event"), then, notwithstanding any provision of this Agreement to the contrary, that failure shall not constitute a default under this Agreement and any Time Period proscribed hereunder shall be extended by the amount of time that such party was unable to perform solely due to the Force Majeure Event. The extended Time Period shall be agreed to in writing by the parties and said agreement shall not be unreasonably withheld by either party. The City Manager shall have the authority to grant an extended Time Period. An extension of any Time Period for reasons of a Force Majeure Event shall be requested solely as provided in this Section. Developer hereby waives and relinquishes the right to notify the City of the intent to exercise the tolling and extension of any permit related to the Project, including Time Periods under this Agreement, development orders, and building permits, available under Section 252.363, Florida Statutes, as the result of a declaration of a state of emergency issued by the Governor for a natural emergency.

26. Notice. Whenever either party desires to give notice to the other, notice shall be sent by hand delivery or certified mail, return receipt requested, and shall be sent to:

For the City:

City Manager
City of Winter Springs
1126 East S.R. 434
Winter Springs, Florida 32708

With additional notice to:

Anthony A. Garganese, City Attorney

Garganese, Weiss, D'Agresta & Salzman, P.A.
111 N. Orange Avenue, Suite 2000
Orlando, FL 32802

For Developer:

Tuskawilla Retail Partners II, LLC
Attn: Mark Mechlowitz, Manager
880 Glenwood Avenue, Suite H
Atlanta, Georgia 30316
MarkM@catalystdp.com
(678) 666-1282

Either party may freely modify their respective contact person and address contained in this Paragraph by providing written notice of the modification to the other party. Any Notice given as provided herein shall be deemed received as follows: if delivered by personal service, on the date so delivered; and if mailed, on the third business day after mailing.

27.0 Assignment. Prior to completing the construction of the Project and reaching final build-out of the Project, Developer shall not assign this Agreement without the prior written consent of the City, which consent shall not be unreasonably withheld, conditioned or delayed. Such assignment shall require the written approval of the City by amendment to this Agreement, which shall not require a public hearing and shall not be unreasonably withheld. However, Developer shall be entitled to assign its rights and obligations under this Agreement to a parent, subsidiary, or affiliated entity in which Developer or its members are members or interest holders without City consent, provided that the City is given notice of such assignment in accordance with Section 26.0 herein. Any assignment authorized by this subparagraph shall require the assignee to be a formal signatory to this Agreement and fully assume all of Developer's obligations, commitments, representations, and warranties under this Agreement. In any assignment, the rights and obligations contained herein shall be binding on successors in interest to the Project Area, and the terms and conditions of this Agreement shall bind and inure to the benefit of the parties hereto and any respective successors and assigns.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seal on the date first above written.

CITY OF WINTER SPRINGS

By: _____
Kevin McCann, Mayor

ATTEST:

By: _____

DRAFT

Christian Gowan, City Clerk

APPROVED AS TO FORM AND LEGALITY
For the use and reliance of the City of Winter Springs, Florida only.

CITY SEAL

Date: _____
By: _____
Anthony A. Garganese, City Attorney for the City of Winter Springs, Florida

Signed, sealed and delivered in the presence of the following witnesses:

_____
Signature of Witness

_____
Printed Name of Witness

_____
Address of Witness

_____

_____
Signature of Witness

_____
Printed Name of Witness

_____
Address of Witness

_____

TUSKAWILLA RETAIL PARTNERS, II, LLC, a Florida limited liability company

_____
Print name: _____

Title:_____

Date: _____, 2025

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by_____, the _____of TUSKAWILLA RETAIL PARTNERS II, LLC, a Florida limited liability company, on behalf of the company, who is personally known to me or produced _____ as identification.

(NOTARY SEAL)

DRAFT

_____
(Notary Public Signature)

_____
(Print Name)
Notary Public, State of _____
Commission No.: _____
My Commission Expires: _____

DEVELOPER IS HEREBY ADVISED THAT SHOULD DEVELOPER FAIL TO FULLY EXECUTE, AND DELIVER TO THE CITY, THIS AGREEMENT WITHIN THIRTY (30) DAYS FROM THE DATE THAT THE CITY COMMISSION APPROVES THIS AGREEMENT, THIS AGREEMENT, AND THE DEVELOPMENT PERMIT APPROVALS REFERENCED HEREUNDER, SHALL AUTOMATICALLY BE DEEMED NULL AND VOID.

DRAFT

EXHIBIT A

PROJECT AREA LEGAL DESCRIPTION

Lot 3 of the Blake Commons plat, recorded in the Plat Book of Seminole County, Book ____, Page _____.

DRAFT

EXHIBIT B

SITE PLAN

DRAFT

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Site Plan Review

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Florida Statue 419.001. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. By submitting this application, you hereby grant temporary right of entry for City officials to enter upon the subject property for purposes of evaluating this application.

Site Plan Type

Type of Development: ____ Residential _X_ Non-Residential

___Preliminary Review ___Final Review _X_Combined Preliminary/Final ___Resubmittal ___ Recorded Plat

Project Name: The Learning Experience Date: 10/24/24

Applicant/Agent Information

Applicant(s): James Herbert, E.I.

Mailing Address: 6200 Lee Vista Blvd, Suite 400 Orlando, FL 32822

Email: james.herbert@nv5.com

Phone Number: (407) 539-4776

Person Who Will Upload Plans: James Herbert, E.I.

Email: james.herbert@nv5.com Phone#: (407) 539-4776

Property Owner(s) Name (If Applicant is not the Property Owner)

Name: KW Partners, LLC

Email: Richard Kerper: rk@kwequity.com Phone #: 727-723-0254

Mailing Address: 2420 Enterprise Road, Suite 201 Clearwater, FL 33763

Phone Number: 727-723-0254

Site Information

Project Address: SR 434 & Michael Blake Blvd. Winter Springs, FL 32708

Parcel ID(s): 26-20-30-5AR-0A00-007L

Parcel Size: 1.02 AC

Existing Use: Vacant Land

Proposed Use: Commercial

Zoning District: Town Center District

Future Land Use: Town Center District

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings.org

Application – Site Plan Review

Is the property located in the Town Center District? __X__ Yes _____ No

Is the property within the S.R. 434 Corridor Overlay District? __X__ Yes _____ No

Is the property located in the Greeneway Interchange Zoning District? _____ Yes __X__ No

The Planning and Zoning Board/Local Planning Agency shall review Site Plan Applications and make a written recommendation to the City Commission. The City Commission shall render all final decisions regarding Preliminary and Final Engineering Plans and may impose reasonable conditions on any approved plans to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the City Code and Comprehensive Plan. All formal decisions shall be based upon the applicable criteria as set forth in the City's Code of Ordinances Chapter 9, Land Development and Chapter 20, Zoning.

Applicants are advised, that if they decide to appeal any decisions made at the meetings or hearings, with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to ensure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per 286.0105, Florida Statutes.

Application Fees

Fees are as reflected on the Fee Schedule plus actual costs incurred for advertising or notification, and reimbursement for technical, and/or professional services which may be required in connection with the review, inspection, or approval of any development (based on accounting submitted by the City Consultant), payable prior to approval of the pertinent stage of development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Site Plan Review

THIS APPLICATION MUST BE SIGNED IN THE PRESENCE OF A NOTARY

This is to certify that I am the owner in simple fee of the subject property as described in this application for Site Plan Review.

Property Owner(s) Name (Print): Richard Kerper

Property Owner Signature: _____ Date: _____

Property Owner(s) Name (Print): _____

Property Owner Signature: _____ Date: _____

STATE OF _____ COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: _____ (seal):

Notary Public Signature: _____

My Commission Expires: _____

Note: If the applicant is not the property owner the Property Owner shall sign and have their signature notarized below, authorizing the applicant and/or agent permission to submit the Site Plan Review application.

Property Owner's Name (Print): Richard Kerper

Property Owner Signature: _____ Date 10/28/24

STATE OF Florida COUNTY OF Pinellas

The foregoing instrument was acknowledged before me this 28 day of October, 2024, by Richard Kerper who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: 10/28/24 (seal):

Notary Public Signature: Kathleen Wolf

My Commission Expires: 8-25-28

KATHLEEN WOLF
Notary Public-State of Florida
Commission # HH 536800
My Commission Expires
August 25, 2028

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Aesthetic Review

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 9–Aesthetic Review Sec.9-605. All applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. Once the application is deemed sufficient, the applicant shall move forward with the Community Workshop, required per Chapter 20–Zoning Sec.20-29.1.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Conditional Use is quasi-judicial in nature. Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Aesthetic Review recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Aesthetic Review and may impose reasonable conditions on any approved Aesthetic Review to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 9, Aesthetic Review Standards. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

An Aesthetic Review Approval by the City Commission under this article shall be valid for a maximum of eighteen (18) months from the date the city commission renders its approval at a public meeting. If the applicant fails to obtain a building permit within the eighteen (18) month period, the city commission's approval shall expire at the end of the period. However, once a building permit is issued, the approval shall be valid for a time period equal to the permit and shall expire only if the building permit expires. Reasonable extensions may be granted by the city commission upon good cause shown by the applicant, provided substantial changes have not occurred in the surrounding area that would make the prior approval inconsistent with the criteria set forth in Chapter 9-Aesthetic Review Sec.9-9603

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Aesthetic Review

REQUIRED INFORMATION

Applicant(s): Steven J. Vinci, AIA- ARC3 Architecture, Inc. Date: 1-17-25
Mailing address: 6699 13th Avenue North, Suite 4A, St. Petersburg, FL 33710
Email: steve@arc-3.com
Phone Number: 727-381-5220

Property Owner(s): KW Partners, LLC
Mailing Address: 2420 Enterprise Road, Suite 201 Clearwater, FL 33763
Email: Richard Kerper: rk@kwequity.com
Phone Number: 727-723-0254

Project Name: TLE Winter Springs- The Learning Experience Daycare
Property Address: SR 434 & Michael Blake Blvd. Winter Springs, FL 32708
Parcel ID(s): 26-20-30-5AR-0A00-007L
Parcel Size: 1.02 AC
Existing Use: Vacant Land

List all witnesses that the applicant intends to present to the City Commission to provide testimony:
Richard Kerper: Owner/ Developer
Steven Vinci, AIA: Architect of Record

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

The submittal will include the following sheets to meet the requirements of the application, including; SP-101 Site Plan, SP-102 Site Details, A-051 Exterior Elevations, A-141 Main Entry Details, A-151 Playground Area Details, A-161 Signage Details, and a Conceptual Rendering Package.

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing.

Criteria for Review

1. The plans and specifications of the proposed project indicate that the setting, landscaping, proportions, materials, colors, texture, scale, unity, balance, rhythm, contrast, and simplicity are coordinated in a harmonious manner relevant to the particular proposal, surrounding area and cultural character of the community.
2. The plans for the proposed project are in harmony with any future development which has been formally approved by the City within the surrounding area.
3. The plans for the proposed project are not excessively similar or dissimilar to any other building, structure or sign which is either fully constructed, permitted but not fully constructed, or included on the same permit application, and facing upon the same or intersecting street within five hundred (500) feet of the proposed site, with respect to one or more of the following features of exterior design and appearance:
    a. Front or side elevations;
    b. Size and arrangement of elevation facing the street, including reverse arrangement; or
    c. Other significant features of design such as, but not limited to: materials, roof line, hardscape improvements, and height or design elements.
4. The plans for the proposed project are in harmony with, or significantly enhance, the established character of other buildings, structures or signs in the surrounding area with respect to architectural specifications and design features deemed significant based upon commonly accepted architectural principles of the local community.
5. The proposed project is consistent and compatible with the intent and purpose of this article, the Comprehensive Plan for Winter Springs, design criteria adopted by the City (e.g. Town Center guidelines, SR 434 design specifications) and other applicable federal, state or local laws.
6. The proposed project has incorporated significant architectural enhancements such as concrete masonry units with stucco, marble, termite-resistant wood, wrought iron, brick, columns and piers, porches, arches, fountains, planting areas, display windows, and other distinctive design detailing and promoting the character of the community.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Aesthetic Review

REQUIRED DOCUMENTATION

___ A complete Application and applicable fee

- ✓ Minor (Site less than 2 acres)
- ___ Major (Site greater than 2 acres)
- ___ Modification of previously approved Aesthetic Review

___ A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

✓ Site Plan

✓ Building Elevations (color) illustrating all sides of structures

✓ Color rendering illustrating street view with landscaping at time of planting;

✓ Illustrations of all walls, fences, and other accessory structures and indication of their height and the materials proposed for their construction;

✓ Signage elevations of proposed exterior permanent signs, outdoor advertising or other constructed elements other than habitable space, if any;

✓ Identification of materials, textures, and colors to be used on all buildings, accessory structures, exterior signs, and other constructed elements;

___ Other architectural and engineering data as may be requested to clarify the application.

___ For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings-fl.org

Application – Aesthetic Review

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for an Aesthetic Review for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Richard Kerpen
Applicant Signature: [signature] Date: 1/15/25
Business Name: KW Partners, LLC
Address: 2420 Enterprise Rd #201 Clearwater FL 33763 Parcel ID: 26-20-30-5AR-0A00-007L
STATE OF Florida COUNTY OF Pinellas

The foregoing instrument was acknowledged before me this 15 day of January, 2025, by Richard Kerpen who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 15 January 2025 (seal):
Notary Public Signature: Kathleen Wolf
My Commission Expires: 25 August 2028

KATHLEEN WOLF
Notary Public-State of Florida
Commission # HH 536800
My Commission Expires
August 25, 2028

Note: The Property Owner shall sign and have their signature notariz
Applicant is not the owner of the subject property.

Property Owner's Name (Print): Robert Meyer
Property Owner Signature: [signature] Date 1/16/25
STATE OF GA COUNTY OF Fulton

The foregoing instrument was acknowledged before me this 16th day of January, 2025, by Robert Meyer who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 1/16/25 (seal):
Notary Public Signature: Lauren Groover
My Commission Expires: 4/28/26

LAUREN GROOVER
Notary Public - State of Georgia
Fulton County
My Commission Expires Apr 28, 2026

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Development Agreement

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per all applicable City Codes and the City Comprehensive Plan. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. Once the application is deemed sufficient, the applicant shall move forward with the Community Workshop, required per Chapter 20–Zoning Sec.20-29.1.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Development Agreement is quasi-judicial in nature. Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Development Agreement recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Development Agreements and may impose reasonable conditions on any approved Development Agreement to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan.

REQUIRED INFORMATION

Applicant(s): Richard Kerper

Applicant Signature: _____ Date: 05/09/25

Mailing address: 2420 Enterprise Road, Suite 201 Clearwater, FL 33763

Email: rk@kwequity.com

Phone Number: (727) 723-0254

Property Owner(s): Mark Mechlowitz, Manager of Tuskawilla Retail Partners II, LLC

Mailing Address: 880 Glenwood Avenue, Suite H Atlanta, GA 30316

Email: MarkM@catalystdp.com

Phone Number: (678) 666-1282

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Development Agreement

Property Address: SR 434 & Michael Blake Blvd. Winter Springs, FL 32708

Parcel ID(s): 26-20-30-5AR-0A00-007L

Parcel Size: 1.02 AC

Project Name: The Learning Experience

A general description of the relief sought under this division.

Developer desires to amend the Original Development Agreement (Seminole County, Florida at Official Record Book 8446, Pages 1131-1144) and add a proposed early childhood learning center to a 1.02 AC lot.

A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in the City Zoning Code and City Comprehensive Plan.

The proposed Learning Experience early childhood center complies with the City of Winter Springs Zoning Code and Comprehensive Plan by aligning with the Town Center District's goals for community-serving uses, promoting walkability, and supporting family-oriented development. Supporting documentation includes all materials included under City plan numbers FEDP-2024-0010 and AERV-2025-0004.

List all witnesses that the applicant intends to present to the City Commission to provide testimony:

Frank Porter, P.E. , James Herbert, E.I.

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

Oral factual testimony

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing.

REQUIRED DOCUMENTATION

X A complete Application and Fee

X An Electronic copy of the most recent survey of the subject property.

X An Electronic copy of the Legal Description of the subject property.

X Documentation and Data supporting the request.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings-fl.org

Application – Development Agreement

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Development Agreement for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Richard Kerper
Applicant Signature: [signature] Date: 5/2/25
Business Name: KW Partners, LLC
Address: 2420 Enterprise Road, Suite 201 Clearwater, FL 33763 Parcel ID: 26-20-30-5AR-0A00-007L

STATE OF Florida COUNTY OF Pinellas

The foregoing instrument was acknowledged before me this 2 day of May, 2025, by Richard Kerper who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 2 May 2025 (seal):
Notary Public Signature: Kathleen Wolf
My Commission expires: 25 August 2028

KATHLEEN WOLF
Notary Public-State of Florida
Commission # HH 536800
My Commission Expires
August 25, 2028

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): Mark Mechlowitz, Manager of Tuskawilla Retail Partners II, LLC
Property Owner Signature: [signature] Date 5/8/2025
STATE OF GA COUNTY OF STEPHENS

The foregoing instrument was acknowledged before me this 8TH day of MAY, 2025, by MARK MECHLOWITZ who is personally known to me or who has produced N/A as identification and who did/did not take an oath.

CLAYTON CHEEK Date: 5/8/2025 (seal):
Notary Public Signature: [signature]
My Commission expires: 11/1/2027

CLAYTON CHEEK
NOTARY
EXPIRES
GEORGIA
NOVEMBER
PUBLIC
STEPHENS COUNTY

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20 – Zoning Sec. 20-34. The sufficiency review shall be completed within thirty (30) calendar days per FL Statue 166.033.

Applicants are responsible for posting notice (provided by the city) on the site at least seven (7) days prior to the Planning & Zoning Board (PZB) meeting at which the matter will be considered. Said notice shall not be posted within the City right-of-way.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Waiver is quasi-judicial in nature.

Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Waiver recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Waivers and may impose reasonable conditions on any approved Waiver to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Waiver which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Waiver, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Waiver shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED INFORMATION:

Applicant(s):	James W. Herbert, E.I. Date: 12/11/24
Mailing address:	6200 Lee Vista Boulevard, Suite 400, Orlando, FL 32822
Email:	james.herbert@nv5.com
Phone Number:	407-539-4776
Property Owner(s):	Richard Kerper
Mailing Address:	2420 Enterprise Road, Suite 201 Clearwater, FL 33763
Email:	rk@kwequity.com
Phone Number:	(727) 723-0254
Project Name:	The Learning Experience
Property Address:	SR 434 & Michael Blake Blvd. Winter Springs, FL 32708
Parcel ID(s):	26-20-30-5AR-0A00-007L
Parcel Size:	1.02 AC
Existing Use:	Vacant Land
Future Land Use:	Commercial
Zoning District:	Town Center District

All waiver requests shall be written in the following format: A waiver is requested from Winter Springs City Code 'X' to allow 'Y' in lieu of 'Z'. After the request, the applicant shall provide a justification for each waiver request.

List Waiver(s)(provide additional sheets if necessary): A waiver is requested from Winter Springs City Code Section 20-465 to allow the The Learning Experience building to be located at a setback of 15' from SR 434 ROW in lieu of the 25' minimum building setback from SR 434 ROW.

Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

The building setback requirement of 25' from the SR 434 ROW poses a challenge for meeting parking requirements as well as fire access requirements while still providing the space needed for a proposed daycare building. The Fifth Third Bank located within the SR 434 corridor establishes a precedent for providing a less than a 25' building setback.

Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

The proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances as well as in compliance with the Comprehensive Plan.

Will the proposed development plan significantly enhance the real property?

The proposed development plan will significantly enhance the real property.

Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

The proposed development plan will serve the public health, safety, and welfare of the City of Winter Springs.

Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

The waiver will not diminish property values and will not alter the essential character of the surrounding neighborhood.

Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

This waiver request is the minimum waiver that will eliminate the impractical result caused by Sec. 20-465 under Chapter 20 - Zoning.

Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

The proposed development plan is compatible and harmonious with the surrounding neighborhood.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

Has the applicant agreed to a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the City Commission including, but not limited to, any mitigative techniques and plans required by city code? Yes X No _____

List all witnesses that the applicant intends to present to the City Commission to provide testimony:
Frank Porter, P.E. - NV5 Inc., James Herbert, E.I. - NV5 Inc.

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:
None at this time.

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing

REQUIRED DOCUMENTATION (PDF):

X A complete Application and Fee ($500.00*)

X A general description of the relief sought under this division

X A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

X A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

X An Excel mailing list with the names and addresses of each property owner within 500 ft. of each property line, along with the HOA Associations within 1/2 mile of each property line.

X For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

* Fees are as shown above plus actual costs incurred for advertising or notification, and for reimbursement for technical and/or professional services which may be required in connection with the review, inspection or approval of any development (based on accounting submitted by the city's consultant) , payable prior to approval of the pertinent stage of development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings fl.org

Application – Waiver

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Waiver for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): James W. Herbert, E.I.

Applicant Signature: _____ Date: 12/11/24

Business Name: NV5, Inc.

Address: 6200 Lee Vista Blvd, Suite 400, Orlando, FL 32822 Parcel ID: 27-23-30-5070-00-010

STATE OF_____COUNTY OF _____ Date _____

The foregoing instrument was acknowledged before me this 11 day of December, 2024, by James W. Herbert who is personally known to me or who has produced ID as identification and who did/did not take an oath.

_____ Date: December 11, 2024 (seal):

Notary Public Signature: Wilda Gutierrez

My Commission expires: 8-25-2028

Notary Public State of Florida
Wilda Gutierrez
My Commission HH 586394
Expires 8/25/2028

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): See attached letter of authorization

Property Owner Signature: _____ Date _____

STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____as identification and who did/did not take an oath.

_____Date: _____ (seal):

Notary Public Signature: _____

My Commission expires: _____

LETTER OF AUTHORIZATION

Property Owner: KW Partners, LLC (contract purchaser)

Property Tax ID #: 26-20-30-5AR-0A00-007L

Legal Description: see attached

Authorized Applicant: Frank A. Porter, P.E., Jason P. Mahoney, P.E., James W. Herbert, E.I.

I hereby authorize Frank A. Porter, P.E., Jason P. Mahoney, P.E., and James W. Herbert, E.I.to make application on my behalf, for the following:

1. City of Winter Springs Applications, including, but not limited, to Site Plan Review, Variance Application, Waiver Application, Aesthetic Review Application and Conditional Use Application

2. Saint John's River Water Management District Environmental Resource Permit.

KW Partners, LLC

By: _____

PRINT NAME: Richard Kerper, Manager

State of Florida

County of Seminole

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization this 31 day of October, 2024, by Richard Kerper, Manager of KW Partners, LLC, on behalf of the LLC. He [XX] is personally known to me or [ ] has produced a driver's license as identification.

(Notary Seal)

_____
Signature of Public Notary

Kathleen Wolf

KATHLEEN WOLF
Notary Public-State of Florida
Commission # HH 536800
My Commission Expires
August 25, 2028

LEGAL DESCRIPTION:

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024)

PARCEL A (DESCRIPTION PROVIDED BY SURVEYOR)

A PORTION OF LOT 8, BLOCK "A", D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ON LAKE JESSUP, SAID LANDS LYING IN SECTION 6, TOWNSHIP 21 SOUTH, RANGE 31 EAST, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF STATE ROAD 434 AND TUSKAWILLA ROAD (PER FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP, SECTION 77070-2516, SHEET 10 OF 13, P.I. STATION 600+32.11); THENCE RUN S38°23'34"E, A DISTANCE OF 1320.11 FEET ALONG THE BASELINE OF SURVEY AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE DEPARTING SAID BASELINE, RUN N51°36'26"E, A DISTANCE OF 94.94 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF THE AFORESAID STATE ROAD 434, AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 164.51 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 193.14 FEET TO THE INTERSECTION WITH THE NORTHWESTERLY BOUNDARY LINE OF ACQUISITION PARCEL B (RAILS TO TRAILS CORRIDOR) AS RECORDED IN OFFICIAL RECORDS BOOK 4092, PAGE 0164, PUBLIC RECORDS OF SEMINOLE COUNTY FLORIDA; THENCE N50°31'58"W, ALONG SAID NORTHWESTERLY BOUNDARY, A DISTANCE OF 231.33 FEET; THENCE N38°28'33"W, A DISTANCE OF 188.71 FEET; THENCE S51°37'48"W, A DISTANCE OF 232.12 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 1.015 ACRES, MORE OR LESS.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20 – Zoning Sec. 20-34. The sufficiency review shall be completed within thirty (30) calendar days per FL Statue 166.033.

Applicants are responsible for posting notice (provided by the city) on the site at least seven (7) days prior to the Planning & Zoning Board (PZB) meeting at which the matter will be considered. Said notice shall not be posted within the City right-of-way.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Waiver is quasi-judicial in nature.

Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Waiver recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Waivers and may impose reasonable conditions on any approved Waiver to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Waiver which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Waiver, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Waiver shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED INFORMATION:

Applicant(s):	James W. Herbert, E.I. Date: 12/11/24
Mailing address:	6200 Lee Vista Boulevard, Suite 400, Orlando, FL 32822
Email:	james.herbert@nv5.com
Phone Number:	407-539-4776
Property Owner(s):	Richard Kerper
Mailing Address:	2420 Enterprise Road, Suite 201 Clearwater, FL 33763
Email:	rk@kwequity.com
Phone Number:	(727) 723-0254
Project Name:	The Learning Experience
Property Address:	SR 434 & Michael Blake Blvd. Winter Springs, FL 32708
Parcel ID(s):	26-20-30-5AR-0A00-007L
Parcel Size:	1.02 AC
Existing Use:	Vacant Land
Future Land Use:	Commercial
Zoning District:	Town Center District

All waiver requests shall be written in the following format: A waiver is requested from Winter Springs City Code 'X' to allow 'Y' in lieu of 'Z'. After the request, the applicant shall provide a justification for each waiver request.

List Waiver(s)(provide additional sheets if necessary): A waiver is requested from Winter Springs City Code Section 20-324 to allow the The Learning Experience building's rear to be facing SR 434 ROW in lieu of the front or sides of the building facing SR 434 ROW.

Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

Chapter 20, Section 324(11)(c) of the Municipal Code requires the front or side of a building to face SR 434 ROW, but this creates an impractical result for the proposed site. Vehicular access from SR 434 is not permitted, and the approved access point is on the opposite side of the lot. Orienting the building toward SR 434 would force the rear of the building to face the parking area, leading to illogical ADA access issues and a dysfunctional site layout. Enforcing this condition under these circumstances is unreasonable and undermines the intent of accessible, efficient development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

The proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and aligns with the intent of the Comprehensive Plan. While Section 324(11)(c) requires building orientation toward SR 434, strict application creates impractical and unreasonable site conditions due to restricted vehicle access. The building is instead oriented toward the approved access point, supporting safe circulation, ADA compliance, and functional site design. This approach maintains the spirit and objectives of the Code and Comprehensive Plan while responding to the site's unique vehicle access constraints.

Will the proposed development plan significantly enhance the real property?

Yes, the proposed development plan will significantly enhance the real property by introducing a high-demand early childhood daycare facility that serves the surrounding community. The project transforms an underutilized site into a safe, accessible, and functional space tailored to young children and families.

Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

Yes, the proposed early childhood daycare will directly serve the public health, safety, and welfare of Winter Springs by providing much-needed childcare services in a safe, professionally designed environment. The site plan prioritizes ADA compliance, pedestrian friendly infrastructure, and safe traffic circulation, ensuring the well-being of children, families, and staff.

Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

No, the waiver will not diminish property values or alter the essential character of the surrounding neighborhood. The proposed early childhood daycare will enhance the area by providing a valuable community service while maintaining a safe, well-designed environment. Overall, the development will positively contribute to the area's character and long-term property values.

Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

This waiver request is the minimum waiver that will eliminate the impractical result caused by Ch. 20, Sec. 324(11)(c).

Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

The proposed development plan is compatible and harmonious with the surrounding neighborhood.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings fl.org

Application – Waiver

Has the applicant agreed to a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the City Commission including, but not limited to, any mitigative techniques and plans required by city code? Yes X No _____

List all witnesses that the applicant intends to present to the City Commission to provide testimony:
Frank Porter, P.E. - NV5 Inc., James Herbert, E.I. - NV5 Inc.

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:
None at this time.

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing

REQUIRED DOCUMENTATION (PDF):

X A complete Application and Fee ($500.00*)

X A general description of the relief sought under this division

X A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

X A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

X An Excel mailing list with the names and addresses of each property owner within 500 ft. of each property line, along with the HOA Associations within 1/2 mile of each property line.

X For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

* Fees are as shown above plus actual costs incurred for advertising or notification, and for reimbursement for technical and/or professional services which may be required in connection with the review, inspection or approval of any development (based on accounting submitted by the city's consultant) , payable prior to approval of the pertinent stage of development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Waiver for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): James W. Herbert, E.I.

Applicant Signature: _____ Date: 04/28/25

Business Name: NV5, Inc.

Address: 6200 Lee Vista Blvd, Suite 400, Orlando, FL 32822 Parcel ID: 27-23-30-5070-00-010

STATE OF Fl COUNTY OF Orange Date 4/28/2025

The foregoing instrument was acknowledged before me this 28th day of April, 2025, by James W. Herbert who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: 4/28/2025 (seal):

Notary Public Signature: _____

My Commission expires: 8/25/2028

Notary Public State of Florida
Justina Robertson
My Commission HH 586413
Expires 8/25/2028

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): See attached letter of authorization

Property Owner Signature: _____ Date _____

STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: _____ (seal):

Notary Public Signature: _____

My Commission expires: _____

LETTER OF AUTHORIZATION

Property Owner: KW Partners, LLC (contract purchaser)

Property Tax ID #: 26-20-30-5AR-0A00-007L

Legal Description: see attached

Authorized Applicant: Frank A. Porter, P.E., Jason P. Mahoney, P.E., James W. Herbert, E.I.

I hereby authorize Frank A. Porter, P.E., Jason P. Mahoney, P.E., and James W. Herbert, E.I.to make application on my behalf, for the following:

1. City of Winter Springs Applications, including, but not limited, to Site Plan Review, Variance Application, Waiver Application, Aesthetic Review Application and Conditional Use Application

2. Saint John's River Water Management District Environmental Resource Permit.

KW Partners, LLC

By: _____

PRINT NAME: Richard Kerper, Manager

State of Florida

County of Seminole

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization this 31 day of October, 2024, by Richard Kerper, Manager of KW Partners, LLC, on behalf of the LLC. He [XX] is personally known to me or [ ] has produced a driver's license as identification.

(Notary Seal)

_____
Signature of Public Notary

Kathleen Wolf

KATHLEEN WOLF
Notary Public-State of Florida
Commission # HH 536800
My Commission Expires
August 25, 2028

LEGAL DESCRIPTION:

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024)

PARCEL A (DESCRIPTION PROVIDED BY SURVEYOR)

A PORTION OF LOT 8, BLOCK "A", D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ON LAKE JESSUP, SAID LANDS LYING IN SECTION 6, TOWNSHIP 21 SOUTH, RANGE 31 EAST, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF STATE ROAD 434 AND TUSKAWILLA ROAD (PER FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP, SECTION 77070-2516, SHEET 10 OF 13, P.I. STATION 600+32.11); THENCE RUN S38°23'34"E, A DISTANCE OF 1320.11 FEET ALONG THE BASELINE OF SURVEY AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE DEPARTING SAID BASELINE, RUN N51°36'26"E, A DISTANCE OF 94.94 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF THE AFORESAID STATE ROAD 434, AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 164.51 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 193.14 FEET TO THE INTERSECTION WITH THE NORTHWESTERLY BOUNDARY LINE OF ACQUISITION PARCEL B (RAILS TO TRAILS CORRIDOR) AS RECORDED IN OFFICIAL RECORDS BOOK 4092, PAGE 0164, PUBLIC RECORDS OF SEMINOLE COUNTY FLORIDA; THENCE N50°31'58"W, ALONG SAID NORTHWESTERLY BOUNDARY, A DISTANCE OF 231.33 FEET; THENCE N38°28'33"W, A DISTANCE OF 188.71 FEET; THENCE S51°37'48"W, A DISTANCE OF 232.12 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 1.015 ACRES, MORE OR LESS.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20 – Zoning Sec. 20-34. The sufficiency review shall be completed within thirty (30) calendar days per FL Statue 166.033.

Applicants are responsible for posting notice (provided by the city) on the site at least seven (7) days prior to the Planning & Zoning Board (PZB) meeting at which the matter will be considered. Said notice shall not be posted within the City right-of-way.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Waiver is quasi-judicial in nature.

Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Waiver recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Waivers and may impose reasonable conditions on any approved Waiver to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Waiver which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Waiver, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Waiver shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED INFORMATION:

Applicant(s):	James W. Herbert, E.I. Date: 06/27/25
Mailing address:	6200 Lee Vista Boulevard, Suite 400, Orlando, FL 32822
Email:	james.herbert@nv5.com
Phone Number:	407-539-4776
Property Owner(s):	Richard Kerper
Mailing Address:	2420 Enterprise Road, Suite 201 Clearwater, FL 33763
Email:	rk@kwequity.com
Phone Number:	(727) 723-0254
Project Name:	The Learning Experience
Property Address:	SR 434 & Michael Blake Blvd. Winter Springs, FL 32708
Parcel ID(s):	26-20-30-5AR-0A00-007L
Parcel Size:	1.02 AC
Existing Use:	Vacant Land
Future Land Use:	Commercial
Zoning District:	Town Center District

All waiver requests shall be written in the following format: A waiver is requested from Winter Springs City Code 'X' to allow 'Y' in lieu of 'Z'. After the request, the applicant shall provide a justification for each waiver request.

List Waiver(s)(provide additional sheets if necessary):

A waiver is requested from Winter Springs City Code Section 20-601 to allow the The Learning Experience streetscape within the SR 434 ROW to consist of (1) 7.5 foot landscape and treescape area for planting canopy trees, (2) 6 foot sidewalk, and (3)13.5 foot landscape area in lieu of (1) 16 foot landscape and treescape area for planting canopy trees, (2) 6 foot sidewalk, and (3) 5 foot landscape area.

Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

Strict enforcement of the 27' streetscape requirement results in an impractical and unreasonable outcome for the proposed daycare development due to existing site constraints and conflicting agency guidance. The FDOT controlled right-of-way adjacent to SR 434 measures only 13.5' in width and the FDOT sidewalk must remain within the right-of-way, thereby limiting design flexibility. The modified streetscape proposed meets the overall intent of Code Section 20-601 while keeping the sidewalk within FDOT right-of-way.

Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

The proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and aligns with the goals of the Comprehensive Plan. While a minor waiver is requested from the strict 27' streetscape requirement, the plan preserves the intent of the code by providing a continuous 6' sidewalk, a 7.5' treescape within FDOT's right-of-way, and a 13.5' landscaped area on site, ensuring a visually appealing and pedestrian-friendly frontage. The development supports Comprehensive Plan objectives by enhancing community services through the addition of a high-quality childcare facility, promoting compatible infill development, and maintaining public safety through adherence to FDOT drainage and grading standards with SR 434's right-of-way. The overall design is consistent with the City's vision for balanced growth, safe infrastructure, and functional land use.

Will the proposed development plan significantly enhance the real property?

- Yes, the proposed development plan will significantly enhance the real property. By introducing a well-designed commercial childcare facility, the project transforms underutilized land into a valuable community asset that meets local demand for early childhood services.
- The site improvements proposed, including landscaping, a 6' wide public sidewalk, and treescape elements will enhance the 3' green strip and 5' wide public sidewalk that is currently located in SR 434's right-of-way.

Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

Yes, the proposed development plan will serve the public health, safety, and welfare of the City of Winter Springs. The childcare facility provides a vital community service by supporting working families and early childhood development in a safe, purpose-built environment. The modified streetscape design ensures positive drainage towards SR 434 per FDOT standards, reduces the risk of flooding near the building, and avoids unsafe elevation changes that could create hazards. Additionally, by preserving a landscaped buffer and sidewalk along SR 434, the plan supports pedestrian safety and maintains the visual integrity of the corridor, aligning with the City's broader planning goals.

Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

The requested waiver will not diminish property values or alter the essential character of the surrounding neighborhood. The proposed design maintains a high-quality streetscape that includes a 7.5' treescape, 6' sidewalk, and 13.5' landscape buffer, preserving aesthetic appeal and pedestrian function along SR 434. The adjustment is a technical necessity driven by FDOT regulations, not a reduction in visual or functional quality. Additionally, as a commercial childcare facility, the development enhances neighborhood character by providing a needed community service while maintaining a safe and attractive frontage along SR 434.

Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

Yes, the waiver request represents the minimum necessary adjustment to eliminate the impractical and unreasonable result caused by the strict application of the 27' streetscape requirement. The design maintains the required 6' sidewalk and shifts it to abut the ROW line while providing a 7.5' treescape within the FDOT ROW and a 13.5' landscaped area on site. This layout preserves the functional intent of the code while avoiding regulatory issues within FDOT's jurisdiction. No further reduction to the streetscape elements is proposed, demonstrating that the waiver is limited strictly to what is needed to resolve the physical and jurisdictional conflicts.

Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

- Yes, the proposed development plan is compatible and harmonious with the surrounding neighborhood. It preserves key streetscape elements such as landscaping, sidewalk access, and a treescape buffer, ensuring visual continuity along SR 434. The project is a commercial childcare facility, which is an appropriate and beneficial use within the area, providing a needed community service without introducing noise, traffic, or scale inconsistent with nearby development. The modified streetscape design maintains an attractive and functional frontage while accommodating both site-specific constraints and agency requirements, ensuring the project blends seamlessly into the existing neighborhood fabric.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

Has the applicant agreed to a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the City Commission including, but not limited to, any mitigative techniques and plans required by city code? Yes X No _____

List all witnesses that the applicant intends to present to the City Commission to provide testimony:
Frank Porter, P.E. - NV5 Inc., James Herbert, E.I. - NV5 Inc.

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:
None at this time.

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing

REQUIRED DOCUMENTATION (PDF):

X A complete Application and Fee ($500.00*)

X A general description of the relief sought under this division

X A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

X A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

X An Excel mailing list with the names and addresses of each property owner within 500 ft. of each property line, along with the HOA Associations within 1/2 mile of each property line.

X For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

* Fees are as shown above plus actual costs incurred for advertising or notification, and for reimbursement for technical and/or professional services which may be required in connection with the review, inspection or approval of any development (based on accounting submitted by the city's consultant) , payable prior to approval of the pertinent stage of development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Waiver for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): James W. Herbert, E.I.

Applicant Signature: _____ Date: 06/27/25

Business Name: NV5, Inc.

Address: 6200 Lee Vista Blvd, Suite 400, Orlando, FL 32822 Parcel ID: 27-23-30-5070-00-010

STATE OF FL COUNTY OF ORANGE Date JUNE 27, 2025

The foregoing instrument was acknowledged before me this 27 day of JUNE, 2025, by JAMES W. HERBERT who is personally known to me or who has produced DRIVER LICENSE as identification and who did/did not take an oath.

_____ Date: June 27, 2025 (seal):

Notary Public Signature: _____

My Commission expires: _____

NOTARY PUBLIC STATE OF FLORIDA
Olga Koloko Tsafack
Comm.: HH 605426
Expires: Oct. 22, 2028
Notary Public - State of Florida

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): See attached letter of authorization

Property Owner Signature: _____ Date _____

STATE OF _____ COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: _____ (seal):

Notary Public Signature: _____

My Commission expires: _____

LETTER OF AUTHORIZATION

Property Owner: KW Partners, LLC (contract purchaser)

Property Tax ID #: 26-20-30-5AR-0A00-007L

Legal Description: see attached

Authorized Applicant: Frank A. Porter, P.E., Jason P. Mahoney, P.E., James W. Herbert, E.I.

I hereby authorize Frank A. Porter, P.E., Jason P. Mahoney, P.E., and James W. Herbert, E.I.to make application on my behalf, for the following:

1. City of Winter Springs Applications, including, but not limited, to Site Plan Review, Variance Application, Waiver Application, Aesthetic Review Application and Conditional Use Application

2. Saint John's River Water Management District Environmental Resource Permit.

KW Partners, LLC

By: _____

PRINT NAME: Richard Kerper, Manager

State of Florida

County of Seminole

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization this 31 day of October, 2024, by Richard Kerper, Manager of KW Partners, LLC, on behalf of the LLC. He [XX] is personally known to me or [ ] has produced a driver's license as identification.

(Notary Seal)

_____
Signature of Public Notary

Kathleen Wolf

KATHLEEN WOLF
Notary Public-State of Florida
Commission # HH 536800
My Commission Expires
August 25, 2028

LEGAL DESCRIPTION:

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER: 11911023, COMMITMENT DATE: 07-26-2024)

PARCEL A (DESCRIPTION PROVIDED BY SURVEYOR)

A PORTION OF LOT 8, BLOCK "A", D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ON LAKE JESSUP, SAID LANDS LYING IN SECTION 6, TOWNSHIP 21 SOUTH, RANGE 31 EAST, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA; BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF STATE ROAD 434 AND TUSKAWILLA ROAD (PER FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY MAP, SECTION 77070-2516, SHEET 10 OF 13, P.I. STATION 600+32.11); THENCE RUN S38°23'34"E, A DISTANCE OF 1320.11 FEET ALONG THE BASELINE OF SURVEY AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE DEPARTING SAID BASELINE, RUN N51°36'26"E, A DISTANCE OF 94.94 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF THE AFORESAID STATE ROAD 434, AS SHOWN ON SAID RIGHT-OF-WAY MAP; THENCE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 164.51 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE S38°43'16"E, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 193.14 FEET TO THE INTERSECTION WITH THE NORTHWESTERLY BOUNDARY LINE OF ACQUISITION PARCEL B (RAILS TO TRAILS CORRIDOR) AS RECORDED IN OFFICIAL RECORDS BOOK 4092, PAGE 0164, PUBLIC RECORDS OF SEMINOLE COUNTY FLORIDA; THENCE N50°31'58"W, ALONG SAID NORTHWESTERLY BOUNDARY, A DISTANCE OF 231.33 FEET; THENCE N38°28'33"W, A DISTANCE OF 188.71 FEET; THENCE S51°37'48"W, A DISTANCE OF 232.12 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 1.015 ACRES, MORE OR LESS.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Conditional Use

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20–Zoning Sec.20-33. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. Once the application is deemed sufficient, the applicant shall move forward with the Community Workshop, required per Chapter 20–Zoning Sec.20-29.1.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Conditional Use is quasi-judicial in nature. Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Conditional Use recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Conditional Uses and may impose reasonable conditions on any approved Conditional Use to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Conditional Use which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Conditional Use, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Conditional Use shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Conditional Use

REQUIRED INFORMATION

Applicant(s): Richard Kerper at KW Partners, LLC Date: 12/12/24

Mailing address: 2420 Enterprise Road, Suite 201 Clearwater, FL 33763

Email: rk@kwequity.com

Phone Number: 727-723-0254

Property Owner(s): Tuskawilla Retail Partners II, LLC

Mailing Address: 880 Glenwood Ave SE # H Atlanta, GA 30316

Email: markm@catalystdp.com

Phone Number: 904-233-4303

Project Name: The Learning Experience

Property Address: SR 434 & Michael Blake Blvd Winter Springs, Florida 32708

Parcel ID(s): 26-20-30-5AR-0A00-007L

Parcel Size: 1.01 AC

Existing Use: Vacant Land

Conditional Use that is being requested? Day Care Center

How is the Conditional Use (density, height, scale and intensity, hours of operation, building and lighting design, setbacks, buffers, noise, refuse, odor, particulates, smoke, fumes and other emissions parking and traffic generating characteristics, number of persons anticipated using, residing or working under the conditional use, and other offsite impacts) compatible and harmonious with adjacent land uses?

A Day Care is compatible and harmonious with adjacent land uses in the Town Center District. The Town Center includes a grocer, restaurant, commercial, office, and medical uses with similar hours of operation, noise, parking and traffic generating characteristics as would be expected from the Day Care Center.

Will the Conditional Use adversely impact land use activities in the immediate vicinity? If no, why not?

The Day Care will have a positive impact on the adjacent land uses by providing safe, convenient, quality child care for residents living in the immediate vicinity.

Demonstrate the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale and intensity of the conditional use requested. The site shall be of sufficient size to accommodate design amenities such as screening, buffers, landscaping, open space, off-street parking, safe and convenient automobile, bicycle, and

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings.org

pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.

The Site Plan submitted with this application demonstrates the size and shape of the site and the proposed access to Sea Hawk Cove. All Town Center Code requirements regarding architectural design, buffers, landscape, open space, parking and pedestrian mobility will be met.

Will the proposed use have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values? If no, why not?

The Day Care Center will have a positive impact on the local economy by providing safe, convenient, quality child care for local area residents and the local workforce.

Will the proposed use have an adverse impact on natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards? If no, why not?

The Day Care Center will not have an adverse impact on the natural environment as a child care facility does not produce any negative air, water or noise pollution.

Will the proposed use have an adverse impact on historic, scenic and cultural resources, including views and vistas, and loss or degradation of cultural and historic resources? If no, why not?

The Day Care Center will not have an adverse impact on historic, scenic, or cultural resources as the child care facility will meet all of the architectural standards of the Town Center.

Will the proposed use have an adverse impact on public services, including water, sewer, stormwater and surface water management, police, fire, parks and recreation, streets, public transportation, marina and waterways, and bicycle and pedestrian facilities? If no, why not?

The Day Care Center will not have an adverse impact on public services as the child care facility is not a large consumer of municipal water or sewer. Additionally, the child care facility by its core business will not be a burden on police, fire, parks and recreation, streets or public transportation.

Will the proposed use have an adverse impact on housing and social conditions, including a variety of housing unit types and prices, and neighborhood quality? If no, why not?

The Day Care Center will have a positive impact on housing and social conditions by providing an additional option for safe, convenient, quality child care for existing and future area residents. This will increase housing unit types, prices and neighborhood quality.

Will the proposed use avoids significant adverse odor, emission, noise, glare, and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs,

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings.org
Application – Conditional Use

lighting, and other sire elements? If no, why not?

The Day Care Center use will avoid significant adverse impacts as the child care facility will not create adverse odor, emission, noise, glare or vibration by nature of its core business.

Demonstrate that the conditional use and associated site plan have been designed to incorporate mitigative techniques and plans needed to prevent adverse impacts addressed in the criteria stated herein or to adjacent and surrounding uses and properties.

The Site Plan submitted with this application demonstrates the day care center has been designed to meet all applicable City Town Center Code to prevent adverse impacts to adjacent and surrounding uses and properties.

If the proposed conditional use is a residential use, whether the elementary, middle and high schools (K-12) that will be initially assigned to the residential project by the School District at the time the city commission considers final approval of the conditional use have both sufficient capacity, are in close proximity to the project so as to make each of the assigned schools accessible and convenient (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the school population that will be drawn from the project, and promote and support the integration of future residents of the project into the existing city of Winter Springs community in a sustainable manner.

N/A, this proposed conditional use is not a residential use.

List all witnesses that the applicant intends to present to the City Commission to provide testimony:

None at this time

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

None at this time

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings-fl.org

Application – Conditional Use

REQUIRED DOCUMENTATION

X A complete Application and Fee

X A general description of the relief sought under this division

X A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

X A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (to scale).

X An acceptable security plan for the proposed establishment that addresses the safety and security needs of the establishment and its users and employees and minimizes impacts on the neighborhood.

N/A An acceptable plan for the mass delivery of merchandise for new large footprint buildings (greater than 20,000 square feet) including the hours of operation for delivery trucks to come into and exit the property and surrounding neighborhood.

X For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings-fl.org

Application – Conditional Use

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Conditional Use for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Richard Kerper

Applicant Signature: _____ Date: 12/12/24

Business Name: KW Partners, LLC

Address: 2420 Enterprise Road, Suite 201 Clearwater, FL 33763 Parcel ID: _____

STATE OF Florida COUNTY OF Pinellas

The foregoing instrument was acknowledged before me this 12 day of December, 2024, by Richard Kerper who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 12/12/24

Notary Public Signature: Kathleen Wolf

My Commission expires: 8-25-28

(seal) KATHLEEN WOLF
Notary Public-State of Florida
Commission # HH 536800
My Commission Expires
August 25, 2028

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): Mark Mechlowitz, Manager of Tuskawilla Retail Partners II, LLC

Property Owner Signature: _____ Date 12/13/2024

STATE OF GA COUNTY OF Fulton

The foregoing instrument was acknowledged before me this 13th day of December, 2024, by Mark Mechlowitz who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Date: 12/13/2024 (seal):

Notary Public Signature: Lauren Groover

My Commission expires: 4/28/2026

LAUREN GROOVER
Notary Public - State of Georgia
Fulton County
My Commission Expires Apr 28, 2026

PUBLIC HEARINGS AGENDA ITEM 401

PLANNING AND ZONING BOARD/LOCAL PLANNING AGENCY AGENDA | AUGUST 7, 2025 REGULAR MEETING

TITLE

Wawa at Winter Springs Marketplace, SR 434 and Tuskawilla Road – Conditional Use Application, Site Plan/Final Engineering, Aesthetic Review, Waivers, and Development Agreement.

SUMMARY

The Community Development Department requests that the Planning & Zoning Board hold a Public Hearing to consider the Conditional Use Application, Site Plan/Final Engineering, Aesthetic Review, Waivers, and Development Agreement regarding the applicant's request to construct a convenient store and gas station in the Town Center District, T5 Transect.

FUNDING SOURCE

RECOMMENDATION

Staff recommends that the Planning & Zoning Board recommend denial of the Conditional Use Application, Site Plan /Final Engineering, Aesthetic Review, and Development Agreement. The development plan does not meet Goal 2: Town Center of the Comprehensive Plan which states:

"The City seeks to create a Town Center based upon traditional design standards for development that will become the identifying focus of the City's downtown and contribute to an increased and diversified tax base for the City. The primary purpose of the Town Center shall be to create an economically successful, vibrant, aesthetic, compact, multimodal, diverse, mixed use (including horizontal and vertical integration of uses) neo-traditional urban environment, designed on a pedestrian scale and with a pedestrian orientation. The Town Center is to be a place where people can reside in a mix of single and multiple family dwellings, work, gather to shop, relax, recreate, be entertained, attend community events, and enjoy the natural beauty of lands located in the Town Center. The Town Center should be created through public and private investment and development," due to the following:

1. The building placement is required to contain shallow setbacks or none, buildings oriented close to the street defining a street wall per Sec.20-320. Therefore, the convenient store placement is required to be oriented close to E. SR 434/Tuskawilla Road.
2. Per Sec.20-325 the front setback is required to be 50 ft., and shall be the average of the front setback of the two developed lots abutting the lot. Therefore, the proposed convenient store setback of 182 ft. from E. SR 434 and 98 ft. from Tuskawilla Rd. exceeds the required setback and the buildings along E. SR 434 in the Winter Springs Marketplace.
3. Per Sec.20-325 the rear setback is required to be 15 ft., and the proposed convenient store is zero feet from the rear.
4. The proposed design and color of the proposed building and gas canopy are not consistent with the Winter Springs Marketplace; therefore, not compatible with the immediate surrounding area of the Town Center.
5. Single-tenant monument signs are required to be consistent in materials with the architecture of the proposed building per Sec.16-82(2)(e).
6. The Traffic Impact Analysis is required to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land Development Code. However, as of the date of this report, the transportation review has not been addressed.
7. There is no hardship present on the subject site to meet all the relevant standards for the Town Center to continue being a place where people can reside in a mix of single and multiple family dwellings, work, gather to shop, relax, recreate, be entertained, attend community events, and enjoy the natural beauty of lands located in the Town Center.

The Traffic Impact Analysis is required to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land

1. Development Code. However, as of the date of this report, the transportation review has not been addressed.
2. There is no hardship present on the subject site to meet all the relevant standards for the Town Center to continue being a place where people can reside in a mix of single and multiple family dwellings, work, gather to shop, relax, recreate, be entertained, attend community events, and enjoy the natural beauty of lands located in the Town Center.

However, should the Planning & Zoning Board recommend APPROVAL of the Site/Final Engineering to the City Commission, staff recommends denial of Waiver I, but approval of Waiver III with no conditions and Waiver II, subject to the following conditions:

1. One (1) ground monument sign to be located at the intersection of SR 434 and Tuskawilla Road.

2. The one (1) ground monument sign to be consistent in materials with the architecture of the proposed building.

PUBLIC HEARINGS AGENDA ITEM

PLANNING & ZONING BOARD
THURSDAY, AUGUST 7, 2025
REGULAR MEETING

TITLE

Wawa at Winter Springs Marketplace, SR 434 and Tuskawilla Road – Conditional Use Application, Site Plan/Final Engineering, Aesthetic Review, Waivers, and Development Agreement.

SUMMARY

The Community Development Department requests that the Planning & Zoning Board hold a Public Hearing to consider the Conditional Use Application, Site Plan/Final Engineering, Aesthetic Review, Waivers, and Development Agreement regarding the applicant's request to construct a convenient store and gas station in the Town Center District, T5 Transect.

General Information			
Applicant	Cory Stitler \ Kimley-Horn and Associates, Inc.		
Property Owner(s)	Tuskawilla Property Investors, LLC		
Location	East/Northeast of the intersection of State Road 434 and Michael Blake Blvd		
Tract Size	±1.22 Acres		
Parcel ID Number	36-20-30-502-0000-0090		
Zoning Designation	Town Center District, T-5 Transect		
FLUM Designation	Town Center District		
Adjacent Land Use	North: State Road 434 East: Tuskawilla Road		South: Aldi's West: Fifth Third Bank
Height	33'4", 1 story (convenience store), 25'2" (gas canopy)		
Setbacks	Front: 25 ft, minimum, 50 ft. maximum	Rear: 15 ft. minimum	Side: 5 ft. minimum, 100 ft. maximum
Development Standards	Lot Coverage 100%		
Development Permits	Not applicable		
Development Agreement	Development Agreement | Pending		

Code Enforcement	Not applicable
City Liens	Not applicable

Background Data:

The development site consists of one lot, Resulting Trust Property Parcel #2 in accordance with the original Winter Springs Marketplace Development and Property Division Agreement, totaling 1.22 acres, having been subdivided from an 8.27 gross acre lot. The development site is located at the southwest corner of S.R. 434 and Tuskawilla Road within the Winter Springs Marketplace. The applicant is proposing a Wawa gas station/convenient store, which is permitted as a conditional use per the recent adoption of Ordinance No. 2025-09 in May of 2025. "Corner stores or neighborhood convenience store with gas pumps" is a conditional use in the Town Center District, Transect 5 (T5). The applicant is proposing a 4,736 sf convenient store and 5,903 gas canopy that contains 6 main pump stations with a cumulative of 12 gas dispensers. Upon receipt of the Planning and Zoning Board's recommendation, the City Commission shall make a final decision on the application, to approve, approve with conditions, or deny the project within the Town Center district.

A "corner store or neighborhood convenience store with gas pumps" is permitted as a conditional use in the T5 Transect, with the following conditions:

(1) Notwithstanding Section 20-418 of the City Code regarding gasoline stations, a conditional use may be approved by the City Commission for an expanded neighborhood convenience store. The store must be between 4,000 to 5,000 square feet and primarily offer traditional convenience store items, including dairy, bakery, tobacco, beverages, grocery, health and beauty aids, newspapers and magazines, lottery sales as may be approved by the State, and confectionery. Additionally, it must feature expanded grocery products, fresh fruits and vegetables, significant fast or prepared food operations and seating, coffee bars or kiosks, and gasoline sales with no more than twelve (12) fueling positions. The store must also be located at the corner of an arterial road intersection.

Public Notice

Notices were mailed to all owners of real property adjacent to and within approximately five hundred (500) feet of the subject property and all Homeowner's Associations on file with the City of Winter Springs on July 29, 2025.

A Community Workshop was held on June 30, 2025 at 6:00 PM at The Foundry Church. There were several concerns related to pedestrian safety and placement of the convenience store building and traffic impacts raised at the Community Workshop, but no objections regarding the proposed development. Please see "Figure 1" Community Workshop Flyer and "Figure 2" Community Workshop Attendance.

Analysis of Final Engineering Plans (Sec. 20-33.1) and Conditional Use (Sec. 20-33) Criteria:

The criteria for Final Engineering Plans are provided and analyzed below, along with all conditional use recommendations and final decisions shall be based on the following criteria to the extent applicable:

(a) Site and final engineering plans and the subdivision of land shall also be subject to the technical requirements set forth in Chapter 9 of the City Code. It is the intent of this section to apply to applications for site and final engineering plans and to any subdivision of land requiring a plat, if applicable, and does not include review and approval of a lot split application.

Please see the discussion below regarding technical requirements of Chapter 9. The Final Engineering Plans have been reviewed by the City's contract engineer, who concluded that the Plans satisfy the technical requirements. provided the conditions of approval set forth below are met.

(b) Except in situations involving one (1) single-family home, the Planning and Zoning Board shall be required to review all site and final engineering plan and subdivision of land applications and make a written recommendation to the city commission. Such recommendation shall include the reasons for the board's recommendation and show the board has considered the applicable criteria set forth in this section.

(c) Upon receipt of the planning and zoning board's recommendation, the city commission shall make a final decision on the application. If the city commission determines that the planning and zoning board has not made a recommendation on an application within a reasonable period of time, the city commission may, at its discretion, consider an application without the planning and zoning board's recommendation.

Except in situations involving one (1) single-family home, all site and final engineering plan and subdivision recommendations and final decisions shall be based on whether the site and final engineering plan and subdivision of land comply with all the technical requirements set forth in chapter 9 of the City Code and the following criteria to the extent applicable:

(1) Whether the applicant has demonstrated the conditional use/final engineering plan, including its proposed density, height, scale and intensity, hours of operation, building and lighting design, setbacks, buffers, noise, refuse, odor, particulates, smoke, fumes and other emissions, parking and traffic-generating characteristics, number of persons anticipated using, residing or working under the conditional use, and other off-site impacts, is compatible and harmonious with adjacent land uses, and will not adversely impact land use activities in the immediate vicinity.

Analysis: Staff have found that the applicant's proposed convenient store/gas station has not demonstrated the requirements of the Code. The proposed gas

station use will operate twenty-four (24) hours a day for seven (7) days a week and has sufficient landscape buffers to be aesthetically pleasing. However, the development plan does not provide safe pedestrian access, in particular to students, and block noise, odor, and other emissions due to the convenient store proposed location not oriented close to SR 434, and the lack of a safe pedestrian travel route from SR 434 to the proposed convenient store location. Further, a Traffic Impact Analysis (TIA) is required to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land Development Code. However, as of the date of this report, the transportation review has not been addressed. The use is not compatible and harmonious with adjacent land uses as the development plan could potentially adversely impact land use activated in the immediate vicinity since the proposed layout contains a front setback of 182 ft. from SR 434 and 98 ft. from Tuskawilla Road, where 50 ft. is required per Sec.20-3254. This setback request is inconsistent with the rest of the Winter Springs Marketplace development, which has building setbacks of _10 ft._____.

As described further herein, the design of the project with the 182-foot proposed building setback is not consistent with the intent of the Winter Springs Town Center, as described in the City's Comprehensive Plan and Zoning Code. GOAL 2 of the Future Land Use Element of the Comprehensive Plan provides:

"The City seeks to create a Town Center based upon traditional design standards for development that will become the identifying focus of the City's downtown and contribute to an increased and diversified tax base for the City. The primary purpose of the Town Center shall be to create an economically successful, vibrant, aesthetic, compact, multimodal, diverse, mixed use (including horizontal and vertical integration of uses) **neo-traditional urban environment, designed on a pedestrian scale and with a pedestrian orientation**. The Town Center is to be a place where people can reside in a mix of single and multiple family dwellings, work, gather to shop, relax, recreate, be entertained, attend community events, and enjoy the natural beauty of lands located in the Town Center. The Town Center should be created through public and private investment and development." The setbacks proposed are not consistent with this Goal of creating a pedestrian-centered Town Center to recreate and gather.

In addition, Objective 2.2 and Policy 2.2.1 of the Future Land Use Element provides:

Objective 2.2: Neo-traditional. Promote and enhance the development of the Town Center by allowing a mixed use higher density/intensity neo-traditional urban pattern.

Policy 2.2.1: Neo-Traditional Characteristics. Encourage a mixed use higher density/intensity neo-traditional Town Center, utilizing, to the extent practical, the fundamentals and urban design concepts in the Town Center Master Plan:

- Urban and high density
- **Walkable community**
- Predictability in design/flexibility in land uses.
- **Visibly different section of S.R. 434**

- Important sites for special public places
- “Green network” of parks and preserved open spaces
- Connected network of streets and blocks
- Special public spaces of defined character
- Special sites for civic buildings
- Pedestrian sized blocks
- Nongated developments

The setbacks proposed and placement of the corner store does not contribute to a walkable community and does not follow the development patterns of the rest of the Town Center on SR 434, with buildings close to the street to create a “visibly different section of SR 434.”

Further, staff notes the following:

1. The building placement is required to contain shallow setbacks or none, buildings oriented close to the street defining a street wall per Sec.20-320. Therefore, the convenient store placement is required to be oriented close to E. SR 434/Tuskawilla Road.
2. Per Sec.20-325 the front setback is required to be 50 ft., and shall be the average of the front setback of the two developed lots abutting the lot. Therefore, the proposed convenient store setback of 182 ft. from E. SR 434 and 98 ft. from Tuskawilla Rd. far exceeds the required setback and the buildings along E. SR 434 in the Winter Springs Marketplace.
3. Per Sec.20-325 the rear setback is required to be 15 ft., and the proposed convenient store is zero feet from the rear.
4. The proposed design and color of the proposed building and gas canopy are not consistent with the Winter Springs Marketplace; therefore, not compatible with the immediate surrounding area of the Town Center.
5. Single-tenant monument signs are required to be consistent in materials with the architecture of the proposed building per Sec.16-82(2)(e) and are discouraged in the Town Center.
6. The Traffic Impact Analysis is required to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land Development Code. However, as of the date of this report, the transportation review has not been addressed.
7. There is no hardship present on the subject site to meet all the relevant standards for the Town Center to continue being a place where people can reside in a mix of single and multiple family dwellings, work, gather to shop, relax, recreate, be entertained, attend community events, and enjoy the natural beauty of lands located in the Town Center.
8. It is not consistent with the use of a “corner store” or neighborhood convenience store to have the building placed 182 feet behind the corner.

(2) Whether the applicant has demonstrated the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale and intensity of

the conditional use requested. The site shall be of sufficient size to accommodate design amenities such as screening, buffers, landscaping, open space, off-street parking, safe and convenient automobile, bicycle, and pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.

Analysis: Staff have found that the applicant demonstrated the size and shape of the site, access and internal circulation, and the design enhancements to be adequate to accommodate the proposed gas station/convenient store use. The site is able to accommodate the 4,736 sf convenient store and 5,903 gas canopy, landscape buffering and screening, off-street parking, and other improvements that will mitigate any adverse impacts of the day care use. However, the proposed site development could be designed in a manner to meet Town Center standards, and be harmonious with the Winter Springs Marketplace. There is no reason that the applicant cannot comply with the Town Center setbacks and alter the proposed layout of the building and gas canopy. There is adequate space to comply with City Code standards.

Further, a Traffic Impact Analysis (TIA) is required to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land Development Code. However, as of the date of this report, the transportation review has not been addressed to determine safe and convenient automobile, bicycle, and pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.

(3) Whether the proposed use will have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values.

Analysis: Staff have found that the proposed gas station/convenient store use will have a beneficial impact on the local economy, providing additional gas station options to local residents and workers, while also providing employment at the facility. Staff find that these impacts will improve property values by continuing to make Town Center a desirable place to live and work.

(4) Whether the proposed use will have an adverse impact on the natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards.

Analysis: Staff have found that the proposed use will have no adverse impact on the natural environment.

(5) Whether the proposed use will have an adverse impact on historic, scenic, and cultural resources, including views and vistas, and loss or degradation of cultural and historic resources.

Analysis: Staff have found that the proposed use will have an adverse impact on views and vistas due to the proposed architectural design and colors not being

harmonious with the Winter Springs Marketplace. Therefore, the Town Center standards are not being met.

(6) Whether the proposed use will have an adverse impact on public services, including water, sewer, stormwater and surface water management, police, fire, parks and recreation, streets, public transportation, marina and waterways, and bicycle and pedestrian facilities.

Analysis: A Traffic Impact Analysis (TIA) is required to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land Development Code. However, as of the date of this report, the transportation review has not been addressed to determine any adverse impact public services related to streets, public transportation, and bicycle and pedestrian facilities. Moreover, the placement of pedestrian pathways to the convenience store However, the proposed use will have no adverse impacts on other related public services.

(7) Whether the traffic report and plan provided by the applicant details safe and efficient means of ingress and egress into and out of the neighborhood and adequately addresses the impact of projected traffic on the immediate neighborhood, traffic circulation pattern for the neighborhood, and traffic flow through immediate intersections and arterials.

Analysis: Staff have found that the Traffic Impact Analysis (TIA) to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land Development Code, has not been addressed as of the date of this report.

(8) Whether the proposed use will have an adverse impact on housing and social conditions, including variety of housing unit types and prices, and neighborhood quality.

Analysis: Staff have found that the proposed use is not anticipated to have an adverse impact on housing and social conditions, as the proposed uses includes a gas station and convenient store. However, the proper development layout could contribute to safety concerns for the current social conditions within the Town Center.

(9) Whether the proposed use avoids significant adverse odor, emission, noise, glare, and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other sire elements.

Analysis: Staff have found that the proposed use does not avoid significant adverse impacts on the parcel and the surrounding neighborhood since the proposed location of the gas canopy is oriented close to SR 434 and the convenient store is proposed to be 182’ from SR 434.

(10) Whether the applicant has provided an acceptable security plan for the proposed establishment that addresses the safety and security needs of the

establishment and its users and employees and minimizes impacts on the neighborhood, if applicable.

Analysis: Staff have found that the applicant has indicated that security systems will be installed for all on-site buildings with the development. The lighting provided illustrates that on-site area will be lit after dark.

(11) Whether the applicant has provided an acceptable plan for the mass delivery of merchandise for new large footprint buildings (greater than twenty thousand (20,000) square feet) including the hours of operation for delivery trucks to come into and exit the property and surrounding neighborhood, if applicable.

Analysis: All proposed buildings are less than 20,000 SF.

(12) Whether the applicant has demonstrated that the conditional use and associated site plan have been designed to incorporate mitigative techniques and plans needed to prevent adverse impacts addressed in the criteria stated herein or to adjacent and surrounding uses and properties.

Analysis: Staff have found that the proposed gas station/convenient store use will utilize mitigative techniques including walls, landscape buffers, and more to reduce and prevent adverse impacts on adjacent and surrounding properties. However, in staff's view, these mitigative techniques are not sufficient to overcome the overall lack of compliance with Town Center Code with regard to building placement.

(13) If the proposed conditional use is a residential use, whether the elementary, middle and high schools (K—12) that will be initially assigned to the residential project by the school district at the time the city commission considers final approval of the conditional use have both sufficient capacity, are in close proximity to the project so as to make each of the assigned schools accessible and convenient (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the school population that will be drawn from the project, and promote and support the integration of future residents of the project into the existing city of Winter Springs community in a sustainable manner.

Analysis: The proposed use is not a residential use.

(14) Whether the applicant has agreed to execute a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code.

Analysis: The applicant has agreed to and is working on a binding development agreement with the City addressing terms and conditions deemed necessary by the City Commission.

Water and Sewer: Public Works & Utilities Department Staff have confirmed that sufficient water and sewer capacity exists for this project.

Stormwater:
Not applicable for this project as no drainage was proposed for this project. The infrastructure included for the development will tie into the existing stormwater pond. That stormwater system will be private and subject to the Declaration of Conditions, Covenants, Easements, and Restrictions as recorded in the Official Records of Seminole County (ORSC), Book 8871, Page 98, as amended by the First Amendment to the same, as recorded in ORSC, Book 8964, Page 1579. These documents govern the maintenance and cost allocations among properties in the Town Center.

Transportation:
The Traffic Impact Analysis is required to determine the impact on and adherence to the Town Center goals per the Comprehensive Plan and Land Development Code. However, as of the date of this report, the transportation review has not been addressed.

Parking:
The Town Center does not have minimum required parking standards, however, the applicant provided documentation (Figure 6) that Wawa will offer a total of fifty (50) spaces of which ten (10) are off-site for employee parking within the Winter Springs Marketplace under a separate permit.

Aesthetic Review:

Pursuant to Section 9-603, which sets forth guidelines and minimum standards for Aesthetic Review packages, staff have utilized the criteria below in Section 9-603 to determine the following. The attached Aesthetic Review package (Figures 7, 8, and 14) includes all of the submittal requirements for aesthetic review as set forth in Section 9-600 through 9-607 and include the following: (a) a site plan; (b) elevations illustration all sides of structures facing public streets or spaces; (c) illustrations of all walls, fences, and other accessory structures and the indication of height and their associated materials; (d) elevation of proposed exterior permanent signs or other constructed elements other than habitable space, if any; (e) illustrations of materials, texture, and colors to be used on all buildings, accessory structures, exterior signs; and (f) other architectural and engineering data as may be required. The procedures for review and approval are set forth in Section 9-603.

Aesthetic Review	
1.	The plans and specifications of the proposed project indicate that the setting, landscaping, proportions, materials, colors, texture, scale, unity, balance, rhythm, contrast, and simplicity are coordinated in a harmonious manner relevant to the project, surrounding area and cultural character of the community.

	Analysis: Staff finds that subject to the approval of the physical landscaping/streetscaping within the area 22-foot area depicted within the streetscape waiver request, landscaping elements are coordinated in a harmonious manner relevant to the particular proposal, the surrounding area, and cultural character of the community. However, the proposed design and color elements are not consistent with the surrounding area and cultural character of the community.
2.	The plans for the proposed project are in harmony with any future development which has been formally approved by the city within the surrounding area. **Analysis:** Staff finds that the plans for the proposed project are not in harmony with the Town Center District Code.
3.	The plans for the proposed project are not excessively similar or dissimilar to any other building, structure or sign which is either fully constructed, permitted but not fully constructed, or included on the same permit application, and facing upon the same or intersecting street within five hundred (500) feet of the proposed site, with respect to one or more of the following features of exterior design and appearance: a. Front or side elevations; b. Size and arrangement of elevation facing the street, including reverse arrangement; or c. Other significant features of design such as, but not limited to materials, roof line, hardscape improvements, and height or design elements. **Analysis:** The plans for this project are not excessively similar or dissimilar to other projects within 500 feet of the proposed project, with the exception of the plans being excessively dissimilar in exterior design and color from the buildings located within Winter Springs Marketplace.
4.	The plans for the proposed project are in harmony with, or significantly enhance, the established character of other buildings, structures or signs in the surrounding area with respect to architectural specifications and design features deemed significant based upon commonly accepted architectural principles of the local community. **Analysis:** As previously mentioned, the project has been reviewed under the Town Center District Code standards, ensuring conformance with the high standard of development for Town Center. The streetscape design has a waiver from the width requirements of Town Center standards that staff approved, but does not find the exterior design and color to enhance the aesthetic impact of the project as compatible with other developments along SR 434 and Tuskawilla Road.
5.	The proposed project has incorporated significant architectural enhancements such as concrete masonry units with stucco, wrought iron, columns and piers, porches, arches, planting areas, display windows, and

	other distinctive design features detailing and promoting the character of the community. **Analysis:** The project significantly meets the standards, with the building's primary exterior consisting of stucco, hardie plank fiber cement lap siding, and stone veneer with the signature bright red for the Wawa's sign on the front façade of the convenient store. The rear façade facing the parking area for the Winter Springs Marketplace does not include the sign. Although the exterior yellow tones are consistent with the Town Center's character of the community, the colors are dissimilar from the buildings within Winter Springs Marketplace.

Reports:

The Final Engineering submittal is required to include the following reports or updates of previously prepared reports for the same property.

Reports	
July 14, 2020	Drainage Report (Figure 20)
July 28, 2020	Potable Water Analysis (Figure 21)
August 4, 2020	Listed Wildlife Species Survey (Figure 22)
December 15, 2020	Preliminary Geotechnical Report (Figure 23)
December 6. 2024	Parking Analysis (Figure 6)
December 2024	Traffic Impact Analysis (Figure 24)

Procedural History:	
May 6, 2025	Pre-Application Meeting
June 30, 2025	Community Workshop
August 7, 2025	Planning & Zoning Board | Recommendation on Conditional Use Application, Site Plan /Final Engineering, Aesthetic Review, Waivers, and Development Agreement.
August 25, 2025	City Commission | Hearing on Conditional Use Application, Site Plan/ Final Engineering, Aesthetic Review, Waivers, and Development Agreement.

Waiver Review: Pursuant to Section 20-34, Any real property owner may file a waiver application requesting a waiver(s) for their real property from any term and condition of this chapter (except from the list of permitted, conditional and prohibited uses set forth in any zoning district category). The Planning and Zoning Board shall be required to review all waiver applications and make a written recommendation to the City Commission. Such recommendation shall include the reasons for the board's recommendation and show the board has considered the applicable waiver criteria set forth and analyzed below. Upon receipt of the Planning and Zoning board's recommendation, the city commission shall make a final decision on the application. If the city commission determines that the planning and zoning board has not made a recommendation on an application within a reasonable period, the city commission may, at its discretion, consider an application without the planning and zoning board's recommendation.

Waiver I: A waiver to allow Wawa to be located at a setback of 182' from the right-of-way of SR 434 and 98' from the right-of-way of Tuskawilla Road in lieu of the 50' maximum front setback, and a setback of zero from the rear in lieu of the 15'minium setback.

Waiver Review	
1.	The applicant clearly demonstrates that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development. **Analysis:** Staff find that the applicant has not demonstrated that the 50' and 15' setback requirement creates an impractical result in that meeting the standards would not prevent the lot to meet other requirements related to the proposed property and development.
2.	The proposed development plan is in substantial compliance with this chapter and in compliance with the comprehensive plan. **Analysis:** Staff find that the proposed setback adjustment is not compliant with the Town Center setback standards as it requires a building closer to the street and the proposed setbacks are not in compliance with the comprehensive plan.
3.	The proposed development plan will significantly enhance real property. **Analysis:** Staff find that the proposed site plan will significantly enhance the real property by providing an additional gas station option that includes a convenient store service which will enhance the value of surrounding property and provide families who live and work near Town Center.
4.	The proposed development plan serves the public health, safety, and welfare.

	Analysis: Staff find that the construction of Wawa will serve the public health, safety, and welfare of area residents.
5.	The waiver will not diminish property values in or alter the essential character of the surrounding neighborhood. **Analysis:** Staff find that the waiver will not diminish property values or the essential character of the surrounding neighborhood. The Town Center is meant to be a mixed-use of commercial and residential to serve residents and visitors. The construction of Wawa will enhance property values and the essential character by increasing convenient store/gas station options in Town Center.
6.	The waiver granted is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. **Analysis:** Staff find that the waiver is not the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. The design does meet the associated requirements of the use while still meeting the intent of the ordinance.
7.	The proposed development plan is compatible and harmonious with the surrounding neighborhood. **Analysis:** Staff find that the site plan is not compatible with the with the Town Center since it exceeds the required setback and the buildings along SR 434 in the Winter Springs Marketplace.
8.	Whether the applicant has agreed to execute a binding development agreement required by the city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code. **Analysis:** The Applicant is working on and has agreed to a binding Development Agreement to incorporate terms and conditions deemed necessary by the City Commission.

Waiver II: A waiver to the requirement of the Town Center District Code, Sec. 20-327.1 to allow for two monument signs for the project. The signs will be identical, with one located at S.R. 434 and the second being located at the existing driveway of the Winter Springs Marketplace on Tuskawilla Road. Also, a waiver to the requirement of the single-tenant monument signs, Sec.16-82 to allow the materials to be inconsistent with the architecture of the proposed building.

Waiver Review	
1.	The applicant clearly demonstrates that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development.

	Analysis: Staff finds that although not permitted by right in the Town Center District, monument signs are a reasonable standard for drivers to note the location of a business. However, the Winter Springs Marketplace already contains four (4) multiple tenant ground monument signs. Therefore, one (1) single-tenant ground sign located at the intersection of SR434 and Tuskawilla would be sufficient for the proposed development. Further, staff finds that the applicant has not demonstrated the monument signs material to be consistent the proposed building requirement creates an impractical result in that meeting the standards would not prevent the lot to meet other requirements related to the proposed property and development. Staff notes that the prior First Modification to the Development and Property Division Agreement stated there would be no further monument signs allowed on SR 434, as the plans for the Fifth-Third Bank at the time requested a monument sign that would serve the bank and the future development parcel on the corner, now proposed to be the Wawa. Staff has proposed that the Second Modification to the Development Agreement allow only one additional monument sign for gas station pricing signage at the corner of Tuskawilla and SR 434.
2.	The proposed development plan is in substantial compliance with this chapter and in compliance with the comprehensive plan. **Analysis:** Staff has reviewed the proposed signs for conformance with the regulations for monument signs for single-tenant businesses under Code Sec. 16-82 (2) and other applicable requirements of Chapter 16, Signs and Advertising. Staff also find them not to be in compliance with the Comprehensive Plan.
3.	The proposed development plan will significantly enhance the real property. **Analysis:** Staff finds that the proposed monument signs will not enhance the value of the subject property, since there are four (4) existing monument signs within the Winter Springs Marketplace; therefore, detracting from the enhancement of the property.
4.	The proposed development plan serves the public health, safety, and welfare. **Analysis:** Staff finds that the plan does not service the public health, safety, and welfare. The addition of 2 monument signs could decrease traffic safety, while degrading the aesthetics of the Town Center since there are four (4) existing monument signs within the Winter Springs Marketplace.
5.	The waiver will not diminish property values in or alter the essential character of the surrounding neighborhood. **Analysis:** Staff find that the waiver will not diminish property values or the essential character of the surrounding neighborhood. The Town Center is meant to be a mixed-use of commercial and residential to serve residents and visitors. The construction of The Learning Experience will enhance

	property values and the essential character by increasing child care options in Town Center.
6.	The waiver granted is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. **Analysis:** Staff finds that the waiver will diminish property values in or alter the essential character of the surrounding neighborhood. Further, it will diminish the high-quality development existing in the Town Center, especially Winter Springs Marketplace.
7.	The proposed development plan is compatible and harmonious with the surrounding neighborhood. **Analysis:** Staff finds that the proposed monument plan is not compatible and harmonious with the surrounding neighborhood due to the request is for two (2) ground monument signs within a retail complex that contains four (4) multiple-tenant signs.
8.	Whether the applicant has agreed to execute a binding development agreement required by the city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code. **Analysis:** The Applicant is working on and has agreed to a binding Development Agreement to incorporate terms and conditions deemed necessary by the City Commission.

Waiver III: A waiver to allow variations in the streetscape width requirements for Wawa, consisting of a 12' landscape and treescape area, a 6' sidewalk, and a 4' landscape area located near the existing access driveway from the Tuskawilla Road right-of-way.

Waiver Review	
1.	The applicant clearly demonstrates that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development. **Analysis:** Staff find that the applicant clearly demonstrates that the applicable conditions create an illogical, impossible, impractical, or patently unreasonable result related to the Town Center streetscape requirements due to Tuskawilla Road containing an insufficient right-of-way at the southern end. Additionally, maintaining the existing dimensions would be in keeping with adjacent parcels.
2.	The proposed development plan is in substantial compliance with this chapter and in compliance with the comprehensive plan. **Analysis:** Staff find that the variations in the streetscape section widths are substantially compliant with the Code requirements and the desired goals

	for the Town Center as described in the Comprehensive Plan. The streetscape maintains the 27' overall width as required by the ordinance while adjusting the sections at Tuskawilla Road existing access driveway to be harmonious with the streetscapes on adjacent parcels.
3.	The proposed development plan will significantly enhance the real property. **Analysis:** Staff find that the proposed variations on the streetscape will significantly enhance the real property by enhancing the overall appearance of the streetscape. The applicant is proposing a number of canopy trees and shrubs that will improve the aesthetic value of the property.
4.	The proposed development plan serves the public health, safety, and welfare. **Analysis:** Staff find that the plan services the public health, safety, and welfare. The proposed streetscape will increase the quality of life for residents and visitors by maintaining the current path and providing a more aesthetically pleasing walkway.
5.	The waiver will not diminish property values in or alter the essential character of the surrounding neighborhood. **Analysis:** Staff find that the waiver will not diminish property values or the essential character of the surrounding neighborhood. The Town Center is meant to be a mixed-use of commercial and residential to serve residents and visitors.
6.	The waiver granted is the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under this chapter. **Analysis:** Staff find that this waiver eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable conditions by keeping the current landscape and sidewalk widths so as to be harmonious with the existing streetscape on adjacent parcels. The total required width of the streetscape as required by the Code will be unaffected.
7.	The proposed development plan is compatible and harmonious with the surrounding neighborhood. **Analysis:** Staff find that the proposed development plan is compatible and harmonious with the surrounding neighborhood. While the widths of each section as proposed are not within the Code, they are compatible with the streetscape for the adjacent parcels and the amount of both canopy trees, shrubs, and plantings will result in a harmonious landscape for the surrounding neighborhood.
8.	Whether the applicant has agreed to execute a binding development agreement required by the city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code.

	Analysis: The Applicant is working on and has agreed to a binding Development Agreement to incorporate terms and conditions deemed necessary by the City Commission.

Applicable Law, Public Policy, and Events:
Florida Statutes 163.2511-163.3246: Growth Policy; County and Municipal Planning; Land Development Regulation (Provides that land development regulations for municipal planning be consistent with the Comprehensive Plan).
Home Rule Powers
Code of Ordinances City of Winter Springs.
Section 20-1. Definitions.

Fiscal Impact:

The Fiscal Impact Report shall be reviewed and approved prior to the project being heard before the City Commission.

Development Agreement:
The Applicant is currently working with the City Attorney on the Development Agreement for the project. The Development Agreement shall be executed prior to any work on the project covered within this document.

STAFF RECOMMENDATION
Staff recommends that the Planning & Zoning Board recommend denial of the Conditional Use Application, Site Plan /Final Engineering, Aesthetic Review, and Development Agreement. The development plan does not meet Goal 2: Town Center of the Comprehensive Plan as provided herein.

In the event the project is recommended for approval, Staff recommends that it is contingent upon, and not effective until, the related Additional Parking project Site Plan/ Final Engineering application is approved.

With regard to Waivers, Staff requests that the Planning and Zoning Board recommend denial of Waiver I, but approval of Waiver III with no conditions and approval of Waiver II, subject to the following conditions:

1. One (1) ground monument sign to be located at the intersection of SR 434 and Tuskawilla Road.

2. The one (1) ground monument sign to be consistent in materials with the architecture of the proposed building.

Attachments:

10

Figure “1” – Community Workshop Flyer
Figure “2” – Community Workshop Attendance Sheet
Figure “3” – Wawa Civil Site Plan 07.30.2025
Figure “4“– Landscape Plan 07.29.2025
Figure “5 “– Master Sign Plan
Figure “6” – Parking Analysis
Figure“7” – Building Elevations
Figure “8” – Canopy Renderings
Figure “9” – Setback Waiver Justification
Figure “10” – Ground Monument Sign Waiver Justification
Figure “11” – Streetscape Waiver Justification
Figure “12” – Conditional Use Justification
Figure “13” – Site Plan Application
Figure “14” – Aesthetic Review Application
Figure “15” – Development Agreement Application
Figure “16” – Setback Waiver Application
Figure “17” – Ground Monument Sign Waiver Application
Figure “18” – Streetscape Waiver Application
Figure “19” – Conditional Use Application
Figure “20” – Drainage Report
Figure “21” Potable Water Analysis
Figure “22” Listed Wildlife Species Survey
Figure “23” Preliminary Geotechnical Engineering Report
Figure “24” Wawa Winter Springs Traffic Impact Analysis

THIS INSTRUMENT WAS PREPARED BY
AND SHOULD BE RETURNED TO:

Anthony A. Garganese
City Attorney of Winter Springs
Garganese, Weiss, D'Agresta & Salzman, P.A.
111 N. Orange Avenue, Suite 2000
Orlando, FL 32802

(407) 425-9566

FOR RECORDING DEPARTMENT USE ONLY

SECOND MODIFICATION TO

DEVELOPMENT AND PROPERTY DIVISION AGREEMENT

Winter Springs Marketplace – Resulting Trust Property Parcel #2 - Wawa

THIS SECOND MODIFICATION TO DEVELOPMENT AND PROPERTY DIVISION AGREEMENT ("Second Modification") is made and executed this _____ day of _____, 2025, by and between the **CITY OF WINTER SPRINGS**, a Florida Municipal Corporation ("City"), whose address is 1126 East S.R. 434, Winter Springs, Florida 32708, and **TUSCAWILLA PROPERTY INVESTORS, LLC,** a Florida Limited Liability Company, whose address is 630 S Maitland Avenue, Suite 100, Maitland, Florida 32751 ("Developer").

WITNESSETH:

WHEREAS, Developer and the City have entered into and executed that certain Development and Property Division Agreement for Winter Springs Marketplace, dated March 8, 2021, and recorded in the Official Records of Seminole County at Book 9887, Pages 718-751 (the "Development Agreement") as well as that certain First Modification to the Development and Property Division Agreement for Winter Springs Marketplace, dated January 30, 2023, and recorded in the Official Records of Seminole County at Book 10397, Pages 628-643 (the "First Modification"); and

WHEREAS, the Development Agreement governs the development of both the Property and Trust Property, as legally described and defined therein, the Trust Property having been conveyed to the Developer subsequent to the execution and recordation of the Development Agreement, and the Trust Property being more particularly described in Exhibit "D" of the Development Agreement; and

DRAFT

WHEREAS, the Development Agreement provided that the Trust Property would be further divided into two (2) resulting Trust Property parcels, as legally described in Exhibit "E" of the Development Agreement; and

WHEREAS, the Developer now desires to construct a Wawa neighborhood convenience store with gas pumps on the Resulting Trust Property Parcel #2, particularly consisting of 1.21 acres, more or less, located southwest of the intersection of SR 434 and Tuskawilla Road, in Winter Springs, Seminole County, Florida, zoned Town Center (T5 Transect), more particularly described in Exhibit **"G"** herein; and

WHEREAS, Developer has now applied for a conditional use of a "corner store or neighborhood convenience store with gas pumps" and submitted applications for a Conditional use, Final Engineering Plans, Waivers, and Aesthetic Plan Approval in order to construct the convenience store on the Resulting Trust Property Parcel #2; and

WHEREAS, pursuant to Chapter 20 Zoning, Article II, Division 1, Section 20-29.1 of the Winter Springs City Code ("City Code"), a community workshop for the Project was held on _____; and

WHEREAS, Section 20-29(c) of the City Code requires that all site plans and waivers shall be binding on the use of the subject property and, further, that as a condition of approval by the City Commission, all development projects requiring a community workshop pursuant to Section 20-29.1 of the City Code shall be required to be memorialized in a binding development agreement; and

WHEREAS, this Second Modification shall be recorded against the Trust Property so that the terms and conditions of approval related to the Trust Property shall run with the land; and

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties mutually agree as follows:

1.0 **Recitals.** The foregoing recitals are true and correct and are hereby incorporated herein by this reference.

2.0 **Authority.** This Second Modification is entered into pursuant to the Florida Municipal Home Rule Powers Act.

3.0 **The Project Area.** The real property that is subject of this Second Modification is the Resulting Trust Property Parcel #2, legally described in **EXHIBIT "G"**, attached hereto and fully incorporated herein by this reference for convenience (the "Project Area" or "Resulting Trust Property Parcel #2" or "Resulting Trust Property #2").

4.0 **Project Description and Requirements; Phasing.** Developer has constructed Phases I and II of the Winter Springs Marketplace shopping center on the Property, as well as

DRAFT

supporting infrastructure, stormwater pond, parking lots, and landscaping. Phase III shall consist of a corner store or neighborhood convenience store with gas pumps and canopy with associated parking on Resulting Trust Property Parcel #2.

(Hereinafter, all project description and requirements and references to the **"Project"** shall refer to the corner store or neighborhood convenience store with gas pumps on Resulting Trust Property Parcel #2.).

The Developer shall construct the Project in a manner consistent with the approved Final Engineering/Site Plans, Aesthetic Plans, and Waivers that are on file with the City with the following file numbers and consistent with the requirements contained in this Second Modification:

File Nos: CU2022-0025 FIFTH THIRD BANK CONDITIONAL USE

SP2022-0026 FIFTH THIRD BANK SITE PLAN REVIEW

WA2022-0045 FIFTH THIRD BANK WAIVERS

AR2022-0046 FIFTH THIRD BANK AESTHETIC REVIEW

VAR2022-0053 FIFTH THIRD BANK VARIANCE

Commented [A1]: Replace with appropriate File Nos.

The overall Final Engineering/Site Plan for the neighborhood convenience store with gas pumps on Resulting Trust Property Parcel #2 is attached hereto as **EXHIBIT "H"** for convenience and incorporated herein by this reference.

The City and Developer agree that the Winter Springs Comprehensive Plan, Multimodal Transportation Element, Policy 1.11.3, requires the Developer of the Project to provide _____ mobility credit based on the net, new average daily trip generation projected for the Project. In addition, the City and Developer agree that the Winter Springs Comprehensive Plan, Multimodal Transportation Element, Policy 1.11.6, requires new development, regardless of size, to provide operational improvements to the City's transportation system to mitigate their impacts on the system, to ensure smooth traffic flow, and to aid in the elimination of hazards, which may include contributions to the City's multimodal system. The Developer has elected to provide _____ as a multimodal improvement to satisfy the required mobility credit in accordance with the above-referenced Policies.

Commented [A2]: Insert if over 300 new net trips

5.0 Conditions of Approval. Specific conditions of approval for the above-referenced Final Engineering Plans, Aesthetic Plans and Waivers, include the following, which are also addressed in the staff report for the Final Engineering/Site Plans, Aesthetic Plans, and Waivers:

DRAFT

In addition, the City Commission hereby deletes in its entirety Section 5.1 of the First Modification, to allow for one (1) additional monument-style ground sign on the Resulting Trust Property Parcel #2 at the corner of SR 434 and Tuskawilla Road. No further monument signs shall be permitted on the SR 434 frontage for the Project Area.

6.0 Termination of Approval as to Resulting Trust Property #2. In the event the Developer (or the ground tenant of Resulting Trust Property Parcel #2) fails to obtain the building permit and substantially commence vertical construction of the building, which shall at minimum include building foundations, on the Resulting Trust Property Parcel #2 within two (2) years of the Effective Date of this Second Modification, then the City shall have the right to terminate and/or void the approvals set forth herein as applies to the Resulting Trust Property #2 and require the Developer to reapply to the City for such approvals as applies to the Resulting Trust Property Parcel #2. The Developer may apply to the City Commission for an extension of this deadline, which may be granted upon good cause shown.

7.0 Representations of the Parties. The City and Developer hereby each represent and warrant to the other that it has the power and authority to execute, deliver and perform the terms and provisions of this Second Modification and has taken all necessary action to authorize the execution, delivery and performance of this Second Modification. The Developer further agrees and makes the following representations and warranties to the City:

A. The Developer is lawfully seized of the Trust Property in fee simple and has full and lawful authority to execute this Second Modification and bind the Project Area property as set forth herein.

This Second Modification will, when duly executed and delivered by the City and Developer, constitute a legal, valid and binding obligation enforceable against the parties hereto. Upon recording of this Second Modification in the Public Records of Seminole County, Florida, the Second Modification shall be a binding obligation upon the Project Area property in accordance with the terms and conditions of this Agreement. Developer represents that it has voluntarily and willfully executed this Second Modification for purposes of binding himself and the Project Area property to the terms and conditions set forth in this Second Modification.

8.0 Successors and Assigns. This Second Modification shall automatically be binding upon and shall inure to the benefit of the City and Developer and their respective successors and assigns. The terms and conditions of this Second Modification similarly shall be binding upon the Project Area property, and shall run with title to the same upon being duly recorded against the Project Area property by the City.

DRAFT

9.0 Effective Date. This Second Modification shall become effective upon approval by the City Commission and execution of this First Modification by both parties hereto.

10.0 Recordation. Upon full execution by the Parties, this Second Modification shall be recorded upon the Resulting Trust Property #2 in the Public Records of Seminole County, Florida by the City and shall be binding upon the Resulting Trust Property #2 and all future owners thereof.

11.0 Effect of Modification. All other terms and conditions of the Development Agreement and First Modification, not in conflict with this Second Modification, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seal on the date first above written.

CITY OF WINTER SPRINGS

By: _____
Kevin McCann, Mayor

Date: _____

ATTEST:

By: _____
Christian Gowan, City Clerk

APPROVED AS TO FORM AND LEGALITY
For the use and reliance of the City of Winter Springs, Florida only.

CITY SEAL

Date: _____
By: _____
Anthony A. Garganese, City Attorney for the City of Winter Springs, Florida

STATE OF FLORIDA
COUNTY OF SEMINOLE

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by Kevin McCann, Mayor of the City of Winter Springs, Florida**,** a Florida municipal corporation, on behalf of the

DRAFT

corporation, who is personally known to me or produced _____ _____ as identification.

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)
Notary Public, State of _____
Commission No.: _____
My Commission Expires: _____

Signed, sealed and delivered in the presence of the following witnesses:

TUSCAWILLA PROPERTY INVESTORS, LLC

By: _____
Ryan Stahl

Date: _____

_____
Signature of Witness

_____
Printed Name of Witness

_____
Signature of Witness

_____
Printed Name of Witness

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by Ryan Stahl, the Manager of Tuscawilla Property Investors, LLC, a limited liability company, on behalf of the company, who is personally known to me or produced _____ _____ as identification.

DRAFT

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)
Notary Public, State of _____
Commission No.: _____
My Commission Expires: _____

DEVELOPER IS HEREBY ADVISED THAT SHOULD DEVELOPER FAIL TO FULLY EXECUTE, AND DELIVER TO THE CITY, THIS AGREEMENT WITHIN THIRTY (30) DAYS FROM THE DATE THAT THE CITY COMMISSION APPROVES THIS AGREEMENT, THIS AGREEMENT, AND THE DEVELOPMENT PERMIT APPROVALS REFERENCED HEREUNDER, SHALL AUTOMATICALLY BE DEEMED NULL AND VOID.

DRAFT

EXHIBIT G

RESULTING TRUST PROPERTY PARCEL #2 (PROJECT AREA)

That part of Lot 9, JOE E. JOHNSTON'S SURVEY, recorded in Deed Book 147, Page 221, Public Records of Seminole County, Florida, and also being that part of Lot 8 Block A, and that part of the unplatted part of Block B of D. R. Mitchell's Survey of the Levy Grant, according to the plat thereof as recorded in Plat Book1, Page 5, Public Records of Seminole County, Florida, and also that part of the vacated Street as set forthin Resolution recorded in Official Records Book 2972, Page 373 more particularly described as follows: Commencing at the Northeast corner of Jesup's Reserve Townhomes Replat, according to the plat thereof as recorded in Plat Book 71, Pages 86 through 93, Public Records of Seminole County, Florida; thence run S39'45'03"E along the Southwesterly right of way line of State Road No. 434 per Official Records Book2803, Page 1023, and Official Records Book 2831, Page 1024, Public Records of Seminole County, Florida, a distance of 442.36 feet for the Point of Beginning; thence continue S39'45'03"E along said South right of way line, a distance of 103.50 feet; thence run S13'15'20"E along the West right of way line of Tuskawilla Road per Official Records Book 8377, Page 27, Public Records of Seminole County, Florida, a distance of 44.85 feet; thence continue S13'18'28"W along said West right of way line, a distance of223.26 feet to a point on a non-tangent curve concave to the Northwest, having a radius of 2.00 feet; thence from a radial bearing of N76'41'29"W run Southwesterly along the arc of said curve through a central angle of 59'49'28", an arc distance of 2.09 feet, having a chord bearing of S43'13'15"W and a chord distance of 1.99 feet to a point of compound curvature of a curve concave to the North having a radius of24.33 feet; thence run Westerly along the arc of said curve through a central angle of 30'50'10", an arc distance of 13.09 feet, having a chord bearing of S88'33'05"W and a chord distance of 12.94 feet; thence run N76'01'50"W, a distance of 60.93 feet to the beginning of a curve concave to the Northeast having a radius of 20.00 feet; thence run Northwesterly along the arc of said curve through a central angle of35'56'47", an arc distance of 12.55 feet, having a chord bearing of N58'03'27"W and a chord distance of12.34 feet; thence run N40'05'03"W, a distance of 178.00 feet to the beginning of a curve concave to the Northeast having a radius of 15.00 feet; thence run Northwesterly along the arc of said curve through a central angle of 42'05'15", an arc distance of 11.02 feet, having a chord bearing of N19'02'26"W and a chord distance of 10.77 feet to a point of reverse curvature of a curve concave to the West having a radius of 130.00 feet; thence run Northerly along the arc of said curve through a central angle of 10'50'21", an arc distance of 24.59 feet, having a chord bearing of N03'24'59"W and a chord distance of 24.56 feet; thence run N49'54'57"E, a distance of 233.19 feet to the Point of Beginning.

EXHIBIT H

Overall Site Plan for Resulting Trust Property Parcel #2

DRAFT

JOINDER AND CONSENT

Commented [A3]: A new property information report is required to complete this Development Agreement

For and in consideration of the mutual covenants, terms, and conditions and restrictions contained herein, together with other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **One Florida Bank**, a Florida banking corporation, as holder of that certain Mortgage, Security Agreement, Financing statement and Assignment of Rents which is recorded in Official Records Book 10107, Page 1 of the Public Records of Seminole County, Florida, as affected by that certain Cross-Default and Cross-Collateralization Agreement recorded in Official Records Book 10108, Page 57, that certain Assignment of Rents, Leases, Profits and Contracts recorded in Official Records Book 10107, Page 20, and that certain UCC-1 Financing Statement recorded in Official Records Book 10147, Page 359; and that certain Mortgage, Security Agreement, Financing statement and Assignment of Rents which is recorded in Official Records Book 9757, Page 1364, as affected by that certain Cross-Default and Cross-Collateralization Agreement recorded in Official Records Book 10108, Page 57, that certain Assignment of Rents, Leases, Profits and Contracts recorded in Official Records Book 9757. {age 1386, and that certain UCC-1 Financing Statement recorded in Official Records Book 9757, Page 1396, all of the Public Records of Seminole County, Florida (collectively, the "Mortgage") hereby joins in and consents to the foregoing First Modification to the Development and Property Division Agreement by and between the City of Winter Springs, a Florida municipal corporation, and Tuscawilla Property Investors, LLC, a Florida limited liability company, and further acknowledges and agrees that its Mortgage shall be subordinated to such First Modification to the Development and Property Division Agreement and the obligations contained therein.

Dated this _____ day of _____, 2025.

DRAFT

Signed and sealed in the presence of:

By: _____

_____ Name: _____

Print Name: _____ Title :_____

_____

Print Name: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by _____, the _____ of _____, a _____, on behalf of the company, who is personally known to me or produced _____ _____ as identification.

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)

Notary Public, State of _____
Commission No.: _____
My Commission Expires: _____

DRAFT

COMMUNITY WORKSHOP

Date: June 30, 2025 @ 6:00 P.M.

Location: The Foundry Church – Classroom 5
1491 E. State Road 434, Winter Springs, FL 32708

Community Workshop to consider Final Engineering Site Plans, Aesthetic Review and Conditional Use in order to construct a 4,736 sq. ft. gas station/convenience store in the Winter Springs Marketplace within the Town Center District on the subject site.



Project: Wawa gas station/convenient store

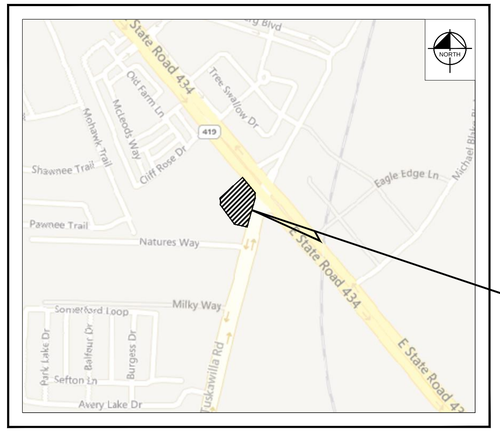
Location: SW corner of Tuskawilla Road and E. State Road 434
Parcel ID: 36-20-30-502-0000-0090
Acreage: ± 1.22-acre project
Zoning: Town Center District (T5)
Future Land Use: Town Center (TC)
Applicant/Presenter: Ryan Stahl, Scott Kearney, Kimley-Horn Associates

COMMUNITY WORKSHOP SIGN-IN SHEET

PROJECT NAME: Wawa gas station/convenient store

MEETING LOCATION & DATE: The Foundry Church (Classroom #5) – June 30, 2025

NAME	MAILING ADDRESS (STREET, CITY, ZIP)	E-MAIL ADDRESS
1. LOUIS ATTI	119 MCLEODS WAY WINTER SPRINGS 32708	ACCESSIBLE@MSN.COM
2. Gina + Jeff Shafer	Winter Springs Villiage	
3. Mark Caruso	1054 chokecherry Dr	mcaruso@winterspringsfl.org
4. Daina Todd	630 S. Maitland Ave, ste 100 Maitland 32751	Daina@equinox-development.com
5. Kristin Banks	630 S Maitland Ave, Ste 100 Maitland FL	kristin@equinox-development.com
6. Cory Sitler	6876 Morwick Lane, Ste 350, Orlando, FL 32827	cory.sitler@kimley-horn.com
7. Stephen Donahoe	1233 Natures Way Winter Springs FL 32708	steve@donahoe.com
8. LINDA FREESLIRN	1604 COUGAR CT 32708	
9. Krystal Kearney	609 Timberwilde Ct.	
10. Lalon Grago	1212 Deer Run Dr., Winter Springs, FL 32708	Lgrago@aol.com
11. Maureen Landgraf	443 Tradition Ln. WSpr.	
12. Victoria Bruce	city Hall	Vbruce@winterspringsfl.org
13. Leah Wegman	Brookshire	
14. Jennifer Garnett	City of Winter Springs	jgarnett@winterspringsfl.org
15.		
16.		
17.		
18.		
19.		
20.		



SITE

LOCATION MAP
N.T.S.

CONSTRUCTION PLANS

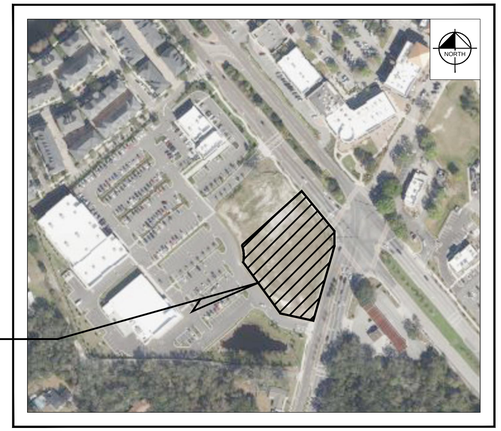
FOR

Wawa

JULY 2025

CITY OF WINTER SPRINGS, FL

PROPERTY INFO:
XXX
ORLANDO, FL 32708
PARCEL ID. 36-20-30-502-0000-0090



SITE

AERIAL PHOTOGRAPH
N.T.S.

LEGAL DESCRIPTION:

THAT PART OF LOT 9, JOE E. JOHNSTON'S SURVEY, RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, AND ALSO BEING THAT PART OF LOT 8 BLOCK A, AND THAT PART OF THE UNPLATTED PART OF BLOCK B OF D. R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, AND ALSO THAT PART OF THE VACATED STREET AS SET FORTH IN RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 2972, PAGE 373 MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF JESUP'S RESERVE TOWNHOMES REPLAT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 71, PAGES 86 THROUGH 93, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA; THENCE RUN S39°45'03"E ALONG THE SOUTHWESTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 434 PER OFFICIAL RECORDS BOOK 2803, PAGE 1023, AND OFFICIAL RECORDS BOOK 2831, PAGE 1024, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, A DISTANCE OF 442.36 FEET FOR THE POINT OF BEGINNING; THENCE CONTINUE S39°45'03"E ALONG SAID SOUTH RIGHT OF WAY LINE, A DISTANCE OF 103.50 FEET; THENCE RUN S13°15'20"E ALONG THE WEST RIGHT OF WAY LINE OF TUSKAWILLA ROAD PER OFFICIAL RECORDS BOOK 8377, PAGE 27, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, A DISTANCE OF 44.85 FEET; THENCE CONTINUE S13°18'28"W ALONG SAID WEST RIGHT OF WAY LINE, A DISTANCE OF 223.26 FEET TO A POINT ON A NON-TANGENT CURVE CONCAVE TO THE NORTHWEST, HAVING A RADIUS OF 2.00 FEET; THENCE FROM A RADIAL BEARING OF N76°41'29"W RUN SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 59°49'28", AN ARC DISTANCE OF 2.09 FEET, HAVING A CHORD BEARING OF S43°13'15"W AND A CHORD DISTANCE OF 1.99 FEET TO A POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 24.33 FEET; THENCE RUN WESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 30°50'10", AN ARC DISTANCE OF 13.09 FEET, HAVING A CHORD BEARING OF S88°33'05"W AND A CHORD DISTANCE OF 12.94 FEET; THENCE RUN N76°01'50"W, A DISTANCE OF 60.93 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 20.00 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 35°56'47", AN ARC DISTANCE OF 12.55 FEET, HAVING A CHORD BEARING OF N58°03'27"W AND A CHORD DISTANCE OF 12.34 FEET; THENCE RUN N40°05'03"W, A DISTANCE OF 178.00 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 15.00 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 42°05'15", AN ARC DISTANCE OF 11.02 FEET, HAVING A CHORD BEARING OF N19°02'26"W AND A CHORD DISTANCE OF 10.77 FEET TO A POINT OF REVERSE CURVATURE OF A CURVE CONCAVE TO THE WEST HAVING A RADIUS OF 130.00 FEET; THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 10°50'21", AN ARC DISTANCE OF 24.59 FEET, HAVING A CHORD BEARING OF N03°24'59"W AND A CHORD DISTANCE OF 24.56 FEET; THENCE RUN N49°54'57"E, A DISTANCE OF 233.19 FEET TO THE POINT OF BEGINNING;

WAWA, INC. SITE DATA	
BUILDING TYPE	U45 M
CANOPY TYPE	SLOPED
CANOPY CONFIGURATION	STACKED
NUMBER OF MPDs (TYPE)	6 (3+1), 4 (3+1+1)
NUMBER OF PARKING SPACES	38
NUMBER OF HANDICAP SPACES	2
NUMBER OF TRUCK/OVERSIZED SPACES:	0
SQ.FT. OF ASPHALT ON-SITE (TO BE SEAL COATED)	20,386 SF
SQ.FT. OF LAWN AREA (TO BE MOWED)	6,633 SF
SQ.FT. OF MULCH AREAS	TBD

SIGNAGE NOTE:

ANY AND ALL SIGNAGE DEPICTED WITHIN THESE DRAWINGS ARE SCHEMATIC IN NATURE. ANY APPROVAL RECEIVED FOR THIS BUILDING PERMIT DOES NOT CONSTITUTE APPROVAL FOR THE CONSTRUCTION OF ANY SIGN /SIGN STRUCTURE COVERED WITHIN ORANGE COUNTY CODE SECTION 31.5. SIGNAGE MUST COMPLY WITH ORANGE COUNTY CODE SECTION 31.5 OR ANY APPLICABLE APPROVED SIGN PLAN. ALL PROPOSED SIGNAGE, INCLUDING SIGNAGE STRUCTURES, ARE REQUIRED TO SUBMIT A SEPARATE APPLICATION AND SHALL BE PROCESSED FOR REVIEW BY ZONING, BUILDING AND DEVELOPMENT ENGINEERING.

UTILITY PROVIDERS

CABLE :
CHARTER COMMUNICATIONS
3767 ALL AMERICAN BLVD.
ORLANDO, FL 32810
CONTACT: RAMON NUNEZ
PHONE: (407) 215-5870

CITY OF WINTER SPRINGS
1126 E. S.R. 434
WINTER SPRINGS, FL 32708
CONTACT: CLETE SAUNIER
PHONE: (407) 327-5989

TELEPHONE:
AT&T
132 COMMERCE WAY
SANFORD, FL 32771
CONTACT: SCOTT LORENZ
PHONE: (407) 302-7611

GAS:
FLORIDA PUBLIC UTILITIES CO.
450 S. HWY 17-92
DEBARY, FL 33713
CONTACT: DAVID JOHNSON
PHONE: (352) 636-7057

POWER :
DUKE ENERGY
2801 WEST STATE ROAD 426
OVIEDO, FL 32765
CONTACT: BENITA ROSTEL
PHONE: (407) 359-4447

Wawa Store # XXX

DEVELOPMENT TEAM

OWNER/DEVELOPER
TUSCAWILLA PROPERTY INVESTORS LLC.
630 S. MAITLAND AVE., SUITE 100
MAITLAND, FL 32751
CONTACT: RYAN STAHL
PHONE: (407) 628-0077
EMAIL: RSTAHL@EQUINOX-DEVELOPMENT.COM

ENGINEER
KIMLEY HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350
ORLANDO, FL 32827
CONTACT: CORY SITLER, P.E.
PHONE: (407) 536-4440
EMAIL: CORY.SITLER@KIMLEY-HORN.COM

LANDSCAPE ARCHITECT
KIMLEY HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350
ORLANDO, FL 32827
CONTACT: MATT FRANKO, PLA
PHONE: (407) 536-4440
EMAIL: MATT.FRANKO@KIMLEY-HORN.COM

SURVEYOR
IRELAND & ASSOCIATES SURVEYING, INC
800 CURRENCY CIRCLE, SUITE 1020
LAKE MARY, FL 32746
CONTACT: PATRICK IRELAND
PHONE:(407) 320-3366
EMAIL: TDUNCAN@IRELANDSURVEYING.COM

PREPARED BY
Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
200 S Orange Ave, Suite 600, Orlando, FL 32801
Phone: (407) 898-1511
WWW.KIMLEY-HORN.COM CA 00000696

Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER SHEET
C1.0	GENERAL NOTES
C1.1	GENERAL NOTES
C2.0	SWPPP NOTES
C2.1	EROSION CONTROL DETAILS
C3.0	EXISTING CONDITIONS AND DEMOLITION
C4.0	SITE PLAN
C5.0	PAVING AND GRADING PLAN
C5.1	DRAINAGE PLAN
C6.0	UTILITY PLAN
C7.0	FIRE TRUCK ROUTING PLAN
C7.1	WB-67 TRUCK ROUTING PLAN
C8.0	ACCESSIBILITY PLAN
C9.0	WAWA STANDARD DETAILS
C9.1	WAWA STANDARD DETAILS
C9.2	WAWA STANDARD DETAILS
C9.3	GENERAL CONSTRUCTION DETAILS
C9.4	GENERAL CONSTRUCTION DETAILS
C10.0	UTILITY DETAILS
C10.1	UTILITY DETAILS
C10.2	UTILITY DETAILS
L1.00	LANDSCAPE PLAN
L1.50	LANDSCAPE DETAILS
L1.51	LANDSCAPE SPECIFICATIONS
L2.00	IRRIGATION PLAN
L2.50	IRRIGATION DETAILS
L2.51	IRRIGATION NOTES

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

Digitally signed by Cory N Sitler
DN: C=US, CN=Cory N Sitler, E=Cory.Sitler@kimley-horn.com, O=KIMLEY-HORN AND ASSOCIATES, INC., OU=Orlando
Date: 2025.07.28 07:58:33 -04'00'

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

CORY N. SITLER LICENSE No. 89984 STATE OF FLORIDA PROFESSIONAL ENGINEER

SHEET NUMBER
C0.0

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

WINTER SPRINGS WAWA
K-H PROJECT# 249473000
07/18/25

Drawing name: K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C0.0 COVER SHEET.dwg COVER SHEET Jul 28, 2025 4:56pm by: Arlene.LaRocque
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Plotted By:LaRocque, Athena Sheet Set:WINTER SPRINGS WAWA Layout:GENERAL NOTES July 28, 2025 04:56:40pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C1.0 GENERAL NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

GENERAL

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, SUCH AS DEWATERING PERMITS, RIGHT OF WAY PERMIT(S), EXCAVATION/FILL PERMIT(S), FIRE PROTECTION PERMIT(S), OR UNDERGROUND UTILITY PERMIT(S), PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL INSPECTION CRITERIA OF APPLICABLE AGENCIES, SCHEDULING OF INSPECTIONS, AND OBTAINING REQUIRED INSPECTIONS FROM AGENCY.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE EXISTING UTILITY INFORMATION SHOWN IS BASED ON THE TOPOGRAPHIC SURVEY PROVIDED BY IRELAND & ASSOCIATES AND SURVEYING, INC. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES, AFFECTING THIS AREA PRIOR TO CONSTRUCTION WORK. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OF THE SURVEY. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPRECIABLY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL HALT CONSTRUCTION AND NOTIFY THE OWNER, ENGINEER, AND APPLICABLE GOVERNING AGENCY IMMEDIATELY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING (HORIZONTALLY AND VERTICALLY) ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND FOR NOTIFYING THE VARIOUS UTILITY COMPANIES (DURING STANDARD BUSINESS HOURS) TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION, TEMPORARY DISTRIBUTION SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. THE CONTRACTOR SHALL COOPERATE WITH UTILITY COMPANY (DURING STANDARD BUSINESS HOURS) DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.
4. ALL DISTURBED AREAS (ON-SITE AND/OR OFF-SITE) NOT DESIGNED OR NOTED TO BE LANDSCAPED OR SODDED, SHALL BE MULCHED AND SEEDED.
5. THE CONTRACTOR SHALL NOT EXCAVATE, REMOVE, OR OTHERWISE DISTURB ANY MATERIAL, STRUCTURE, OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE LINES, GRADES, OR GRADING SECTIONS ESTABLISHED FOR THIS PROJECT, EXCEPT WHERE SUCH EXCAVATION OR REMOVAL IS PROVIDED FOR IN THE CONTRACT, PLANS, OR SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUB-CONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.
6. ALL WORK AND MATERIALS FURNISHED SHALL BE IN CONFORMITY WITH THE LINES, GRADES, GRADING SECTIONS, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS, AND TESTING REQUIREMENTS THAT ARE SPECIFIED IN THE CONTRACT PLANS OR SPECIFICATIONS.
7. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION, AS APPLICABLE AT THE TIME ALL PERMITS HAVE BEEN OBTAINED.
8. ALL UNDERGROUND UTILITIES MUST BE IN-PLACE, TESTED AND INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
9. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO REPRODUCTIVE DISTORTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.
10. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR REVIEW.

    SHOP DRAWINGS OF ALL DRAINAGE STRUCTURES, MATERIALS, AND COMPONENTS TO BE INSTALLED WITHIN CITY OF WINTER SPRINGS PUBLIC RIGHTS-OF-WAY, SHALL BE SUBMITTED TO THE CITY OF WINTER SPRINGS FOR REVIEW AND APPROVAL. UPON ENGINEER OR RECORD'S COMPLETION OF REVIEW AND APPROVAL OF SHOP DRAWINGS FOR WORK WITHIN THE CITY OF WINTER SPRINGS'S JURISDICTION THE ENGINEER OF RECORD SHALL COORDINATE SHOP DRAWING SUBMITTALS TO THE CITY OF WINTER SPRINGS FOR THEIR REVIEW AND APPROVAL.
11. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.
12. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
13. THE CONTRACTOR SHALL COMPLY WITH THE LEGAL LOAD RESTRICTIONS IN HAULING OF MATERIALS IN PUBLIC ROADS BEYOND THE LIMITS OF WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR THE DAMAGE WHICH MAY RESULT FROM THE MOVING OF MATERIAL AND EQUIPMENT.
14. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA.
15. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
16. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARD PLANS FOR ROAD CONSTRUCTION" (ED. 2025-26) FOR DETAILS AND SPECIFICATIONS OF ALL CURB AND GUTTERS CALLED FOR IN THESE PLANS WITHIN PUBLIC RIGHTS OF WAY.
17. WHERE ASPHALT PAVING MEETS CONCRETE PAVING SUCH AS AT CONCRETE CURBING, THE ASPHALT SHOULD BE FINISHED ¼" TO ½" ABOVE THE CONCRETE SURFACE TO ALLOW FOR FURTHER TRAFFIC COMPACTION OF THE ASPHALT.
18. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND/OR PAVEMENT TESTING WITH THE GEOTECHNICAL ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE GEOTECHNICAL SOILS REPORT. UPON COMPLETION OF WORK, THE GEOTECHNICAL ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
19. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN OUT MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
20. ALL CONCRETE SIDEWALKS SHALL BE CONSTRUCTED PER FDOT DESIGN INDEX (ED. 2025/2026) #522-001. (1)
21. SITEWORK SHALL COMPLY WITH 2023 FLORIDA BUILDING CODE AND FLORIDA ACCESSIBILITY CODE.
22. ANY EXISTING WELLS (I.E. ARTESIAN, IRRIGATION, DRINKING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED AND SHALL COPY THE CITY OF WINTER SPRINGS ON ANY WELL ABANDONMENT PERMITS.
23. . ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE.

TREES AND VEGETATION

1. THE CONTRACTOR IS TO MINIMIZE THE REMOVAL OF VEGETATION TO THE GREATEST EXTENT PRACTICAL. NO TREES SHALL BE REMOVED OR DAMAGED WITHOUT OWNER'S APPROVAL. TREES IN CLOSE PROXIMITY TO CONSTRUCTION SHALL BE PROTECTED BY ORANGE FENCING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS AND RETENTION AND DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
3. REFER TO LANDSCAPE PLANS FOR DETAILS REGARDING TREE REMOVAL AND TREE PRESERVATION.

PAVEMENT MARKING AND SIGNAGE

1. THE INSTALLATION, SHAPE, AND SIZE OF ALL SIGNS AND THEIR LETTERING SHALL COMPLY WITH THE LATEST EDITIONS OF THE U.S. DEPARTMENT OF TRANSPORTATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ED. 2023" (MUTCD), AND THE F.D.O.T. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ED. 2024", AND THE F.D.O.T. "DESIGN STANDARDS, ED. 2025/2026". WHERE CONFLICTS EXIST BETWEEN THE PLANS AND THE ABOVE MENTIONED SPECIFICATIONS, THE MORE STRINGENT CRITERIA SHALL PREVAIL.
2. STOP BARS AND STOP SIGNS ARE TO BE PROVIDED AT ALL INTERNAL, ONSITE INTERSECTIONS, WITH THE EXCEPTION OF SIGNALIZED INTERSECTIONS (UNLESS OTHERWISE NOTED).
3. ALL PAVEMENT MARKINGS SHALL COMPLY WITH F.D.O.T. STANDARD INDEX #711-001 (ED. 2025/2026). (1)

STORM DRAINAGE SYSTEM

1. THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS" (ED. 2025/2026) IS REFERRED TO FOR THE STRUCTURAL DESIGN OF DRAINAGE STRUCTURES SPECIFIED IN THESE PLANS, AS REFERENCED BY STANDARD INDEX. ALL SPECIALTY DRAINAGE STRUCTURES REQUIRE SEPARATE STRUCTURAL DESIGN, WHICH IS NOT INCLUDED IN THESE PLANS. STATION OFFSETS ARE TO THE CENTERLINE OF THE STRUCTURE TOP (I.E. DITCH BOTTOM INLET OR CURB INLET TOP), AS OPPOSED TO THE STRUCTURE BASE. (1)
2. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
3. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END SECTIONS. LENGTHS OF PIPE SHOWN WHICH TERMINATE WITH MITERED END OR FLARED END SECTIONS ARE MEASURED TO THE DOWNSTREAM INVERT OF THE MITERED END OR FLARED END SECTION.
4. ALL DRAINAGE STRUCTURE GRATES AND COVERS, EITHER EXISTING OR PROPOSED SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
5. CONSTRUCTION OF THE STORM WATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.
6. STORM WATER PIPES, STRUCTURES, MINIMUM COVER, AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH F.D.O.T. AND THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS.
7. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER AS TO ADEQUATELY REMOVE SILT PRIOR TO RUNOFF FROM THE SITE.
8. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT STANDARD DESIGN INDEX (ED. 2025/2026) #430-001. (1)
9. THE CONTRACTOR SHALL MAINTAIN AND PROTECT THE STORMWATER COLLECTION SYSTEM (INLETS, PIPES) FROM EXCESSIVE MUD, SILT, DIRT, DEBRIS, TRASH, ETC. UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE INSPECTED BY THE OWNER'S ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL CLEAN AND FLUSH STORM PIPES AND INLETS OF ALL EXCESSIVE SILT, DEBRIS, ETC. THE CITY OF WINTER SPRINGS SHALL BE NOTIFIED OF THE FINAL INSPECTION OF THE STORMWATER SYSTEM SHOULD A REPRESENTATIVE WANT TO ATTEND.

SAFETY

1. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
2. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS/HER PERSONNEL. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN, APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL FROM HAZARDS WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL PROVIDE FOR THE SAFETY AND CONTROL OF LOCAL TRAFFIC DURING CONSTRUCTION. ADDITIONAL INFORMATION MAY BE REQUIRED IF LANE CLOSURE DURATIONS ARE LONGER THAN DAYTIME OPERATIONS.

DEMOLITION

1. CONTRACTOR SHALL SUBMIT DEMOLITION SCHEDULE TO OWNER PRIOR TO PROCEEDING WITH DEMOLITION ACTIVITIES.
2. EXTENT OF SITE CLEARING IS SHOWN ON DRAWINGS.
3. CONTRACTOR SHALL CONDUCT SITE DEMOLITION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
4. CONTRACTOR SHALL PROVIDE PROTECTION NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS INDICATED ON PLAN "EXISTING TO REMAIN".
5. CONTRACTOR SHALL RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
6. CONTRACTOR SHALL REMOVE WASTE MATERIALS AND UNSUITABLE AND EXCESS TOPSOIL FROM PROPERTY AND DISPOSE OF OFF-SITE IN A LEGAL MANNER.
7. CONTRACTOR SHALL DEMOLISH AND COMPLETELY REMOVE FROM SITE MATERIAL INDICATED ON PLAN OR NOTES "TO BE REMOVED".
8. CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY THE DEMOLITION OPERATION.

DEWATERING NOTES

1. DURING THE EXCAVATION OF THE STORMWATER FACILITIES, AND IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL CONSTRUCT A SEDIMENT BASIN TO PROVIDE A DISCHARGE POINT FOR DEWATERING. THE SEDIMENT BASIN CAN BE IN THE PROPOSED EXCAVATION AREA OF A POND OR IT CAN BE A BERMED AREA ABOVE GROUND. ALL DEWATERING MUST BE HELD IN THE SEDIMENT AREA UNTIL THE WATER IS CLEAN SUCH THAT THERE WOULD BE NO TURBID DISCHARGE. AFTER THE WATER IN THE SEDIMENT BASIN IS CLEAN, THE WATER MAY BE RELEASED INTO THE ON-SITE POND PROVIDED THERE IS NO ADVERSE IMPACT TO THE EXISTING WATER QUALITY.
2. UNDER NO CIRCUMSTANCES WILL THE DISCHARGE FROM THE ON-SITE DEWATERING BE DIRECTLY DISCHARGED OFFSITE.
3. IF CONTRACTOR ENCOUNTERS SILTY/CLAY SAND, WHICH CAUSES THE WATER TO BECOME TURBID, HE/SHE SHALL TREAT THE SEDIMENT BASIN WITH CHEMICAL ADDITIVE SUCH AS ALUM IN ORDER TO PROMOTE THE COAGULATION OF THE PARTICLES WHICH ALLOW THE TO SETTLE AND THE WATER TO BECOME LESS TURBID. IF TURBID WATER ENCOUNTERED DURING EXCAVATION OF THE PONDS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY TO DETERMINE THE COURSE OF ACTION THAT IS APPROPRIATE TO ELIMINATE THE TURBIDITY AND ALLOW DISCHARGE THAT MEETS WATER QUALITY STANDARDS.
4. THE CONTRACTOR SHALL SEQUENCE THE EXCAVATION OF THE STORMWATER PONDS SUCH THAT A SEDIMENT BASIN WILL BE AVAILABLE AT ALL TIMES. THE SEDIMENT BASIN CAN BE RELOCATED AS NECESSARY SUBJECT TO THE WATER WITHIN THE SEDIMENT BASIN BEING NON-TURBID AND ACCEPTABLE FOR DISCHARGE OFF-SITE.

EARTHWORK / GRADING / DEMUCKING PROCEDURES

1. A GEOTECHNICAL ENGINEERING INVESTIGATION REPORT HAS BEEN PREPARED, OF WHICH COPIES ARE AVAILABLE THROUGH THE OWNER OR THEIR SOIL TESTING COMPANY. A GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO PROVIDE ON-SITE INSPECTIONS DURING EXCAVATION/FILL OPERATIONS AND TESTING OF THE COMPACTED FILL SO THAT PROPER DOCUMENTATION OF THE REQUIRED COMPACTING CRITERIA CAN BE PROVIDED. THE CITY OF WINTER SPRINGS SHALL BE COPIED ON ALL INSPECTION REPORTS.
2. CONTRACTOR TO FOLLOW THE GUIDANCE OF THE REFERENCED GEOTECHNICAL ENGINEERING INVESTIGATION REPORT OR INDICATE WHETHER ON-SITE GEOTECHNICAL ENGINEER SHALL DETERMINE DEPTH OF DEMUCKING AND/OR REMOVAL OF UNSUITABLE FILL.
3. ALL EXISTING DEBRIS (ABOVE OR BELOW GROUND), CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS IN A LEGAL MANNER.
4. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.
5. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE OWNER OR THEIR SOILS TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
7. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
8. THE CONTRACTOR SHALL INSURE THAT PROPER SOIL DENSITIES ARE ACHIEVED FOR PLACEMENT OF ALL HEADWALL/ENDWALL FOOTINGS, RETAINING WALL FOOTINGS, AND IN GENERAL, ANY FOOTING SUPPORT DESCRIBED ON THESE PLANS. IT WILL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT SUFFICIENT SOILS TESTING HAS BEEN PERFORMED PRIOR TO FINAL INSTALLATION OF IMPROVEMENTS.
9. ANY UNSUITABLE ORGANIC SOIL SHALL BE EXCAVATED TO A MINIMUM MARGIN OF 6 FEET BEYOND ITS PERIPHERY EXCAVATED TO EXPOSE THE UNDERLYING NON-ORGANIC FINE SAND.
10. IF DETERMINED NECESSARY, DEWATERING DURING EXCAVATING/BACKFILLING OPERATIONS MAY BE ACCOMPLISHED BY DITCHING AND THE USE OF SUMP PUMPS AND/OR OTHER METHODS (WELL POINTS), AS NECESSARY. CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS FOR DEWATERING ACTIVITIES THAT MAY BE REQUIRED.
11. UPON APPROVAL OF THE GEOTECHNICAL ENGINEER, THE EXCAVATED AREAS MAY BE BACKFILLED WITH CLEAN FINE SAND FREE OF UNSUITABLE OR DELETERIOUS MATERIAL. HOWEVER, THE FILL SHOULD NOT BE PLACED IN MORE THAN 6 INCHES OF STANDING WATER. ONCE THE FILL IS AT LEAST 2 FEET ABOVE THE DEWATERED LEVEL, BACKFILLING MAY PROCEED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
12. SEDIMENT CONTROL MEASURES SHOULD BE EMPLOYED DURING THE CONSTRUCTION PROCESS TO KEEP THE POND FROM RECEIVING SIGNIFICANT AMOUNTS OF STORMWATER RUNOFF FROM THE SURROUNDING CONSTRUCTION SITE. THIS RUNOFF IS LIKELY TO CONTAIN SUSPENDED FINE-GRAINED SOIL PARTICLES THAT CAN IMPEDE THE INFILTRATION CAPACITY OF THE PONDS IF ALLOWED TO SETTLE OUT ON THE POND BOTTOMS. IF DEWATERING EFFLUENT OR STORMWATER RUNOFF FROM THE ACTIVE CONSTRUCTION SITE IS DISCHARGED TO THE POND, CONTRACTOR SHALL SCRAPE AND REMOVE FINE-GRAINED SEDIMENTS THAT HAVE ACCUMULATED ON THE POND BOTTOM, AND REPLACE WITH SUITABLE SOIL TO THE PLAN SPECIFIED GRADE ELEVATIONS. REQUIRED DEPTH OF SCRAPE AND REMOVAL SHALL BE DETERMINED BY GEOTECHNICAL ENGINEER.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89864

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

GENERAL NOTES

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER C1.0

F.D.O.T. RIGHT-OF-WAY WORK GENERAL NOTES

1. EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
2. SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT PORTIONS OF SOME DRAINAGE STRUCTURES EXTEND INTO THE STABILIZED PORTION OF THE ROADBED AND EXTREME CAUTION WILL BE NECESSARY IN STABILIZATION OPERATIONS AT THESE LOCATIONS.
3. ALL DRAINAGE PIPES SHALL BE STEEL REINFORCED CONCRETE PIPE, CLASS III, UNLESS OTHERWISE NOTED.
4. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE ENGINEER SHOULD NOTIFY THE DISTRICT LOCATION SURVEYOR, WITHOUT DELAY, BY TELEPHONE.
5. EXISTING DRIVEWAYS WITHIN THE LIMITS OF THIS PROJECT ARE TO BE REPLACED AT THE SAME LOCATION AND WIDTH, UNLESS OTHERWISE SHOWN ON PLANS.
6. THE CONTRACTOR SHALL REMOVE ANY ORGANIC AND PLASTIC MATERIAL ENCOUNTERED IN THE FIELD IN ACCORDANCE WITH FDOT 2025/2026 STANDARD PLANS INDEX 120-002. COST OF REMOVAL OF ORGANIC AND PLASTIC MATERIAL AND BACKFILL OF SUITABLE MATERIAL IN ACCORDANCE WITH FDOT 2025/2026 STANDARD PLANS INDEX 120-001 SHALL BE INCLUDED IN THE COST OF REGULAR EXCAVATION.
7. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
8. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
9. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.
10. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND SURVEYS BUT IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND PROTECT EXISTING UTILITY FACILITIES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WITH UTILITY OWNERS.
11. ALL MAINTENANCE OF TRAFFIC (MOT) ITEMS REQUIRED IN ACCORDANCE WITH FDOT 2025/2026 STANDARD PLANS INDEX '102-' SERIES INDICES SHALL BE FURNISHED, INSTALLED, AND MAINTAINED TO PROPERLY MAINTAIN TRAFFIC AND ADDRESS DROP OFF CRITERIA IN THE WORK ZONE.
12. NO LANES CLOSED BETWEEN THE HOURS OF 6:00 AM TO 8:00 PM.
13. THE EXISTING POSTED SPEED LIMIT ON SR-434 WILL REMAIN DURING ALL PHASES OF CONSTRUCTION.
14. ANY EXISTING OR PROPOSED SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED BY THE CONTRACTOR PER INDEX 600 AND WHEN THE CONFLICT NO LONGER EXISTS THE SIGNS SHALL BE RESTORED TO THEIR ORIGINAL POSITION. COST SHALL BE INCLUDED IN MAINTENANCE OF TRAFFIC.
15. IF ONLY FDOT 2025/2026 STANDARD PLANS INDEX (SUCH AS #'S. 102-600, 102-611, 102-612, 102-613, 102-616, 102-660, ETC.) WILL BE USED, THEN THE CONTRACTOR WILL NOT BE REQUIRED TO PROVIDE SIGNED AND SEALED MAINTENANCE OF TRAFFIC (M.O.T.) PLANS. IF THE CONTRACTOR REQUIRES M.O.T. PLANS OTHER THAN THE 2025/2026 STANDARD PLANS INDICES, THEN THE CONTRACTOR WILL HAVE TO SUBMIT SIGNED AND SEALED PLANS TO FDOT FOR REVIEW AND APPROVAL.
16. MAINTENANCE OF TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT 2025/2026 STANDARD PLANS INDEX, 2023 FDOT DESIGN MANUAL (FDM), THE STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION (ED. 2024) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (ED. 2009 AND 2012 SUPPLEMENT) AS A MINIMUM.
17. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF TRANSPORTATION A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO CLOSING ANY LANES OR BEGINNING ANY CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY.
18. TEST RESULTS OF ANY TESTS TAKEN FOR OR DURING CONSTRUCTION OF THE PERMITTED WORK SHALL BE PROVIDED TO THE FDOT UPON REQUEST.
19. IF THE DEPARTMENT DETERMINES THAT AS-BUILT CONDITIONS VARY SIGNIFICANTLY FROM APPROVED PLANS, THE PERMITTEE OR THE PERMITTEE'S CONTRACTOR SHALL PROVIDE AS-BUILT PLANS, ALONG WITH A RECORD DRAWINGS REPORT BY PERMITTEE'S PROFESSIONAL ENGINEER, FORM 850-040-19, WITHIN 30 DAYS OF COMPLETING CONSTRUCTION.
20. ALL DISTURBED AREAS WITHIN FDOT RIGHT-OF-WAY MUST BE SODDED ONLY WITH COMMON BERMUDA SOD.
21. CONTRACTORS CERTIFICATE OF LIABILITY INSURANCE MUST BE ISSUED PRIOR TO STARTING CONSTRUCTION IN FDOT RIGHT-OF-WAY.
22. MAINTENANCE OF TRAFFIC:
    a. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN PREPARED UNDER THE DIRECTION OF, AND SIGNED AND SEALED BY, A LICENSED FLORIDA PROFESSIONAL ENGINEER WHO IS EXPERIENCED IN PREPARING TRAFFIC CONTROL PLANS AND WHO IS CERTIFIED PER FDOT PROCEDURE, TOPIC NO. 625-010-010.
    b. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE FDOT REQUIRES DOCUMENTATION FOR SUCCESSFUL COMPLETION OF AN APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE FOR THE AGENCY, UTILITY, OR CONTRACTOR EMPLOYEE(S) DESIGNING, INSTALLING, AND/OR MAINTAINING THE APPROVED MAINTENANCE OF TRAFFIC PLAN IN ACCORDANCE WITH DEPARTMENT PROCEDURE, TOPIC NO. 625-010-010.
    c. ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR THE FOLLOWING FACILITIES SHALL BE DESIGNED AND INSTALLED TO MEET THE EXISTING POSTED SPEEDS AS STATED FOR ALL TRAFFIC CONTROL PHASES: SR-434 – 50 MPH
23. ALL WORK PERFORMED WITHIN FDOT RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH FDOT 2020 STANDARD PLANS INDEX, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (ED. 2024) ND THE UTILITY ACCOMMODATION MANUAL (ED. 2017).
24. IT WILL BE THE RESPONSIBILITY OF THE PERMITTEE TO REPAIR ANY DAMAGE TO FDOT FACILITIES CAUSED BY CONSTRUCTION OF THE PROJECT.
25. ALL SIDEWALK CLOSURES SHALL ABIDE TO THE STANDARD PROCEDURES PER FDOT 2025/2026 RD PLANS INDEX 102-660.
26. ALL CONCRETE SIDEWALKS SHALL BE CONSTRUCTED PER FDOT 2025/2026 STANDARD PLANS INDEX 522-001 & 522-002.
27. ALL ROADWAY SIGNAGE AND/OR SIGNAGE COLUMS/POSTS LOCATED WITHIN RIGHT-OF-WAY IMPACTED BY PROPOSED IMPROVEMENTS SHALL BE ADJUSTED AND/OR RE-INSTALLED IN ACCORDANCE WITH 2025/2026 STANDARD PLANS INDEX AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (ED. 2024).
28. A COPY OF THE FDOT PERMIT FOR WORK WITHIN THE SR 434 ROW SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS.

PAVING, GRADING AND DRAINAGE

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS, ETC.) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE GEOTECHNICAL ENGINEER OF RECORD OR THE OWNERS ENGINEERS. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS AND PER THE GEOTECHNICAL REPORT. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED.
5. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES.
6. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
7. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE 2025/2026 EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURB AND GUTTERS CALLED FOR IN THESE PLANS.
8. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER FOR APPROVAL.
9. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (STRUCTURES, OTHER POURED)
10. ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX #711-001.
11. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER. CONTRACTOR TO COORDINATE WITH OWNER REGARDING TYPE OF MATERIAL, LANDSCAPING AND IRRIGATION REQUIREMENTS.
12. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
13. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES.
14. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A REGISTERED LAND SURVEYOR AT CONTRACTORS EXPENSE.
15. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.
16. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND JURISDICTIONAL PERMITTING AGENCIES.
17. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN-OUTS, MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.

PAVING/GRADING TESTING AND INSPECTION

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE SOILS REPORT. UPON COMPLETION OF WORK THE SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
2. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS AND GEOTECHNICAL REPORT, THE VARIOUS AGENCIES AND PERMIT CONDITIONS. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THESE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.
3. A COPY OF ALL TESTING REPORTS SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS.

POTABLE WATER SYSTEM

1. POTABLE WATER SERVICE SHALL BE PROVIDED BY THE CITY OF WINTER SPRINGS. THE WATER DISTRIBUTION SYSTEM SHOWN ON THESE PLANS SHALL BE INSTALLED AND CONSTRUCTED PER THE CITY OF WINTER SPRINGS STANDARDS & SPECIFICATIONS. ONSITE WATER DISTRIBUTION SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED AFTER COMPLETION OF CONSTRUCTION, CERTIFICATION, AND CLEARANCE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).

POTABLE WATER TESTING AND INSPECTION

1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL BE PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER OR UTILITY INSPECTOR. PRESSURE TESTS TO BE IN ACCORDANCE WITH F.D.E.P. SPECIFICATIONS AND THE CITY OF WINTER SPRINGS CONTRACTOR TO NOTIFY THE OWNER'S ENGINEER AND APPLICABLE AGENCY INSPECTORS TWO (2) FULL BUSINESS DAYS IN ADVANCE OF PERFORMING TESTS.
2. CONTRACTOR TO PERFORM CHLORINATION AND BACTERIOLOGICAL SAMPLING, AND OBTAIN CLEARANCE OF DOMESTIC AND FIRE LINE WATER SYSTEM(S). COPIES OF ALL BACTERIOLOGICAL TEST RESULTS ARE TO BE SUBMITTED TO THE OWNER'S ENGINEER FOR CERTIFICATION PURPOSES.
3. ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA MANUAL M23, CONCERNING HYDROSTATIC TESTING OF PVC PIPING. ALL PUBLIC UTILITIES HYDROSTATIC TESTING TO BE WITNESSED BY THE CITY OF WINTER SPRINGS INSPECTOR.
4. THE CITY OF WINTER SPRINGS SHALL BE NOTIFIED ABOUT THE TESTING SO THAT THEY MAY WITNESS. COPIES OF ALL TESTING REPORTS SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS. A COPY OF THE FDEP CLEARANCE CERTIFICATE SHALL ALSO BE FURNISHED TO THE CITY OF WINTER SPRINGS.

SANITARY SYSTEM

1. SANITARY WASTEWATER SERVICE SHALL BE PROVIDED BY THE CITY OF WINTER SPRINGS. THE WASTEWATER COLLECTION SYSTEM SHOWN ON THESE PLANS SHALL BE INSTALLED BY THE CONTRACTOR, AND CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS. ONSITE WASTEWATER COLLECTION SYSTEM SHALL BE PRIVATELY OWNED AND MAINTAINED AFTER COMPLETION OF CONSTRUCTION, CERTIFICATION, AND CLEARANCE BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).

SANITARY TESTING AND INSPECTION

1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY INSPECTOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH A CLOSED CIRCUIT TELEVISED INSPECTION (CCTV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE CCTV INSPECTION TAPE TO THE ENGINEER, THE OWNER, AND THE APPLICABLE MUNICIPALITY/AGENCY.
2. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATON TEST ON ALL GRAVITY SEWERS IN ACCORDANCE WITH THE REGULATORY AGENCY HAVING JURISDICTION. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE REGULATORY AGENCY FOR APPROVAL. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.
3. LEAKAGE TESTS ARE SPECIFIED REQUIRING THAT:
    A. THE LEAKAGE EXFILTRATION OR INFILTRATION DOES NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.
    B. EXFILTRATION OR INFILTRATION TESTS BE PERFORMED WITH A MINIMUM POSITIVE HEAD OF 2 FEET
    C. AIR TESTS, AS A MINIMUM, CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828 FOR CLAY PIPE, ASTM C 924 FOR CONCRETE PIPE, ASTM F-1417 FOR PLASTIC PIPE, AND FOR OTHER MATERIALS APPROPRIATE TEST PROCEDURES.
4. CONTRACTOR TO PERFORM APPROPRIATE DEFLECTION TESTS FOR ALL FLEXIBLE PIPE. TESTING IS REQUIRED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. TESTING REQUIREMENTS SPECIFY:
    A. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.
    B. USING A RIGID BALL OR MANDREL FOR THE DEFLECTION TEST WITH A DIAMETER NOT LESS THAN 95% OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE, DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED.
    C. PERFORMING THE TEST WITHOUT MECHANICAL PULLING DEVICES.
5. CONTRACTOR TO INSPECT & TEST MANHOLE FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE. AIR TESTING, IF SPECIFIED FOR CONCRETE SEWER MANHOLES, SHALL CONFORM TO THE TEST PROCEDURES DESCRIBED IN ASTM C-1244.
6. THE CITY OF WINTER SPRINGS SHALL BE NOTIFIED ABOUT THE TESTING SO THAT THEY MAY WITNESS. COPIES OF ALL TESTING REPORTS SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS. A COPY OF THE FDEP CLEARANCE CERTIFICATE SHALL ALSO BE FURNISHED TO THE CITY OF WINTER SPRINGS.

CONTRACTOR'S AS-BUILT

1. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION, CERTIFIED BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA. AT A MINIMUM, THIS "AS-BUILT" INFORMATION SHALL INCLUDE: TOP OF PIPE/INVERT ELEVATIONS AND HORIZONTAL LOCATIONS OF ALL WATER, SANITARY SEWER, AND RECLAIM WATER UTILITIES INSTALLED (AS APPLICABLE); PAVEMENT GRADE BREAK LOCATIONS AND SUFFICIENT ELEVATIONS OF FINISHED GRADE SURFACES WHICH ALLOW THE ENGINEER TO DETERMINE COMPLIANCE WITH THE PROPOSED DESIGN; TOP, GRATE, & INVERT ELEVATIONS OF THE STORMWATER COLLECTION SYSTEM, INCLUDING THE POND GRADES (TOP, BANK, BOTTOM), POND CONTROL STRUCTURE, & SWALES; ANY IMPROVEMENTS WITHIN FDOT OR COUNTY RIGHT-OF-WAYS.
2. THE DIGITAL "AS-BUILT" FILE, PROVIDED IN AUTOCAD FORMAT, SHALL ALSO BE PROVIDED IN THE FLORIDA STATE PLANE COORDINATE SYSTEM. NO ENGINEER'S CERTIFICATIONS OF COMPLETION OR REQUESTS FOR FINAL ACCEPTANCE WILL BE SUBMITTED UNTIL THIS INFORMATION HAS BEEN RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.
3. SURVEYOR AS-BUILT SHALL CONTAIN COMPLETED ASSET TABLE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS UTILITY STANDARDS AND SPECIFICATIONS.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89864

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

LICENSED PROFESSIONAL ENGINEER — STATE OF FLORIDA — CORY N. SITLER — No. 89864 — DATE

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

GENERAL NOTES

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER C1.1

Plotted By: LaRocque, Arlene Sheet Set: WINTER SPRINGS WAWA Layout: GENERAL NOTES (2) July 28, 2025 04:56:47pm K:\orl-civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C1.0 GENERAL NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION

PROJECT NAME AND LOCATION
WINTER SPRINGS MARKETPLACE
TAX PARCEL: 36-20-30-502-0000-0090
CITY OF WINTER SPRINGS, FL

*SEE COVER SHEET FOR LOCATION MAP

DEVELOPER NAME AND ADDRESS

TUSKAWILLA PROPERTY INVESTORS, LLC
630 SOUTH MAITLAND AVE., SUITE 100
MAITLAND, FL 32751
CONTACT: RYAN STAHL
PHONE: (407) 628-0277
EMAIL: RSTAHL@EQUINOX-DEVELOPMENT.COM

PROJECT DESCRIPTION

THIS PROJECT IS TO DEVELOP A WAWA GAS STATION/ CONVENIENCE STORE AS PART OF WINTER SPRINGS MARKET PLACE COMMERCIAL PROPERTY. SITE IS LOCATED AT SOUTHWEST CORNER OF INTERSECTION OF TUSKAWILLA RD AND SR-434 IN WINTER SPRINGS, SEMINOLE COUNTY, FL.

PROJECT AREA: 1.21 ACRES
CONTRIBUTING DRAINAGE AREA: 1.22 ACRES

CONTROL STRUCTURE :

CS-A

LONGITUDE : 81°15'47.15"W LATITUDE: 28°41'44.62"N

CS-B

LONGITUDE : 81°15'46.94"W LATITUDE: 28°41'44.98"N

CS-C

LONGITUDE : 81°15'49.30"W LATITUDE: 28°41'46.20"N

ULTIMATE RECEIVING WATERS: LAKE JESSUP via MASTER SYSTEM

ACTIVITIES THAT REQUIRE EROSION CONTROL

SITE CLEARING AND GRUBBING; PROVIDING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; EXCAVATION FOR THE RETENTION POND; SITE GRADING; INSTALLATION OF STORM WATER, SANITARY SEWER, AND WATER STRUCTURES; CURB, ROADWAYS, AND PARKING FACILITIES.

*SEE PLANS FOR THE LOCATION OF TEMPORARY SEDIMENT BARRIERS AND OTHER EROSION CONTROL METHODS.

SOIL PARAMETERS

SOIL TYPES:

SERIES NAME	HYDROLOGIC GROUP
PAOLA–ST. LUCIE SANDS, 0 TO 5 PERCENT SLOPES	A
TAVARES–MILLHOPPER FINE SANDS, 0 TO 5 PERCENT SLOPES	A

SEQUENCE OF MAJOR ACTIVITIES

THE ORDER OF CONSTRUCTION IS AS FOLLOWS:

1. PROVIDE STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND OTHER EROSION CONTROL METHODS
3. CLEAR AND GRUB FOR SEDIMENT BASIN AND EARTH DIKE
4. CONSTRUCT EARTH DIKE AND SEDIMENT BASIN
5. FINISH CLEARING AND GRUBBING
6. REMOVE AND STORE TOPSOIL
7. PROVIDE INITIAL GRADING AS REQUIRED
8. STABILIZE ALL DISTURBED AREAS AS SOON AS POSSIBLE
9. INSTALL UTILITIES, STORM SEWER, CURB AND GUTTER
10. INSTALL BASE TO ROAD AND PARKING AREA
11. FINISH GRADING ENTIRE SITE
12. CONSTRUCT FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT
14. REMOVE ANY ITEMS THAT ARE NOT REQUIRED

TIMING OF CONTROL MEASURES

THE INSTALLATION OF SILT FENCE (AND OTHER EROSION CONTROL MEASURES), A STABILIZED ENTRANCE AND SEDIMENT BASIN SHALL OCCUR PRIOR TO CLEARING AND GRUBBING ACTIVITY. AFTER CONSTRUCTION IS COMPLETE, THE ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE AREAS SHALL BE REGRADED AND PERMANENTLY STABILIZED AS SHOWN ON THE PLANS.

EROSION AND SEDIMENT CONTROLS

BEST MANAGEMENT PRACTICES SHALL BE USED FOR THIS PROJECT TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN-OFF. THE LOCATION AND DETAILS OF EROSION CONTROL METHODS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING THESE CONTROL METHODS AS SHOWN ON THE PLANS OR AS REQUIRED. HE/SHE SHALL ALSO PROVIDE THE REQUIRED EROSION PROTECTION AS REQUIRED BY LOCAL, STATE AND FEDERAL LAW.

STORM WATER MANAGEMENT

STORM WATER COLLECTION SHALL BE MANAGED BY A EXISTING WET AND DRY MASTER STORMWATER MANAGEMENT SYSTEM. THE POND SYSTEM WAS PREVIOUSLY DESIGNED TO MEET OR EXCEED ALL THE REQUIREMENTS OF ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND CITY OF WINTER SPRINGS, FL.

STABILIZATION PRACTICES:

TEMPORARY STABILIZATION - TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED REQUIRED CAN BE FOUND IN TABLE 1.65 A OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, WHERE SOILS ARE ACIDIC 2 TONS OF PULVERIZED AGRICULTURAL LIMESTONE SHOULD BE ADDED PER ACRE AND 450 POUNDS OF 10-20-20 FERTILIZER SHALL BE APPLIED TO EACH ACRE. AFTER SEEDING, EACH AREA SHALL BE IMMEDIATELY MULCHED WITH STRAW OR EQUIVALENT EQUAL. AREAS OF THE SITE WHICH ARE TO BE PAVED SHALL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE APPROPRIATE PERMANENT SEED MIX CAN BE FOUND IN TABLES 1.66A, 1.66B AND 1.66C OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, 2 TONS/ACRE OF FINELY GROUND AGRICULTURAL LIMESTONE AND THE PROPER FERTILIZER BASED ON THE TYPE OF SEEDING SHALL BE APPLIED TO EACH ACRE TO PROVIDE PLANT NUTRIENTS. AFTER SEEDING, EACH AREA SHALL BE MULCHED IMMEDIATELY. ALL RETENTION/DETENTION BASINS SHALL BE SODDED AT LEAST TO THE NORMAL WATER LINE. ALL EXPOSED AREAS WITHIN PUBLIC RIGHTS-OF-WAY SHALL BE SOLID SODDED, OTHER AREAS WITH SLOPES STEEPER THAN 4:1 SHALL BE SODDED.

STRUCTURAL PRACTICES:

EARTH DIKE - IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.

SEDIMENT BASIN - A SEDIMENT BASIN SHALL BE CONSTRUCTED IN THE COMMON DRAINAGE AREA FOR THE SITE. ALL SEDIMENT COLLECTED IN THE BASIN MUST BE REMOVED FROM THE BASIN UPON COMPLETION OF CONSTRUCTION. SEDIMENT FROM THE BASIN MAY BE USED AS FILL ON THE SITE IF IT IS SUITABLE SOIL.

WASTE DISPOSAL

WASTE MATERIALS - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.

HAZARDOUS WASTE - HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.

SANITARY WASTE - SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.

OFF-SITE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE CONTRACTOR SHALL PROMPTLY REMOVE ALL MUD, DIRT, OR OTHER MATERIALS TRACKED OR SPILLED ONTO EXISTING PUBLIC ROADS AND FACILITIES, DUE TO CONSTRUCTION. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARPAULIN.

DUST & DEBRIS CONTROL
THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL WITHIN THE CONSTRUCTION LIMITS AS WELL AS ALONG HAUL ROUTES AND ROADWAYS USED BY THE EQUIPMENT AND VEHICLES. THE CONTRACTOR SHALL ENSURE THAT EXCESSIVE DUST IS NOT TRANSPORTED BEYOND THE LIMITS OF CONSTRUCTION IN POPULATED AREAS. THE CONTRACTOR MAY CONTROL DUST FOR EMBANKMENTS OR OTHER CLEARED OR UNSURFACED AREAS BY APPLYING WATER. INSTALL MULCH, SEED, SOD, OR TEMPORARY PAVING AS EARLY AS PRACTICAL. CONTROL DUST DURING STORAGE AND HANDLING OF DUSTY MATERIALS BY WETTING, COVERING, OR OTHER MEANS AS APPROVED BY THE ENGINEER.
DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE ON THE PROJECT SITE.

ITEMS REQUIRING POLLUTION PREVENTION

THE FOLLOWING ITEMS ARE EXPECTED TO BE PRESENT ON THE PROJECT SITE:

-ASPHALT
-CONCRETE
-FERTILIZERS
-METAL PIECES
-PETROLEUM BASED PRODUCTS
-TAR
-CLEANING SUPPLIES
-DETERGENTS
-MASONARY BLOCK/BRICKS
-PAINT
-WOOD

THE FOLLOWING ARE NON-STORM WATER SOURCES THAT WILL BE ENCOUNTERED AT THE SITE AND SHOULD BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE:

-UNCONTAMINATED GROUNDWATER EXPOSED DURING EXCAVATION
-WATER FROM WATER LINE FLUSHING
-PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).

SPILL PREVENTION AND CONTROL

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

-SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.

-STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.

-ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.

-ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.

-PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.

-ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

HAZARDOUS PRODUCTS

-MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.

-PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.

PRODUCT SPECIFIC PRACTICES

-PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.

-THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

-PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.

-CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

-SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.

-THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.

-ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.

-WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.

-TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.

-AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.

-THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

MAINTENANCE AND INSPECTION PRACTICES

THE FOLLOWING ARE MAINTENANCE AND INSPECTION PRACTICES THAT SHALL BE COMPLETED BY THE CONTRACTOR:

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE CHECKED DAILY AND AFTER EACH 0.5 INCH OR GREATER RAINFALL BY THE SUPERINTENDENT OR SOMEONE UNDER HIS/HER DIRECT SUPERVISION.

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE KEPT IN GOOD CONDITION. REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.

-THE SILT FENCE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF FENCE.

-THE SILT FENCE SHALL BE CLEARED OF SEDIMENT WHEN SEDIMENT MEASURES ONE-THIRD THE HEIGHT OF THE FENCE.

-THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED MONTHLY FOR DEPTH OF SEDIMENT. THEY SHALL BE CLEANED WHEN SEDIMENT REACHES 10% OF TOTAL CAPACITY AND AFTER CONSTRUCTION IS COMPLETE.

-DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.

-ALL SEEDING SHALL BE CHECKED FOR PROPER GROWTH AND UNIFORMITY. UNSTABALIZED AREAS SHALL BE RE-SODDED.

-A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.

-THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.

ADDITIONAL CONTRACTOR RESPONSIBILITIES

-C.O.R. IS REQUIRED TO SUBMIT A SWPPP TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO MOBILIZING TO THE SITE AND INSTALLING ANY BMPS.

-C.O.R. IS REQUIRED TO COMPLY WITH THE REGULATIONS OF THE CITY, WATER MANAGEMENT DISTRICT, AND FDEP IN MANAGING STORMWATER RUNOFF FROM CONSTRUCTION SITES.

-C.O.R. IS REQUIRED TO SUBMIT AND OBTAIN A NOTICE OF INTENT FROM FDEP FOR THIS PROJECT.

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: _____ DATE:_____

CORY SITLER
FLORIDA REGISTRATION NUMBER: 89984
PROFESSIONAL ENGINEER

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FORM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER.

SIGNATURE AND DATE	NAME AND TITLE, COMPANY / ADDRESS AND TELEPHONE NUMBER	RESPONSIBILITY

NO.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

Digitally signed by Cory N. Sitler, P.E.
DN: C=US, O=Kimley-Horn and Associates, Inc., CN=Cory N. Sitler, P.E., E=cory.sitler@kimley-horn.com, 0.9.2342.19200300.100.1.1=R89984@kimley-horn.com, 0.9.2342.19200300.100.1.1=CA1D0D0000C1A0, 0.9.2342.19200300.100.1.1=CA1D0D0000C1A0
Date: 2025.07.18 13:53:51 -04'00'

LICENSED PROFESSIONAL ENGINEER
DATE:

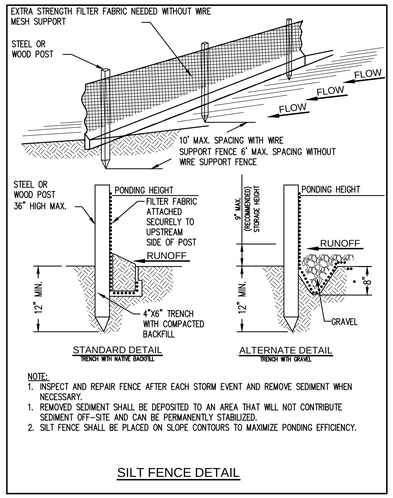
KHA PROJECT 149170026
DATE 07/18/25
SCALE AS SHOWN
DESIGNED BY CNS
DRAWN BY MMB
CHECKED BY ADL

SWPPP NOTES

WINTER SPRINGS
WAWA
CITY OF WINTER SPRINGS FL

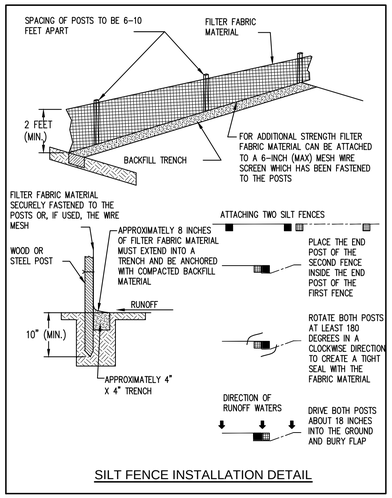
SHEET NUMBER
C2.0

Plotted By: LaRocque, Alfons Sheet Set: WINTER SPRINGS WAWA Layout: SWPPP NOTES July 28, 2025 04:56:55pm K:\orl_co\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C2.0 SWPPP NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

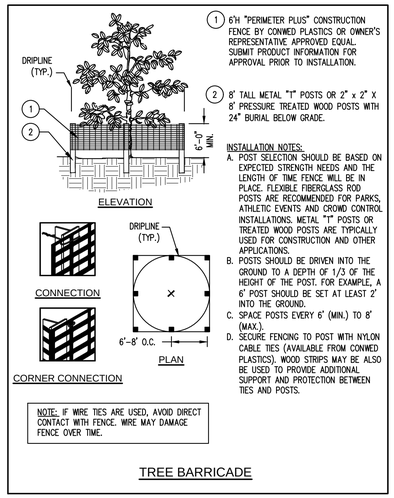


NOTE:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
1. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
2. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE DETAIL



SILT FENCE INSTALLATION DETAIL

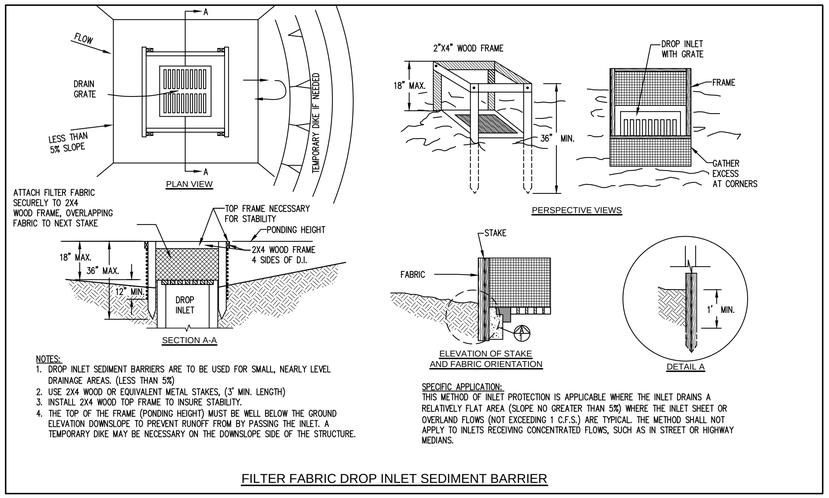


1. 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
2. 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

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

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

TREE BARRICADE



NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. USE 2X4 WOOD OR EQUIVALENT METAL STAKES, (3' MIN. LENGTH)
3. INSTALL 2X4 WOOD TOP FRAME TO INSURE STABILITY.
4. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY PASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

SPECIFIC APPLICATION:
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

FILTER FABRIC DROP INLET SEDIMENT BARRIER

SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION US APPLICABLE TO CURB INLETS WHERE A STURDY, COMPACT INSTALLATION IS DESIRED. EMERGENCY OVERFLOW CAPABILITIES ARE MINIMAL, SO EXPECT SIGNIFICANT PONDING WITH THIS MEASURE.

* GRAVEL SHALL BE ASTM #3, #357, OR #5 COARSE AGGREGATE.

GRAVEL CURB INLET SEDIMENT FILTER WITH OVERFLOW WEIR

NOTES:
1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS, OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET SEDIMENT BARRIER

NOTES:
1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. SANDBAGS OF EITHER BURLAP OR WOVEN 'GEOTEXTILE' FABRIC, ARE FILLED WITH GRAVEL LAYERED AND PACKED TIGHTLY.
3. LEAVE A ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB AND GUTTER SEDIMENT BARRIER

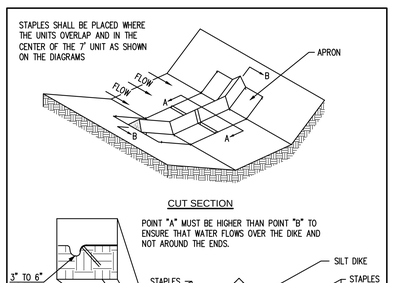
1. PLACE CONCRETE BLOCKS IN A SINGLE ROW AROUND PERIMETER OF INLET ON THEIR SIDES, WITH ENDS OF ADJACENT BLOCKS ABUTTING.
2. HEIGHT OF BARRIER VARIES. USE STACKS OF 4-INCH, 8-INCH, OR 12" BLOCKS. MIN. HEIGHT OF BARRIER 12" AND MAX. HEIGHT OF 24"
3. PLACE HARDWARE CLOTH/WIRE MESH W/ MAX. 1/2" OPENINGS OVER VERTICAL FACE OF CONCRETE BLOCKS.
4. THE AGGREGATE SHALL BE ANY NON-ERODIBLE MATERIAL SUCH AS LOOSE ROCK, BROKEN CONCRETE THAT WILL SLOW THE FLOW OF THE WATER AND ALLOW IT TO FILTER THROUGH AND OVER THE MATERIAL BEFORE ENTERING THE INLET.

BLOCK AND AGGREGATE INLET SEDIMENT DEVISE

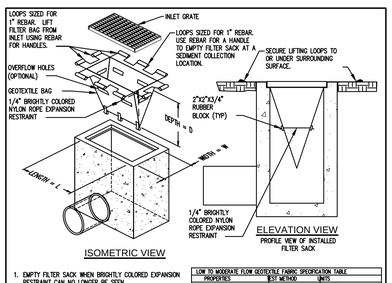
D1 = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D2 = 5' STD. (ADDITIONAL PANEL FOR DEPTHS 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTE:
COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS



TEMPORARY CHECK DAM



1. EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE WILL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. AN OIL ABSORBENT PAD OR PILLOW CAN BE PURCHASED WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE

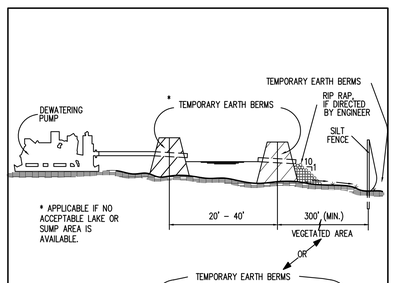
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	125 LBS
MULLEN BURST	ASTM D-3786	600 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	30 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.05 SEC -1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE

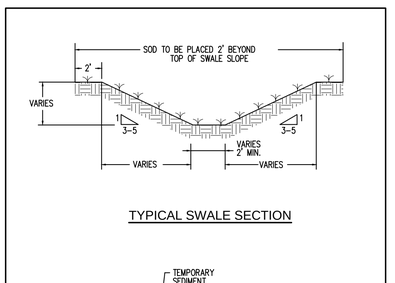
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	385 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	430 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

FILTER SACKS (GRATED INLETS)

DO NOT USE ON ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.



TYPICAL DEWATERING DISCHARGE PLAN



TEMPORARY SEDIMENT SUMP

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:EROSION CONTROL DETAILS July 28, 2025 04:57:02pm K:\orl-civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C2.0 SWPPP NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	NMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89064
This item has been digitally signed and sealed by Cory N. Sitler, P.E., on the date indicated here.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	NMB
CHECKED BY	ADL

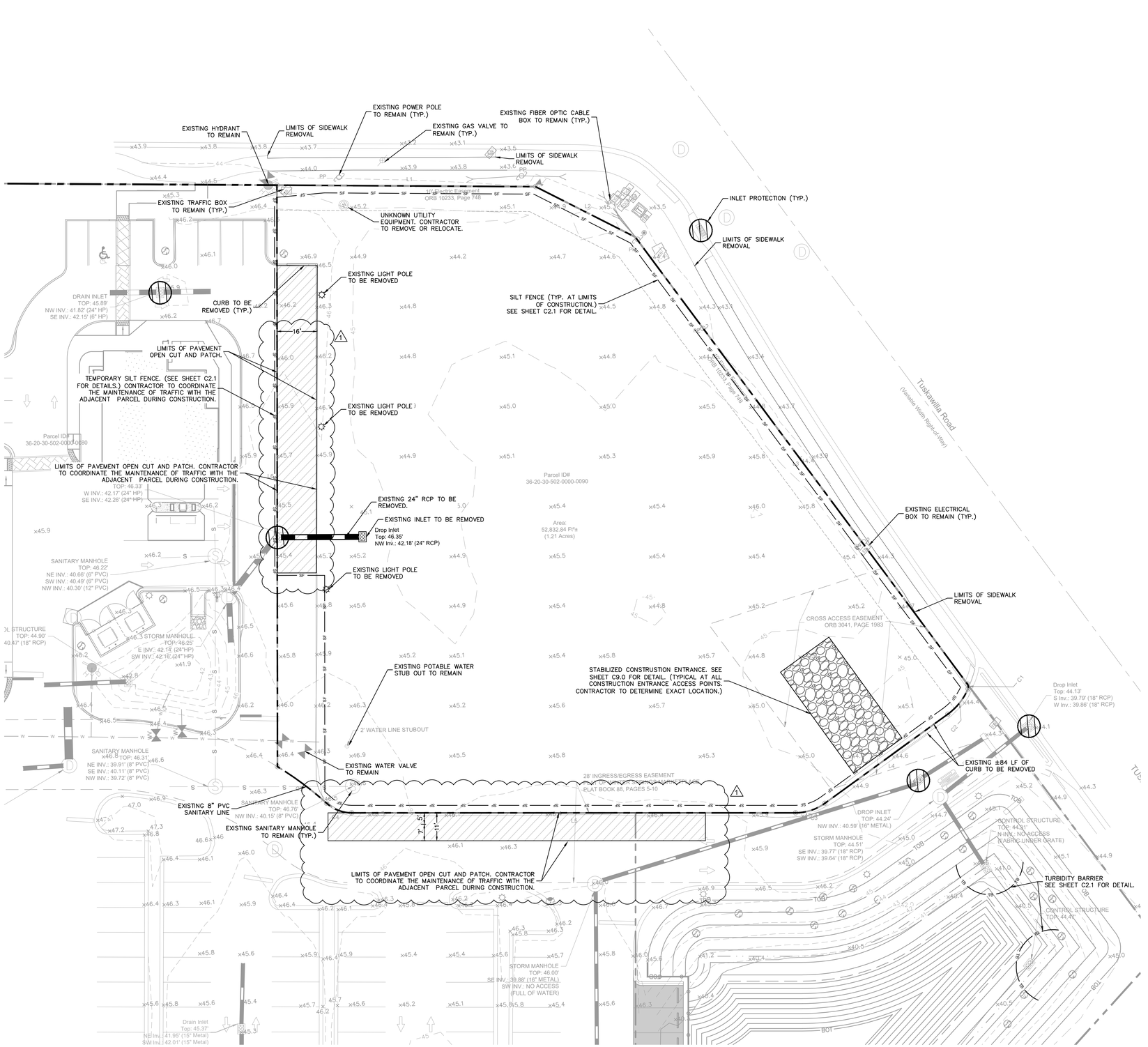
EROSION CONTROL DETAILS

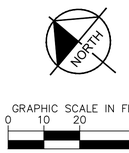
WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C2.1

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:EXISTING CONDITIONS AND DEMOLITION PLAN July 28, 2025 08:32:30pm K:\orl_civil\149170026-winter springs wawa\CADD\CONSTPlanSheets- Wawa\C3.0 EXISTING CONDITIONS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.





GRAPHIC SCALE IN FEET
0 10 20 40

SIDEWALK NOTES:

1. ALL SIDEWALK CLOSURES SHALL BE IN ACCORDANCE WITH FDOT DESIGN INDEX #102-600. (PROVIDE TEMPORARY ASPHALT SIDEWALKS AS NEEDED)

DATUM/BENCHMARK NOTE:

1. VERTICAL INFORMATION BASE ON SEMINOLE COUNTY BENCHMARK DESIGNATION "813-16-01" ELEVATION = 36.446 NAVD 88.

EXISTING UTILITY NOTE:

1. THERE MAY BE ON-SITE UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO IRRIGATION, SANITARY SEWER, POTABLE WATER LINES, NATURAL GAS LINES, ELECTRIC, TELEPHONE AND CABLE LINES) THAT WERE NOT LOCATED OR IDENTIFIED BY THE PROJECT SURVEYOR. PRIOR TO CONSTRUCTION START, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ON-SITE UTILITIES AND RIGHT-OF-WAY UTILITIES.
2. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.

DEMOLITION NOTES:

1. SEE ADDITIONAL NOTES, SHEET C1.0.
2. ANY EXISTING WELLS (I.E. ARTESIAN, IRRIGATION, DRINKING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED. ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE. C.O.R. SHALL PROVIDE A COPY OF ANY WELL ABANDONMENT PERMITS TO THE CITY.

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS, FLORIDA, LLC. DATED NOV. 15, 2018.

EROSION CONTROL NOTE:

1. REFER TO SWPPP SHEETS C2.0 FOR ADDITIONAL NOTES & DETAILS.
2. INSTALL AND MAINTAIN SILT FENCE PER FDOT.
3. PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT ALL CONSTRUCTION ACCESS POINTS.
4. UTILIZE PERFORATED SOCK DRAIN (OR EQUIVALENT) IN FRONT OF EXISTING/PROPOSED CURB INLETS ADJACENT TO CONSTRUCTION ACTIVITIES. ALONG ALL ROADWAYS.
5. INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF ALL EXISTING/PROPOSED INLETS.
6. PROVIDE TREE PROTECTION BARRIERS AROUND ALL EXISTING TREES LOCATED ON-SITE WHICH ARE DESIGNATED TO BE PRESERVED. REFER TO LANDSCAPE PLANS FOR TREES TO REMAIN AND TREE PROTECTION DETAILS/NOTES.

LEGEND

- PROPERTY BOUNDARY
- TB — TB — TURBIDITY BARRIER
- SF — SF — PROPOSED TYPE III SILT FENCE
- AREA TO BE DEMOLISHED
- SOIL TRACKING PREVENTION
- INLET PROTECTION

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89864

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

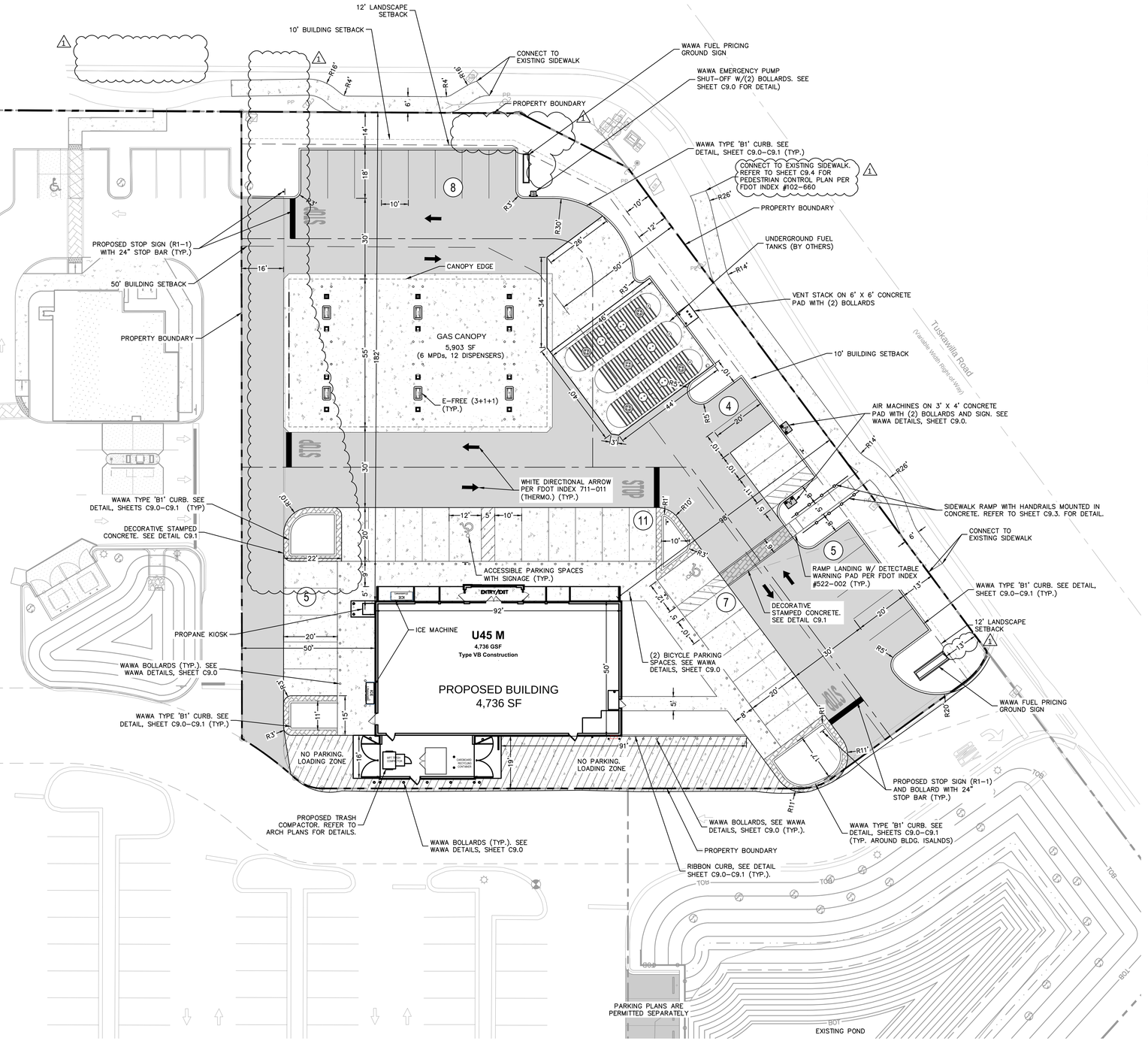
KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

EXISTING CONDITIONS AND DEMOLITION PLAN

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER C3.0



LEGEND

- PROPERTY LINE
- (11) PARKING SPACE COUNT
- PROPOSED CONCRETE, SEE SHEET C9.1 FOR DETAILS
- PROPOSED STAMPED CONCRETE, SEE SHEET C9.0 FOR DETAILS
- STANDARD DUTY ASPHALT, SEE SHEET C9.1 FOR DETAILS

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

PROVIDED BUILDING HEIGHTS

WAWA:	33 FT
CANOPY:	25 FT

REQUIRED BUILDING SETBACKS

FRONT (TUSKAWILLA RD):	25 FT MIN TO 50 FT MAX
FRONT (S.R. 434):	25 FT MIN TO 50 FT MAX
SIDE:	5 FT MIN TO 100 FT MAX
REAR:	15 FT MIN

PROVIDED BUILDING SETBACKS

FRONT (TUSKAWILLA RD):	50 FT
FRONT (S.R. 434):	50 FT
SIDE:	0 FT
REAR:	0 FT

REQUIRED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
FRONT (S.R. 434):	12 FT
SIDE:	10 FT
REAR:	10 FT

PROVIDED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
FRONT (S.R. 434):	12 FT
SIDE:	0 FT
REAR:	0 FT

OVERALL SITE DATA:

PROJECT AREA:	52,833 SQ. FT (1.21 AC)
ZONING:	T-5 URBAN CENTER ZONE
PARCEL ID:	36-20-30-502-0000-0090
FUTURE LAND USE:	COMMERCIAL
PROPOSED USE:	COMMERCIAL
MINIMUM BUILDING HEIGHT:	2-STORIES
MAXIMUM BUILDING HEIGHT:	5-STORIES

ABUTTING PARCEL DATA:

ADJACENT PARCEL ID:	ZONING	FUTURE LAND USE
36-20-30-502-0000-0080	T-5 URBAN CENTER ZONE	COMMERCIAL
01-21-30-5VK-0000-0040	T-5 URBAN CENTER ZONE	COMMERCIAL
01-21-30-5VK-0C00-0000	T-5 URBAN CENTER ZONE	COMMERCIAL

BUILDING COVERAGE:

PROPOSED FLOOR AREA:	
WAWA:	4,736 SF
TOTAL FLOOR AREA:	4,736 SF
F.A.R. (4,736 SF/52,833 SF)	0.20
MAXIMUM ALLOWABLE F.A.R.	1.0 MAXIMUM

OVERALL IMPERVIOUS CALCULATIONS

MAXIMUM IMP. AREA (PER DRAINAGE CALCS):	1.02 AC
BUILDING AREA:	0.24 AC (9.0%)
PAVEMENT AREA:	0.78 AC (50.8%)
TOTAL IMPERVIOUS AREA:	1.02 AC (84.3%)
TOTAL OPEN SPACE:	0.19 AC (15.7%)

REQUIRED PARKING:

FROM PARKING STUDY:	
WAWA PARKING:	50 SPACES
TOTAL PARKING SPACES REQUIRED:	50 SPACES

PROVIDED PARKING:

REGULAR SPACES (10'X20'):	38 SPACES
ADA SPACES (ALL VAN ACCESSIBLE):	2 SPACES
OFF-SITE EMPLOYEE PARKING: (UNDER SEPARATE PERMIT)	10 SPACES
TOTAL PARKING SPACES PROVIDED:	50 SPACES

REQUIRED BICYCLE PARKING:

FROM TRAFFIC IMPACT ANALYSIS:	
1 SPACE PER 5,000 SF OR 2 SPACES MIN.	2 SPACES
TOTAL PARKING SPACES REQUIRED:	2 SPACES

PROVIDED BICYCLE PARKING:

WAWA - GAS STATION/CONVENIENCE STORE	2 SPACES
TOTAL BICYCLE PARKING SPACES:	2 SPACES

LANDSCAPING

ALL LANDSCAPING SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE

SITE SIGNAGE

PERMANENT SITE SIGNAGE WILL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE.

REGULATORY SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH MUTCD (2009 ED.) AND FDOT DESIGN STANDARDS (LATEST ED.)

STORMWATER MANAGEMENT

STORMWATER RUNOFF FOR THE PROPOSED ONSITE IMPROVEMENTS WILL BE MANAGED THROUGH THE EXISTING WET DETENTION, DRY DETENTION, AND EXFILTRATION STORMWATER MANAGEMENT SYSTEM WHICH HAS BEEN DESIGNED TO MEET THE CITY OF WINTER SPRINGS CODE AND THE REQUIREMENTS OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD).

100-YEAR FLOOD PLAIN

THE PROPERTY IS LOCATED OUTSIDE THE FLOODPLAIN WITHIN "ZONE X" - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN - PER FEMA FIRM, MAP NUMBER 12117C0160F, REVISED ON SEPTEMBER 28, 2007.

PHASING

ALL SITE WORK AND INFRASTRUCTURE WILL BE COMPLETED IN ONE (1) PHASE

GENERAL NOTES:

1. HANDICAP ACCESSIBLE PARKING SPACES AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE (2012 ED.).
2. HANDICAP ACCESSIBLE PARKING SPACES PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH FDOT INDEX #711-001, SHEET 12 (LATEST ED.).
3. ALL LANDSCAPE ISLANDS CURB RADII ARE 5-FT UNLESS OTHERWISE NOTED.
4. TYPICAL AT ALL INTERNAL ON SITE INTERSECTIONS (PRIVATE), UNLESS OTHERWISE NOTED: PROVIDE 24" WHITE STOP BAR WITH 24" STOP SIGN
5. PEDESTRIAN CIRCULATION - SIDEWALKS, SIDEWALK CROSSINGS, RAMPINGS (PEDESTRIAN ACCESS SHALL CONNECTION EACH OF THE BUILDINGS TO ONE ANOTHER AN SHALL CONNECT TO THE RIGHT-OF-WA UTILIZING ALTERNATIVE PAVEMENT THROUGHOUT - PAINT/THERMOPLASTIC IS NOT ACCEPTABLE). PEDESTRIAN CROSSWALKS SHALL BE OF CONTRASTING MATERIALS OR TEXTURED OR STAMPED CONCRETE OR ASPHALT TO GIVE THE APPEARANCE OF CONTRASTING MATERIALS. PLEASE REFER TO SHEET C9.0 FOR DETAILS.

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89864

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

LICENSED PROFESSIONAL ENGINEER

KHA PROJECT 149170026			
DATE	07/18/25		
SCALE	AS SHOWN		
DESIGNED BY	CNS		
DRAWN BY	MMB		
CHECKED BY	ADL		

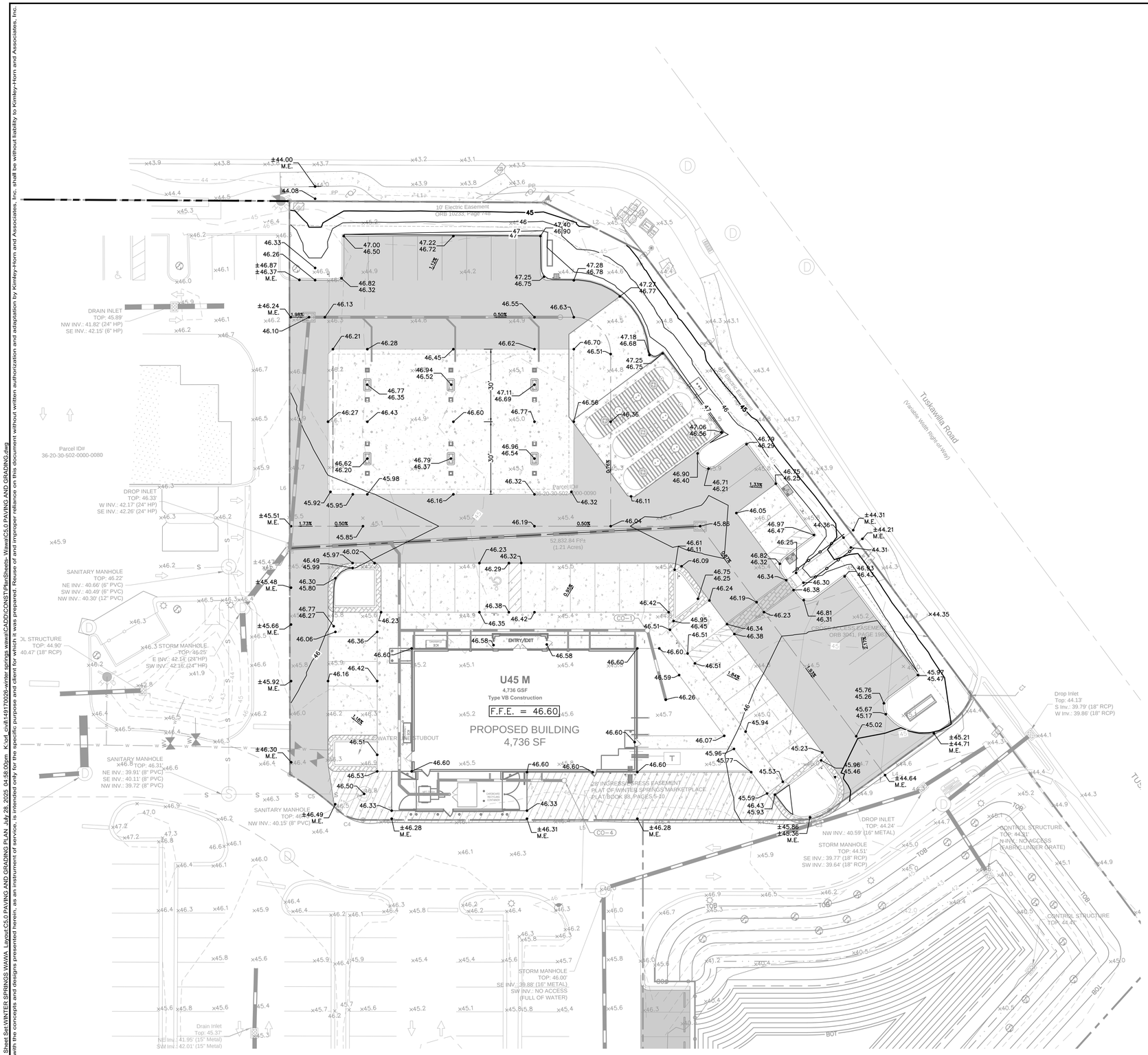
SITE PLAN

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER C4.0

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:SITE PLAN July 28, 2025 04:57:39pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C4.0 SITE PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



PAVING, GRADING AND DRAINAGE NOTES:

1. REFER TO PGD SHEET C5.1 FOR ADDITIONAL STORM STRUCTURE INFORMATION.
2. FOR EROSION CONTROL NOTES AND DETAILS, REFER TO GENERAL NOTES SHEETS C1.0 AND SWPPP SHEETS C2.0 –C2.1.
3. ALL PEDESTRIAN SIDEWALKS, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 1:48 CROSS SLOPE (2.0%), MAX. 1:20 RUNNING SLOPE (5.0%).
4. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS DATED NOVEMBER 15, 2018.

DATUM/BENCHMARK:

1. ELEVATIONS SHOWN PER NAVD 88. REFER TO SURVEY FOR ADDITIONAL DETAILS AND BENCHMARKS.

LEGEND

×44.00	EXISTING SPOT ELEVATION
93.50	PROPOSED ELEVATION
94.00 / 93.50	PROPOSED TOP OF CURB/ PAVEMENT ELEVATION
±94.00 M.E	PROPOSED TOP OF CURB/ PAVEMENT ELEVATION
44	EXISTING CONTOUR
44	PROPOSED CONTOUR
	PROPOSED STORM PIPE
	PROPOSED STORM INLET
Ⓓ	PROPOSED STORM MANHOLE
	EXISTING STORM PIPE
	EXISTING GRATE INLET
1.00%	PROPOSED DIRECTION OF SURFACE WATER RUNOFF
	PROPOSED YARD DRAIN
	PROPOSED CONCRETE PAVEMENT SEE SECTION, SHEET C9.1
	PROPOSED STANDARD DUTY ASPHALT PAVEMENT SEE SECTION, SHEET C9.1

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89864

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

LICENSED PROFESSIONAL ENGINEER STATE OF FLORIDA — DATE

KHA PROJECT 149170026
DATE 07/18/25
SCALE AS SHOWN
DESIGNED BY CNS
DRAWN BY MMB
CHECKED BY ADL

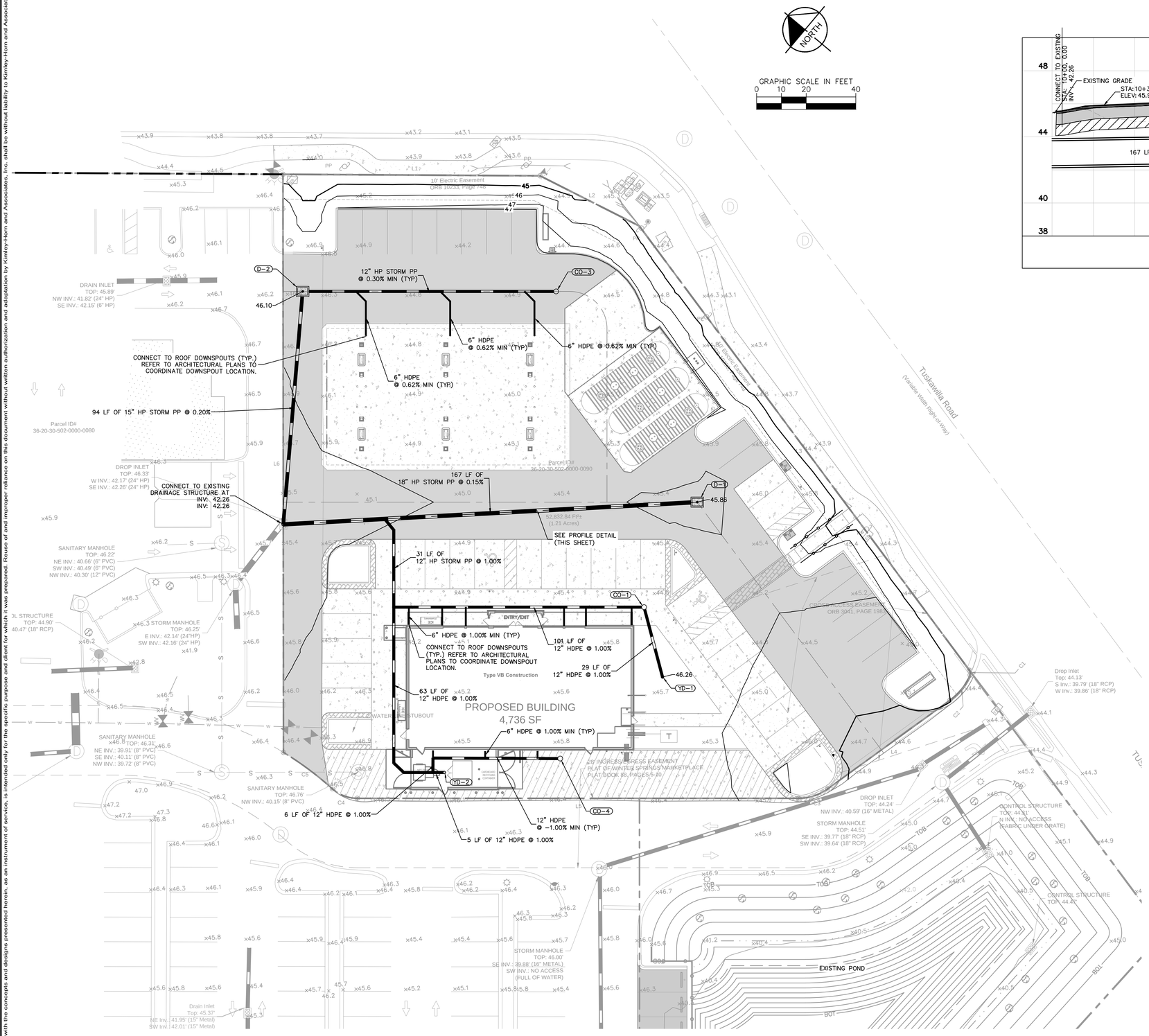
PAVING AND GRADING PLAN

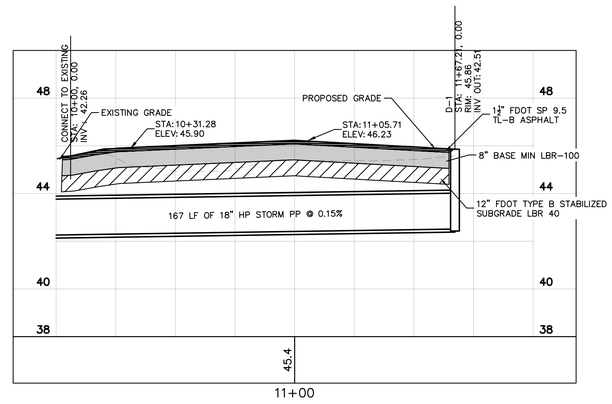
WINTER SPRINGS WAWA

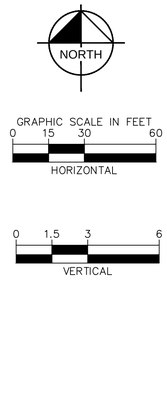
CITY OF WINTER SPRINGS FL

SHEET NUMBER C5.0

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C5.0 PAVING AND GRADING PLAN July 28, 2025 04:58:00pm K:\orl-civil\149170026-winter springs-wawa\CADD\CONST\PlanSheets- Wawa\C5.0 PAVING AND GRADING.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.







STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CO-1	TRAFFIC-RATED CLEAN OUT TOP: 46.51 SW. INV: 43.70 (12" HDPE) NW. INV: 43.70 (12" HDPE)
CO-3	TRAFFIC-RATED CLEAN OUT TOP: 46.61 NW. INV: 42.76 (12" HP STORM PP)
CO-4	TRAFFIC-RATED CLEAN OUT TOP: 46.55 NW. INV: 44.06 (12" HDPE)
D-1	TYPE "F" INLET PER FDOT INDEX #425-053 TOP: 45.86 NW. INV: 42.51 (18" HP STORM PP)
D-2	TYPE "F" INLET PER FDOT INDEX #425-053 TOP: 46.10 SE. INV: 42.45 (12" HP STORM PP) SW. INV: 42.45 (15" HP STORM PP)
YD-1	YARD DRAIN TOP: 46.26 NE. INV: 43.99 (12" HDPE)
YD-2	YARD DRAIN TOP: 46.44 NW. INV: 43.54 (12" HDPE)

PAVING, GRADING AND DRAINAGE NOTES:

1. ALL STORM SEWER PIPING MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS.
2. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT INDEX #430-001.
3. FOR EROSION CONTROL NOTES AND DETAILS, REFER TO GENERAL NOTES SHEETS C1.0 AND SWPPP SHEETS C2.0 –C2.1.
4. CONNECT ALL ROOF DOWNPOUTS TO 6-INCH HDPE LATERALS. CONNECT LATERALS TO 12-INCH HDPE TRUNK LINES EXTENDING TO STRUCTURES WITH MIN. 1.0% SLOPE, MIN. 16" COVER. REFER TO WAWA STANDARD DETAIL SHEET C9.2

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS DATED NOVEMBER 15, 2018.

DATUM/BENCHMARK:

1. ELEVATIONS SHOWN PER NAVD 88. REFER TO SURVEY FOR ADDITIONAL DETAILS AND BENCHMARKS.

LEGEND

×44.00	EXISTING SPOT ELEVATION
93.50	PROPOSED ELEVATION
94.00 / 93.50	PROPOSED TOP OF CURB/ PAVEMENT ELEVATION
±94.00 M.E	PROPOSED TOP OF CURB/ PAVEMENT ELEVATION
44	EXISTING CONTOUR
44	PROPOSED CONTOUR
	PROPOSED STORM PIPE
	PROPOSED STORM INLET
Ⓓ	PROPOSED STORM MANHOLE
	EXISTING STORM PIPE
	EXISTING GRATE INLET
1.00%	PROPOSED DIRECTION OF SURFACE WATER RUNOFF
	PROPOSED YARD DRAIN
	PROPOSED CONCRETE PAVEMENT SEE SECTION, SHEET C9.1
	PROPOSED STANDARD DUTY ASPHALT PAVEMENT SEE SECTION, SHEET C9.1

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

LICENSED PROFESSIONAL ENGINEER STATE OF FLORIDA

DATE: 07/18/25

KHA PROJECT 149170026
DATE 07/18/25
SCALE AS SHOWN
DESIGNED BY CNS
DRAWN BY MMB
CHECKED BY ADL

DRAINAGE PLAN

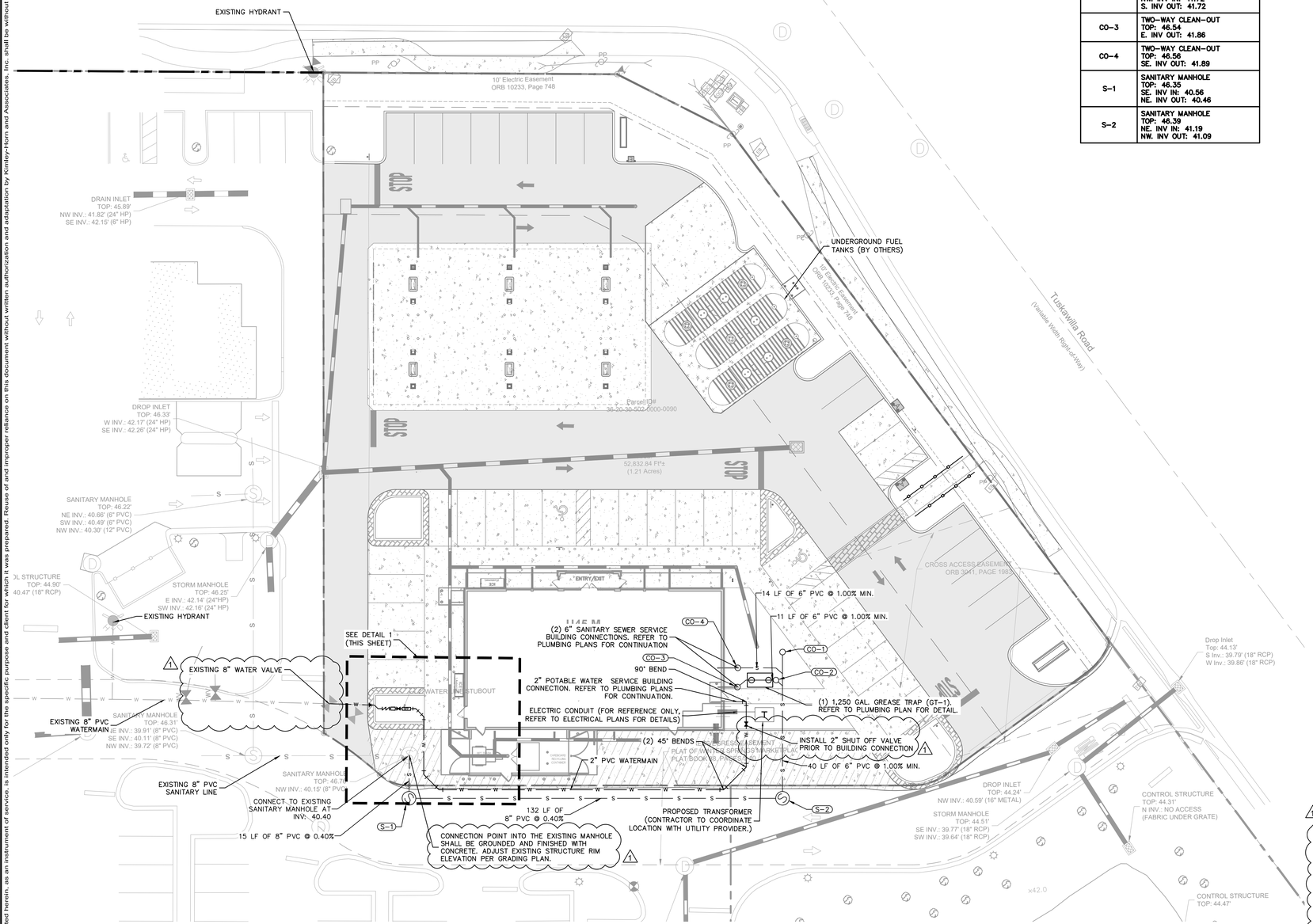
WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER C5.1

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C5.1 DRAINAGE PLAN July 28, 2025 04:58:11pm K:\orl-civil\149170026-winter springs wawa\CAD\CONST\PlanSheets- Wawa\C5.0 PAVING AND GRADING.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C6.0 UTILITY PLAN July 28, 2025 05:43:27pm K:\orl_civil\149170026-winter springs wawa\CADD\CONSTPlanSheets- Wawa\C6.0 UTIL.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



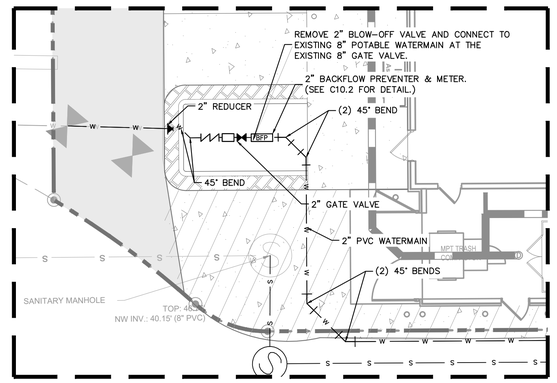
SANITARY SEWER STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CO-1	CLEAN OUT TOP: 46.44 SW. INV OUT: 41.70
CO-2	CLEAN OUT TOP: 46.39 NW. INV IN: 41.72 S. INV OUT: 41.72
CO-3	TWO-WAY CLEAN-OUT TOP: 46.54 E. INV OUT: 41.86
CO-4	TWO-WAY CLEAN-OUT TOP: 46.56 SE. INV OUT: 41.89
S-1	SANITARY MANHOLE TOP: 46.35 SE. INV IN: 40.56 NE. INV OUT: 40.46
S-2	SANITARY MANHOLE TOP: 46.39 NE. INV IN: 41.19 NW. INV OUT: 41.09

LEGEND

- EXISTING STORM PIPE
- EXISTING WATER MAIN
- EXISTING SANITARY MAIN
- PROPOSED WATER LINE
- PROPOSED FIRE LINE
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM PIPE
- PROPOSED STORM INLET
- PROPOSED STORM MANHOLE
- PROPOSED 10-FT UTILITY

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40



DETAIL 1
SCALE= 1"=10'

EXISTING UTILITIES:

1. PRIOR TO CONSTRUCTION START, CONTRACTOR SHALL FIELD VERIFY THE LOCATION, SIZE, AND INVERTS OF ALL EXISTING UTILITIES SERVICING THE PROPOSED BUILDING, INCLUDING UTILITY STUB-OUT LOCATIONS, SIZES AND INVERTS. CONTRACTOR SHALL CONTACT ENGINEER WITH ANY DISCREPANCIES.

POTABLE WATER UTILITY NOTES:

1. ALL POTABLE WATER UTILITIES SHALL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS UTILITIES ENGINEERING MANUAL. CONTRACTOR SHALL BE RESPONSIBLE TO BE FAMILIAR WITH THESE STANDARDS AND SPECIFICATIONS.
2. REFER TO THE CITY OF WINTER SPRINGS UTILITY STANDARD DETAILS, SHEETS C10.0 – C10.2.

GENERAL UTILITY NOTES:

1. REFER TO GENERAL CONSTRUCTION NOTES SHEET C1.0 TO C1.1.
2. CONTRACTOR TO COORDINATE PROPOSED TRANSFORMER LOCATION AND ELECTRIC SERVICE LINES WITH POWER COMPANY AND OWNER. TRANSFORMER & ELECTRICAL SERVICE LINE SHOWN FOR INFORMATIONAL PURPOSES ONLY. DESIGNED & PERMITTED BY OTHERS.
3. CONTRACTOR TO COORDINATE TELECOMMUNICATION SERVICE LINES WITH SERVICE PROVIDER AND OWNER. DESIGNED & PERMITTED BY OTHERS.
4. PRIOR TO CONSTRUCTION START, THE CONTRACTOR SHALL BE RESPONSIBLE TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH CITY OF WINTER SPRINGS.

SANITARY WASTEWATER UTILITY NOTES:

1. ALL SANITARY WASTEWATER UTILITIES SHALL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS UTILITIES ENGINEERING MANUAL. CONTRACTOR SHALL BE RESPONSIBLE TO BE FAMILIAR WITH THESE STANDARDS AND SPECIFICATIONS.
2. REFER TO THE CITY OF WINTER SPRINGS UTILITY STANDARD DETAILS, SHEETS C10.0 – C10.2.
3. GREASE TRAPS ARE SHOWN FOR REFERENCE ONLY. GREASE TRAPS ARE TO BE PERMITTED AS PART OF THE BUILDING PERMIT. SIZING CALCULATIONS WILL BE REQUIRED AS PART OF THE BUILDING PERMIT SUBMITTAL/REVIEW PROCESS.
4. ALL CLEAN-OUTS WITHIN THE PAVEMENT SHALL BE H-20 TRAFFIC BEARING.

FIRE PROTECTION SERVICE NOTES:

1. ALL UNDERGROUND MAINS SERVING FIRE HYDRANTS OR FIRE PROTECTION SPRINKLER SYSTEMS ON PRIVATE PROPERTY MUST BE PERMITTED PRIOR TO INSTALLATION. THE DRAWING SHALL INDICATE THAT ALL UNDERGROUND FIRE MAINS WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24: "STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES" (LATEST ED.). [F.A.C. 69A-60.005(2)]
2. ALL FIRE SERVICE MAIN LOCATED DOWNSTREAM OF THE FIRE POINT OF SERVICE (POS) SHALL BE INSTALLED BY A QUALIFIED AND LICENSED CONTRACTOR. CONSTRUCTION AND MATERIALS SHALL COMPLY WITH APPLICABLE FIRE CODE. CONTRACTOR TO VERIFY REQUIREMENTS WITH SEMINOLE COUNTY PRIOR TO SHOP DRAWING REVIEW.
3. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED NOT MORE THAN 100 FT FROM THE NEAREST FIRE HYDRANT. [NFPA 14: 6.3.5.4]
4. PROVIDE SIGNAGE FOR ALL PROPOSED FIRE DEPARTMENT CONNECTIONS (F.D.C.) INDICATING ITS LOCATION AND THE BUILDING IT SERVICES.
5. FIRE DEPARTMENT ACCESS ROADS PROVIDED AT THE START OF A PROJECT AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. (NFPA 1, 16.1.4).
6. A SECOND ENTRANCE/EXIT MIGHT BE REQUIRED PER AHJ IF THE RESPONSE TIME FOR EMERGENCY IS EXCEEDED PER NFPA 1, SECTION 18.2.3.3 MULTIPLE ACCESS ROADS.
7. A WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ACCUMULATES. THIS APPLIES TO BOTH COMMERCIAL AND RESIDENTIAL DEVELOPMENTS. (NFPA 1, 16.5.3.1).
8. WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED, AND IN SERVICE PRIOR TO CONSTRUCTION WORK. (NFPA 1, 16.4.3.1.3).
9. FIRE FLOW TESTING SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 291, RECOMMENDED PRACTICE FOR FIRE FLOW TESTING.
10. A 36 IN. CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS AND A CLEAR SPACE OF NOT LESS THAN 60 IN. (1524 MM) SHALL BE PROVIDED IN FRONT OF EACH HYDRANT CONNECTION HAVING A DIAMETER GREATER THAN 21/2 IN. NFPA 1, 18.5.7.
11. HYDRANT SHALL BE MARKED WITH A BLUE REFLECTOR THAT IS PLACED 6" IN THE ROADWAY IN ACCORDANCE WITH NFPA 1, CHAPTER 18.5.10.
12. ACCESS TO GATED SUBDIVISIONS OR DEVELOPMENTS SHALL PROVIDE FIRE DEPARTMENT ACCESS THROUGH AN APPROVED SOS AND SEMINOLE COUNTY KNOX KEY SWITCH. NFPA 1, 18.2.2.2.

⚠1

POTABLE WATER DEMANDS

Building Type	Number of Units	GPD/Unit	ADF		MDF		PHF	
			GPD	GPM	GPD	GPM	GPD	GPM
Gas Station /Store	4,736 SF	0.1	474	0.33	947	0.66	1,421	0.99
TOTAL			**474**	**0.33**	**947**	**0.66**	**1,421**	**0.99**

WASTEWATER DEMANDS

Building	Number of Units	GPD/Unit	ADF		MDF		PHF	
			GPD	GPM	GPD	GPM	GPD	GPM
Gas Station /Store	4,736 SF	0.1	474	0.33	947	0.66	1,894	1.32
TOTAL			**474**	**0.33**	**947**	**0.66**	**1,894**	**1.32**

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

Digitally signed by Cory N. Sitler, P.E.
DN: C=US, E=cory.sitler@kimley-horn.com, O=KIMLEY-HORN AND ASSOCIATES, INC., CN=Cory N. Sitler, P.E., 0.9.2342.19200300.100.1.1=A01410D000001908D0D9C180, 0.9.2342.19200300.100.1.1=A01410D000001908D0D9C180
Date: 2025.07.18 15:43:21 -04'00'

LICENSED PROFESSIONAL ENGINEER — DATE: 07/18/25

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

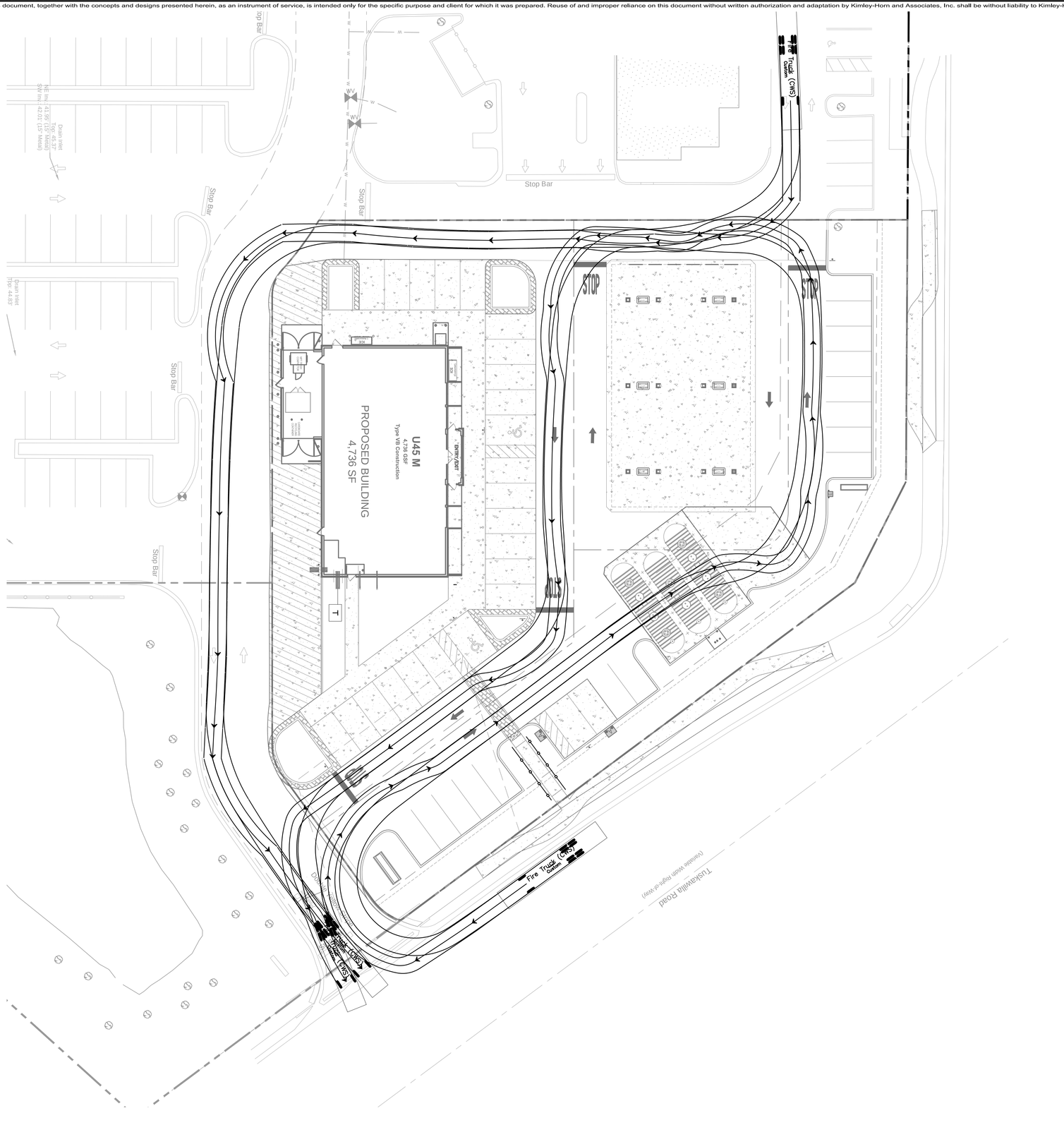
UTILITY PLAN

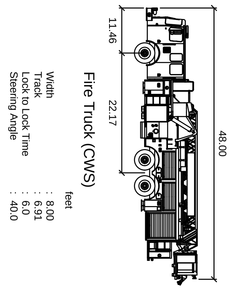
WINTER SPRINGS WAWA

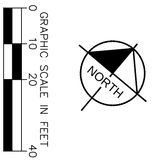
CITY OF WINTER SPRINGS FL

SHEET NUMBER
C6.0

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:FIRE TRUCK ROUTING PLAN July 28, 2025 04:58:33pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C7.0 TRUCK ROUTING PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.







SHEET NUMBER	C7.0	KHA PROJECT	149170026
WINTER SPRINGS WAWA		DATE	07/18/25
CITY OF WINTER SPRINGS	FL	SCALE	AS SHOWN
FIRE TRUCK ROUTING PLAN		DESIGNED BY	CNS
		DRAWN BY	MMB
		CHECKED BY	ADL

LICENSED PROFESSIONAL ENGINEER — STATE OF FLORIDA — DATE: 07/18/25

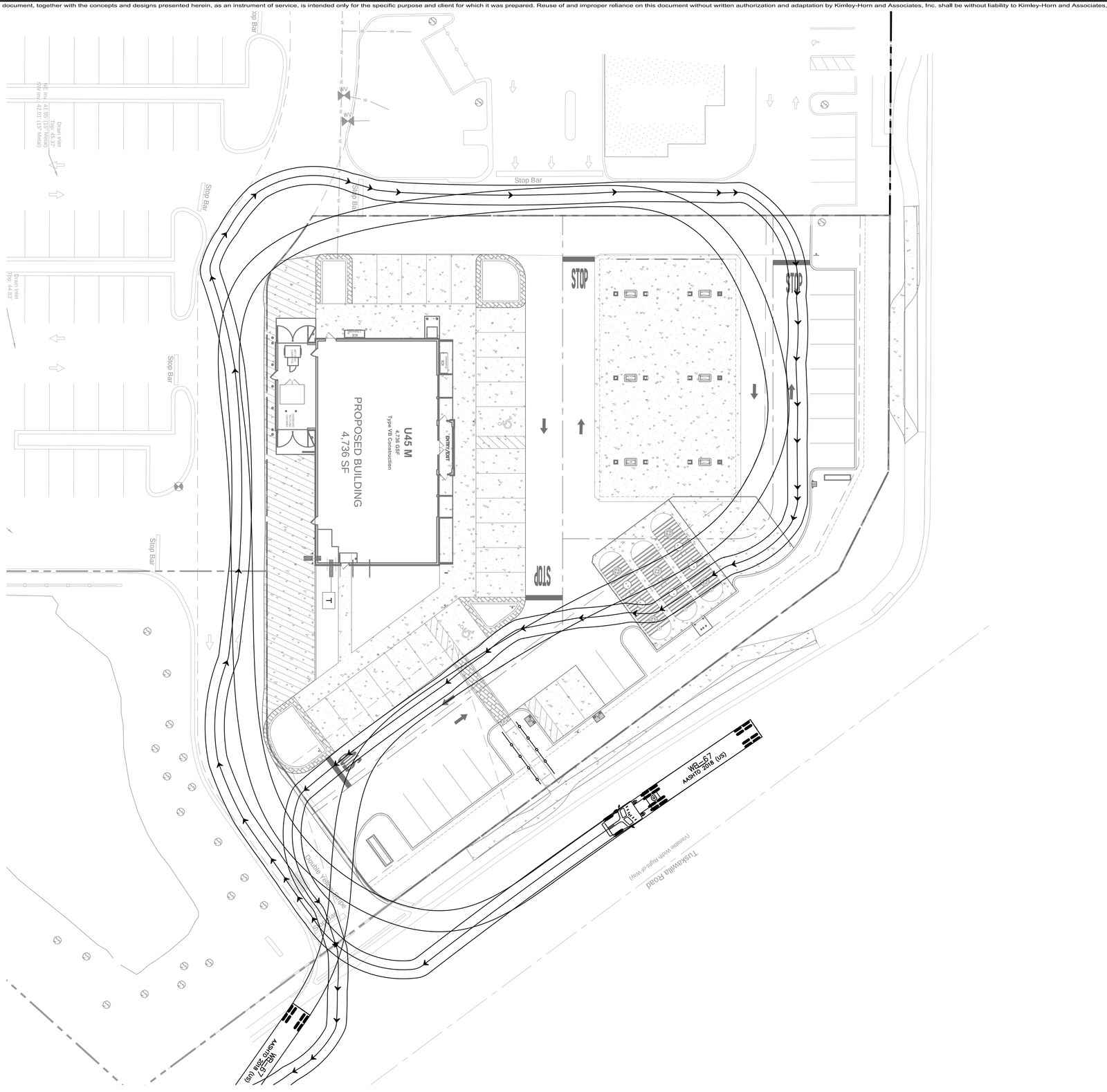
Kimley»Horn

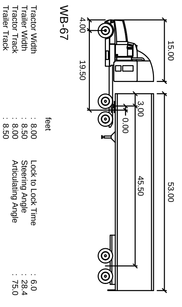
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

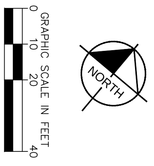
Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:WB-67 TRUCK ROUTING PLAN July 28, 2025 04:58:38pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C7.0 TRUCK ROUTING PLAN.dwg

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.





	feet
Tractor Width	8.00
Trailer Width	8.00
Tractor Track	8.00
Trailer Track	8.00
Lock-to-Lock Time	6.0
Steering Angle	28.4
Articulating Angle	75.0



SHEET NUMBER C7.1

WINTER SPRINGS
WAWA

CITY OF WINTER SPRINGS FL

WB-67 TRUCK ROUTING PLAN

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

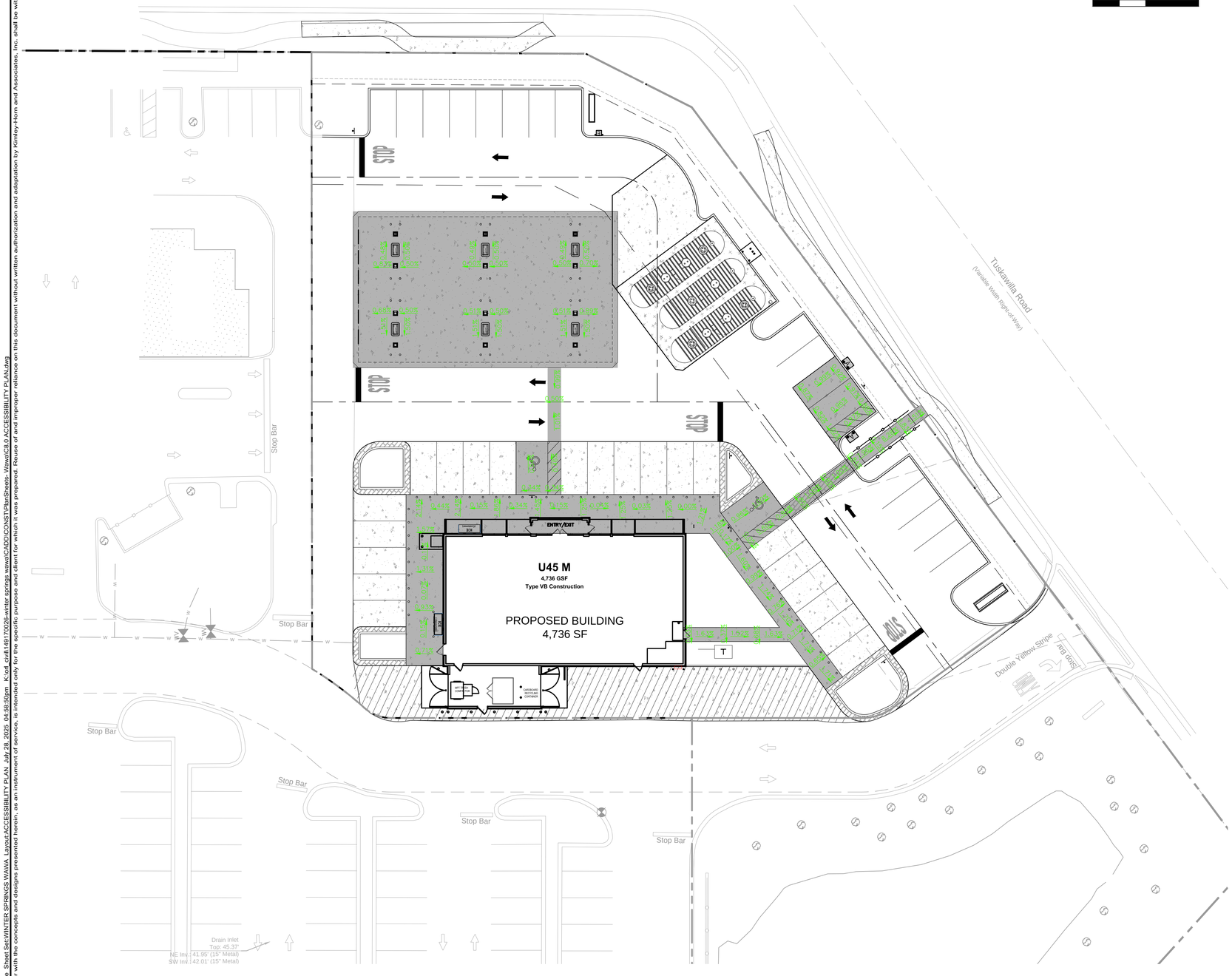
LICENSED PROFESSIONAL ENGINEER
STATE OF FLORIDA
DATE: 07/18/25

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Plotted By:LaRocque, Allena Sheet Set:WINTER SPRINGS WAWA Layout:ACCESSIBILITY PLAN July 28, 2025 04:58:50pm K:\orl-civil\149170026-winter springs wawa\CADD\CONST\PlanSheets Wawa\C8.0 ACCESSIBILITY PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



FOR SITE ACCESSIBILITY PLAN

REVISED JULY 28, 2016

SITE LEGEND

ACCESSIBLE AREAS
SEE REQUIREMENTS BELOW

PROJECT BOUNDARY

CW — CROSSWALK TO MEET ADA SPECIFICATIONS AND FDOT INDEX 304 AND 17348. MAX CROSS SLOPE 2%. SEE REQUIREMENTS BELOW.

SWR — RAMPS TO MEET ADA SPECIFICATIONS, FDOT INDEX 304 & FLORIDA ACCESSIBILITY CODE 4.1.2 (1). SEE REQUIREMENTS BELOW.

ACCESSIBILITY REQUIREMENTS

1. GENERAL: ALL PEDESTRIANS USE AREAS (INCLUDING SIDEWALK AROUND BUILDING) TO MEET AMERICANS WITH DISABILITIES ACT AND FLORIDA ACCESSIBILITY CODE SPECIFICATIONS.
2. ACCESSIBLE ROUTES. AS REQUIRED BELOW, SHOULD MEET THE FOLLOWING:
   a. MAXIMUM DESIGN CROSS SLOPE: 1:48 (2.08%)
   b. MAXIMUM DESIGN LONGITUDINAL SLOPE: 1:20 (5%)
   c. MINIMUM WIDTH: 36"
   d. RAMP MAXIMUM RISE (NO RAIL): 6"
   e. RAMP MAXIMUM SLOPE: 1:12
3. EMERGENCY EXITS: MINIMUM 60% OF EMERGENCY EXITS TO HAVE AN ACCESSIBLE ROUTE, AS DEFINED ABOVE, AWAY FROM BUILDING.
4. HANDICAP PARKING & LOADING:

TOTAL NUMBER OF SPACES:	50 SPACES
REQUIRED HANDICAP SPACES:	2 SPACES
PROVIDED HANDICAP SPACES:	2 SPACES

   a. MINIMUM REQUIRED NUMBER OF SPACES PER FLORIDA ACCESSIBILITY CODE & AMERICANS WITH DISABILITY ACT
   b. MAXIMUM DESIGN CROSS SLOPE: 1:48 (2.08%)
5. GAS PUMPS: AN ACCESSIBLE ROUTE, AS DEFINED ABOVE, IS REQUIRED FROM THE MAIN ENTRANCE TO THE NEAREST FUELING POSITION.
6. EMERGENCY STOPS: AN ACCESSIBLE ROUTE, AS DEFINED ABOVE, IS REQUIRED FROM THE BUILDING AND CANOPY TO THE NEAREST EMERGENCY STOP.
7. PEDESTRIAN CONNECTIONS TO PUBLIC TO BE AN ACCESSIBLE ROUTE, AS DEFINED ABOVE.
8. HANDICAP OUTDOOR DINING TABLE:
   a. WHEELCHAIR DINING POSITION MAXIMUM DESIGN CROSS SLOPE: 1:48 (2.08%)
   b. ACCESSIBLE ROUTES, AS DEFINED ABOVE, ARE REQUIRED FROM THE HANDICAP SPACE AND THE MAIN ENTRANCE TO THE WHEELCHAIR DINING POSITION
9. AIR PUMP:
   a. 16'X20' ACCESSIBLE AREA REQUIRED ADJACENT TO AIR PUMP
   b. ACCESSIBLE AREA MAXIMUM DESIGN CROSS SLOPE: 1:48 (2.08%)
   c. AIR PUMP SHOULD BE WITHIN 10" OF AN ACCESSIBLE ROUTE, AS DEFINED ABOVE.
   d. AIR PUMP MAXIMUM HEIGHT RELATIVE TO ACCESSIBLE ROUTE: 48"
10. DRIVEWAY CONNECTIONS ACROSS SIDEWALKS:
    a. RAMPS TO MEET REQUIREMENTS, AS DESCRIBED ABOVE UNDER ACCESSIBLE ROUTES.
    b. CROSSWALKS ACROSS DRIVEWAYS TO BE AN ACCESSIBLE ROUTE AS DESCRIBED ABOVE.

AS-BUILT CHECKLIST

- INITIAL ITEMS THAT MEET REQUIREMENTS.
- CONTRACTOR TO COMPLETE AND PROVIDE TO ENGINEER MINIMUM OF 20 DAYS PRIOR TO C.O.
- TO BE COMPLETED BY CONTRACTOR & PROVIDED TO ENGINEER PRIOR TO ENGINEER'S REVIEW.
- NOTE ISSUES, DEFICIENCIES, ETC ADJACENT TO INITIAL BOXES.

	CONTRACTOR	ENGINEER
a. MINIMUM REQUIRED NUMBER OF SPACES PER FLORIDA ACCESSIBILITY CODE & AMERICANS WITH DISABILITY ACT	☐	☐
b. MAXIMUM DESIGN CROSS SLOPE: 1:48 (2.08%)	☐	☐
5. GAS PUMPS: AN ACCESSIBLE ROUTE, AS DEFINED ABOVE, IS REQUIRED FROM THE MAIN ENTRANCE TO THE NEAREST FUELING POSITION.	☐	☐
6. EMERGENCY STOPS: AN ACCESSIBLE ROUTE, AS DEFINED ABOVE, IS REQUIRED FROM THE BUILDING AND CANOPY TO THE NEAREST EMERGENCY STOP.	☐	☐
7. PEDESTRIAN CONNECTIONS TO PUBLIC TO BE AN ACCESSIBLE ROUTE, AS DEFINED ABOVE.	☐	☐
8. HANDICAP OUTDOOR DINING TABLE: a. WHEELCHAIR DINING POSITION MAXIMUM DESIGN CROSS SLOPE: 1:48 (2.08%)	☐	☐
b. ACCESSIBLE ROUTES, AS DEFINED ABOVE, ARE REQUIRED FROM THE HANDICAP SPACE AND THE MAIN ENTRANCE TO THE WHEELCHAIR DINING POSITION	☐	☐
9. AIR PUMP: a. 16'X20' ACCESSIBLE AREA REQUIRED ADJACENT TO AIR PUMP	☐	☐
b. ACCESSIBLE AREA MAXIMUM DESIGN CROSS SLOPE: 1:48 (2.08%)	☐	☐
c. AIR PUMP SHOULD BE WITHIN 10" OF AN ACCESSIBLE ROUTE, AS DEFINED ABOVE.	☐	NOT REVIEWED BY KIMLEY-HORN
d. AIR PUMP MAXIMUM HEIGHT RELATIVE TO ACCESSIBLE ROUTE: 48"	☐	NOT REVIEWED BY KIMLEY-HORN
10. DRIVEWAY CONNECTIONS ACROSS SIDEWALKS: a. RAMPS TO MEET REQUIREMENTS, AS DESCRIBED ABOVE UNDER ACCESSIBLE ROUTES.	☐	☐
b. CROSSWALKS ACROSS DRIVEWAYS TO BE AN ACCESSIBLE ROUTE AS DESCRIBED ABOVE.	☐	☐

CONTRACTOR CERTIFICATION:

I CERTIFY THAT THE ITEMS INITIALED ABOVE HAVE BEEN VERIFIED TO MEET THE REQUIREMENTS SPECIFIED ABOVE.

COMPANY NAME:

NAME OF SIGNATOR:

TITLE:

SIGNATURE:

DATE:

ENGINEER REVIEW:

DESIGN:

THE ACCESSIBLE AREAS SHOWN ON THIS PLAN WERE DESIGNED TO MEET THE ACCESSIBILITY REQUIREMENTS SPECIFIED ABOVE.

AS BUILT:

BASED LIMITED SITE OBSERVATIONS AND REVIEW OF THE AS-BUILT SURVEY PROVIDED BY _____ DATED _____. IT IS OUR OPINION THAT THE ITEMS _____ INITIALED ABOVE MEET THE REQUIREMENTS SPECIFIED ABOVE.

COMPANY NAME:

NAME OF SIGNATOR:

TITLE:

LICENSE NUMBER:

SIGNATURE, SEAL, DATE:

THIS IS TO CERTIFY TO THE BEST OF OUR KNOWLEDGE AND BELIEF, BASED ON LIMITED SITE OBSERVATIONS AND REVIEW OF AS-BUILTS PROVIDED BY CONTRACTOR (AT CONSTRUCTION INC.), IN ACCORDANCE WITH OUR AGREEMENT AS TO THE EXTENT OF OUR SPECIFIED SERVICES IN THIS REGARD, THAT THE ADA ACCESSIBILITY REQUIREMENTS, AS IDENTIFIED ON THE APPROVED PLANS AND SPECIFICATIONS FOR WAWA AT SR44 & MISSION – BID SET SHEET C6.2, IS SUBSTANTIALLY IN ACCORDANCE WITH THE PERMITTED CONSTRUCTION DOCUMENTS AND ADA ACCESSIBILITY REQUIREMENTS, AND THIS CERTIFICATION DOES NOT RELIEVE ANY PARTY OF THEIR CONTRACTUAL OR OTHER RESPONSIBILITIES.

NOTES:

1. SITE PLAN: SEE SITE PLAN FOR AIR PUMP LOCATION, DIMENSIONS, ETC.
2. GRADING PLAN: SEE GRADING PLAN FOR GRADING DESIGN.
3. SITE DETAILS: SEE SITE DETAILS SHEET FOR ACCESSIBILITY AND OTHER DETAILS.
4. ARCHITECTURAL PLANS: ARCHITECTURAL PLAN REFERENCES ARE FOR INFORMATIONAL PURPOSES ONLY. REFER TO ARCHITECTURAL PLANS FOR ACTUAL LOCATIONS AND SPECIFICATIONS.

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

LICENSED PROFESSIONAL ENGINEER — DATE:

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

ACCESSIBILITY PLAN

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C8.0

WAWA SIGNAGE/STRIPING DETAILS

REV. JUNE 7,2022

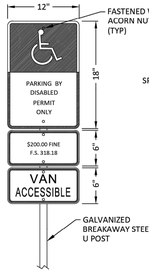


NOTE: SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

AIR PARKING SIGN

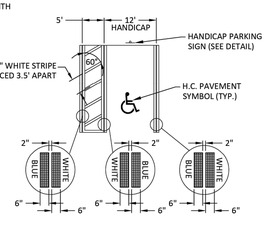
NTS

NOTES:
1. ALL LETTERS ARE 1" SERIES "C" PER MUTCD.
2. TOP PORTION OF SIGN SHALL HAVE A 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. FINE NOTIFICATION SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND & BORDER. CONTRACTOR SHALL VERIFY FINE AMOUNT & ORD. NO.
5. ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
6. INSTALLATION HEIGHT OF SIGN SHALL BE 60" ABOVE THE FINISHED GRADE TO THE BOTTOM OF THE SIGN. ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
7. SIGN POST TO BE GALVANIZED BREAKAWAY STEEL U POST.
8. SIGN TO BE FASTENED TO POST WITH ACORN NUT.



HANDICAP PARKING SIGN

NTS



STRIPING, SPACING, AND CURB RAMPS SHALL COMPLY WITH THE LATEST STATE OF FLORIDA ACCESSIBILITY CODE & FDOT STANDARD INDEX 711-001

NOTE: ALL SIGNS TO USE ACORN BOLTS.

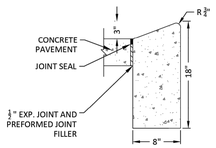
HANDICAP STRIPING DETAIL

NTS

SIGNAGE AND STRIPING NOTES:
1. ALL STANDARD PARKING STRIPES ARE TO BE 4" YELLOW
2. ARROWS SHOWN IN DRIVE AISLES ARE FOR INFORMATION ONLY AND SHALL NOT BE PAINTED.

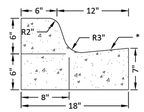
WAWA CURB DETAILS

REV. JUNE 19, 2017



WAWA TYPE B1 CURB

NTS



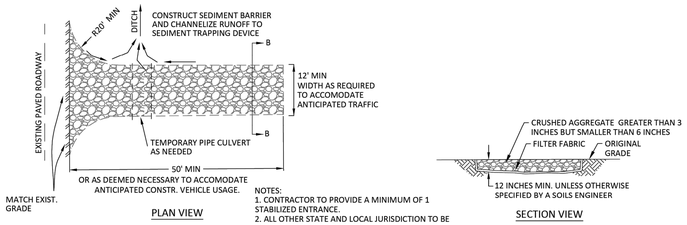
*NOTE:
WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON PLANS.

WAWA TYPE F1 CURB

NTS

EROSION CONTROL DETAILS

REV. JULY 28, 2016



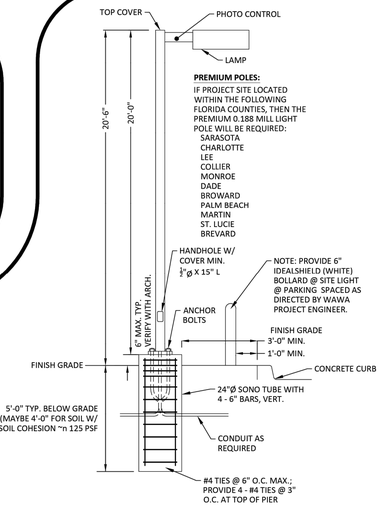
PLAN VIEW

NOTES:
1. CONTRACTOR TO PROVIDE A MINIMUM OF 1 STABILIZED ENTRANCE.
2. ALL OTHER STATE AND LOCAL JURISDICTION TO BE CONTRACTED AND ADHERED TO.

SECTION VIEW

STABILIZED CONSTRUCTION ENTRANCE / EXIT (TYPE 1)

NTS



PREMIUM POLES:
IF PROJECT SITE LOCATED WITHIN THE FOLLOWING FLORIDA COUNTIES, THEN THE PREMIUM 0.188 MILL LIGHT POLE WILL BE REQUIRED:
- SARASOTA
- CHARLOTTE
- LEE
- COLLIER
- MONROE
- DADE
- BROWARD
- PALM BEACH
- MARTIN
- ST. LUCIE
- BREVARD

NOTE: THIS DETAIL IS NOT CERTIFIED. FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR TO PROVIDE SHOP DRAWINGS CERTIFIED BY STRUCTURAL ENGINEER.

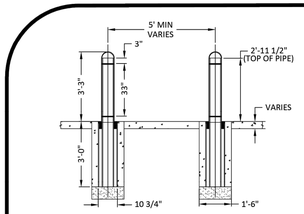
PLACEMENT: POLE SHALL BE PLACED AT PARKING STRIPE AT HEAD OF SPACE.

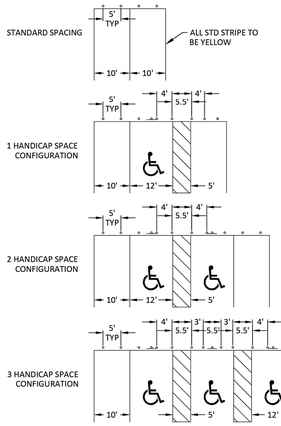
LIGHT POLE WITH STANDARD ANCHORING DETAIL

NTS

WAWA GENERAL DETAILS

REV. OCTOBER 9, 2023

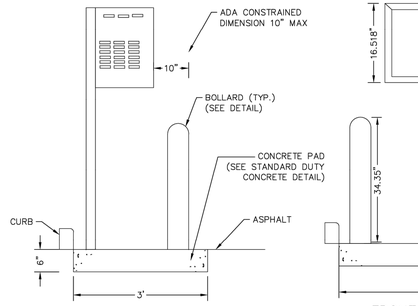




NOTE: ALL DIMENSIONS MEASURED TO CENTER OF BOLLARD. BOLLARD SPACING IS 5' UNLESS OTHERWISE NOTED.

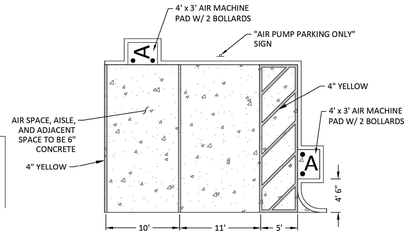
BOLLARD SPACING/DIMENSION DETAIL

NTS



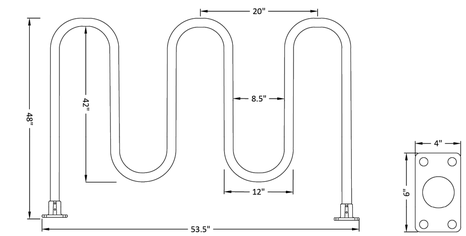
DESIGNER NOTE: AIR PUMP TO BE PLACED INLINE OF SIGHT TO BUILDING.

AIR PUMP STANDARD DETAIL



AIR PARKING SPACE DETAIL

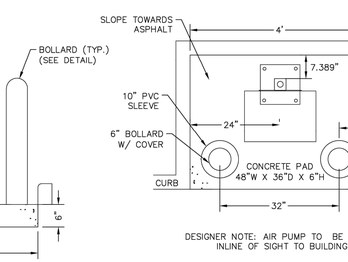
NTS



MADE OF ROLLED ALUMINUM:	1 1/2" SCHEDULE 40 ALUMINUM WITH 1 7/8" O.D.
STANDARD LENGTHS:	60" SECTION FITS UP TO 5 BIKES
STANDARD HEIGHT:	46"
INSTALLATION OPTIONS:	SURFACE MOUNT
FINISHING OPTIONS:	STANDARD CLEAR ANODIZED
MANUFACTURED BY:	IDEAL SHIELD 2525 CLARK ST DETROIT, MI 48209 PHONE: 1-866-825-8659

STANDARD BICYCLE RACK DETAIL

NTS

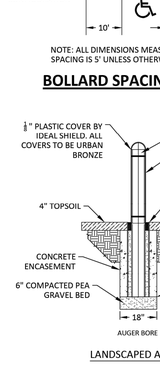


NOTE: SIDEWALK RAMPS TO MEET ADA, FDOT DESIGN STANDARDS, AND LOCAL SPECIFICATIONS.

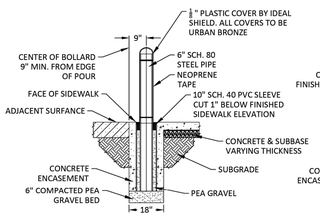
ADA DETECTABLE CURB WARNING DETAIL

ADA DOME TOOL DESIGN - STAMPCRETE INTERNATIONAL.

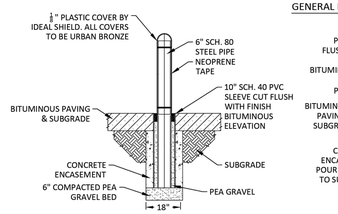
NTS



LANDSCAPED AREAS



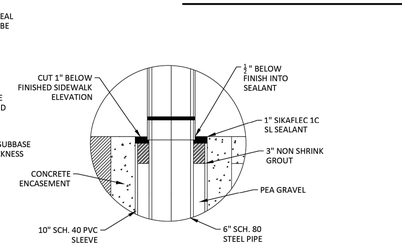
CONCRETE AREAS



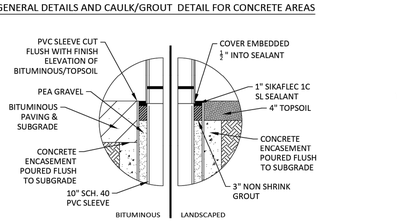
BITUMINOUS AREAS

BOLLARD DETAIL

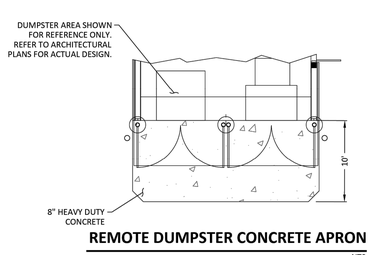
NTS



GENERAL DETAILS AND CAULK/GROUT DETAIL FOR CONCRETE AREAS

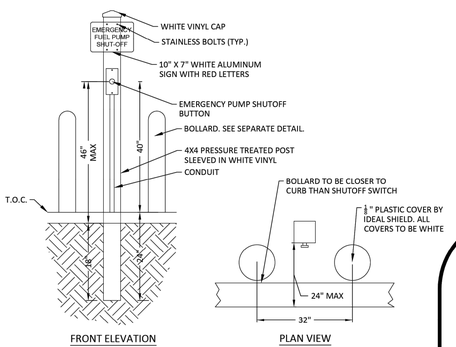


CAULK/GROUT DETAIL FOR LANDSCAPED & BITUMINOUS AREAS



REMOTE DUMPSTER CONCRETE APRON

NTS



FRONT ELEVATION

PLAN VIEW

EMERGENCY PUMP SHUTOFF DETAIL

NTS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89664

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

Digitally signed by Cory N. Sitler, P.E.
DN: C=US, E=cory.sitler@kimley-horn.com, O=Kimley-Horn and Associates, Inc., CN=Cory N. Sitler, P.E., 0.9.2342.19200300.100.1.1=A01410D000001906F9D9DC1A0, 0.9.2342.19200300.100.1.1=A01410D000001906F9D9DC1A0
Date: 2025.07.18 15:07:22 -04'00'

LICENSED PROFESSIONAL ENGINEER — STATE OF FLORIDA — CORY N. SITLER — No. 89664 — DATE: 07/18/25

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

WAWA STANDARD DETAILS

WINTER SPRINGS WAWA

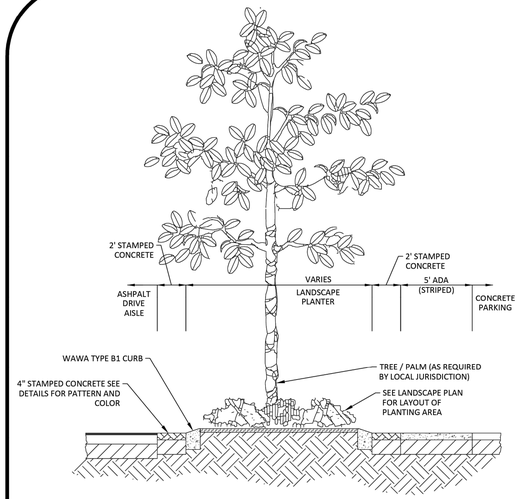
CITY OF WINTER SPRINGS FL

SHEET NUMBER
C9.0

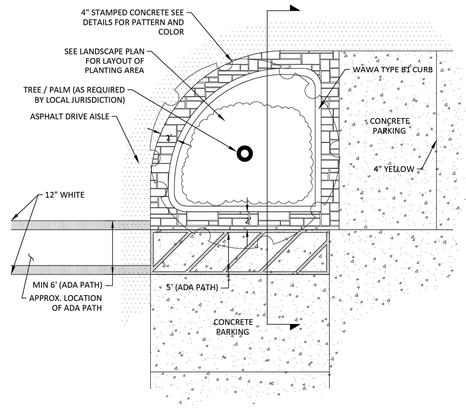
Plotted By:LaRocque, Athena Sheet Set:WINTER SPRINGS WAWA Layout:C9.0 WAWA DETAILS July 28, 2025 05:28:03pm K:\orl_civil\149170026\winter springs wawa\CADD\CONST\PlanSheets- Wawa\C9.0 DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

WAWA PLANTER DETAILS

REV. JULY 28, 2016



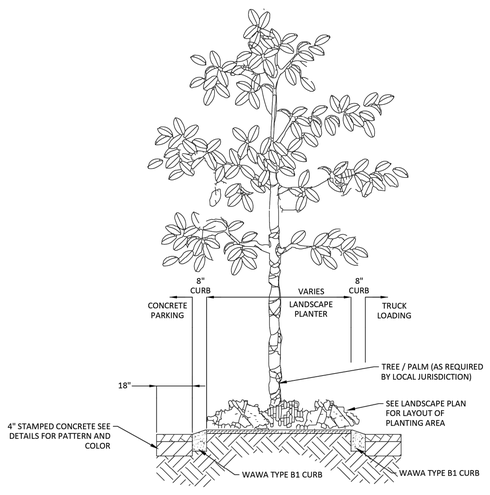
SECTION



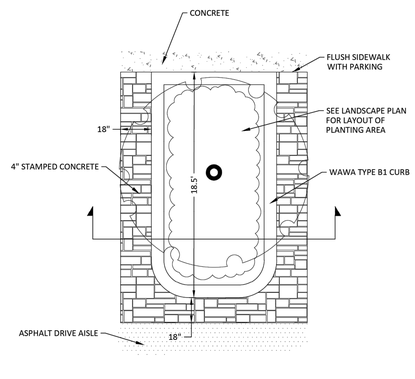
PLAN

CORNER ISLAND LANDSCAPE DETAIL

NTS



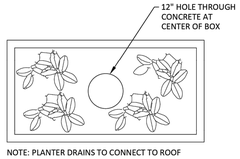
SECTION



PLAN

PARKING ISLAND LANDSCAPE DETAIL

NTS



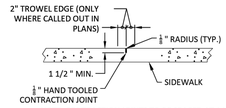
NOTE: PLANTER DRAINS TO CONNECT TO ROOF DRAIN MANIFOLD. SEE DETAIL.

PLANTER BOX DRAINAGE DETAIL

NTS

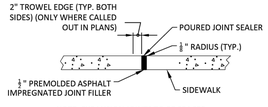
WAWA PAVEMENT DETAILS

REV. JUNE 7,2022



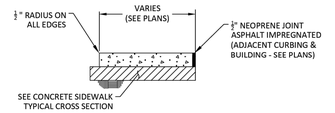
NOTE: CONTRACTION JOINTS TO BE SPACED AT A WIDTH OF WALKWAY OR A MAX. OF 10'.

CONTRACTION JOINTS



NOTE: EXPANSION JOINTS TO BE SPACED AT A MAX. OF 30'.

EXPANSION JOINTS

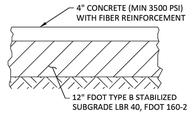


NOTE: TO BE CONSTRUCTED PER FDOT INDEX 522-001 & FDOT SPECIFICATIONS (SECTION 350)

SIDEWALK

SIDEWALK DETAILS

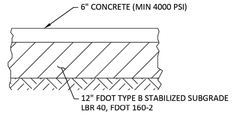
NTS



NOTE: TO BE CONSTRUCTED PER WAWA & FDOT SPECIFICATIONS (SECTION 350) AND GEOTECHNICAL ENGINEERING REPORT

CONCRETE SIDEWALK TYPICAL CROSS SECTION

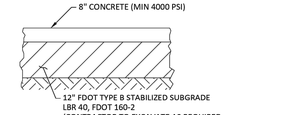
NTS



NOTE: TO BE CONSTRUCTED PER WAWA & FDOT SPECIFICATIONS (SECTION 350) AND GEOTECHNICAL ENGINEERING REPORT

STANDARD DUTY CONCRETE PAVEMENT TYPICAL CROSS SECTION

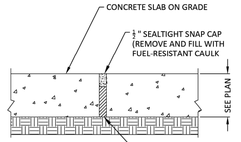
PARKING AT BUILDING & AIR PUMP NTS



NOTE: TO BE CONSTRUCTED PER WAWA & FDOT SPECIFICATIONS (SECTION 350) AND GEOTECHNICAL ENGINEERING REPORT

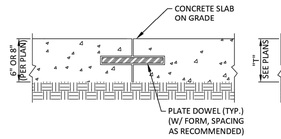
HEAVY DUTY CONCRETE PAVEMENT TYPICAL CROSS SECTION

CANOPY AREA, LOADING ZONE & TANK FIELD AREA REMOTE DUMPSTER APRON NTS

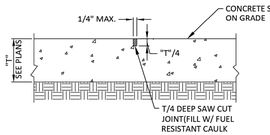


ISOLATION JOINT DETAIL

AT STRUCTURES SUCH AS GAS ISLANDS, BUILDING CANOPY COLUMNS, BOLLARDS ETC.



CONSTRUCTION JOINT DETAIL

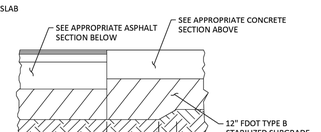


CONTROL JOINT DETAIL

NOTE: SEE ARCHITECT SPECIFICATIONS FOR COMPLETE CONCRETE DETAILS.

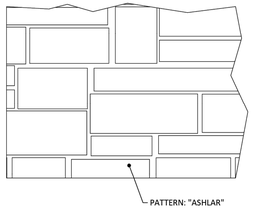
CONCRETE JOINT DETAILS

NTS



ASPHALT TO CONCRETE TRANSITION DETAIL

NTS

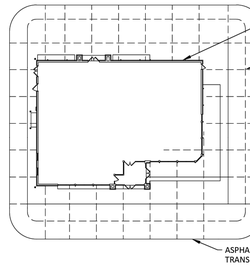


NOTES:

1. SEE PAVEMENT SECTION FOR PAVEMENT DETAILS TO BE STANDARD DUTY CONCRETE IN NON-VEHICULAR AREAS. TO MEET CONCRETE CROSSWALK DETAIL FOR CROSSWALKS IF APPLICABLE.
2. FINAL COLOR TO BE COORDINATED WITH WAWA PRIOR TO INSTALLATION.
3. THE STAMPED CONCRETE FIELD IS "ASHLAR" PATTERN. USE INCRETE COLOR-INTEGRATED CONCRETE "DESERT TAN" WITH THE FOLLOWING STEP-BY-STEP TREATMENT:
   - A. 100% BROADCAST DRY SHAKE HARDENER "DESERT TAN", FOLLOWED BY:
   - B. 30%-35% BROADCAST DRY SHAKE HARDENER "COCOA", THEN HARD TROWEL.
   - C. USE RELEASE POWDER "PEACH" IN MOLD. KEEP SOME OF THE COLOR IN GROUT JOINTS AND HIGHLIGHTS.
   - D. USE PENETRATING, NON-GLOSSY SEALER SUCH AS CLEAR SEAL BY INCRETE SYSTEMS

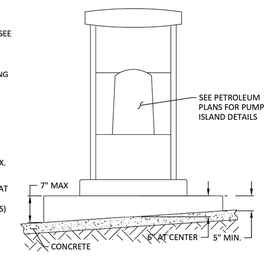
STAMPED CONCRETE DETAIL

NTS



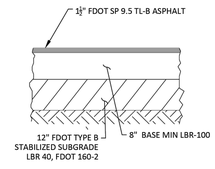
JOINT LAYOUT DETAIL

NTS



PUMP ISLAND GRADING DETAIL

NTS

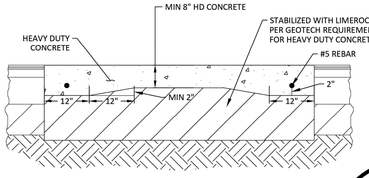


BASE:
1. FDOT SHELL ROCK, BANK RUN SHELL, LIMEROCK, CRUSHED CONCRETE OR CEMENT COQUINA BASE. LBR-100
2. BASE TO MEET LOCAL, FDOT, GEOTECHNICAL REPORT & WAWA SPECIFICATIONS

NOTES
1. TO BE CONSTRUCTED PER FDOT SPECIFICATIONS (SECTIONS 330, 200, & 160), GEOTECHNICAL ENGINEERING REPORT, AND WAWA SPECIFICATIONS.
2. INTENDED FOR SANDY AND GRAVEL SUB-GRADES CAPABLE OF ACHIEVING A LBR OF 10 OR GREATER (SN OF 2.60). A SUB-GRADE WITH LESS THAN 9 LBR WILL REQUIRE A SPECIFIC SUB-BASE AND PAVEMENT DESIGN.

STANDARD DUTY ASPHALT PAVEMENT TYPICAL CROSS SECTION

NTS



STAMPING OPTION TO BE DETERMINED BY CIVIL ENGINEER & WAWA

- ☑ NOT STAMPED/ COLORIZED (PREFERRED)
- ☐ STAMPED, SEE DETAIL FOR PATTERN & COLOR

CONCRETE CROSSWALK DETAIL

NTS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 99064

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

LICENSED PROFESSIONAL ENGINEER

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

WAWA STANDARD DETAILS

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER C9.1

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C9.1 WAWA DETAILS July 28, 2025 09:28:09pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C9.0 DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

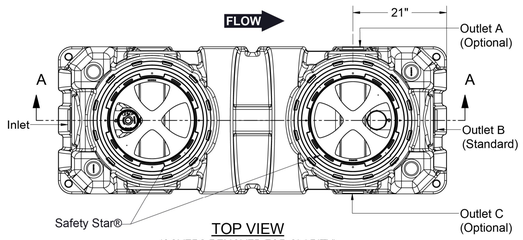
WAWA UTILITY DETAILS

REV. MAY 12, 2023

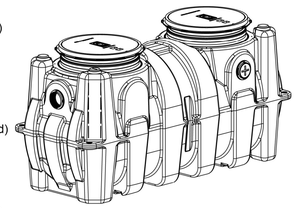
SPECIFICATIONS

Notes:

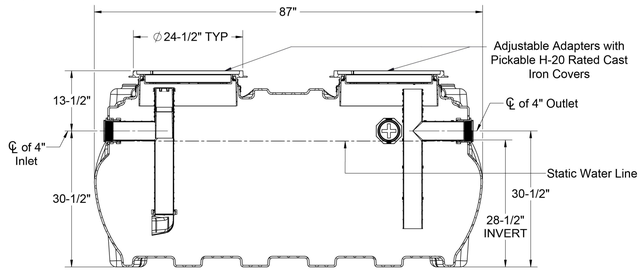
1. 4" FPT inlet/outlet with 4" plain end adapters, single inlet and triple outlet.
2. Unit weight - w/ cast iron covers: 376 lbs. (For wet weight add 2,310 lbs.)
3. Maximum operating temperature: 150° F continuous
4. Capacities - Liquid: 277 gal.;
   Grease: 1,895 lbs. (260 gal.) @100GPM
   Grease: 1,196 lbs. (164 gal.) @200GPM
   Solids: 69 gal.
5. This unit does not require flow control for 100 GPM applications. Built-in flow control is provided for 200 GPM applications. For series installations, only install flow control on the first unit in the series if necessary.
6. For gravity drainage applications only.
7. Do not use for pressure applications.
8. Cover placement allows full access to tank for proper maintenance.
9. Vent not required unless per local code.
10. Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping.
11. Integral air relief / Anti-siphon / Sampling access.
12. Adjustable cover adapters provide up to 4" of additional height.
13. Designed for below-grade, above-grade, indoor or outdoor installations.
14. Safety Star®, access restrictor built into each cover adapter, prevents accidental entry to tanks (450 lb rating).



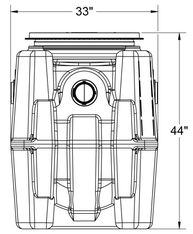
TOP VIEW
(COVERS REMOVED FOR CLARITY)



ISOMETRIC VIEW



SECTION A-A



END VIEW

ENGINEER SPECIFICATION GUIDE

Schier Great Basin™ grease interceptor model # GB-250 shall be lifetime guaranteed and made in USA of seamless, rotationally-molded polyethylene with minimum 3/8" uniform wall thickness. Interceptor shall be furnished for above or below-grade installation with adjustable cover adapters, Safety Star® access restrictor built into each cover adapter, built-in flow control (for 200 GPM only) and three outlet options. Interceptor shall be certified to ASME A112.14.3 (Type D for 100 GPM, type C for 200 GPM) and CSA B481.1. Interceptor flow rate shall be 100 GPM or 200 GPM. Interceptor grease capacity shall be 1,895 lbs. @ 100 GPM or 1,196 lbs. @ 200 GPM. Cover shall provide water/gas-tight seal and have minimum 16,000 lbs. load capacity.

CERTIFIED PERFORMANCE

Great Basin™ hydromechanical grease interceptors are third party performance-tested and listed by IAPMO to ASME #A112.14.3 and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

Type D certification does not require a flow control

SPECIFICATION SHEET

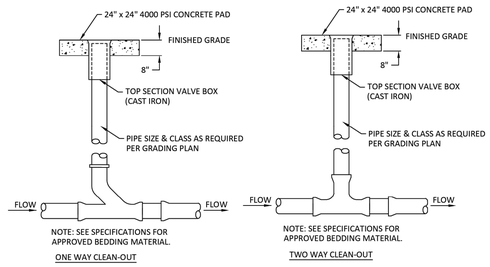
MODEL NUMBER:	PART NUMBER: 4055-007-02			
GB-250	DESCRIPTION: GB-250 GREASE INTERCEPTOR 100 GPM / 200 GPM, 4" INLET/OUTLET, H-20 RATED CAST IRON COVERS			
PROPRIETARY AND CONFIDENTIAL	DWG BY: C.SINCLAIR	DATE: 5/4/2022	REV: -	ECO: -

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF **SCHIER PRODUCTS**. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF **SCHIER PRODUCTS** IS PROHIBITED.

SCHIER
6455 Woodland Dr
Shawnee, KS 66218
Tel: 913-951-3300
Fax: 913-951-3399
schierproducts.com

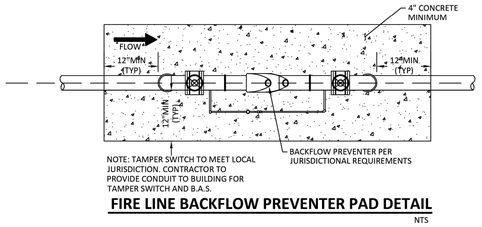
GREASE TRAP DETAIL

NTS



CLEAN OUT DETAIL

NTS

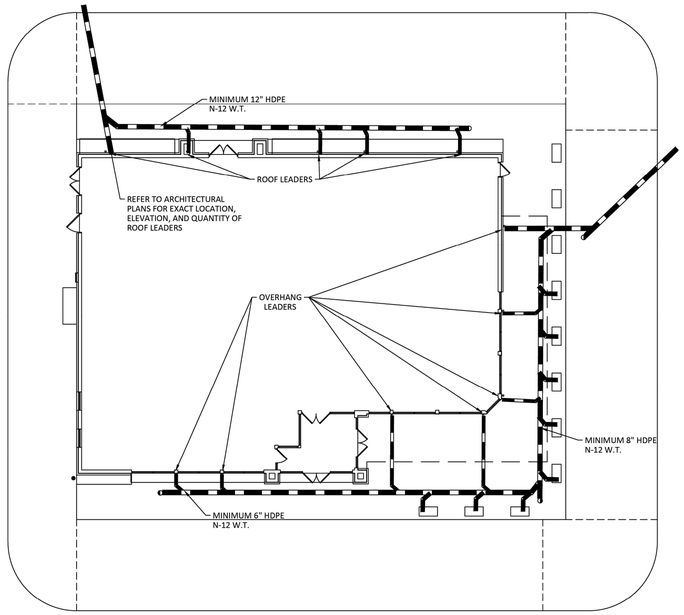


FIRE LINE BACKFLOW PREVENTER PAD DETAIL

NTS

WAWA DRAINAGE DETAILS

REV. MAY 15, 2019

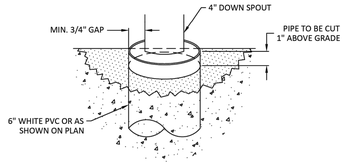


NOTES:

1. ENGINEER TO SPECIFY ACTUAL PIPE SIZE PER HYDRAULIC CALCULATIONS.
2. SITE CONTRACTOR TO BUILD LINES TO INDIVIDUAL WYE FITTINGS.
3. PLANTER DRAINS ARE TO CONNECT TO MANIFOLD.

ROOF DRAIN MANIFOLD DETAIL

NTS



ROOF DRAIN CONNECTION DETAIL

NTS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984
This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

WAWA STANDARD DETAILS

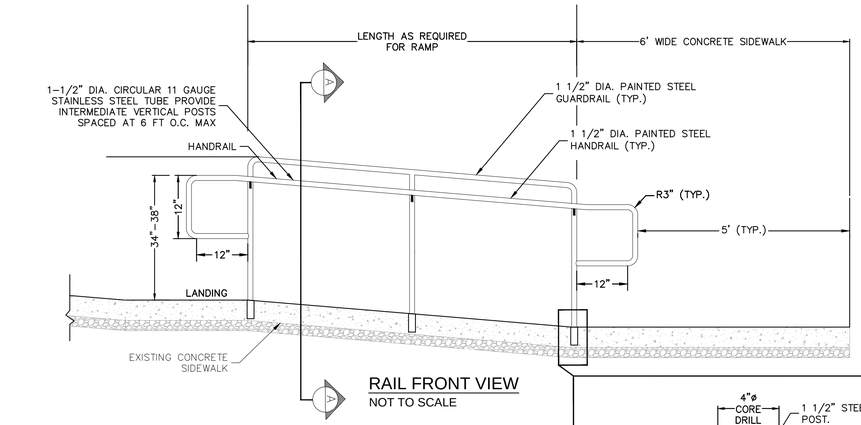
WINTER SPRINGS
WAWA

CITY OF WINTER SPRINGS FL

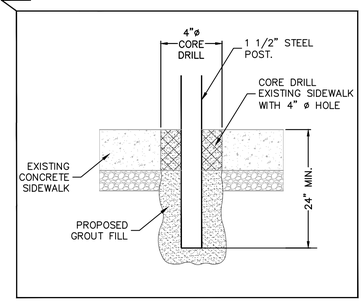
SHEET NUMBER
C9.2

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

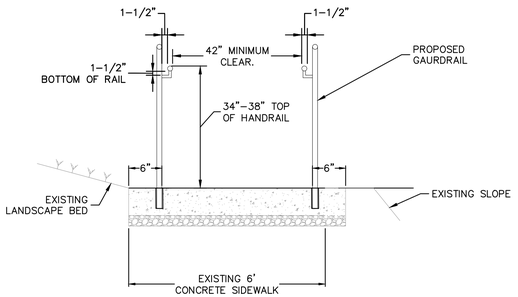
Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C9.2 WAWA DETAILS July 28, 2025 05:28:14pm K:\orl-civil\149170026-winter springs wawa\CAD\CONST\PlanSheets- Wawa\C9.0 DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



RAIL FRONT VIEW
NOT TO SCALE

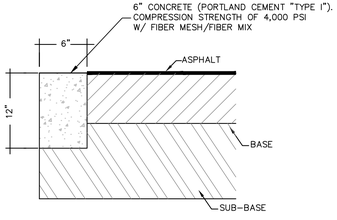


CORE DRILL BLOW UP
NOT TO SCALE



CROSS SECTION A-A
NOT TO SCALE

NOTES:
1. EXTEND HANDRAIL 12" BEYOND RAMP LIMITS; TYPICAL EACH END
2. RAILING TO BE DESIGNED TO MEET IBC 1607.8.1 FOR LOADING.
3. ALL PEDESTRIAN SIDEWALK, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED TO COMPLY WITH A.D.A. SPECIFICATIONS AND NOT EXCEED MAX. 2.0% CROSS SLOPE (1:48), MAX. 5% RUNNING SLOPE (1:20) WITHOUT RAILS. ANY SLOPE EXCEEDING 5% WILL REQUIRED RAILS AS SHOWN ABOVE.



RIBBON CURB DETAIL
N.T.S.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

LICENSED PROFESSIONAL ENGINEER — DATE

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

GENERAL CONSTRUCTION DETAILS

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C9.3

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C9.3 GENERAL DETAILS July 28, 2025 04:58:17pm K:\orl_civil\149170026-winter springs wawa\CADD\CONSTPlanSheets- Wawa\C9.0 DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Taper

NOTES:

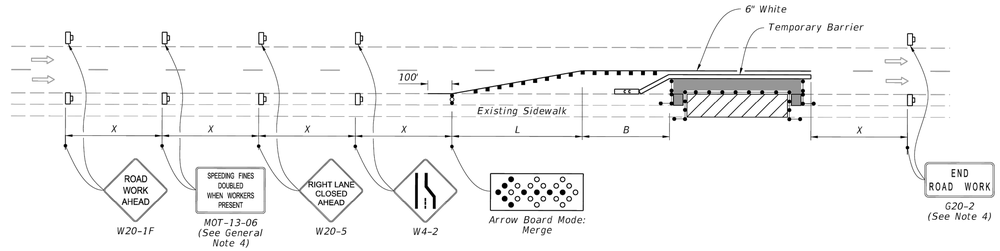
1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", channelizing device spacing values.

2. Provide a 5' wide temporary pedestrian way with a maximum cross-slope of 0.02, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary pedestrian ways less than 5' in width at intervals not to exceed 200'.

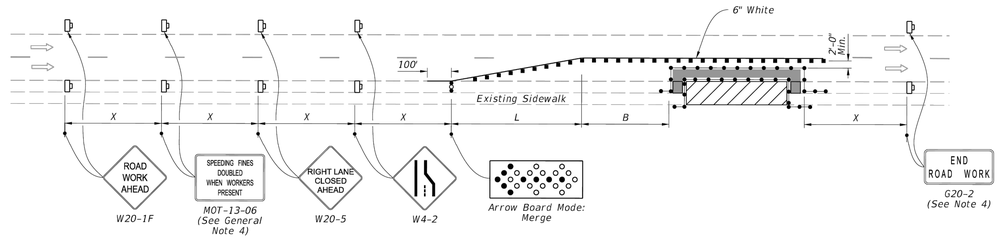
3. When temporary pedestrian ways require curb ramps, meet the requirements of Index 522-002. Detectable warnings are not required for curb ramps diverting pedestrian traffic into a closed lane.

4. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2), along with associated work zone sign distances, may be omitted when the work operation will be in place for 24 hours or less.

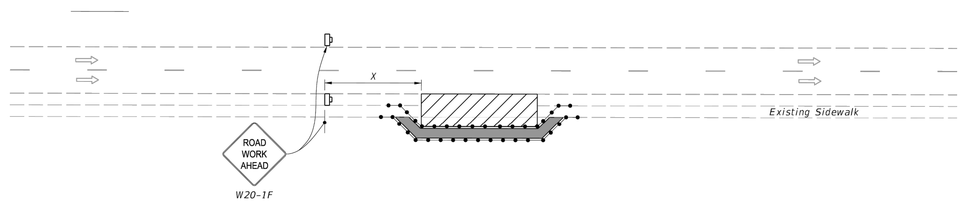
5. Pedestrian Diversion Option 2 may only be used when called for in the Plans or as approved by an Engineer.



PEDESTRIAN DIVERSION - OPTION 1
(Temporary Barrier Shown, Low Profile Barrier Similar)



PEDESTRIAN DIVERSION - OPTION 2
(Work Zone Speed 35 mph or Less)



PEDESTRIAN SPECIAL DETOUR

SYMBOLS:
- Work Area
- Temporary Pedestrian Way
- Channelizing Device (See Index 102-600)
- Pedestrian Longitudinal Channelizing Device (LCD)
- Work Zone Sign
- Arrow Board
- Crash Cushion
- Lane Identification and Direction of Traffic

2/21/2023 10:19:10 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT	INDEX	SHEET
11/01/21			FY 2023-24 STANDARD PLANS	102-660	2 of 2

SIDEWALK CLOSURE

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL ENGINEER — DATE:

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89884

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

Digitally signed by Cory N. Sitler, P.E.
DN: C=US, E=cory.sitler@kimley-horn.com, O=KIMLEY-HORN AND ASSOCIATES, INC., CN=Cory N. Sitler, P.E., 0.9.2342.19200300.100.1.1=A01410D000001908F0006C1A0, 0.9.2342.19200300.100.1.1=A01410D000001908F0006C1A0
Date: 2025.07.18 13:43:47 -04'00'

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

GENERAL CONSTRUCTION DETAILS

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

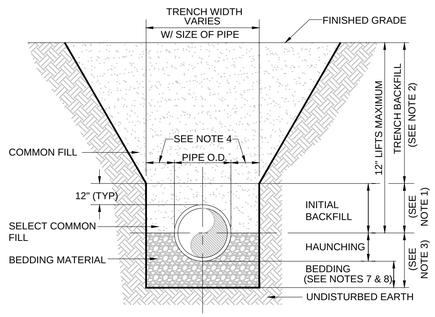
SHEET NUMBER C9.4

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

Sunshine811.com

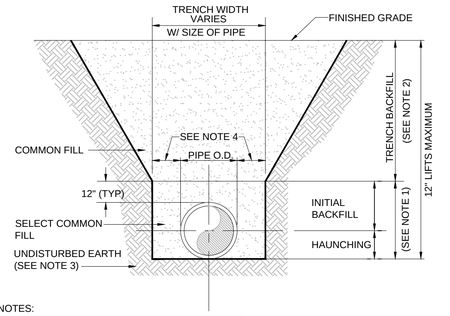
Plotted By: LaRocque, Arlene Sheet Set: WINTER SPRINGS WAWA Layout: C9.4 GENERAL DETAILS July 28, 2025 04:59:22pm K:\orl-civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\C9.0 DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

BEDDING AND TRENCHING - TYPE A



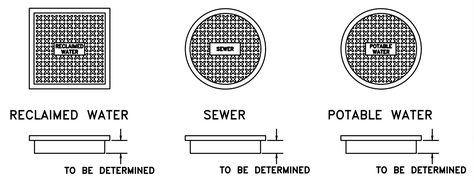
NOTES:
1. INITIAL BACKFILL: SELECT COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. TYPE A BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
4. 15" 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. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER UP TO 12" 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. UTILITIES SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
9. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY OF WINTER SPRINGS RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF R/W UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

BEDDING AND TRENCHING - TYPE B

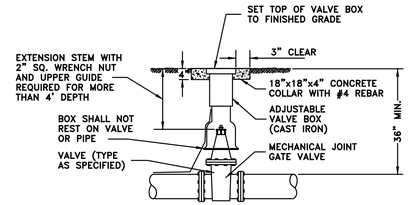


NOTES:
1. INITIAL BACKFILL AND HAUNCHING: SELECT COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY UTILITIES.
4. 15" 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. SURFACE RESTORATION WITHIN CITY OF WINTER SPRINGS RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

VALVE, VALVE BOX AND COVER



TYPICAL VALVE BOX COVER DETAILS

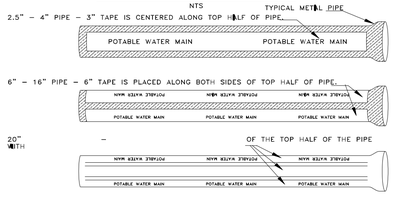


TYPICAL VALVE AND VALVE BOX DETAIL

WSW001 12-07-93

DUCTILE IRON POTABLE WATER MAIN

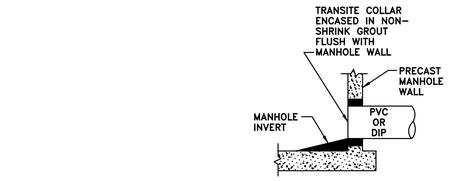
NTS



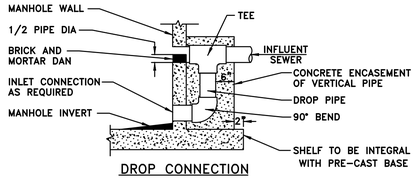
NOTE;
Standard Tape
Water Line and Blue With Black Lettering
Sewer Line Tape is 3" Wide and Green With Black Lettering
Force Main Tape is 3" Wide and Brown With Black Lettering

W.S.DETAIL 6-9-00 TYP

PIPE IDENTIFICATION AND WARNING TAPE

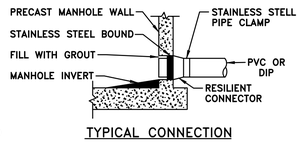


FORCEMAIN CONNECTION



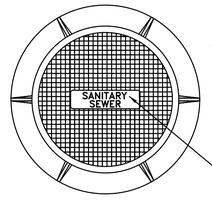
DROP CONNECTION

NOTES:
1. PENETRATION TO EXISTING MANHOLES SHALL BE CORE BORED
2. OUTSIDE DROP CONNECTION SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO FEET OR MORE ABOVE THE MAIN INVERT CHANNEL



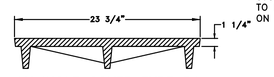
TYPICAL CONNECTION

TYPICAL MANHOLE CONNECTIONS

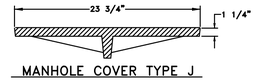


NOTES:
1. ARTERIAL ROADWAYS– USF RING AND COVER SERIES 170–BJ. HEAVY DUTY LOAD RATING. COVER WEIGHT 217#, TOTAL WEIGHT 372#.
2. RESIDENTIAL ROADWAYS– USF RING AND COVER SERIES 170–J. HEAVY DUTY LOAD RATING. COVER WEIGHT 150#, TOTAL WEIGHT 305#.

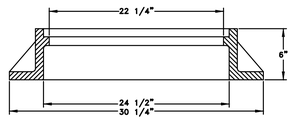
RAISED 1 1/2" LETTERS FLUSH WITH TOP OF COVER LABELED SANITARY OR STORM AS APPLICABLE. MANHOLE TO INCLUDE "WINTER SPRINGS" ON THE COVER



MANHOLE COVER TYPE BJ



MANHOLE COVER TYPE J

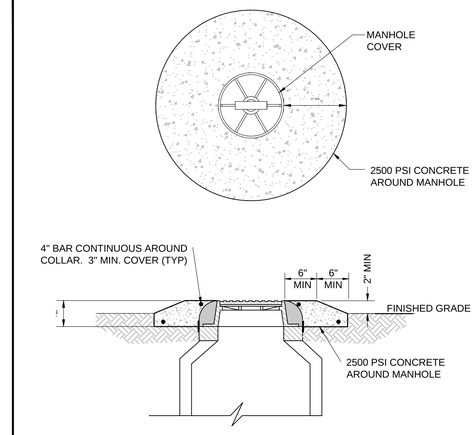


USF 170 MANHOLE RING

MANHOLE FRAME & COVER

W.S. Detail 6-9-00

MANHOLE IN GRASS AREA



NOTES:
1. CLEARANCE OF 30" FREE FROM OBSTRUCTIONS IN ALL DIRECTIONS.
2. AREAS SUPPORTING CONCRETE COLLAR OR SLAB SHALL BE PROPERLY COMPACTED.
3. TOP OF MANHOLE SHALL BE 2" ABOVE FINISHED GRADE, CROWN OF ADJACENT ROADWAY, OR 100 YEAR FLOOD ELEVATION, WHICHEVER IS GREATER.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

Digitally signed by Cory N. Sitler, P.E.
DN: CN=Cory N Sitler, O=Kimley-Horn and Associates, Inc., OU=Orlando, E=cory.sitler@kimley-horn.com, C=US
Date: 2025.07.18 15:53:57 -04'00'

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

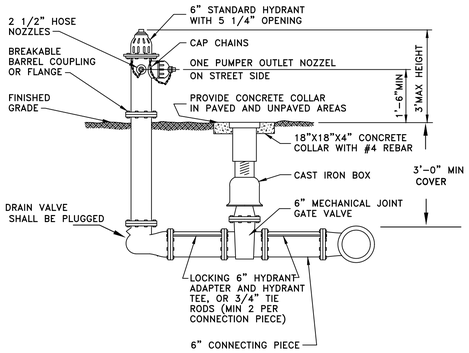
UTILITY DETAILS

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER C10.0

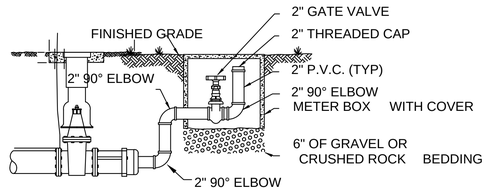
Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:UTILITY DETAILS July 28, 2025 06:14:01pm K:\orl_civil\149170028-winter springs wawa\CADD\CONST\PlanSheets- WawaC10.0 UTILITY DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



NOTES:

1. THE HYDRANTS ACCEPTABLE TO THE CITY OF WINTER SPRINGS SHALL BE EITHER THE CLOW # 42 MEDALION AMERICAN DARLING B84B, OR THE MUELLER A-423.
2. THE BARREL SHALL BE PAINTED YELLOW AND TOP WHITE
3. GRIP RING OR MEGA LUG RESTRAINTS MAY USED IN PLACE OF ALL THREAD RODS

FIRE HYDRANT ASSEMBLY



NOTE:
ALL PIPE AND FITTINGS MUST BE SCHEDULE 40 P.V.C.

BLOWOFF VALVE

W.S. DETAIL 6-9-00 DT

*MINIMUM LENGTH OF RESTRAINED PIPE TO BE INSTALLED ON EACH SIDE OF FITTING							
FITTINGS	PIPE DIAMETER (INCHES)						
	4	6	8	10	12	16	24
90° BEND	25	36	46	55	64	N/A	N/A
45° BEND	10	15	19	23	26	N/A	N/A
22 ½° BEND	5	8	9	11	13	N/A	N/A
11 ¼° BEND	3	4	5	6	8	N/A	N/A
PLUG OR BRANCH OF TEE	40	57	75	91	106	N/A	N/A
DEAD ENDS	42	59	77	93	108	N/A	N/A

* TO BE FILLED IN BY DESIGN ENGINEER

*MINIMUM LENGTH OF RESTRAINED PIPE TO BE INSTALLED ON LARGE SIDE OF REDUCER						
	LARGER MAIN (INCHES)	REDUCED PIPE DIAMETER (INCHES)				
		4	6	8	10	12
REDUCER	8	56	33	N/A	N/A	N/A
	10	76	57	32	N/A	N/A
	12	94	79	58	32	N/A

* TO BE FILLED IN BY DESIGN ENGINEER

NOTES:

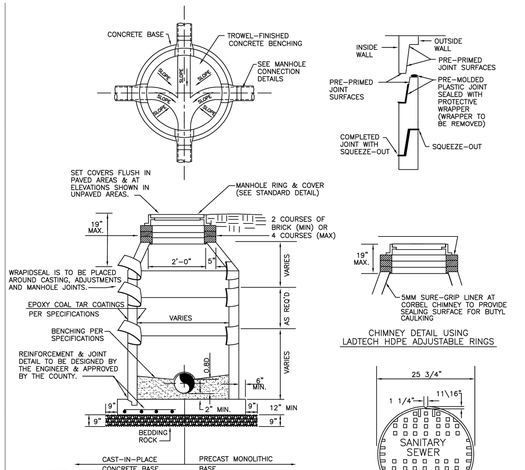
1. INSTALL FULL LENGTH JOINTS WITH TOTAL NUMBER OF JOINTS EQUAL TO OR GREATER THAN SHOWN IN THE TABLE AND FOR THE TOTAL EQUIVALENT LENGTH REQUIRED.
2. WHERE TWO OR MORE FITTINGS ARE TOGETHER USE FITTINGS WHICH YIELD THE GREATEST NUMBER OF RESTRAINED JOINTS.
3. CONTRACTOR SHALL SUBMIT FOR REVIEW AND COMMENT, DRAWINGS FOR RESTRAINED JOINT SYSTEM. ENGINEER APPROVED SHOP DRAWINGS TO BE SUBMITTED TO THE COUNTY.
4. RESTRAINING SEWER AND WATER MAIN SCHEDULES SHALL BE COMPLETED BY THE ENGINEER BASED ON ALL DESIGN CONSIDERATIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

TYPE OF PIPE:	DIP
WORKING PRESSURE:	150 PSI
SOIL DESIGNATION:	SM (SAND SILT)
DEPTH OF COVER:	4-FT
LAYING CONDITION:	TYPE 3
FACTOR OF SAFETY:	1.5

5. FOR HDPE, PVC OR PIPE ENCASED IN POLYETHELYNE, INCREASE THE GIVEN VALUE BY A FACTOR OR 1.25.

RESTRAINED JOINT TABLE

SEM. CO. MAY 2013
110



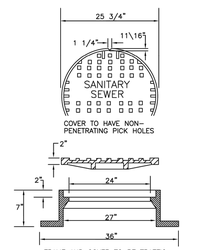
NOTES:

1. WRAPIDSEAL MUST BE USED ON THE EXTERIOR OF ALL JOINTS, CASTINGS AND RISER RINGS. FOR MANHOLES, WETWELLS AND APV STRUCTURES WRAPIDSEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. ALL JOINTS FOR PRECAST MANHOLE SECTIONS SHALL BE SEALED WITH A PRE-MOLDED PLASTIC JOINT SEALER (RAM-NEK OR EQUAL)
3. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAILS.
4. A FLAT PRECAST TOP WITH A MIN. 6" SLAB THICKNESS MAY BE USED IN LIEU OF A PRECAST CONE SECTION.
5. FRAME WEIGHT TO BE 220 LBS.
6. COVER WEIGHT TO BE 170 LBS.
7. COVER TO BE MARKED: SANITARY SEWER
8. WEIGHTS TO BE STAMPED ON FRAME AND COVER.
9. FRAME AND COVER TO HAVE MACHINED SURFACES AND WATERTIGHT.
10. NEW MANHOLES RECEIVING FORCEMAIN FLOWS SHALL BE POLY LINED EXISTING MANHOLES RECEIVING FORCEMAIN FLOWS SHALL BE FIBERGLASS LINED.

PRECAST ECCENTRIC CONCRETE MANHOLE

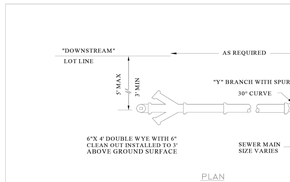
SEM. CO. OCT 2012
309

CHIMNEY DETAIL USING LADTECH HDPE ADJUSTABLE RINGS

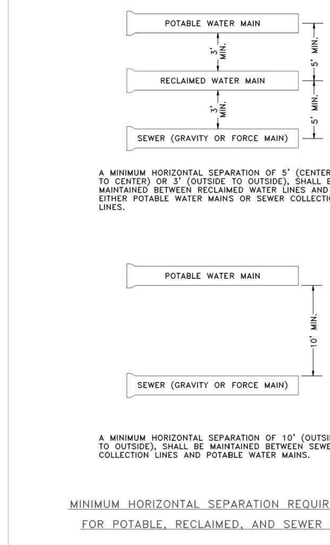


FRAME AND COVER TO BE TRAFFIC BEARING U.S. FOUNDRY #227 OR EQUAL.

STANDARD COVER AND FRAME DETAIL



SEWER LATERAL DETAIL



MINIMUM HORIZONTAL SEPARATION REQUIREMENTS FOR POTABLE, RECLAIMED, AND SEWER LINES

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

Digitally signed by Cory N. Sitler, P.E.
DN: CN=Cory N Sitler, P.E., O=Kimley-Horn and Associates, Inc., OU=Orlando, E=cory.sitler@kimley-horn.com, C=US
Date: 2025.07.18 15:53:52 -04'00'

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

UTILITY DETAILS

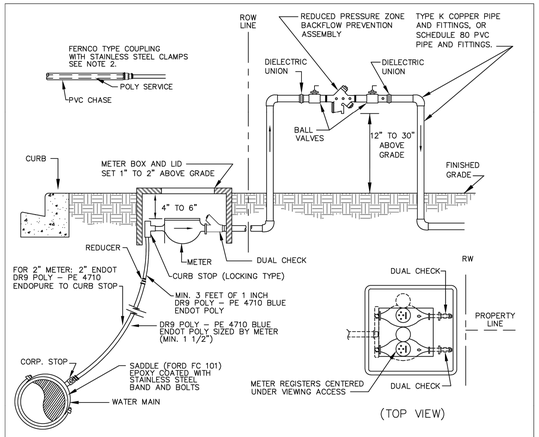
WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C10.1

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C0.1 UTILITY DETAILS July 28, 2025 06:14:04pm K:\orl_civil\149170026-winter springs wawa\CAD\CONST\PlanSheets - Wawa\C10.0 UTILITY DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

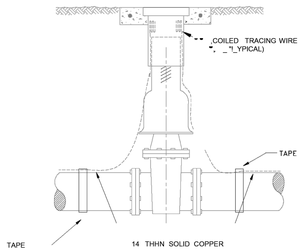


NOTES:

1. A POSITIVE DIELECTRIC CONNECTION SHALL BE MADE BETWEEN ALL GALVANIZED AND BRASS COMPONENTS.
2. METER SHALL BE INSTALLED BETWEEN SIDEWALK AND CURB WHERE APPLICABLE, OR AT PROPERTY LINE AND IN NO CASE SHALL IT BE INSTALLED IN SIDEWALK OR OTHER PAVED AREAS.
3. FOR COMMERCIAL INSTALLATION, BACKFLOW PREVENTION ASSEMBLIES (BFP) AND PIPING SHALL BE PAINTED WITH A PRIMER SUITED TO BASE MATERIALS AND SHALL BE FINISHED WITH TWO COATS EXTERIOR ENAM (COLOR OPTIONAL).
4. ON NEW INSTALLATIONS, THE BFP SHALL BE TESTED IN ACCORDANCE WITH CITY OF WINTER SPRINGS WATER REQUIREMENTS BEFORE THE METER INSTALLATION CAN BE APPROVED FOR USE.
5. FOR ROADWAY CROSSINGS, ALL POLYETHYLENE SERVICE LINES SHALL BE INSTALLED IN A SCHEDULE 40 PVC SLEEVE. THE SLEEVE SHALL HAVE A NOMINAL DIAMETER OF A MINIMUM OF 1 INCH LARGER THAN TH SERVICE LINE DIAMETER, BUT NOT EXCEEDING 4 INCH NOMINAL DIAMETER. THE SLEEVE SHALL EXTEND A MINIMUM OF 12 INCHES BEYOND THE OUTSIDE EDGE OF THE ROADWAY PAVEMENT AND/OR CURBING. TH DEPTH OF COVER OVER THE CASING SHALL BE A MINIMUM OF 24 INCHES BELOW THE BASE COURSE OR 36 INCHES OF TOTAL COVER, WHICHEVER IS GREATER. THE ANNULAR SPACE SHALL BE SEALED WITH A CASING SEALER. A FERNCO TYPE COUPLING WITH STAINLESS STEEL CLAMPS SHALL BE INSTALLED AT THE CASING ENDS.
6. MAINTENANCE OF THE BFP, PIPING AND APPURTENANCES DOWNSTREAM OF THE METER SHALL BE THE RESPONSIBILITY OF THE OWNER.
7. ON SINGLE FAMILY RESIDENTIAL IRRIGATION SYSTEMS, THE BFP MAY BE INSTALLED ANYWHERE BETWEEN THE IRRIGATION METER AND THE HOUSE, BUT NOT FARTHER THAN 50 FEET FROM THE METER AND SHALL BE UPSTREAM OF ANY OUTLET AND SHALL MEET ALL OTHER INSTALLATION REQUIREMENTS.
8. THE BFP SHALL NOT BE INSTALLED IN THE RIGHT OF WAY.

COMMERCIAL 3/4", 1", 1 1/2" & 2" WATER METER, DUAL CHECK BACKFLOW AND REDUCED PRESSURE BACKFLOW PREVENTER WHEN USING POTABLE OR RECLAIMED WATER FOR IRRIGATION

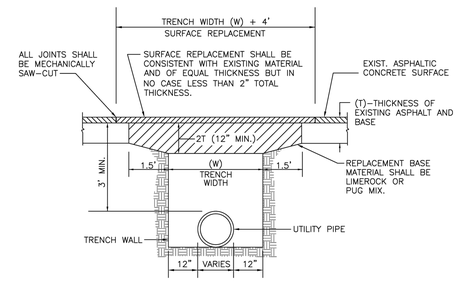
SEM.CO OCT 2012
207



TRACING WIRE GENERAL NOTES:

1. PIPE LINE TRACING WIRE IS TO BE INSTALLED ON ALL POTABLE WATER RECLAIMED WATER AND SEWER FORCE MAINS.
2. SYSTEMS-TRACING WIRE SHALL ALLOW TRACABILITY OF ALL PIPE BRANCHES INCLUDING THOSE FOR HYDRANTS. TRACING WIRE SHALL BE INSTALLED OVER THE ENTIRE LENGTH OF THE MAIN AND SECURED TO THE MAIN EVERY 5 FEET WITH ADHESIVE TAPE. WIRE SHALL EXTEND A MINIMUM OF 12" ABOVE GRADE AT EACH INTERVAL AND SHALL BE COILED AND PLACED IN A VALVE BOX FOR EASY ACCESSIBILITY.
3. ON DEAD END MAINS THE TRACING WIRE SHALL BE PLACED IN A PROPERLY IDENTIFIED PVC VALVE BOX AT THE END OF THE RUN.

TRACING WIRE CONNECTION

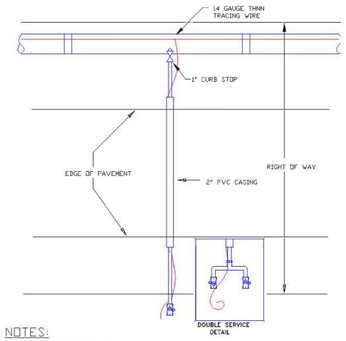


NOTES:

1. BACKFILL SHALL BE PLACED IN 6" LAYERS FROM BENEATH THE HAUNCHES OF THE PIPE TO THE BASE AND COMPACTED TO 98% DENSITY PER AASHTO T-180 MODIFIED PROCTER.
2. BASE MATERIALS SHALL BE PLACED IN TWO OR THREE LAYERS ROLLED AND TAMPED TO ABOVE SPECIFIED DENSITY.

STANDARD ROADWAY OPEN CUT DETAIL

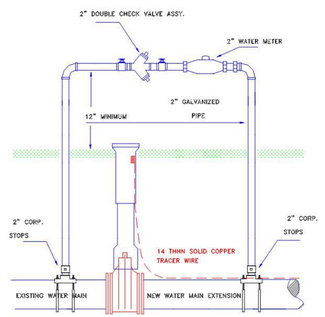
SEM. CO. OCT 2012
106



NOTES:

1. METER BOX INSTALLED BY THE CITY OF WINTER SPRINGS
2. DOUBLE SERVICE LINES SHALL BE 1" PE TUBING
3. ALL LINES UNDER PAVEMENT SHALL BE ENCASED IN 2" PVC PIPE

POTABLE WATER SERVICE
OPPOSITE SIDE OF MAIN



TEMPORARY BYPASS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Cory N. Sitler, P.E., State of Florida, Professional Engineer, License No. 89984

This item has been digitally signed and sealed by Cory N. Sitler, P.E. on the date indicated here.

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

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

UTILITY DETAILS

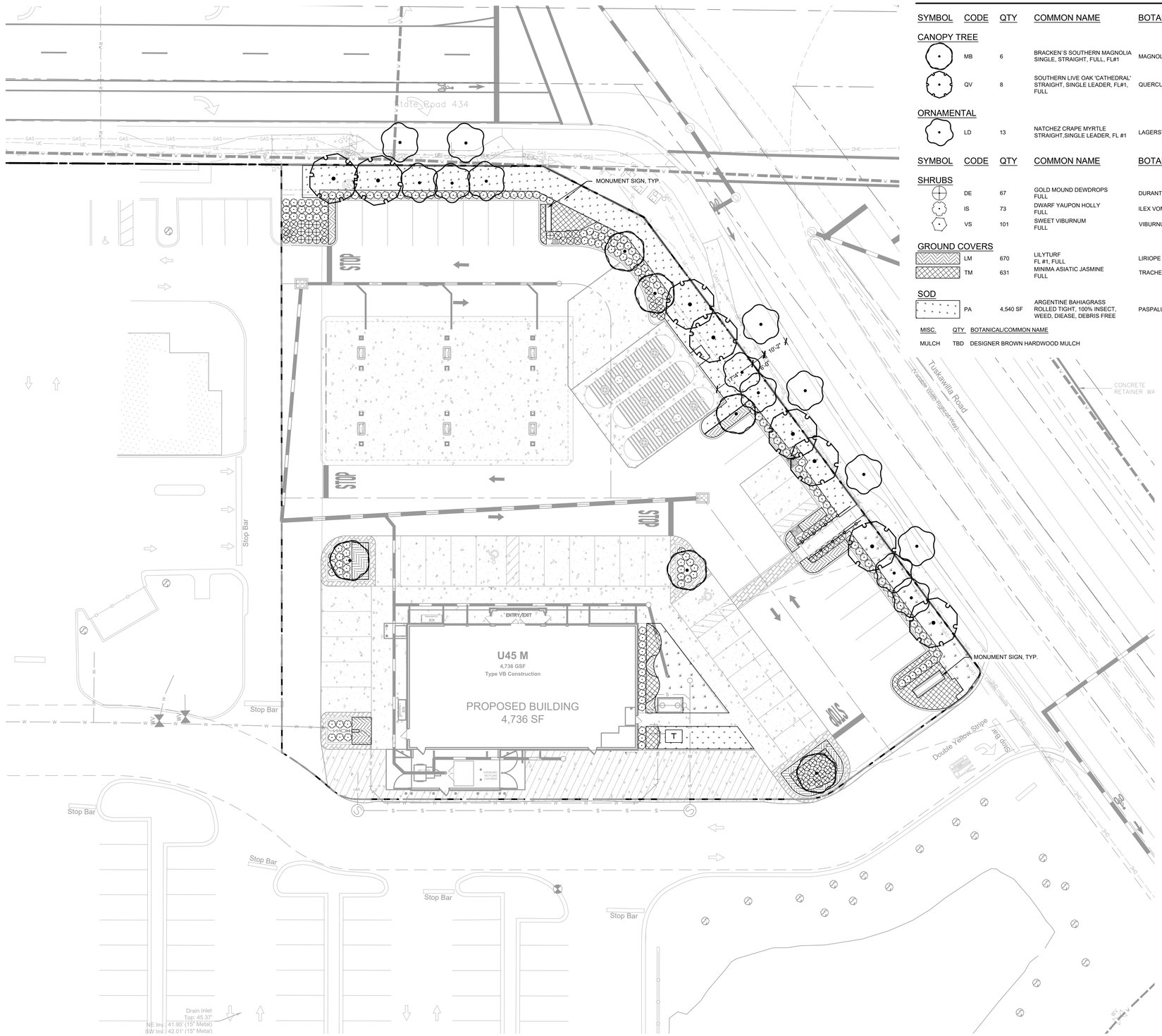
WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C10.2

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

Plotted By:LaRocque, Arlene Sheet Set:WINTER SPRINGS WAWA Layout:C8.3 UTILITY DETAILS July 28, 2025 06:14:08pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets - Wawa\C10.0 UTILITY DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



PLANT SCHEDULE

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	CAL	SIZE
CANOPY TREE							
	MB	6	BRACKEN'S SOUTHERN MAGNOLIA SINGLE, STRAIGHT, FULL, FL#1	MAGNOLIA GRANDIFLORA `BRACKENS BROWN BEAUTY`	FG	3" CAL MIN	10` HT., 4` SPR.
	QV	8	SOUTHERN LIVE OAK 'CATHEDRAL' STRAIGHT, SINGLE LEADER, FL#1, FULL	QUERCUS VIRGINIANA 'CATHEDRAL'	FG	4" CAL MIN	12` HT., 4` SPR.
ORNAMENTAL							
	LD	13	NATCHEZ CRAPE MYRTLE STRAIGHT,SINGLE LEADER, FL #1	LAGERSTROEMIA INDICA `NATCHEZ`	FG	2" CAL MIN	10` HT MIN

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	SPACING
SHRUBS							
	DE	67	GOLD MOUND DEWDROPS FULL	DURANTA ERECTA 'GOLD MOUND'	3 GAL	36" FULL	36" OC
	IS	73	DWARF YAUPON HOLLY FULL	ILEX VOMITORIA `STOKES DWARF	3 GAL	24" FULL	36" OC
	VS	101	SWEET VIBURNUM FULL	VIBURNUM ODORATISSIMUM	3 GAL	30" FULL	36" OC
GROUND COVERS							
	LM	670	LILYTURF FL #1, FULL	LIRIOPE MUSCARI	1 GAL	12" FULL	12" OC
	TM	631	MINIMA ASIATIC JASMINE FULL	TRACHELOSPERMUM ASIATICUM 'MINIMA'	1 GAL	12" FULL	12" OC
SOD							
	PA	4,540 SF	ARGENTINE BAHIAGRASS ROLLED TIGHT, 100% INSECT, WEED, DIEASE, DEBRIS FREE	PASPALUM NOTATUM 'ARGENTINE'	SOD	-	-

MISC.	QTY	BOTANICAL/COMMON NAME
MULCH	TBD	DESIGNER BROWN HARDWOOD MULCH

SPECIFICATIONS

3" DEPTH MINIMUM, SHREDDED, FREE OF WEEDS/INVASIVE PLANT MATERIAL

LANDSCAPE NOTES:

1. ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY
2. ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.
3. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA 2) TO PROTECT ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
11. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
12. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
13. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
14. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
15. ALL INVASIVE / EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
16. ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
17. TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS "ESTABLISHED" (AS APPROVED BY THE LANDSCAPE ARCHITECT).
18. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.
19. ALL PLANTED LANDSCAPE AREAS TO HAVE 3" DEEP DESIGNER BROWN HARDWOOD MULCH TO FULLY COVER DRIP IRRIGATION & AMENDED SOILS. REPAIR AS NEEDED DURING CONSTRUCTION. SUBMIT ALTERNATIVE MULCH SPECIFICATION FOR LANDSCAPE ARCHITECT APPROVAL.

GRAPHIC SCALE IN FEET
0 10 20 40

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

REGISTERED LANDSCAPE ARCHITECT MATTHEW TAYLOR FRANCO 1A6667292 STATE OF FLORIDA
DATE: 07/18/25

THIS DRAWING AND SPECIFICATIONS, AS AN INSTRUMENT OF SERVICE, IS AND SHALL REMAIN THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES, INC. WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. THE REUSE OF THESE DRAWINGS AND SPECIFICATIONS ON ANY EXTENSION OF THIS PROJECT OR ON ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KIMLEY-HORN AND ASSOCIATES, INC. IS PROHIBITED AND UNLAWFUL.

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	GNS
DRAWN BY	NMB
CHECKED BY	ATDS

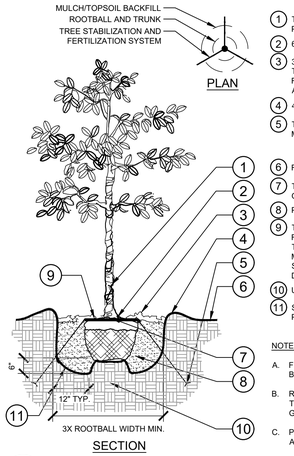
LANDSCAPE PLAN

WINTER SPRINGS
WAWA
CITY OF WINTER SPRINGS
FL

SHEET NUMBER
L1.00

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

Plotted By:Kiziann, Mary Sheet Set:WINTER SPRINGS WAWA Layout:LANDSCAPE PLAN July 28, 2025 09:41:38pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\L1.00 LANDSCAPE PLAN.dwg



1. TRUNK/ROOT BALL TO BE CENTERED AND PLUMB/LEVEL IN PLANTING PIT.
2. 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
3. 3" MINIMUM MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 6' DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
4. 4" HIGH BERM, FIRMLY COMPACTED.
5. TREE FROG ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. FINISHED GRADE. (SEE GRADING PLAN)
7. TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE.
8. PREPARED PLANTING SOIL AS SPECIFIED.
9. TOP OF ROOTBALL SHALL BE 1" ABOVE FINISHED GRADE. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
10. UNDISTURBED NATIVE SOIL.
11. SCARIFY BOTTOM AND SIDES OF PLANTING PIT.

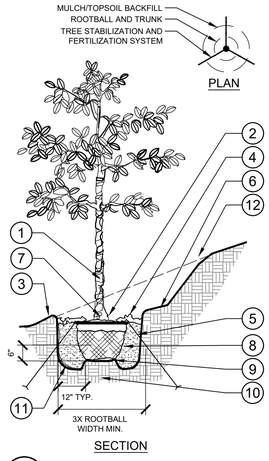
NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.

C. PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-300.

1 L1.50 TREE PLANTING
SECTION / PLAN — NTS



1. TRUNK/ROOT BALL TO BE CENTERED AND PLUMB/LEVEL IN PLANTING PIT.
2. 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
3. 3. 4" HIGH BERM, FIRMLY COMPACTED.
4. 3" MINIMUM OF HARDWOOD BARK MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 6' DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
5. TREE FROG ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. 4" MIN. OF TOPSOIL TO BRING TO FINISHED GRADE. (SEE GRADING PLAN)
7. TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE.
8. PREPARED PLANTING SOIL AS SPECIFIED.
9. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
10. UNDISTURBED NATIVE SOIL.
11. SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
12. CUT BACK SLOPE TO PROVIDE A FLAT SURFACE FOR PLANTING.

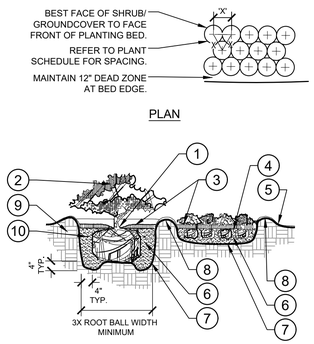
NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.

C. PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-300.

2 L1.50 TREE PLANTING ON A SLOPE
SECTION / PLAN — NTS



1. TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
2. PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.
3. 3" MULCH LAYER AS SPECIFIED.
4. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
5. FINISHED GRADE (SEE GRADING PLAN).
6. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES) NOTE: WHEN GROUND-COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
7. SCARIFY OF PLANTING PIT SIDES AND BOTTOM.
8. 4" HIGH BERM FIRMLY COMPACTED.
9. UNDISTURBED NATIVE SOIL.
10. FERTILIZER TABLETS (MAX 3" DEEP)

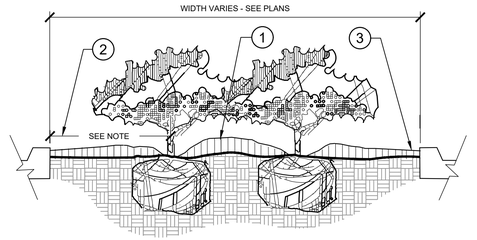
NOTES:

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

B. WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.

C. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

3 L1.50 SHRUB/GROUNDCOVER PLANTING
SECTION / PLAN — NTS



1. CROWN ISLANDS @ 5:1 SLOPES (OR AS SPECIFIED ON THE LANDSCAPE PLANS).
2. CLEAR ZONE: 36" MIN. FROM BACK OF CURB TO CENTER OF NEAREST SHRUB. CLEAR ZONE SHALL CONTAIN 3" CONTINUOUS MULCH OR TURF, SEE PLANS.
3. 2" MIN VERTICAL CLEARANCE, TOP OF CURB TO TOP OF MULCH.

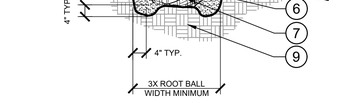
NOTES:

A. EXCAVATE A CONTINUOUS 24" DEEP PIT (FROM TOP OF CURB) FOR ENTIRE LENGTH AND WIDTH OF ISLAND & BACKFILL WITH APPROVED PLANTING MIX.

B. PROTECT AND RETAIN ALL CURBS AND BASE. COMPACTED SUBGRADE TO REMAIN FOR STRUCTURAL SUPPORT OF CURB SYSTEM (TYP).

C. ALL ISLANDS SHALL UTILIZE POOR DRAINAGE DETAIL WHEN PERCOLATION RATES ARE 2" PER HOUR OR LESS.

4 L1.50 PLANTED PARKING LOT ISLANDS/MEDIANS
SECTION — NTS



1. TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
2. PRUNE SHRUBS AS DIRECTED BY OWNER'S REPRESENTATIVE.
3. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE SHRUBS ARE PLACED IN MASSES, MULCH SHALL BE SPREAD IN A CONTINUOUS BED.
4. SOIL BERM TO HOLD WATER. TOP OF PLANTING PIT 'BERM' TO BE LEVEL ACROSS PIT. SLOPE DOWNHILL PORTION OF BERM AS REQUIRED TO MEET EXISTING GRADE. MULCH OVER EXPOSED TOPSOIL.
5. FINISHED GRADE (SEE GRADING PLAN)
6. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES).
7. SCARIFY SIDES AND BOTTOM OF PLANTING PIT.
8. FERTILIZER TABLETS (MAX 3" DEEP).
9. UNDISTURBED NATIVE SOIL

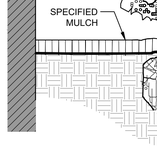
NOTES:

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

B. WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.

C. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

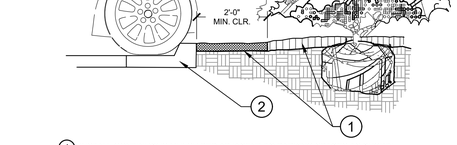
5 L1.50 SHRUB/GROUNDCOVER PLANTING ON A SLOPE
SECTION — NTS



NOTES:

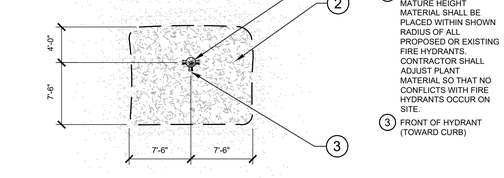
1. CLEAR ZONE: 36" MIN. FROM BUILDING TO CENTER OF NEAREST SHRUB.
2. INSTALL SPECIFIED MULCH: 24" MIN. FROM BUILDING. SPECIFIED MULCH TO BE INSTALLED AT A DEPTH OF 3" (MIN.)

6 L1.50 PLANTINGS ADJACENT TO BUILDINGS
SECTION — NTS



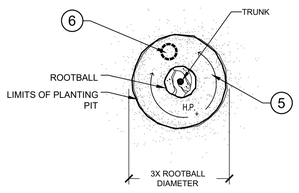
1. INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 3" DEEP. NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE.
2. CURB / PARKING LOT EDGE.

7 L1.50 PARKING SPACE/CURB PLANTING
SECTION — NTS



1. FIRE HYDRANT.
2. NO PLANT EXCEEDING 12" MATURE HEIGHT MATERIAL SHALL BE PLACED WITHIN SHOWN RADIUS OF ALL PROPOSED OR EXISTING FIRE HYDRANTS. CONTRACTOR SHALL ADJUST PLANT MATERIAL SO THAT NO CONFLICTS WITH FIRE HYDRANTS OCCUR ON SITE.
3. FRONT OF HYDRANT (TOWARD CURB)

8 L1.50 SHRUB PLANTING AT FIRE HYDRANT
SECTION / PLAN — NTS



1. FINISH GRADE (SEE GRADING PLANS).
2. BACKFILL WITH PREPARED PLANTING SOIL MIX AS SPECIFIED.
3. FILTER CLOTH, MIRAFI 500X OR BETTER.
4. SLOPE BOTTOM TO DRAIN.
5. AUGURED HOLE Ø ±18" PENETRATE THROUGH OCCLUDING LAYER TO WATER TABLE OR TO A DEPTH OF 7' TO ASSURE PROPER PERCOLATION.
6. BACKFILL WITH 1/2" - 3/4" GRAVEL TO REQUIRED DEPTH THROUGH OCCLUDING LAYER TO ASSURE PROPER PERCOLATION.
7. WATER TABLE. (DEPTH VARIES)
8. UNDISTURBED NATIVE SOIL.
9. SET ROOTBALL ON UNDISTURBED STABLE SUBSOIL SO THAT TOP OF ROOT BALL IS 1" ABOVE FINISHED GRADE.

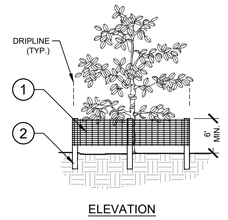
NOTES:

A. THIS DETAIL SHALL BE IMPLEMENTED WHERE PERCOLATION RATES ARE 2" PER HOUR OR LESS.

B. CONTRACTOR TO PERFORM PERCOLATION TEST AS REQUIRED. AND NOTIFY OWNER/LANDSCAPE ARCHITECT.

C. SEE TYPICAL TREE PLANTING DETAIL THIS SHEET FOR PLANT STAKING.

9 L1.50 POOR DRAINAGE CONDITION
SECTION / PLAN — NTS



1. 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
2. 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:

A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.

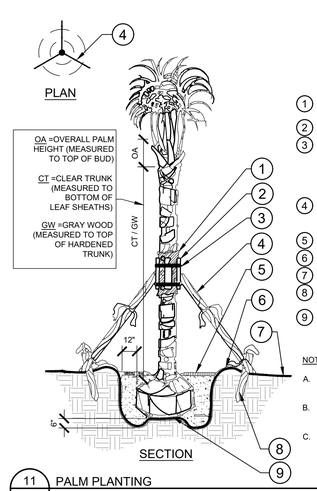
B. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/3 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 6' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.

C. SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).

D. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

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

10 L1.50 TREE PROTECTION FENCING
ELEVATION / PLAN — NTS



1. 5 LAYERS OF BURLAP TO PROTECT TRUNK.
2. FIVE 2" X 4" X 18" WOOD BATTENS.
3. SECURE BATTENS WITH 2- 3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED IN RELATION TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
4. (3) 2"X4"X8' SUPPORTS. NAIL (DRILL AN NAIL IF NECESSARY) TO BATTENS AND 2" 4" STAKES. STAIN DARK BROWN.
5. 3" SPECIFIED MULCH
6. BERM SOIL TO HOLD WATER.
7. FINISH GRADE
8. 2X4X24" (MIN) P.T. WOOD STAKES (TYP.) NAIL TO SUPPORT POLES.
9. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES).

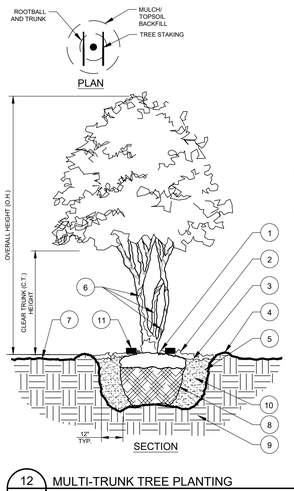
NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. ALL TREE STAKING IS TO BE WITHIN MULCH BED AREA OUTSIDE TREE PIT.

C. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION - REFER TO POOR DRAINAGE CONDITION DETAIL.

11 L1.50 PALM PLANTING
SECTION / PLAN — NTS



1. BASE OF TREE SHALL BE PLANTED SLIGHTLY ABOVE (1" MIN.) ADJACENT FINISH GRADE. REMOVE ALL TWINE & STRAPS & CUT BURLAP FROM TOP 1/3 OF ROOT BALL. NO SYNTHETIC BURLAP WILL BE ACCEPTED.
2. 4" SHREDDED HARDWOOD MULCH OR APPROVED EQUAL.
3. DIAMETER OF TREE PIT TO BE TWICE THE DIAMETER OF ROOT BALL-ROUGHEN SIDES OF TREE PIT.
4. 3" HIGH SOIL BERM TO HOLD WATER.
5. TOPSOIL MIX BACKFILL.
6. TREE WRAP.
7. 4" MIN. OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).
8. ROOT BALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING ROOT BALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.
9. UNDISTURBED SUBSOIL.
10. PREPARE PLANTING SOIL AS SPECIFIED.
11. **Tree Frog® RBK40pt** FOR UP TO 4" TREE CALIPER OR **Tree Frog® RBK60pt** FOR GREATER THAN 4" AND UP TO 6" TREE CALIPER. REFER TO SITEWORK SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION REQUIREMENTS.

NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. SET TREE AT ORIGINAL DEPTH. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.

C. SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

D. PRUNE TREE AS DIRECTED BY LANDSCAPE ARCHITECT

E. ASSURE PERCOLATION OF ALL PLANTING PITS

12 L1.50 MULTI-TRUNK TREE PLANTING
SECTION/PLAN — NTS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

REGISTERED LANDSCAPE ARCHITECT MATTHEW TAYLOR FRANCIS LA6667292 STATE OF FLORIDA

Digitally signed by Matthew Taylor Francis
DN: C=US, E=matthew.francis@kimley-horn.com, O=Kimley-Horn and Associates, Inc., CN=LA6667292
Date: 2025.07.18 09:42:29 -04'00'

DATE: 07/18/25

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	GNS
DRAWN BY	KMHB
CHECKED BY	ATDG

LANDSCAPE DETAILS

WINTER SPRINGS
WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L1.50

Plotted By:Kasemi, Mary Sheet Set:WINTER SPRINGS WAWA Layout:LANDSCAPE DETAILS July 28, 2025 05:41:37pm K:\cvl_civil\149170026-winter springs wawa\CADD\CONSTPlanSheets- Wawa\L1.00 LANDSCAPE PLAN.dwg

GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS SPECIFIED HEREIN.

2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.

3. THE CONTRACTOR SHALL SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FDOT DESIGN STANDARDS, INDEX 600. IF A DIRECT APPLICATION OF INDEX 600 IS PROPOSED, THE CONTRACTOR SHALL SUBMIT IN WRITING A STATEMENT INDICATING THE STANDARD INDEX AND PAGE NUMBER NO LESS THAN 10 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION. WHEN A DIRECT APPLICATION OF FDOT STANDARD INDEX 600 IS NOT ACCEPTABLE A PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A FLORIDA PROFESSIONAL ENGINEER WHO HAS SUCCESSFULLY COMPLETED ADVANCED TRAINING IN MAINTENANCE OF TRAFFIC, AS DEFINED BY FDOT FOR APPROVAL BY THE COUNTY ENGINEER'S REPRESENTATIVE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNER OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR: REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA; LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION; THE SAFETY AND PROTECTION THEREOF; REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

C. PROTECTION OF EXISTING PLANT MATERIALS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC... THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF THREE HUNDRED DOLLARS ($300) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.

D. MATERIALS

1. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS

a. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.

b. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

c. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

1. CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW:

2. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

a. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND HAVE A PH BETWEEN 5.5 AND 7.0.

b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.

c. SOIL AMENDMENT (IF NEEDED PER SOIL TESTING) THE CONTRACTOR SHALL FURNISH AND INSTALL A 3" LAYER OF AMENDED PLANTING SOIL IN ALL PLANTING BEDS, EXCLUDING SOD AREAS. THE AMENDED PLANTING SOIL SHALL BE COMPOSED OF 35% FERTICOMP 20% FLORIDA PEAT 45% SANDY LOAM. THE AMENDED PLANTING SOIL SHALL BE MIXED INTO THE BEDS UPON PLANTING.

2. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING (SUBMIT SOIL TESTING RESULTS AFTER INCORPORATING AMENDMENTS TO DEMNSTRATE COMPLIANCE WITH SOIL QUALITY REQUIREMENTS .

F. WATER

1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

* WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

G. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

* FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). MULCH SHALL BE "FLORIMULCH," EUCALYPTUS MULCH, OR SIMILAR SUSTAINABLY HARVESTED MULCH UNLESS SPECIFIED OTHERWISE.

2. PROVIDE A THREE (3) INCH MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT (6' MINIMUM) PLANTED UNDER THIS CONTRACT.

I. DIGGING AND HANDLING

1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.

2. BALLED AND BURLAPPED (B&B), AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.

4. PROTECTION OF PALMS: ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.

5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.

J. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.

4. RPG= "ROOTS PLUS GROWER" CONTAINER PRODUCTS SHALL BE USED WHERE SPECIFIED.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

N. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.

2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.

3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

O. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.

4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ONSITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.

6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.

7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.

8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.

10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.

12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET, ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.

13. TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST, IN ACCORDANCE WITH ANSI A-300.

14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOW ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.

16. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

P. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.

2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

3. PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

4. SODDING

a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.

b. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.

c. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.

5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

6. LAWN MAINTENANCE

a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).

b. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP

UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

R. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

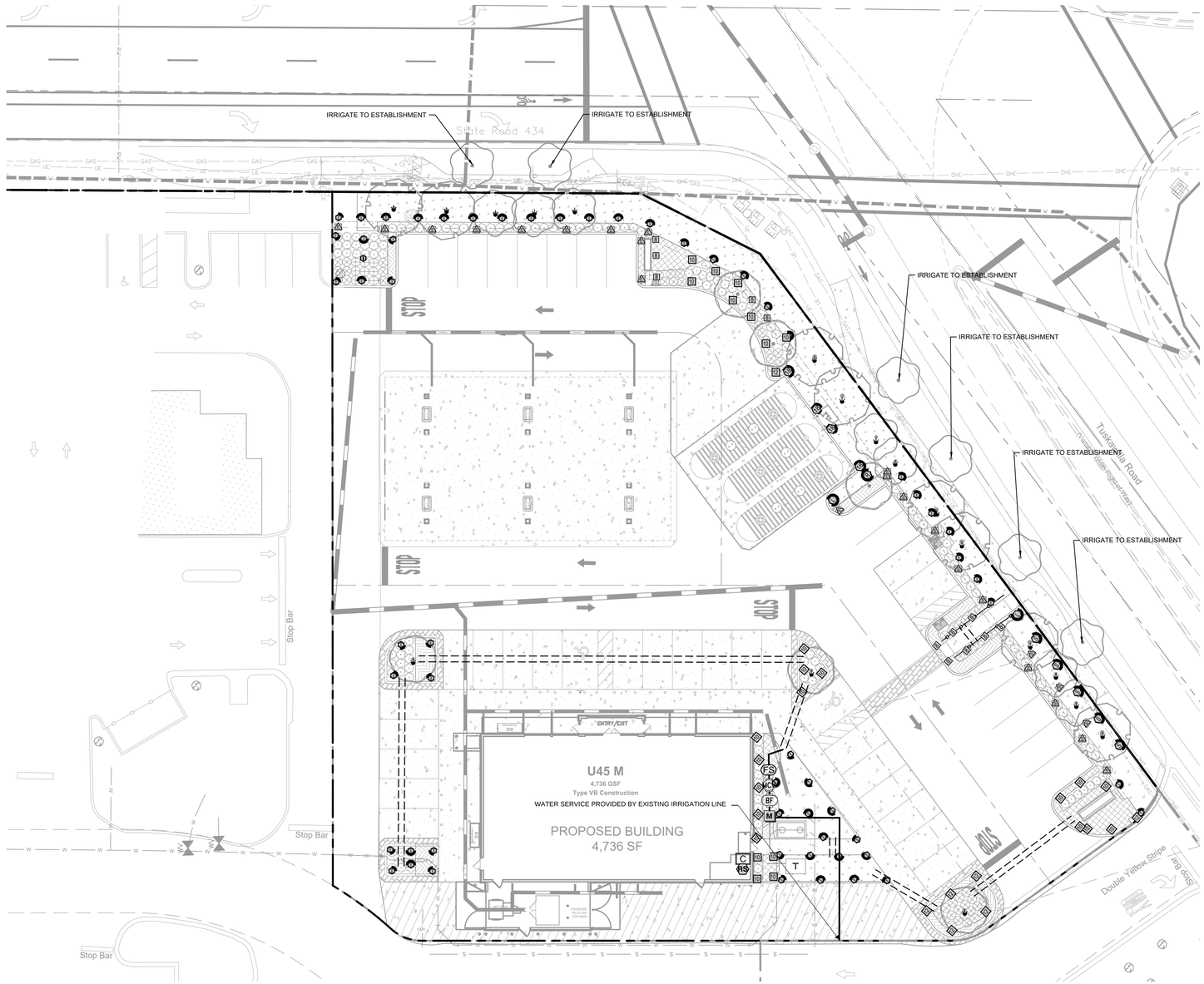
S. FINAL INSPECTION AND ACCEPTANCE OF WORK

FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

T. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PL



NOTE: IF SOURCE TO BE RECLAIMED (NON-POTABLE) ALL EQUIPMENT TO BE INDICATED AS SUCH AND PURPLE IN COLOR. FOLLOW ALL LOCAL JURISDICTION STANDARDS FOR RECLAIMED IRRIGATION SYSTEMS.

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

CONTRACTOR TO PERMANENTLY MARK ALL SLEEVE CROSSINGS AT ASSOCIATED TOPS OF CURB (TYP).

CONTRACTOR TO ADJUST ALL OVERHEAD SPRAY HEADS TO ENSURE MINIMAL OVER-SPRAY OCCURS ON ANY HARDSCAPE SURFACE (TYP).

PROPOSED IRRIGATION CONTROLLER - PROVIDE ELECTRICAL POWER & CONDUIT FROM POWER SOURCE, BETWEEN CONTROLLER & WATER METER AND TO ANY ASSOCIATED APPURTENANCES.

CONTROLLER & RAIN SENSOR TO BE LOCATED OUTSIDE IN GREEN SPACE, SCREENED FROM THE PUBLIC VIEW. AVOID OVERHEAD OBSTRUCTIONS AND OVERSPRAY ASSOCIATED WITH RAIN SENSOR.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
EST LCS RCS CST SST	RAIN BIRD RD-06-P30-F-U** 15 STRIP SERIES 6IN. POP-UP, WITH 30 PSI IN-STEM PRESSURE REGULATION, AND FLOW-SHIELD TECHNOLOGY. 1/2IN. NPT FEMALE THREADED INLET.	24	30
08 HE-VAN 10 HE-VAN / 12 HE-VAN 15 HE-VAN	RAIN BIRD RD-06-P30-F-U** HE-VAN SERIES 6IN. POP-UP, WITH 30 PSI IN-STEM PRESSURE REGULATION, AND FLOW-SHIELD TECHNOLOGY. 1/2IN. NPT FEMALE THREADED INLET.	46	30
LST SST RST	RAIN BIRD R-VAN-STRIP RD-06-S-P45-F TURF ROTARY, 5FT.X15FT. (LCS AND RCS), 5FT.X30FT. (SST) HAND ADJUSTABLE MULTI-STREAM ROTARY W/ RD1800 TURF SPRAY BODY ON 6IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. FLOW SHIELD TECH. 1/2IN. NPT FEMALE THREADED INLET.	8	30
14 ADJ 14 F	RAIN BIRD R-VAN14 RD-06-S-P45-F TURF ROTARY, 8FT.-14FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 TURF SPRAY BODY ON 6IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. FLOW-SHIELD TECHNOLOGY. 1/2IN. NPT FEMALE THREADED INLET.	64	30
18 ADJ 18 F	RAIN BIRD R-VAN18 RD-06-S-P45-F TURF ROTARY, 13FT.-18FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 TURF SPRAY BODY ON 6IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. FLOW-SHIELD TECHNOLOGY. 1/2IN. NPT FEMALE THREADED INLET.	6	30
1401 1402 1404	RAIN BIRD 1806-SAM-1400 FLOOD FLOOD BUBBLER 6IN. POPUP WITH CHECK VALVE, INSTALL W/ PA-80 ADAPTER.	20	20

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	AREA TO RECEIVE DRIPLINE RAIN BIRD XFDEP-09-12 XFDE ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE. 0.9 GPH EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. UV & KINK RESISTANT. USE XF INSERT FITTINGS.	345.2 LF

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
MCV	RAIN BIRD PEB-PRS-D 1" 1IN., 1-1/2IN., 2IN., 3IN. PLASTIC INDUSTRIAL MASTER VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE.	1
BF	FEBCO 825Y 1" REDUCED PRESSURE BACKFLOW PREVENTER	1
C	RAIN BIRD ESPLXME2 12 STATION TRADITIONALLY-WIRED, COMMERCIAL CONTROLLER. INDOOR/OUTDOOR, PLASTIC WALL-MOUNT ENCLOSURE.	1
RS	RAIN BIRD RSD-CEX RAIN SENSING DEVICE, CONDUIT MOUNT. WITH THREADED ADAPTER, EXTENSION WIRE.	1
FS	RAIN BIRD FS-100-P 1IN. FLOW SENSOR, PLASTIC PVC MODEL. SUGGESTED OPERATING RANGE 5.4 GPM TO 54 GPM. SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE. RAIN BIRD COMPATIBLE CONTROLLERS: ESP-LXI/VM(P)	LXD	LXME2(P)	ME3, OR CONTROLLERS ACCEPTING CUSTOM K-FACTOR AND OFFSET. INSTALL IN RAIN BIRD VALVE BOX	1
M	WATER METER 1"	1
	IRRIGATION MAINLINE: PVC SCHEDULE 40	132.5 LF
	PIPE SLEEVE: PVC SCHEDULE 40 - LATERALS	294.8 LF
	PIPE SLEEVE: PVC SCHEDULE 40 - MAINLINE	57.0 LF

FLOW TOTALS
Bubbler: 18
Shrub Spray: 49.2
Turf Rotary: 32.1
Total: 99.3 GPM

IRRIGATION NOTES

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

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

Sunshine811.com

GRAPHIC SCALE IN FEET
0 10 20 40

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
6876 NARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

REGISTERED LANDSCAPE ARCHITECT MATTHEW T. TAYLOR FRANCO LA6667292 STATE OF FLORIDA

Digitally signed by Matthew T. Taylor Franco
DN: CN=Matthew T. Taylor Franco, C=US, E=matthew.taylor@kimley-horn.com, O=KIMLEY-HORN AND ASSOCIATES, INC., OU=LA6667292
Date: 2025.07.25 08:40:39 -04'00'

DATE: 07/25/25

KHA PROJECT 149170026
DATE 07/16/25
SCALE AS SHOWN
DESIGNED BY GNG
DRAWN BY NMB
CHECKED BY ATDG

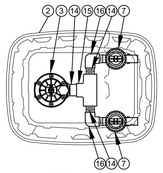
IRRIGATION PLAN

WINTER SPRINGS WAWA

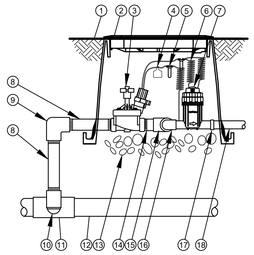
CITY OF WINTER SPRINGS FL

SHEET NUMBER L2.00

Plotted By: Kozemi, Mary Sheet Set: WINTER SPRINGS WAWA Layout: L2.00 July 28, 2025 06:41:39pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- W\wawiL2.00 IRRIGATION PLAN.dwg



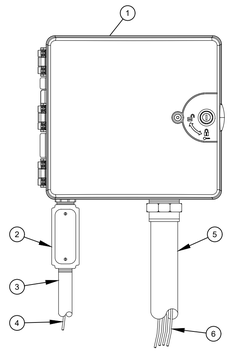
TOP VIEW



SIDE VIEW

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

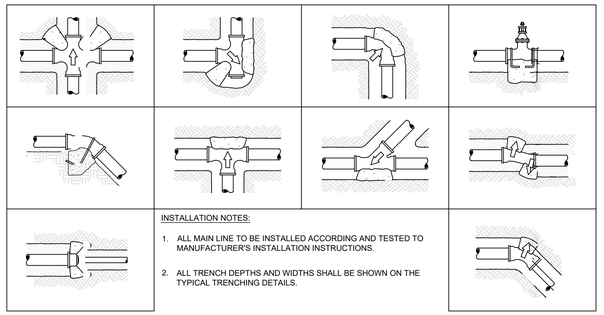
1 COMMERCIAL CONTROL DRIP ZONE VALVE KIT
L2.50 SECTION / PLAN — NTS



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

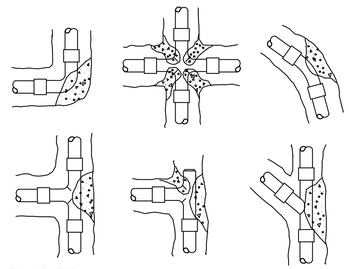
NOTES:
1. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT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

2 TYPICAL CONTROLLER
L2.50 ELEVATION — NTS



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

3 TYPICAL THRUST BLOCK
L2.50 SECTION — NTS

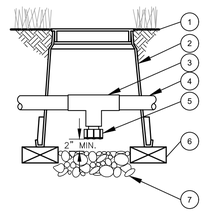


INSTALLATION NOTES
1. 3000 PSI CONCRETE OR BETTER IS TO BE USED FOR THRUST BLOCKS.
2. FOR 45°/90° FITTINGS, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED.
3. FOR 22-1/2° FITTINGS, MINIMUM OF 0.5 CUBIC FEET OF CONCRETE TO BE USED.
4. FOR TEES, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED. THRUST BLOCKS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

4 THRUST BLOCK REINFORCEMENT
L2.50 SECTION — NTS

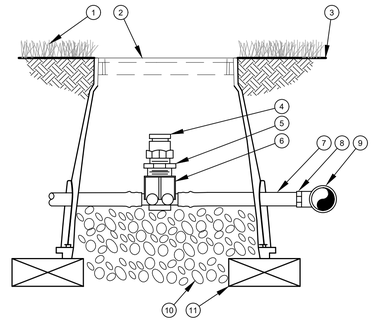
LINE BOTTOM OF VALVE PIT WITH LANDSCAPE FABRIC. MAINTAIN CLEAR SPACE BETWEEN BOTTOM OF VALVE PIT AND VALVE. DO NOT ALLOW BOX TO REST ON PIPE.

5 TYPICAL CONTROL VALVE
L2.50 SECTION — NTS



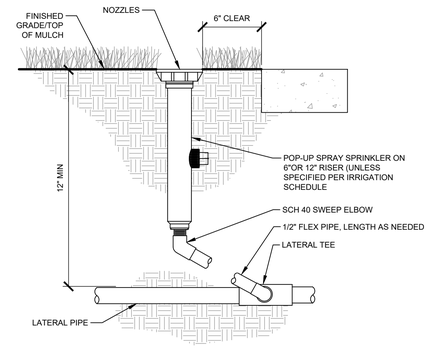
1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER:
3. PVC SCH 40 TEE
4. PVC LATERAL PIPE
5. FILTERED DRAIN VALVE:
6. BRICK (1 OF 2)
7. 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

6 DRAIN VALVE
L2.50 SECTION — NTS



1. TURF GRASS
2. VALVE BOX LID
3. FINISH GRADE
4. ½" AIR RELIEF VALVE: TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
5. ½" X ¾" PVC REDUCER BUSHING
6. BARB X FEMALE THREAD CONNECTOR:
7. ½" BLANK DRIPLINE TUBING:
8. BARB X MALE THREAD CONNECTOR:
9. PVC TEE CONNECTED TO PVC HEADER PIPE
10. 3" MINIMUM DEPTH OF ¾" WASHED GRAVEL
11. BRICK (1 OF 2)

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



8 TYPICAL IRRIGATION HEAD
L2.50 SECTION — NTS

CONTRACTOR TO REFER TO IRRIGATION PLAN FOR LOCATION OF CONTROL VALVES THAT UTILIZE MULTIPLE DRIPLINE SUPPLY CONNECTIONS. IF NOT SHOWN, INSTALL WITHIN ADJACENT GREEN AREA NOT IN A HIGHLY VISIBLE AREA.

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

9 TYPICAL DRIP LINE
L2.50 PLAN — NTS

10 TYPICAL SLEEVING
L2.50 SECTION — NTS

11 TYPICAL TRENCHING
L2.50 SECTION / PLAN — NTS

NOTE: BUBBLER SHALL NOT BE PLACED AT TRUNK FLARE.

12 TYPICAL BUBBLER
L2.50 SECTION — NTS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

REGISTERED LANDSCAPE ARCHITECT MATTHEW TAYLOR FRANCIS LA6667292 STATE OF FLORIDA
Digitally signed by Matthew Taylor Francis
DN: CN=Matthew Taylor Francis, O=KIMLEY-HORN AND ASSOCIATES, INC., C=US
Date: 2025.07.25 09:54:32 -04'00'
DATE: 07/25/25

THESE DRAWINGS AND SPECIFICATIONS ARE COPYRIGHTED AND ONLY FOR USE BY THE OWNER AND KIMLEY-HORN AND ASSOCIATES, INC. THEY ARE NOT TO BE USED BY ANY OTHER PERSON OR ENTITY FOR ANY OTHER PROJECT, OR FOR ADDITIONS TO THIS PROJECT, WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF KIMLEY-HORN AND ASSOCIATES, INC. ANY UNAUTHORIZED USE WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	GNG
DRAWN BY	NMB
CHECKED BY	ATDG

IRRIGATION DETAILS

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER L2.50

Plotted By: Kozemi, Mary Sheet Set: WINTER SPRINGS WAWA Layout: L2.50 July 28, 2025 08:42:02pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\PlanSheets- Wawa\L2.00 IRRIGATION PLAN.dwg

IRRIGATION SYSTEM NOTES:

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

PRE-APPROVED MANUFACTURERS:
1. TORO
2. HUNTER
3. RAINBIRD

13. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION.
14. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED WITHIN SCH. 40 PVC 2x SIZE OF PIPE AND FREE OF STONES/DEBRIS. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS.
15. MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
16. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVING AND DIRECTIONAL BORES.
17. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
18. ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SCH. 40 PVC SLEEVES. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
19. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION "HB". LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
20. THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW," THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
21. ELECTRIC SERVICE TO THE CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
22. ALL 24 VAC WIRING FROM DECODER TO VALVE SHALL BE OF DIRECT BURIAL COPPER WIRE. MAXIMUM LENGTH OF WIRE FROM DECODER TO VALVE SHALL NOT EXCEED 400 FEET. AS FOLLOWS:
    CONTROL WIRES - #14
    COMMON WIRES - #14
23. ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS:
    -RECTANGULAR 12"X17" HEAVY DUTY BOX. (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
24. ALL IRRIGATION HEADS/DRIP TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY. (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES).
25. HEADS, LATERALS, EMITTERS, AND VALVES ARE NOT SHOWN, BUT ARE NECESSARY FOR A FULLY FUNCTIONING IRRIGATION SYSTEM.
26. LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE. WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
27. IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. BUBBLERS, DRIPLINE, AND SPRAY HEADS SHALL BE SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
28. ALL DRIP ZONES SHALL BE INSTALLED WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE. DRIPLINE SHALL PROVIDE 0.9 GPH EMITTERS, 12" O.C. WITH 12" LINE SPACING AT A MINIMUM.
29. ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURERS SPECIFICATIONS. IF REQUIRED, ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1,000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2,500' REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICE KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY. IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
30. ALL CONTROL WIRE SHALL BE INSTALLED IN A 1 ½" ELECTRICAL CONDUIT.
31. SMALLEST DIAMETER LATERAL PIPE SHALL BE 3/4".
32. IRRIGATION SYSTEM SHALL BE CAPABLE OF SUPPLYING AN AVERAGE OF 1.05" OF WATER PER WEEK WITHIN WATERING RESTRICTIONS AS APPLICABLE.
33. IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING, OR PRESERVED PLANT COMMUNITIES. DO NOT TRENCH THROUGH EXISTING ROOT SYSTEMS OF ANY VEGETATION INTENDED TO BE PRESERVED.
34. CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
35. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THE CONDITION DENOTED ON THE LANDSCAPE PLAN.
36. IRRIGATION PIPING INSTALLED UNDER ROADS AND SIDEWALKS SHALL BE IN SCHEDULE 40 PVC SLEEVING AT 2X THE PIPE SIZE. ALL SLEEVING SHALL BE FREE OF STONES AND DEBRIS.
37. IRRIGATION SOURCE TO BE EITHER WELL, POTABLE, OR NON-POTABLE WATER. IRRIGATION CONTRACTOR TO VERIFY SOURCE PRIOR TO DESIGN.
38. POINT OF CONNECTION TO BE DETERMINED BY OWNER. IRRIGATION SYSTEM CONNECTIONS TO THE LOCAL JURISDICTION SERVICE SHALL COMPLY WITH ALL APPLICABLE CODES.
39. IRRIGATION CONNECTION MAY REQUIRE BACKFLOW PREVENTION, VERIFY WITH LOCAL JURISDICTION.
40. IRRIGATION SYSTEM SHALL COMPLY WITH THE LOCAL JURISDICTION LAND DEVELOPMENT CODE.

1 L2.51 TYPICAL SCHEMATIC IRRIGATION NOTES

No.	REVISIONS	DATE	BY
1	REVISED PER CITY AND FDOT COMMENTS	07/18/25	MMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT MATTHEW TAYLOR FRANCIS LA6667292 STATE OF FLORIDA

Digitally signed by Matthew Taylor Francis
DN: C=US, E=matthew.francis@kimley-horn.com, O=KIMLEY-HORN AND ASSOCIATES, INC., CN=LA6667292
Date: 2025.07.25 09:42:36 -04'00'

DATE: 07/25/25

THIS DRAWING AND SPECIFICATIONS, AS AN INSTRUMENT OF SERVICE, IS AND SHALL REMAIN THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES, INC. THIS DRAWING AND SPECIFICATIONS SHALL NOT BE USED BY ANY PERSON OR ENTITY FOR ANY PROJECT OTHER THAN THE SPECIFIED PROJECT, FOR EXTENSIONS TO THE PROJECT, OR FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AGREEMENT OF KIMLEY-HORN AND ASSOCIATES, INC.

KHA PROJECT	149170026
DATE	07/18/25
SCALE	AS SHOWN
DESIGNED BY	CNS
DRAWN BY	MMB
CHECKED BY	ADL

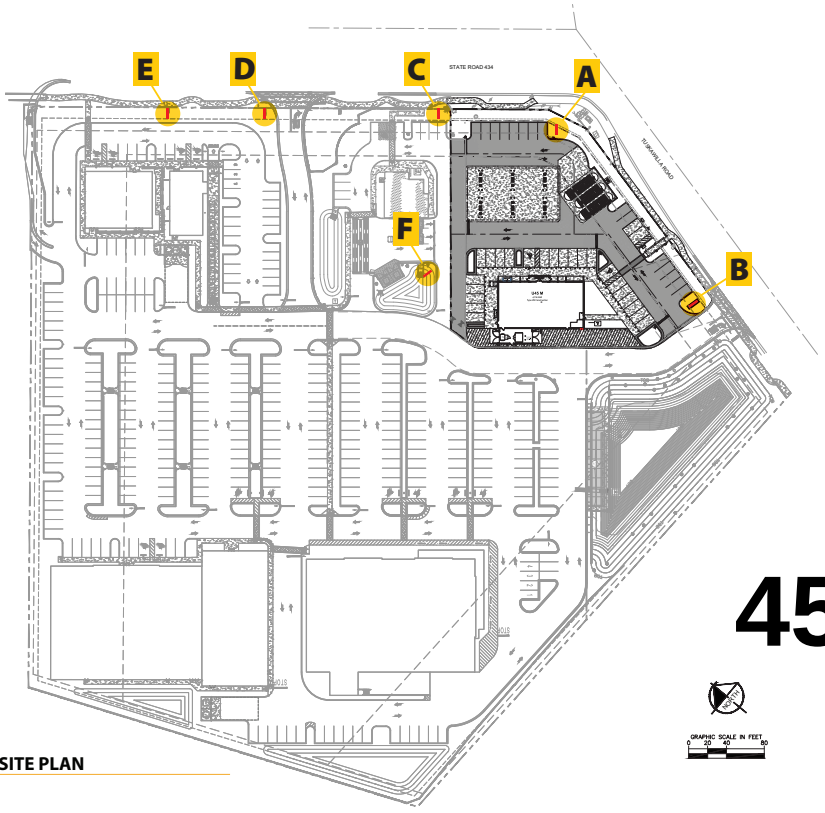
IRRIGATION NOTES

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L2.51

Plotted By:Kizzann, Mary Sheet Set:WINTER SPRINGS WAWA Layout:IRRIGATION SPECIFICATIONS July 28, 2025 09:42:07pm K:\orl_civil\149170026-winter springs wawa\CADD\CONSTPlanSheets- Wawa\L2.00 IRRIGATION PLAN.dwg



SIGNAGE SITE PLAN

WHITE SIGN COMPANY

SIGN TYPE:
MONUMENT SIGNS

JOB NUMBER: 0000

DATE: 06/06/2025

CUSTOMER:
WINTER SPRINGS MARKETPLACE

DESIGNER: Fernando Lima

SALES REP: Luke Mullins

ADDRESS:
STATE ROAD 434
& TUSCAWILLA RD.
WINTER SPRINGS, FL

GLE SIDED ☐
JBLE SIDED ☑

UMINATED ☑
N ILLUMINATED ☐

FT: 00

452

c UL us
LISTED
E319-113
ES 12000976

www.whitesigncompany.com
386-320-0623

WHITE SIGN COMPANY

SIGN TYPE:
MONUMENT SIGN

JOB NUMBER: 0000

DATE: 08/06/2025

CUSTOMER:
WINTER SPRINGS MARKETPLACE

DESIGNER: Fernando Lima

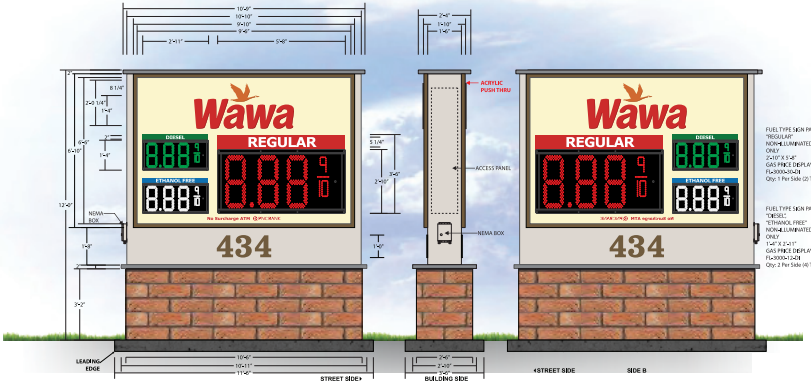
SALES REP: Luke Mullins

ADDRESS:
STATE ROAD 434
& TUSCAWILLA RD.
WINTER SPRINGS, FL

GLE SIDED ☐
JBLE SIDED ☑

MINATED ☑
N ILLUMINATED ☐

FT: 61.75



453

A 3 PRODUCT
CUSTOM D/F ILLUMINATED MONUMENT SIGN (61.75 SQ. FT.) SR 434

Scale: 3/8"=1'-0"

c UL us
LISTED
E319-113
ES 12000976

www.whitesigncompany.com
386-320-0623

WHITE SIGN COMPANY

SIGN TYPE:
MONUMENT SIGN

JOB NUMBER: 0000

DATE: 08/06/2025

CUSTOMER:
WINTER SPRINGS MARKETPLACE

DESIGNER: Fernando Lima

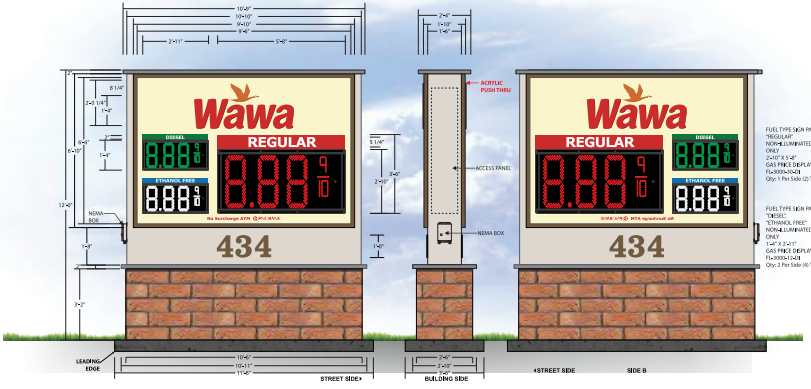
SALES REP: Luke Mullins

ADDRESS:
STATE ROAD 434
& TUSCAWILLA RD.
WINTER SPRINGS, FL

GLE SIDED ☐
JBLE SIDED ☑

MINATED ☑
N ILLUMINATED ☐

FT: 61.75



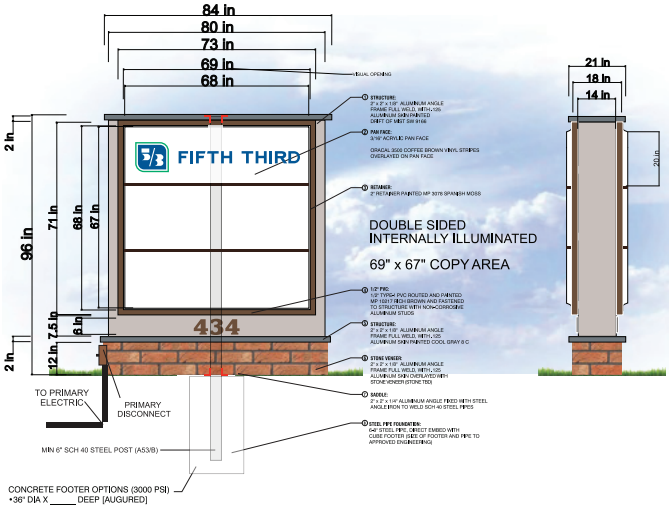
454

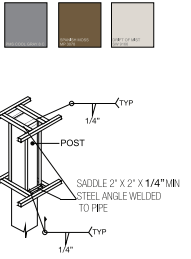
B 3 PRODUCT
CUSTOM D/F ILLUMINATED MONUMENT SIGN (61.75 SQ. FT.) Tuskawilla Rd.

Scale: 3/8"=1'-0"

c UL us
LISTED
E319-113
ES 12000976

www.whitesigncompany.com
386-320-0623





ELECTRICAL NOTES
•VOLTAGE: 120V
•20A / 120 AMP CIRCUIT REQUIRED

GENERAL NOTES
THIS SIGN IS TO BE INSTALLED IN ACCORDANCE WITH
THE REQUIREMENTS OF ARTICLE 600 OF THE CURRENT
NATIONAL ELECTRICAL CODE.
1. GROUNDED AND B
2. EXISTING BRANCH
NEC 600.6 NOT TO EX
3. LIMITED TO 15 A
4. SEE ELECTRICAL D
FOR SIGN COMPONE

WHITE SIGN COMPANY

SIGN TYPE:
MONUMENT SIGN

JOB NUMBER: 0000

DATE: 06/06/2025

CUSTOMER:
WINTER SPRINGS MARKETPLACE

DESIGNER: Fernando Lima

SALES REP: Luke Mullins

ADDRESS:
STATE ROAD 434
& TUSCAWILLA RD
WINTER SPRINGS, FL

SINGLE SIDED ☐
DOUBLE SIDED ☑

ILLUMINATED ☑
NON ILLUMINATED ☐

SQ FT: 56.0

455

C 3 PRODUCT
CUSTOM D/F ILLUMINATED MONUMENT SIGN (56.0 SQ. FT.) State Road 434

c UL us
LISTED
E319-113
ES 12000976

www.whitesigncompany.com
386-320-0623

MONUMENT SIGN S-1 A



18" WIDE EXTRUDED ALUMINUM CABINET
WITH 2" RETAINER SYSTEM
CABINET FINISHED IN SATIN ACRYLIC ENAMEL
ID CABINET FACES TO BE 3/16" THICK TRANSLUCENT
WHITE PAN FORMED ACYRLIC WITH OUTSIDE SURFACE
APPLIED VINYL DECORATION
ID CABINET TO HAVE INTERNAL WHITE "L.E.D."
LLUMINATION

FABRICATED ALUMINUM CAP, POLE COVER AND
EMBELLISHMENTS TO HAVE INTERNAL ALUMINUM
ANGLE FRAME CONSTRUCTION
WITH SATIN ENAMEL AND LT. SPRAY STUCCO FINISHES
COLORS AS INDICATED

SIGN INSTALLED ON SINGLE VERTICAL STEEL SUPPORT
POLE WITH DIRECT BURIAL CONCRETE
FOUNDATION

DISCONNECT JUNCTION BOX ON SIDE
OF POLE COVER

BRICK / STONE VENEER BY OTHERS

INTERNALLY ILLUMINATED DOUBLE SIDED FREESTANDING SIGN SCALE 1/4" = 1'-0"

456

D 3 PRODUCT
CUSTOM D/F ILLUMINATED MONUMENT SIGN (108.0 SQ. FT.) State Road 434

WHITE SIGN COMPANY

SIGN TYPE:
MONUMENT SIGN

JOB NUMBER: 0000

DATE: 08/06/2025

CUSTOMER:
WINTER SPRINGS
MARKETPLACE

DESIGNER: Fernando Lima

SALES REP: Luke Mullins

ADDRESS:
STATE ROAD 434
& TUSCAWILLA RD
WINTER SPRINGS, FL

GLE SIDED ☐
JBLE SIDED ☑

MINATED ☑
N ILLUMINATED ☐

FT: 108.0

c UL us
LISTED
E319-113
ES 12000976

www.whitesigncompany.com
386-320-0623

MONUMENT SIGN S-3



18" WIDE EXTRUDED ALUMINUM CABINET
WITH 2" RETAINER SYSTEM
CABINET FINISHED IN SATIN ACRYLIC ENAMEL
ID CABINET FACES TO BE 3/16" THICK TRANSLUCENT
WHITE PAN FORMED ACYRLIC WITH OUTSIDE SURFACE
APPLIED VINYL DECORATION
ID CABINET TO HAVE INTERNAL WHITE "L.E.D."
LLUMINATION

FABRICATED ALUMINUM CAP, POLE COVER AND
EMBELLISHMENTS TO HAVE INTERNAL ALUMINUM
ANGLE FRAME CONSTRUCTION
WITH SATIN ENAMEL AND LT. SPRAY STUCCO FINISHES
COLORS AS INDICATED

SIGN INSTALLED ON SINGLE VERTICAL STEEL SUPPORT
POLE WITH DIRECT BURIAL CONCRETE
FOUNDATION

DISCONNECT JUNCTION BOX ON SIDE
OF POLE COVER

BRICK / STONE VENEER BY OTHERS

INTERNALLY ILLUMINATED DOUBLE SIDED FREESTANDING SIGN SCALE 1/4" = 1'-0"

457

E 3 PRODUCT
CUSTOM D/F ILLUMINATED MONUMENT SIGN (48.0 SQ. FT.) State Road 434

WHITE SIGN COMPANY

SIGN TYPE:
MONUMENT SIGN

JOB NUMBER: 0000

DATE: 06/06/2025

CUSTOMER:
WINTER SPRINGS
MARKETPLACE

DESIGNER: Fernando Lima

SALES REP: Luke Mullins

ADDRESS:
STATE ROAD 434
& TUSCAWILLA RD.
WINTER SPRINGS, FL

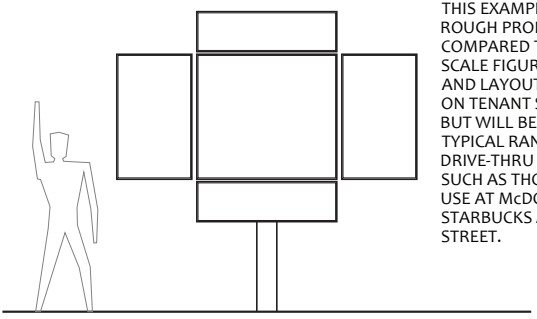
GLE SIDED ☐
JBLE SIDED ☑

UMINATED ☑
N ILLUMINATED ☐

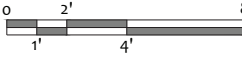
FT: 48.0

c UL us
LISTED
E319-113
ES 12000976

www.whitesigncompany.com
386-320-0623



THIS EXAMPLE SHOWS ROUGH PROPORTIONS COMPARED TO A HUMAN SCALE FIGURE. EXACT SIZE AND LAYOUT WILL DEPEND ON TENANT STANDARDS, BUT WILL BE WITHIN THE TYPICAL RANGE OF A DRIVE-THRU MENU BOARD, SUCH AS THOSE ALREADY IN USE AT McDONALD'S AND STARBUCKS ACROSS THE STREET.



F S-4 DIAGRAMATIC ELEVATION

WHITE SIGN COMPANY

SIGN TYPE: MONUMENT SIGN

JOB NUMBER: 0000

DATE: 06/06/2025

CUSTOMER: WINTER SPRINGS MARKETPLACE

DESIGNER: Fernando Lima

SALES REP: Luke Mullins

ADDRESS: STATE ROAD 434 & TUSCAWILLA RD WINTER SPRINGS, FL

GLE SIDED ☐
JBLE SIDED ☑

UMINATED ☑
N ILLUMINATED ☐

FT: 00

458

c UL us
LISTED
E319-113
ES 12000976

www.whitesigncompany.com
386-320-0623

Kimley»Horn

MEMORANDUM

To: Terrilyn Rolle, MPA, AICP
Director of Community Development, Winter Springs

From: Emanuelle D Rodríguez Muñiz, P.E., IMSA[1]
Kimley-Horn and Associates, Inc.

Date: December 6, 2024

Subject: Wawa Winter Springs
Parking Demand Study



This document has been digitally signed and sealed by Emanuelle D Rodriguez Muñiz, P.E. on the date adjacent to the seal

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

Emanuelle D Rodriguez

Digitally signed by Emanuelle D Rodriguez
DN: CN=Emanuelle D Rodriguez, dnQualifier=A01410C000001934168451000 2EF49, O=KIMLEY-HORN AND ASSOCIATES INC, C=US
Date: 2024.12.06 10:35:24-05'00'

Introduction

Kimley-Horn and Associates, Inc. has undertaken the following review and analysis to evaluate the anticipated parking needs for the proposed Wawa convenience store/gas station to be located south of SR 434 and west of Tuskawilla Road in the City of Winter Springs, Florida.

The site is zoned as (T-C) Town Center District. As stated in Section 20-324 of the City's Land Development Code (LDC), there are no minimum parking requirements for T-C; instead, a parking analysis shall be performed justifying the proposed parking solution. This study provides a comparison between the City's code-required parking for the most similar land use, Institute of Transportation Engineers (ITE) *Parking Generation Manual 6th Edition*, and Urban Land Institute (ULI) *Shared Parking 3rd Edition*. The study also includes the required bicycle parking for the site based on the Association of Pedestrian and Bicyclist Professionals (APBP).

The proposed Wawa development will consist of the following uses, as shown in the site plan provided in **Attachment A**:

- 4,736 square feet of convenience store
- 12 vehicle fueling positions (VFP)

Code Parking Requirements

Section 9-277 of the City's LDC defines the off-street parking requirements for specific land uses. The LDC does not have a specific land use for convenience store/gas station therefore “General business and retail commercial” was reviewed:

- General business and retail commercial. One (1) parking space for each three hundred (300) square feet of floor space in the building exclusive of storage space.

Kimley»Horn

As shown in **Table 1,** a total parking supply of 16 spaces (rounded to nearest integer) at a parking ratio of 3.38 spaces per a thousand square feet would potentially be required depending on interpretation of the City's LDC.

Table 1: City Code Parking Requirement

City LDC		Proposed Development		Required Parking
Land Use	Min. Requirement	Size	Units	
General business and retail commercial	1 space per 300 SF	4,736	SF	16

ITE's Parking Generation Manual, 6th Edition Evaluation

A calculation of the anticipated parking demand was undertaken using data published by the Institute of Transportation Engineers (ITE) *Parking Generation Manual 6th Edition*. Empirical data collected on sites throughout the country are compiled to develop parking demand ratios for similar land uses. The 85th percentile peak parking demand was utilized in accordance with industry-accepted standards.

As shown in **Table 2,** a total parking supply of 50 spaces (rounded to nearest integer) at a parking ratio of 10.56 spaces per a thousand square feet would be needed to serve the proposed convenience store/gas station as an isolated and stand-alone establishment.

Table 2: ITE Parking Demand Summary

ITE ParkGen			Proposed Development		Required Parking
Land Use	LUC	85th Percentile	Size	Units	
Convenience Store/Gas Station	945	10.65 per KSF	4.736	KSF	50

ULI Shared Parking, 3rd Edition Evaluation

Parking within mixed-use developments means patrons can "park once" though are able to visit multiple establishments essentially reducing overall parking demand. The Urban Land Institute (ULI) *Shared Parking 3rd Edition* provides a methodology to calculate the parking demand reduction based on the mix of land uses. The proposed Wawa is within a mixed-use development as shown in **Table 3.** Properties were identified through a desktop search as well as using data from the Seminole County Property Appraiser. Building configuration of the development is shown as **Attachment C**.

Table 3: ULI Land Uses by Existing Tenants

Bldg.	Existing Tenant	ULI Land Use	Sq. Ft.
A	Lake Jesup Dental Care	Medical/Dental Office	4,280
B	Chipotle	Fast Casual/Fast Food	2,325
C	Fifth Third Bank	Bank (Drive In Branch)	2,065
D	Crunch Fitness	Health Club	19,200
E	Dollar Tree	Discount Stores/Superstores	10,000
F	Aldi	Supermarket/Grocery	19,209
G	Wawa	Retail (over 2KSF)	4,736
		Total	**61,815**

Kimley»Horn

The ULI Shared Parking provides monthly adjustment factors and weekend time-of-day adjustment factors, which show the peak season and peak time-of-day, respectively. The parking ratio applied is the highest demand period which potentially generates demand for 311 spaces (rounded to the nearest integer). The results of ULI's Shared Parking analysis are shown in **Attachment D.**

As shown in **Table 4**, the mixed-use development *without* Wawa currently provides 344 parking spaces. ULI estimates even including Wawa's parking demand, 307 spaces would be sufficient. Therefore, a 33-parking space surplus exists prior to adding parking by Wawa.

Table 4: Parking Ratio Determination

ULI Peak Demand Estimate	Existing Spaces	Surplus/Deficit
311	344	+33

Bicycle Parking

According to the Association of Pedestrian and Bicyclist Professionals (APBP), bicycle parking can be measured by commercial activity including retail. Long-term bicycle parking is considered utilized by employees demanding less spaces per square foot. Short-term bicycle parking is considered utilized by patrons who routinely generate demand and require more spaces per square foot. Therefore, the short-term bicycle parking recommendation of 2 spaces is applied to the Wawa as shown in **Table 5**:

Table 5: Bicycle Parking Spaces Summary

Commercial Activity	Long-Term Bicycle Parking Requirement	Short-Term Bicycle Parking Requirement
General Retail	1 space for each 12,000 sf of floor area. Minimum requirement is 2 spaces	1 space for each 5,000 sf of floor area. Minimum requirement is 2 spaces

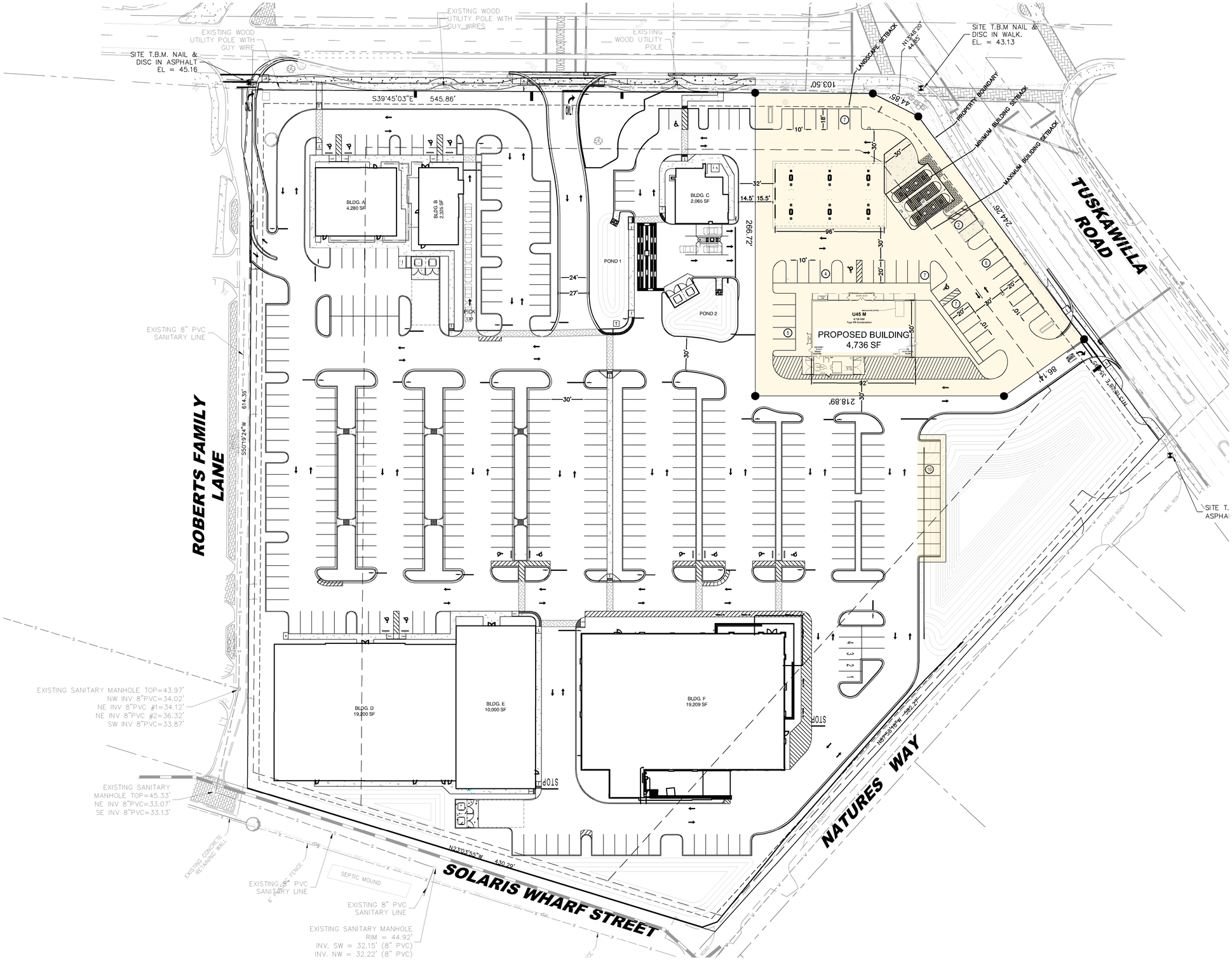
Conclusion

Upon review of the ITE parking ratio for a stand-alone convenience store/gas station, 10.65 spaces per KSF could be recommended. However, Wawa is within a mixed-use development which ULI measures would have shared parking capacity. The mixed-use development including the Wawa would generate demand for a total of 311 spaces. The mixed-use development currently supplies 344 parking spaces which *does not* reflect potential future parking from Wawa. Therefore, the existing 344 spaces is considered sufficient to address both the mixed-use development and Wawa's peak parking demand. Additional parking by Wawa will only serve to increase the existing 33 space surplus.

Additionally, it is recommended that 2 bicycle parking spaces be provided at the Wawa location based on the Association of Pedestrian and Bicyclist Professionals (APBP) guidelines.

ATTACHMENT A

Site Plan



K:\ORL_Civil\149170016 - Winter Springs Marketplace\CADD\CONCEPT\SP-47.dwg

EQUINOX DEVELOPMENT

SP-47

S.R. 434 & TUSCAWILLA RD.

WINTER SPRINGS, FLORIDA

PROPOSED SITE LAYOUT

06/2052024 - CONTACT JONATHAN A. MARTIN, P.E. (407) 427-1686

GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

Kimley»Horn

ATTACHMENT B

ITE Parking Generation Manual

Land Use: 945 Convenience Store/Gas Station

Description

A convenience store/gas station is a facility with a co-located convenience store and gas station. The convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel. The sites in this land use include both self-pump and attendant-pumped fueling positions and both pre-pay and post-pay operations.

A convenience store/gas station is typically located along a major thoroughfare to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) are common at these facilities.

The convenience store product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine. Coffee and premade sandwiches are also commonly sold. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

Convenience Store (Land Use 851) is a related use.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at five study sites in a general urban/suburban setting.

Hour Beginning	Percent of Weekday Peak Parking Demand
12:00–4:00 a.m.	-
5:00 a.m.	-
6:00 a.m.	-
7:00 a.m.	54
8:00 a.m.	73
9:00 a.m.	65
10:00 a.m.	72
11:00 a.m.	80
12:00 p.m.	100
1:00 p.m.	89
2:00 p.m.	69
3:00 p.m.	63
4:00 p.m.	54
5:00 p.m.	54
6:00 p.m.	49
7:00 p.m.	-
8:00 p.m.	-
9:00 p.m.	-
10:00 p.m.	-
11:00 p.m.	-

Additional Data

The reported parking demand does not include any vehicles parked at fueling pump spaces even though some motorists may leave their vehicle at the fueling pump while inside the convenience store.

The average parking supply ratio for the 15 study sites in a general urban/suburban setting with parking supply information is 12 spaces per 1,000 square feet GFA. The average peak parking occupancy at these sites is 69 percent.

The sites were surveyed in the 1990s, the 2000s, and the 2020s in California, New Jersey, Pennsylvania, Texas, and Virginia.

Source Numbers

417, 433, 443, 444, 626, 637

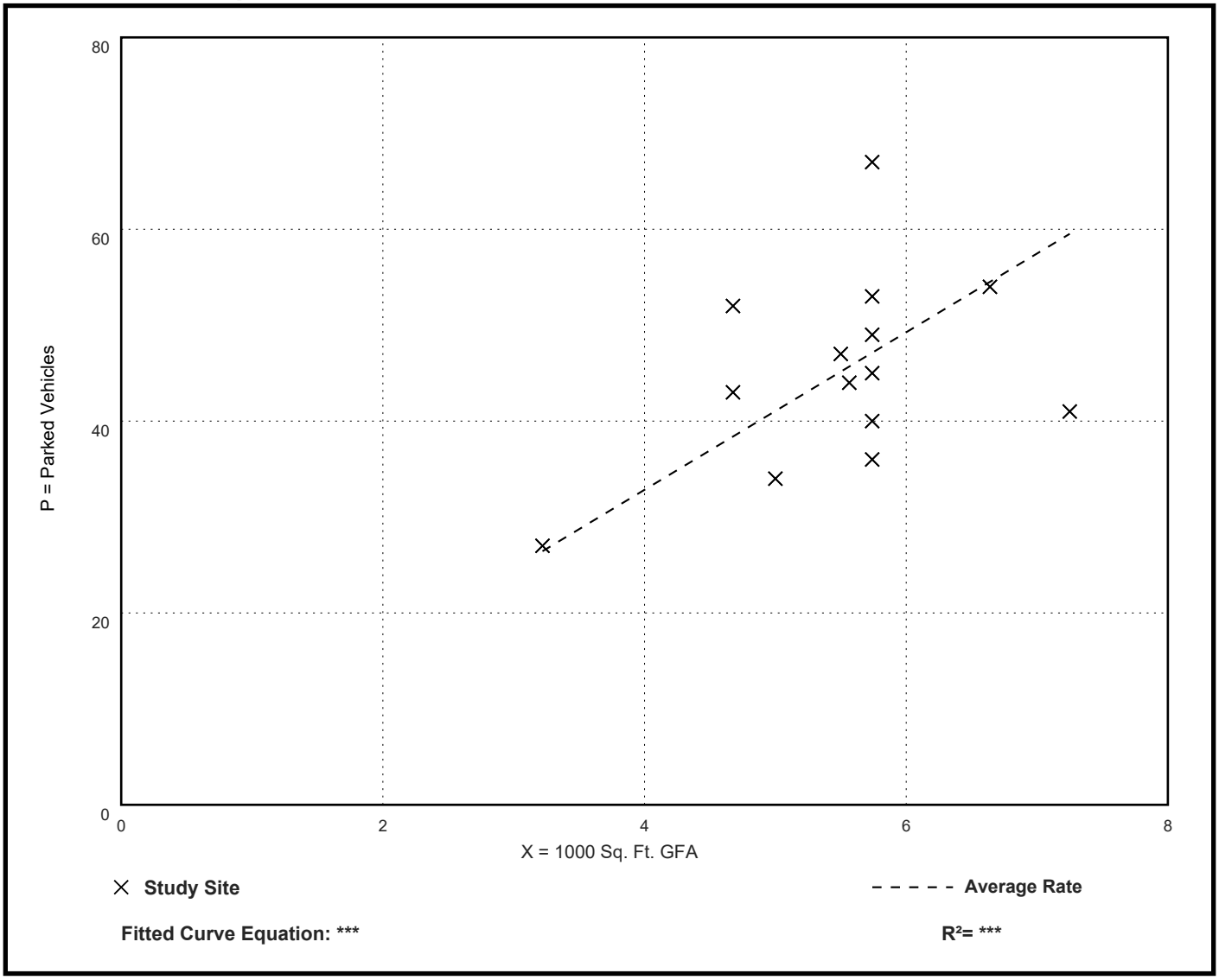
Convenience Store/Gas Station (945)

Peak Period Parking Demand vs: 1000 Sq. Ft. GFA
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. 1000 Sq. Ft. GFA: 5.5

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
8.21	5.66 - 11.67	7.80 / 10.65	***	1.71 (21%)

Data Plot and Equation



Fitted Curve Equation: *

R^2= *

ATTACHMENT C

Mixed-Use Development Layout

S.R. 434 & TUSCAWILLA RD.

WINTER SPRINGS, FLORIDA

SP-47

PROPOSED SITE LAYOUT

06/2052024 - CONTACT JONATHAN A. MARTIN, P.E. (407) 427-1686

EQUINOX DEVELOPMENT

GRAPHIC SCALE IN FEET 0 20 40 80

NORTH

Kimley»Horn

K:\ORL_Civil\149170016 - Winter Springs Marketplace\CADD\CONCEPT\SP-47.dwg

ATTACHMENT D

ULI Shared Parking Results

Copyright © 2020 All rights reserved. The Urban Land Institute, International Council of Shopping Centers, and National Parking Association.

Project: Winter Spring
Description: Wawa

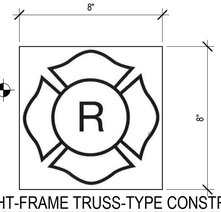
Shared Parking Demand Summary

Peak Month: DECEMBER -- Peak Period: 5 PM, WEEKDAY

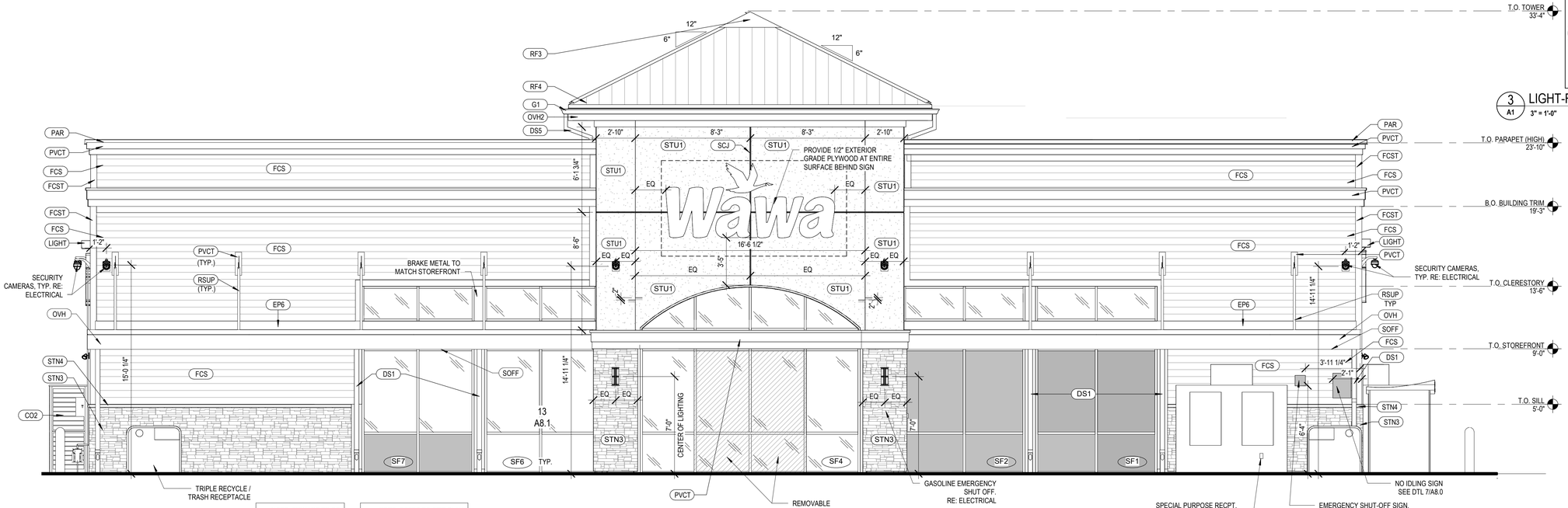
Land Use	Project Data		Weekday					Weekend					Weekday			Weekend		
	Quantity	Unit	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj 5 PM	Peak Mo Adj December	Estimated Parking Demand	Peak Hr Adj 5 PM	Peak Mo Adj December	Estimated Parking Demand
Retail																		
Retail (over 2,000 ksf)	4,736	sf GLA	2.90	100%	100%	2.89	ksf GLA	3.20	100%	100%	3.20	ksf GLA	85%	100%	12	80%	100%	13
Employee			0.70	99%	100%	0.69		0.80	99%	100%	0.79		100%	100%	4	55%	100%	2
Supermarket/Grocery	19,209	sf GLA	4.00	100%	100%	3.99	ksf GLA	4.00	100%	100%	3.99	ksf GLA	100%	100%	77	90%	100%	69
Employee			0.75	99%	100%	0.74		0.75	99%	100%	0.74		100%	100%	15	55%	100%	8
Discount Stores/Superstores	10,000	sf GLA	3.40	100%	100%	3.39	ksf GLA	3.80	100%	100%	3.80	ksf GLA	85%	100%	29	95%	100%	36
Employee			0.85	99%	100%	0.84		0.95	99%	100%	0.94		95%	100%	8	100%	100%	10
Food and Beverage																		
Fast Casual/Fast Food	2,325	sf GLA	12.40	100%	50%	6.16	ksf GLA	12.70	100%	57%	7.26	ksf GLA	60%	96%	10	60%	96%	13
Employee			2.00	99%	100%	1.98		2.00	99%	100%	1.98		70%	100%	3	70%	100%	3
Entertainment and Institutions																		
Health Club	19,200	sf GLA	6.60	100%	99%	6.54	ksf GLA	5.50	100%	99%	5.47	ksf GLA	90%	100%	114	100%	100%	106
Employee			0.40	99%	100%	0.40		0.25	99%	100%	0.25		100%	100%	8	100%	100%	5
Hotel and Residential																		
Office																		
Medical/Dental Office	4,280	sf GFA	3.00	100%	100%	2.99	ksf GFA	0.00	100%	100%	0.00	ksf GFA	80%	100%	10	0%	100%	-
Employee			1.60	100%	100%	1.60		0.00	100%	100%	0.00		100%	100%	7	0%	100%	-
Bank (Drive In Branch)	2,065	sf GFA	3.50	100%	95%	3.34	ksf GFA	3.00	100%	100%	3.00	ksf GFA	100%	100%	8	0%	100%	-
Employee			2.50	100%	100%	2.50		1.75	100%	100%	1.75		100%	100%	6	0%	100%	-
Additional Land Uses																		

	Weekday		Weekend	
Customer/Visitor	260		Customer/Visitor	237
Employee/Resident	51		Employee/Resident	28
Reserved	-		Reserved	-
Total	311		Total	265
Shared Parking Reduction	13%			16%

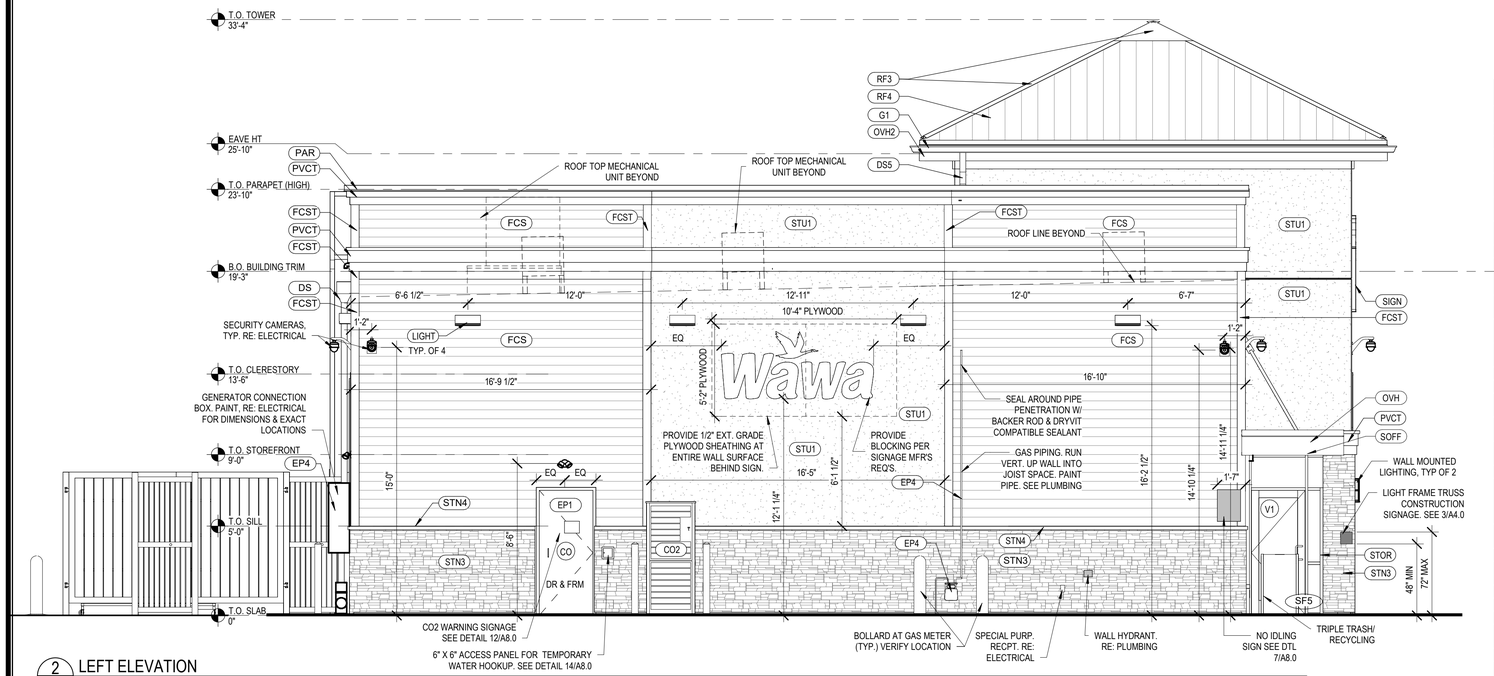
1. SYMBOL SHALL BE PLACED WITHIN 24" TO THE LEFT OF MAIN ENTRY DOOR.
2. PERMANENTY ATTACH TO FACE OF STRUCTURE ON CONTRASTING BACKGROUND.
3. BOTTOM OF SIGN 48" MIN. A.F.F. TOP OF SIGN 72" MAX A.F.F
4. AS PER 69A-60.0081



3 / A1 LIGHT-FRAME TRUSS-TYPE CONSTR. SIGN
3" = 1'-0"



1 / A1 FRONT ELEVATION
1/4" = 1'-0"



2 / A1 LEFT ELEVATION
1/4" = 1'-0"

NOTE: REFER TO SITE PLAN FOR STL BOLLARD LOCATIONS

NOTE: SIGNAGE TO BE PERMITTED SEPERATELY

GENERAL NOTES

1. VERIFY WITH SITE PLAN LOCATION OF STEEL BOLLARDS.
2. REFER TO EXTERIOR FINISH SCHEDULE FOR DETAILED MATERIAL INFORMATION.
3. G.C. TO INSTALL A 9" X 9" 'EMERGENCY SHUT-OFF' SIGN AT FRONT OF BUILDING AT BUTTON LOCATION - SIGN TO HAVE RED BACKGROUND AND WHITE LETTERS. REFER TO ELECTRICAL PLANS FOR LOCATION.
4. MOUNT SECURITY CAMERAS THE SAME HEIGHT AS THE EXTERIOR WALL FIXTURE
5. PETERSEN PAC-CLAD IS AN ACCEPTABLE ALTERNATE MFR. FOR PRODUCTS WHERE "ATAS" IS SPECIFIED. PROVIDE EQUAL OR BETTER QUALITY PRODUCTS. SUBMIT PRODUCT DATA TO ARCHITECT FOR APPROVAL.

EXTERIOR FINISH SCHEDULE

SYMB	MATERIAL	MANUFACTURER	COLOR	FPA APPROVAL #	NOTES
	ILLUMINATED SIGNAGE		-		-
CO2	CO2 FILL BOX	SUPPLIER	-		SEE A1.0 & EQ1.0 FOR LOCATION
DS	3"x4" .032 ALUMINUM DOWNSPOUT	ATAS ALUMINUM CORP.	COMMERCIAL GRADE, SMOOTH, PRE FINISHED ASCOT WHITE		COORDINATE WITH CIVIL FOR CONNECTION TO STORM SEWER.
DS1	3"x4" .032 ALUMINUM DOWNSPOUT	ATAS ALUMINUM CORP.	COMMERCIAL GRADE, SMOOTH, PRE FINISHED ASCOT WHITE		
DS5	3"x4" .032 ALUMINUM DOWNSPOUT	ATAZ INTERNATIONAL, INC (TYP)	COMMERCIAL GRADE, SMOOTH, PRE FINISHED ASCOT WHITE		PROVIDE WALK PADS ON ROOF
EP1	PAINT	SHERWIN WILLIAMS	SW7007 CEILING BRIGHT WHITE		FOR DOORS AND FRAMES
EP4	PAINT	SHERWIN WILLIAMS	SW COLOR MATCH BM PUMICE STONE #1197		FOR GAS METER, ICE BOX, GENERATOR
EP6	AZEK TRIM, PAINTED	SHERWIN WILLIAMS	COLOR: WHITE		
FCS	"HARDIEPLANK" FIBER CEMENT LAP SIDING	JAMES HARDIE	EMBELLISHED CREAM, FINISH: SMOOTH 8.25" X 12'	FL13192	PRE-FINISHED. PROVIDE COLOR-MATCHED CAULK BY JAMES HARDIE
FCST	HARDIE TRIM FIBER CEMENT ACCENT TRIM	JAMES HARDIE	ARTIC WHITE, FINISH: SMOOTH, 5/4" TH x 5.5" W x 10'-0" L		PRE-FINISHED. PROVIDE COLOR-MATCHED CAULK BY JAMES HARDIE
G1	ALUMINUM GUTTERS	ATAS ALUMINUM CORP.	.032 ALUMINUM, COLOR: WHITE		K-STYLE GUTTER. CONTINUOUS - NO SEAMS ALLOWED.
LADD	METAL EXT. LADDER	EASTERN METAL SUPPLY	POWDER COAT COLOR: SLATE GREY OR EQUIVALENT		PROVIDED BY WAWA VENDOR. REFER TO LADDER DETAILS.
LIGHT	EXTERIOR LIGHT FIXTURE	-	FINISH: WHITE		SEE ELECTRICAL DRAWINGS
MTPN	METAL PANEL	CFL ARCHITECTURAL, LLC.	PAINT TO MATCH DOOR, EP1	FL13192	
OFS	OVERFLOW COPING - .032 ALUMINUM 5" X10" OVERFLOW SCUPPER	-	PRE-FINISHED WHITE		ALTERNATE : PETERSON PAC-CLAD
OVH	METAL OVERHANG FASCIA	ATAS INTERNATIONAL, INC.	RAPID-LOK FASCIA, LOK FASCIA, COLOR: #17 BRITE RED		SEE DETAILS SHEET A3.1. ALTERNATE: PETERSEN PAC-CLAD
OVH2	HIP ROOF FASCIA	ATAS INTERNATIONAL, INC.	BRAKE METAL, COLOR #10 ASCOT WHITE		SEE DETAILS SHEET A3.1. ALTERNATE: PETERSEN PAC-CLAD
PAR	ALUM. PARAPET FASCIA	ATAS ALUMINUM CORP.	COLOR: SLATE GREY		RAPID LOCK COPING
PBS	PREFINISHED ALUMINUM BAHAMA SHUTTER	FENWALL FABRICATION & MFG.	COLOR TO MATCH ADJACENT TRIM	FL13192	SHUTTER PER SPECS. CONTACT (321) 926-6667, ALTERNATE SUPERIOR CUSTOM SHUTTERS, CONTACT DAVID DANIELS (407) 949-1969
PVCT	ACCENT TRIM	AZEK	COLOR: WHITE FINISH: SMOOTH		PRE-FINISHED. MITER ALL CORNERS; ALTERNATE: PALIGHT
RF3	STANDING SEAM ROOF HIP CAP	-	TO MATCH METAL ROOFING		-
RF4	METAL ROOFING	ATAS ALUMINUM CORP.	DUTCH SEAM 19.25" WIDE COLOR: SLATE GREY		-
RSUP	ROD SUPPORT	-	POWDER COAT, MATCH SW#6076		SEE STRUCTURAL DRAWINGS
SCJ	STUCCO CONTROL JOINT - 3/4" WIDE	-	-		"W" SHAPED ACCORDION STYLE RE:SPECS
SIGN	ILLUMINATED SIGNAGE	-	-		SIGN BY WAWA; SURFACE MOUNTED
SOFF	OPALINE OPW 085	ATAS INTERNATIONAL, INC.	#10 ASCOT WHITE		PORCH/ENTRY SOFFITS W/ VENT PANELS, COLOR TO MATCH SOFFIT
STN3	MANUFACTURED STONE VENEER	QUALITY STONE	PROVENCE		STYLE: OHIO DRYSTACK; MORTAR GREY
STN4	PRE-CAST MANUFACTURED STONE WATERTABLE/SILL	QUALITY STONE	HEWN STANDARD SILL BAND COLOR : EGGSHELL		24" MIN. LENGTH SECTIONS. VERTICAL GROUT JOINTS: 3/16" MAX WIDTH GROUT WITH QUIKRETE SM100 GRAY
STOR	STOREFRONT SYSTEM	YKK OR KAWNEER	DARK BRONZE	FL7237-R9	SEE SPECIFICATIONS
STU1	STUCCO	SENERGY	#3085 MERINGUE, FINISH: SAHARA		

PROFESSIONAL OF RECORD: ABIGAIL LEIGH BENJAMIN
LICENSE NO. AR103331
THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE WITHIN THE DIGITAL SIGNATURE ABOVE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

AECOM
AECOM Technical Services, Inc.
300 BROADACRES DRIVE, SUITE 250
BLOOMFIELD, NJ 07003
973.883.8500 FAX 973.883.8601
http://www.aecom.com

CLIENT NAME
WAWA INC.
260 W. BALTIMORE PIKE
WAWA,PA 19063

PROJECT NAME
U45 FL - R PROTOTYPE v2025.Q1
WAWA STORE #XXXX
SR 434 & TUSKAWILLA RD.
WINTER SPRINGS, FL

SHEET TITLE
EXTERIOR ELEVATIONS Copy 1

RELEASE	DATE
ISSUED FOR PERMIT	XX/XX/XX

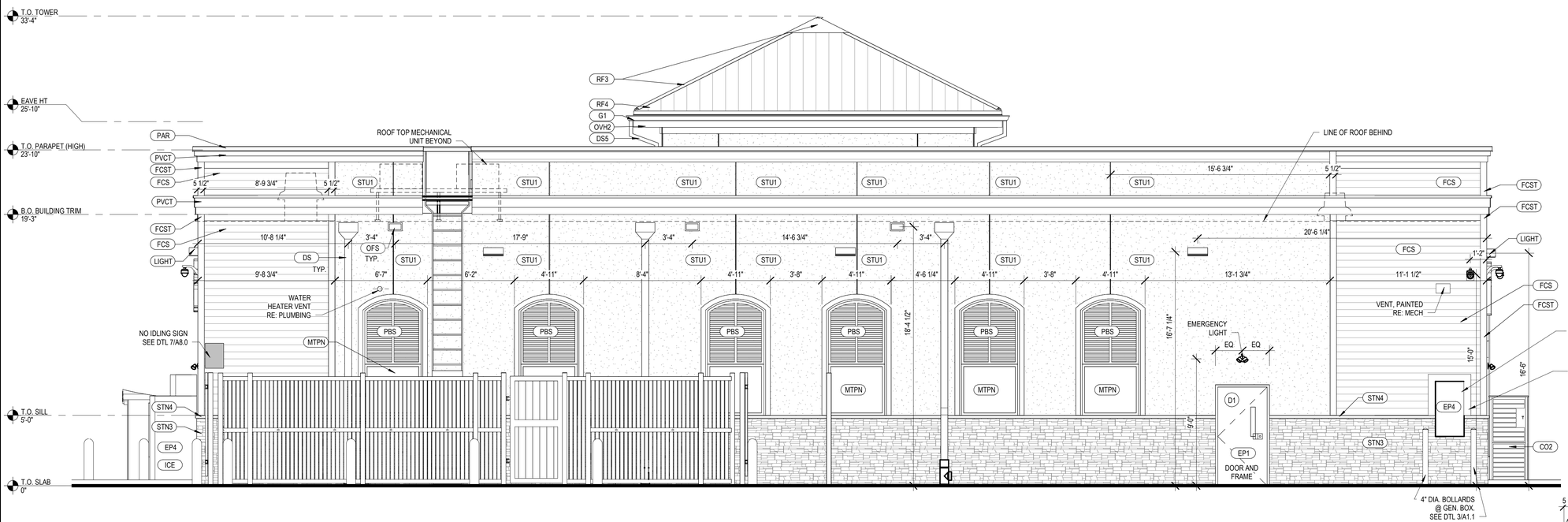
PROTOTYPE: U45 FL - R PROTOTYPE v2025.Q1
PROJECT NO. 60699612
DRAWN
CHECKED

XXXX
WINTER SPRINGS, FL

Wawa

A1

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

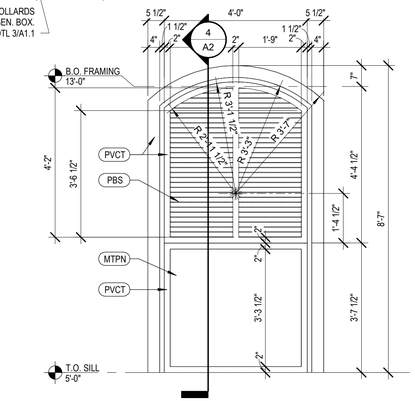


1 A2 REAR ELEVATION
1/4" = 1'-0"

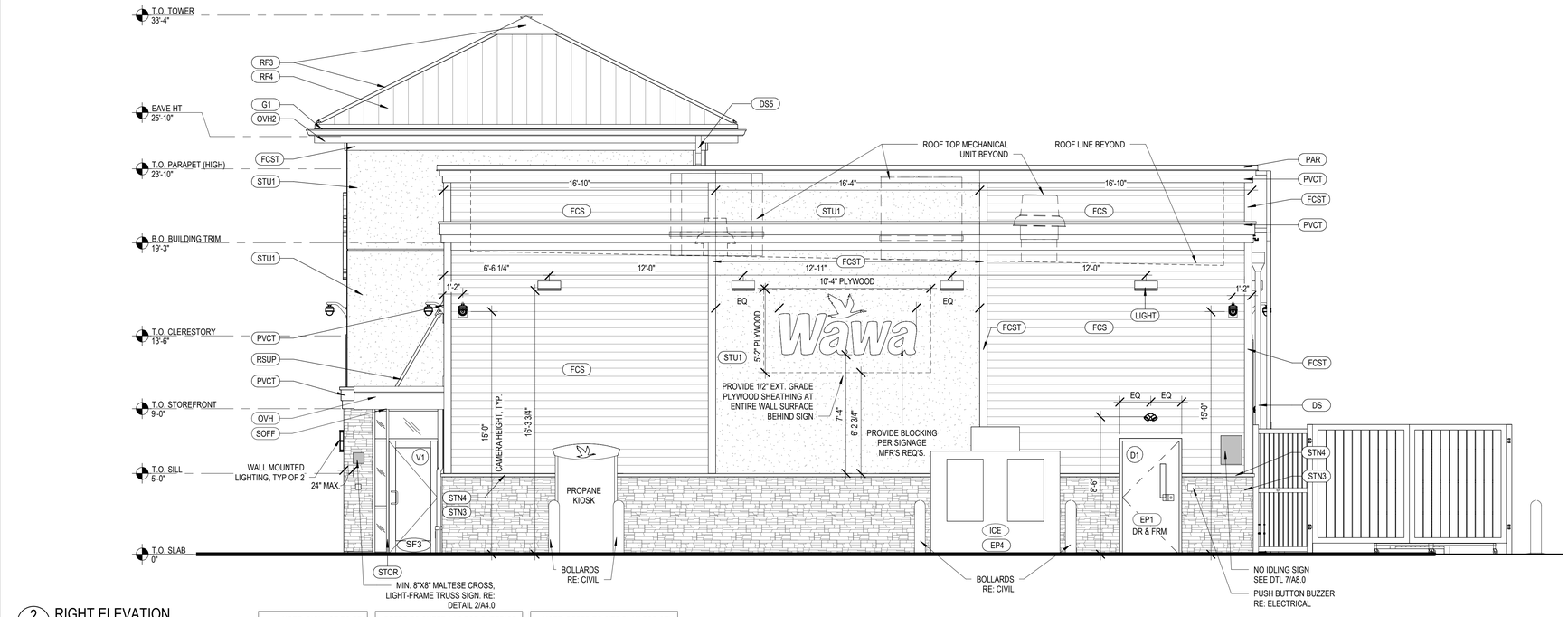
NOTE: SIGNAGE TO BE PERMITTED SEPERATELY

REFER TO SHEET A4.0 FOR EXTERIOR FINISH SCHEDULE AND NOTES

REFER TO SITE PLAN FOR STL BOLLARD LOCATIONS



3 A2 BAHAMA SHUTTER DETAIL
1/2" = 1'-0"

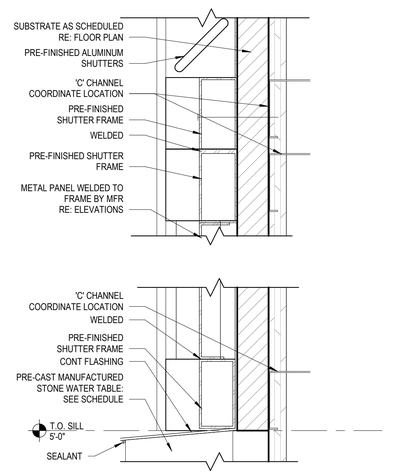


2 A2 RIGHT ELEVATION
1/4" = 1'-0"

NOTE: SIGNAGE TO BE PERMITTED SEPERATELY

REFER TO SHEET A4.0 FOR EXTERIOR FINISH SCHEDULE AND NOTES

NOTE: REFER TO SITE PLAN FOR STL BOLLARD LOCATIONS



4 A2 METAL PANEL UNDER SHUTTER, (MTPN)
6" = 1'-0"

PROFESSIONAL OF RECORD: ABIGAIL LEIGH BENJAMIN
LICENSE NO. AR103031
THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE WITHIN THE DIGITAL SIGNATURE ABOVE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

AECOM
AECOM Technical Services, Inc.
300 BROADACRES DRIVE, SUITE 250
BLOOMFIELD, N.J. 07003
973.883.8500 FAX 973.883.8601
http://www.aecom.com

CLIENT NAME
WAWA INC.
260 W. BALTIMORE PIKE
WAWA, PA 19063

PROJECT NAME
U45 FL - R PROTOTYPE v2025.Q1
WAWA STORE #XXXX
SW 42ND ST & TUSKAWILLA RD.
WINTER SPRINGS, FL

SHEET TITLE
EXTERIOR ELEVATIONS Copy 2

RELEASE	DATE
ISSUED FOR PERMIT	XX/XX/XX

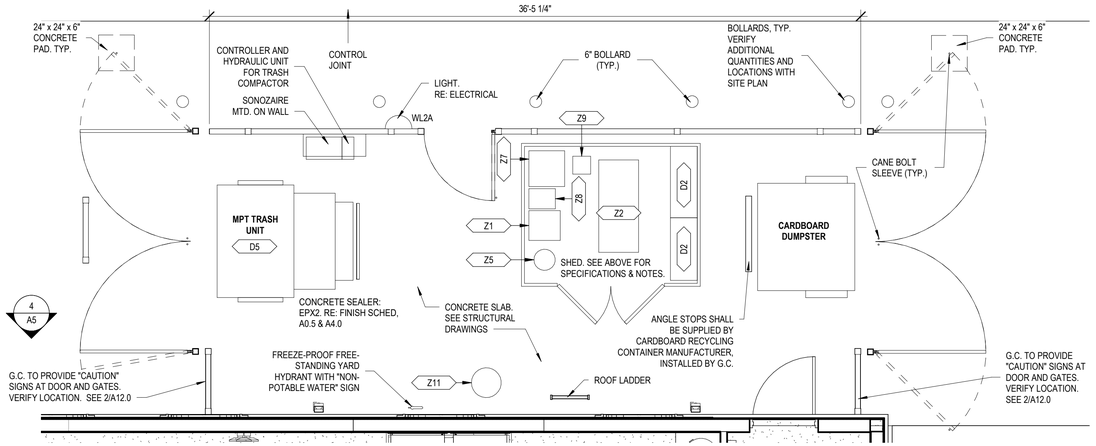
PROTOTYPE: U45 FL - R PROTOTYPE v2025.Q1
PROJECT NO. 60659912
DRAWN
CHECKED

XXXX
WINTER SPRINGS, FL

Wawa

A2

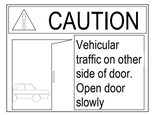
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



1 A3 TRASH COMPOUND PLAN
1/4" = 1'-0"

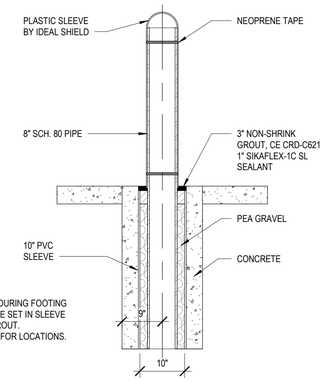
SHED SPECIFICATIONS
MFR: SUPERIOR SHEDS, INC.

MODEL: 10'-0" (WIDTH) X 8'-0" (DEPTH) VENTED SHED
PLAN TRACKING #33173-R1 (FBC 6TH EDITION - 2017)
AGENCY PLAN #SS-B-180CR1 (FBC 6TH EDITION - 2017)
COLOR: WHITE
NOTES: FURNISHED AND INSTALLED BY G.C. UNDER SEPARATE PERMIT



NOTE:
1. SIGN FURNISHED BY WAWA, INSTALLED BY GC
2. POST AT ALL GATES AND DOORS FACING TRAFFIC LANES

2 A3 SIGN AT DOORS AND GATES
3/4" = 1'-0"



NOTES:
1. SET 10" PVC SLEEVE DURING FOOTING POUR. BOLLARD TO BE SET IN SLEEVE WITH NON SHRINK GROUT.
2. REFER TO SITE PLAN FOR LOCATIONS.

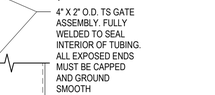
3 A3 BOLLARD DETAIL
3/4" = 1'-0"

4 A3 TYPICAL GATE ELEVATION
1/2" = 1'-0"

5 A3 CANE BOLT & LATCH DETAIL
1" = 1'-0"

NOTES:
1. ALL METAL TO BE HOT DIPPED GALVANIZED AND PAINTED WHITE, PER SPECS.

6 A3 GATE DETAIL
1" = 1'-0"



7 A3 PVC POST DETAIL
3/4" = 1'-0"

8 A3 TYPICAL PVC FENCE ELEVATION
1/2" = 1'-0"

9 A3 PARTIAL IN. ELEV.
1/4" = 1'-0"

10 A3 HINGE DETAIL
3" = 1'-0"

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

PROFESSIONAL OF RECORD: ABIGAIL LEIGH BENJAMIN
LICENSE NO. AR103031
THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:
ON THE DATE WITHIN THE DIGITAL SIGNATURE ABOVE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

AECOM
AECOM Technical Services, Inc.
300 BROADACRES DRIVE, SUITE 250
BLOOMFIELD, N.J 07003
973.883.8500 FAX 973.883.8601
http://www.aecom.com

CLIENT NAME
WAWA INC.
260 W. BALTIMORE PIKE
WAWA,PA 19063

PROJECT NAME
U45 FL - R PROTOTYPE v2025.Q1
WAWA STORE #XXXX
SR 434 & TUSKAWILLA RD.
WINTER SPRINGS, FL

SHEET TITLE
TRASH COMPOUND DETAILS

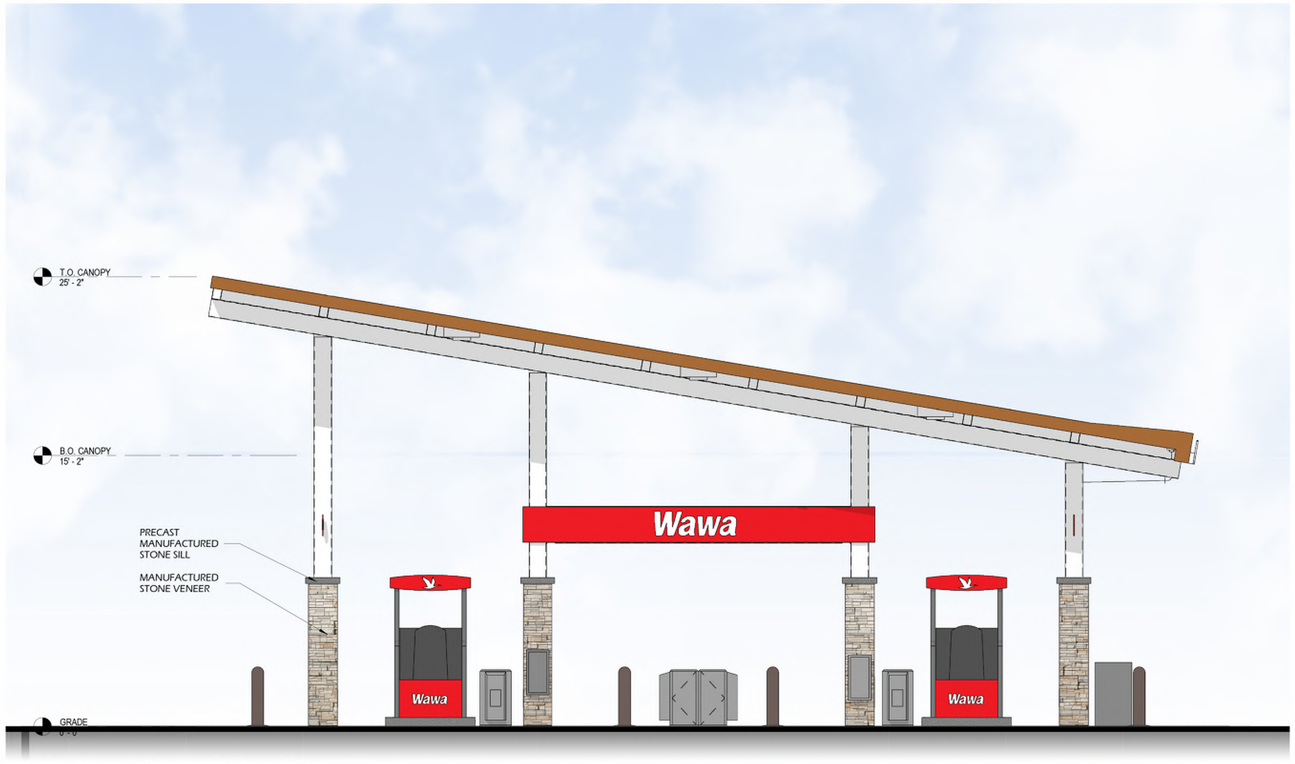
RELEASE	DATE
ISSUED FOR PERMIT	XX/XX/XX

PROTOTYPE: U45 FL - R PROTOTYPE v2025.Q1
PROJECT NO. 60699812
DRAWN
CHECKED

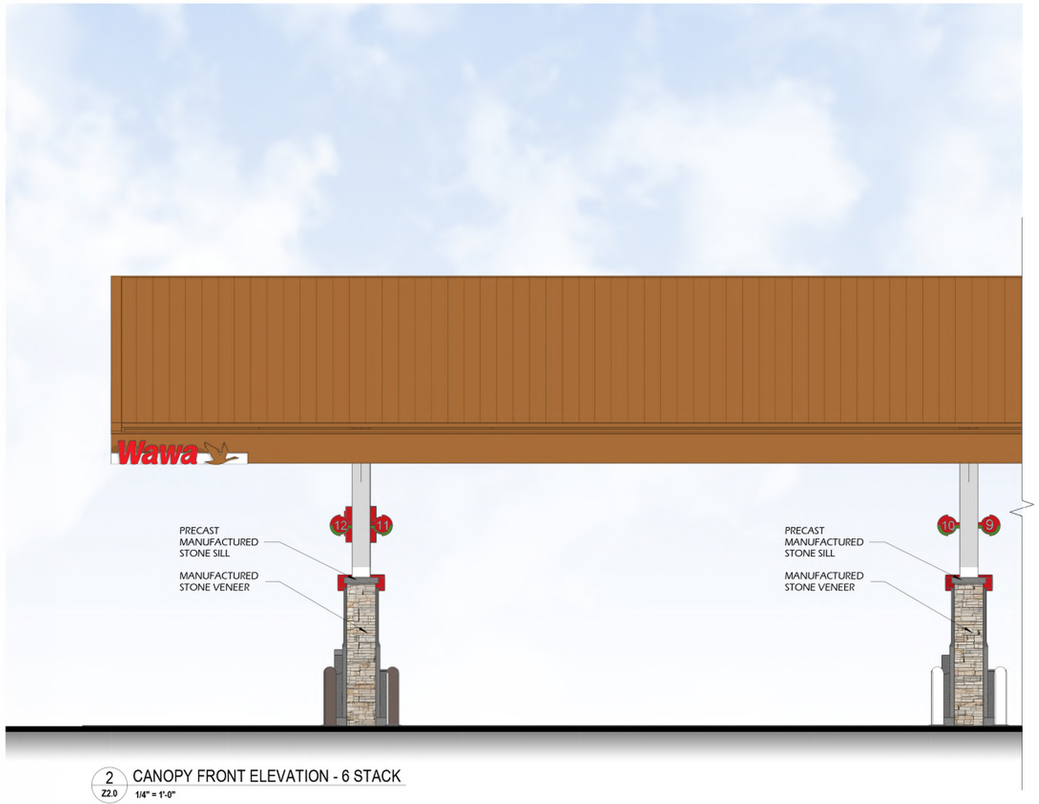
XXXX
WINTER SPRINGS, FL

Wawa

A3



1 Z2.0 CANOPY SIDE ELEVATION - 6 STACK
1/4" = 1'-0"



2 Z2.0 CANOPY FRONT ELEVATION - 6 STACK
1/4" = 1'-0"



3 Z2.0 PERSPECTIVE (FOR REFERENCE ONLY)

AECOM
300 BROADACRES DRIVE, SUITE 250
BLOOMFIELD, NJ 07003
973.883.8500 FAX 973.883.8601
http://www.aecom.com

STACKED 6 GAS CANOPY - XXXX

SR 434 & TUSKAWILLA RD. WINTER SPRINGS, FL • XXXX • 08/30/2024



VIEW LOOKING WEST FROM TUSKAWILLA ROAD



VIEW LOOKING SOUTH FROM PARKING LOT

PROFESSIONAL OF RECORD: ABIGAIL LEIGH BENJAMIN
LICENSE NO. AR103031
THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE WITHIN THE DIGITAL SIGNATURE ABOVE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

AECOM
AECOM Technical Services, Inc.
300 BROADACRES DRIVE, SUITE 250
BLOOMFIELD, N.J. 07003
973.883.8500 FAX 973.883.8601
http://www.aecom.com

CLIENT NAME
WAWA INC.
260 W. BALTIMORE PIKE
WAWA, PA 19063

PROJECT NAME
U45 FL - R PROTOTYPE v2025.Q1
WAWA STORE #XXXX
SR 434 & TUSKAWILLA RD.
WINTER SPRINGS, FL

SHEET TITLE
3D RENDERINGS

RELEASE	DATE

PROTOTYPE: U45 FL - R PROTOTYPE v2025.Q1
PROJECT NO. 60659812
DRAWN
CHECKED

XXXX
WINTER SPRINGS, FL

Wawa

A4

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

Kimley»Horn

July 3, 2025

Terrilyn Rolle, Director of Community Development
City of Winter Springs
Community Development Department
1126 State Road 434
Winter Springs, Florida 32708

Subject: **Waiver Application Justification**
Wawa at Winter Springs Marketplace
Site Plan Case No.: FEDP-2025-0016

Please find attached plans and additional supporting documents for the waiver request from the City of Winter Springs Code Sections listed below.

1) Section 20-325 – Transect Standards – Lot Design Guidelines Table
   - ***a) A waiver is requested from Winter Springs City Code Sec. 20-325 to allow a maximum 98-ft front setback from Tuskawilla Road in lieu of the 50-ft max setback specified.***
   - ***b) A waiver is requested from Winter Springs City Code Sec. 20-325 to allow a maximum 182-ft front setback from S.R. 434 in lieu of the 50-ft max setback specified.***
   - ***c) A waiver is requested from Winter Springs City Code Sec. 20-325 to allow a 0-ft rear setback in lieu of the 15-ft min setback specified.***

The following is an itemized discussion to each of the six (6) waiver justification questions included with this request package.

1. Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

   1a) ***The waiver allowing a maximum 98-ft front building setback (to Tuskawilla Rd) in lieu of the 50-ft setback is requested in order to better accommodate safer traffic flow and better visibility of fueling services, making the site more functional and attractive.***

   A 50-ft setback hinders vehicle movement, causing congestion and safety concerns. Additionally, placing the building at the front obscures the gas pumps and car line from the road, which could deter potential customers. The 50-ft setback prevents functionality given the site's triangular geometry and would prevent adequate parking for the project. The 98-ft setback allows the design to accommodate these constraints, ensuring both safety and operational efficiency.

   1b) ***The waiver allowing a maximum 182-ft front building setback (to SR 434) in lieu of the 50-ft setback is requested in order to better accommodate safer traffic flow and better visibility of services, making the site more functional and attractive.***

   Positioning the building within the 50-ft setback would create poor traffic circulation and safety issues, as vehicles would have difficulty maneuvering efficiently due to the triangular geometry of the site. Additionally, placing the building at the front would obscure the gas pumps and car line from S.R. 434, deterring potential customers due to reduced visibility. Granting the 182-ft setback ensures better traffic flow, enhances visibility of the facilities, and ultimately results in a more functional and safe site design.

1c) ***The waiver allowing 0-ft rear setback in lieu of the 15-ft setback is requested in order to achieve integration of shared driveway aisles and optimal site circulation.***

This waiver is necessary because the 15-ft rear setback prevents functionality given the site's triangular geometry and would prevent adequate parking for the project. The adjoining properties are zoned commercial, and the master development plan incorporates internal driveway aisles. Enforcing the 15-ft rear setback would be impractical, as the cohesive design of the commercial area depends on unrestricted space for shared driveway aisles, ensuring seamless accessibility and site flow.

2. Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

   The proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and is generally consistent with the Comprehensive Plan. All design adjustments and enhancements have been made in accordance with city guidelines and feedback from Staff, ensuring the project aligns with Winter Springs' development standards and goals.

3. Will the proposed development plan significantly enhance the real property?

   The proposed development plan will significantly enhance the real property as the current property is an undeveloped vacant lot. By transforming the development parcel into a cohesive, visually appealing area, the project will add value and integrate seamlessly with the surrounding environment, benefiting both the property and the community.

4. Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

   The proposed development aims to serve the public health, safety, and welfare of the City of Winter Springs by introducing a gas station and convenience store developed to the City's commercial standards for this corridor. Additionally, the development will boost the City's commercial tax base, helping to reduce the financial burden on Winter Springs residents. Together, these improvements serve the community by providing essential services, enhancing safety and cleanliness, and contributing to the local economy.

5. Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

   The waiver will not diminish the property values and seeks to maintain the essential character of the surrounding neighborhood.

6. Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

   The requested waivers are the minimum waivers that will eliminate the unreasonable conditions caused by the sections of code detailed above in the introduction of this letter.

7. Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

   The proposed site is designed to be compatible and harmonious with the surrounding neighborhood. Adding a gas station and convenience store will enhance the overall experience of the Marketplace, making it a convenient one-stop destination for various

needs. The cohesive design, landscaping, and well-maintained facilities will complement the existing retail and residential areas, ensuring a seamless integration with the community. The improved infrastructure, including well-lit and secure facilities will upgrade experience for Winter Springs residents. This design approach ensures that the development respects and improves the character of the neighborhood while providing valuable services and amenities in a convenient and attractive setting.

If you have any further questions, please do not hesitate to contact our office at 407-536-4440 or by email at **cory.sitler@kimley-horn.com**.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Cory N. Sitler, P.E.
FL PE No. 89984
Associate

K:\ORL_Civil\149170026-Winter Springs Wawa\LETTERS\2025-05-13 Waiver Letter - Setbacks.docx

Kimley»Horn

July 3, 2025

Terrilyn Rolle, Director of Community Development
City of Winter Springs
Community Development Department
1126 State Road 434
Winter Springs, Florida 32708

Subject: **Waiver Application Justification**
Wawa at Winter Springs Marketplace
Site Plan Case No.: FEDP-2025-0016

Please find attached plans and additional supporting documents for the waiver request from the City of Winter Springs Code Sections listed below.

1) Section 20-327.1 – Signs
   a) A waiver is requested from Winter Springs City Code Sec. 20-327.1 to allow monument-style ground signs on properties located along SR-434 and Tuskawilla Road within the Town Center, which includes this property. Two (2) signs are proposed. Please see the master signage site plan for the location of the proposed signs.

The following is an itemized discussion to each of the six (6) waiver justification questions included with this request package.

1. Demonstrate that the applicable term or condition clearly creates an illogical, impossible,

1a) ***The waiver to allowing monument-style ground signs along SR 434 and Tuskawilla Road within the Town Center is necessary due to the property's location. Positioned at the intersection of two major roads—SR 434 and Tuskawilla, which have six and five lanes respectively along the property's frontage and feature planted medians—business visibility from these wide, high-speed roads is essential for sustaining the development's commercial success. Additionally, separate monuments signage is needed for this specific tenant as fueling prices will be displayed for customers and cannot be added to the existing signage for the Marketplace.***

Monument-style ground signs are typical for this type of development, including comparable properties within the SR 434 overlay district nearby. Given that the property in question is situated near the edge of the Town Center district, we believe that allowing these monument-style signs is both fair and aligns with the City's intent for the area and development.

The proposed signs include: Two (2) monument ground signs along each property frontage (SR 434 & Tuskawilla Rd).

2. Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

The proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and is generally consistent with the Comprehensive Plan. All design adjustments and enhancements have been made in accordance with city guidelines and feedback from Staff, ensuring the project aligns with Winter Springs' development standards and goals.

3. Will the proposed development plan significantly enhance the real property?

   The proposed development plan will significantly enhance the real property as the current property is an undeveloped vacant lot. By transforming the development parcel into a cohesive, visually appealing area, the project will add value and integrate seamlessly with the surrounding environment, benefiting both the property and the community.

4. Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

   The proposed development aims to serve the public health, safety, and welfare of the City of Winter Springs by introducing a gas station and convenience store developed to the City's commercial standards for this corridor. Additionally, the development will boost the City's commercial tax base, helping to reduce the financial burden on Winter Springs residents. Together, these improvements serve the community by providing essential services, enhancing safety and cleanliness, and contributing to the local economy.

5. Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

   The waiver will not diminish the property values and seeks to maintain the essential character of the surrounding neighborhood.

6. Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

   The requested waivers are the minimum waivers that will eliminate the unreasonable conditions caused by the sections of code detailed above in the introduction of this letter.

7. Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

   The proposed site is designed to be compatible and harmonious with the surrounding neighborhood. Adding a gas station and convenience store will enhance the overall experience of the Marketplace, making it a convenient one-stop destination for various needs. The cohesive design, landscaping, and well-maintained facilities will complement the existing retail and residential areas, ensuring a seamless integration with the community. The improved infrastructure, including well-lit and secure facilities will upgrade experience for Winter Springs residents. This design approach ensures that the development respects and improves the character of the neighborhood while providing valuable services and amenities in a convenient and attractive setting.

If you have any further questions, please do not hesitate to contact our office at 407-536-4440 or by email at **cory.sitler@kimley-horn.com**.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Cory N. Sitler, P.E.
FL PE No. 89984
Associate

K:\ORL_Civil\149170026-Winter Springs Wawa\LETTERS\2025-05-13 Waiver Letter -Signs.docx

July 3, 2025

Terrilyn Rolle, Director of Community Development
City of Winter Springs
Community Development Department
1126 State Road 434
Winter Springs, Florida 32708

Subject: **Waiver Application Justification**
Wawa at Winter Springs Marketplace
Site Plan Case No.: FEDP-2025-0016

Please find attached plans and additional supporting documents for the waiver request from the City of Winter Springs Code Sections listed below.

1) Section 20-601 – Streetscape Requirements (Per Ordinance 2024)
   a) ***A waiver is requested from Winter Springs City Code Sec. 20-605 (Ordinance 2020-02) to allow a 13-ft onsite landscape buffer with canopy trees, a meandering 6-ft offsite sidewalk, and interspersed understory trees between back of sidewalk and front of sidewalk within the R/W. The requested streetscape buffer modification will provide the 27-ft buffer as required by code. This request will be in lieu of the required 5-ft landscape area adjacent to the R.O.W., followed by a 6-ft sidewalk, and a 16-ft landscape and treescape area (total 27-ft).*** **A waiver is requested for the Tuskawilla streetscape width due to insufficient right-of-way (R.O.W.) at the southern end, which limits the total streetscape to 22-ft. The site's geometry and layout have been optimized to ensure efficient parking and circulation. Unfortunately, this optimal parking arrangement restricts the availability of additional streetscape space. However, the landscaping will comply with the specified number of plantings as outlined in the relevant code section.**

The following is an itemized discussion to each of the six (6) waiver justification questions included with this request package.

1. Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

   1a) ***The waiver allowing modifications to the streetscape configuration and plant species along SR 434 and Tuskawilla Road is necessary due to existing utilities, sidewalks, and site geometry. Current underground and overhead utilities limit tree planting per the code requirements. A waiver is requested for the streetscape width on Tuskawilla Road due to the limited right-of-way (R.O.W.) and conflicts with overhead utilities affecting the sidewalk placement. These constraints interfere with the ability to meet the 27-foot streetscape requirement. The sidewalk cannot be moved further into the property to accommodate additional streetscape space due to the site's geometry and the necessity to maintain efficient parking and circulation. Given these fixed site conditions, meeting the required streetscape 27-ft width is not feasible.***

   To collaborate with City Staff, the applicant has agreed to place canopy trees within the onsite landscape buffer and intersperse understory trees among them consistent with other frontage within the Marketplace. The existing sidewalk within the R.O.W. will be upgraded to a 6-ft sidewalk in areas adjacent to the proposed development. Understory trees will be placed between the curb and sidewalk in the R.O.W.

This proposed configuration provides the required 6-ft sidewalk and canopy trees within the streetscape buffer, mitigating conflicts with overhead utilities as the trees mature. The inclusion of understory trees in the R.O.W. will enhance the streetscape for pedestrians and vehicular traffic. While this layout differs from the standard streetscape design, it meets the intent of the code requirements.

2. Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

   The proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and is generally consistent with the Comprehensive Plan. All design adjustments and enhancements have been made in accordance with city guidelines and feedback from Staff, ensuring the project aligns with Winter Springs' development standards and goals.

3. Will the proposed development plan significantly enhance the real property?

   The proposed development plan will significantly enhance the real property as the current property is an undeveloped vacant lot. By transforming the development parcel into a cohesive, visually appealing area, the project will add value and integrate seamlessly with the surrounding environment, benefiting both the property and the community.

4. Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

   The proposed development aims to serve the public health, safety, and welfare of the City of Winter Springs by introducing a gas station and convenience store developed to the City's commercial standards for this corridor. Additionally, the development will boost the City's commercial tax base, helping to reduce the financial burden on Winter Springs residents. Together, these improvements serve the community by providing essential services, enhancing safety and cleanliness, and contributing to the local economy.

5. Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

   The waiver will not diminish the property values and seeks to maintain the essential character of the surrounding neighborhood.

6. Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

   The requested waivers are the minimum waivers that will eliminate the unreasonable conditions caused by the sections of code detailed above in the introduction of this letter.

7. Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

   The proposed site is designed to be compatible and harmonious with the surrounding neighborhood. Adding a gas station and convenience store will enhance the overall experience of the Marketplace, making it a convenient one-stop destination for various needs. The cohesive design, landscaping, and well-maintained facilities will complement the existing retail and residential areas, ensuring a seamless integration with the community. The improved infrastructure, including well-lit and secure facilities will upgrade experience for Winter Springs residents. This design approach ensures that the

development respects and improves the character of the neighborhood while providing valuable services and amenities in a convenient and attractive setting.

If you have any further questions, please do not hesitate to contact our office at 407-536-4440 or by email at **cory.sitler@kimley-horn.com**.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Cory N. Sitler, P.E.
FL PE No. 89984
Associate

K:\ORL_Civil\149170026-Winter Springs Wawa\LETTERS\2025-05-13 Waiver Letter - Streetscape.docx

Kimley»Horn

June 4, 2025

Terrilyn Rolle, Director of Community Development
City of Winter Springs
Community Development Department
1126 E State Road 434
Winter Springs, FL 32708

Re: **Conditional Use Application Cover Letter**
Wawa at Winter Springs Marketplace

Please find attached the plans and supporting documentation for the Conditional Use request for the proposed Wawa at Winter Springs Marketplace project. The numbered items below provide responses to the questions within the Conditional Use Application provided.

1. How is the Conditional Use (density, height, scale and intensity, hours of operation, building and lighting design, setbacks, buffers, noise, refuse, odor, particulates, smoke, fumes and other emissions parking and traffic generating characteristics, number of persons anticipated using, residing or working under the conditional use, and other offsite impacts) compatible and harmonious with adjacent land uses?
Response: The project is consistent with the commercialized corridor within the Urban Town Center District. The proposed use is complimentary to the other uses within the Winter Springs Marketplace and provides additional services that residents can utilize while at the Marketplace. The project improves the walkability and promotes pedestrian and bicycle traffic which further enhances the neighborhood-like atmosphere.

The proposed height, scale, and intensity of the development in the final engineering plans align with the uses previously approved in Winter Springs and the existing uses within the Winter Springs Marketplace master development. Impacts related to noise, refuse, odor, particulates, smoke, fumes, and other emissions are not expected to adversely affect the surrounding areas. The development is designed to be compatible and harmonious with adjacent land uses, ensuring it does not negatively impact activities in the vicinity.

2. Will the Conditional Use adversely impact land use activities in the immediate vicinity? If no, why not?
Response: This project use is consistent with surrounding uses within the Marketplace and does not adversely impact those tenants. The proposed development is strategically distanced from the residential areas along the northwest and southern boundaries. Additionally, enhanced streetscaping along the S.R. 434 frontage has been incorporated to ensure integration of open space with the development.

3. Demonstrate the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale and intensity of the conditional use requested. The site shall be of sufficient size to accommodate design amenities such as screening, buffers, landscaping, open space, off-street parking, safe and convenient automobile, bicycle, and pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.
Response: Utilizing existing access points from the marketplace and internal drive aisles, the site access and internal circulation are designed to conform to existing traffic patterns. Streetscape improvements are proposed with enhanced landscaping along Tuskawilla Road and S.R. 434, aligning with the City's streetscape intentions. Onsite improvements

accommodate bikes and pedestrian mobility, ensuring a cohesive and accessible environment for all users.

The site's size, shape, proposed access points, and internal circulation are well-designed to support the proposed development. These connections provide direct access to the Wawa site without requiring vehicles to traverse other tenants' parking areas, SR 434, or Tuskawilla Rd. Additionally, access points have been verified through auto-turn simulations to ensure adequate movement and access larger vehicles.

4. Will the proposed use have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values? If no, why not?
Response: The proposed development of a convenience store/gas station, a conditional use within the T5 Transect of the Town Center District, is expected to enhance the local economy, governmental fiscal impact, employment, and property values. By creating new job opportunities, the site will positively contribute to the local economy. Additionally, it will generate a beneficial fiscal impact on local government through impact fees, new revenue streams, and utility connections. Developing this undeveloped parcel into a cohesive part of the Winter Springs Town Center will also boost property values.

5. Will the proposed use have an adverse impact on natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards? If no, why not?
Response: As part of the master development, ECS Florida, LLC completed geotechnical and environmental studies for all areas of the site. The reports did not identify adverse impacts to the natural environment. According to T5 Transect Town Center standards (Sec. 20-325), the site allows for a maximum lot coverage of 100%. However, the applicant has chosen to limit the impervious area and building coverage, opting not to utilize the full 100% lot coverage allowed.

A noise study is not required since the City's noise ordinance (Sec. 13-31) restricts decibel levels to 60-70 in commercial zones between 10:00 p.m. and 7:00 a.m., prohibiting any disturbance during these hours. The proposed use will fully comply with the City's noise regulations.

The site is not located within a floodplain. Based on Flood Insurance Rate Map (FIRM) No. 12117C0160F, Community No. 120295, City of Winter Springs, the site is located in Zone "X". As stated in the FIRM panel legend, Zone X is for areas of 0.2% annual chance of flooding.

The stormwater will connect to the existing system, which was permitted for future development of the parcel by the City of Winter Springs and the St. Johns Water Management District. The project is consistent with the master stormwater system design, ensuring efficient and compliant stormwater management.

6. Will the proposed use have an adverse impact on historic, scenic and cultural resources, including views and vistas, and loss or degradation of cultural and historic resources? If no, why not?
Response: Proposed development does not anticipate adverse impact on any historic, scenic, or cultural resources, including views and vistas, and loss or degradation of cultural and historic resources.

7. Will the proposed use have an adverse impact on public services, including water, sewer, stormwater and surface water management, police, fire, parks and recreation, streets, public transportation, marina and waterways, and bicycle and pedestrian facilities? If no, why not?
Response: The proposed development has been designed in accordance with the T5 Transect of the Town Center District Code, which includes criteria for water, sewer, stormwater and surface water management, police, and fire. The stormwater will connect to the existing system, permitted for future development by the City of Winter Springs and the St. Johns Water Management District, consistent with the master stormwater design for efficient and compliant stormwater management.

The proposed development includes the installation of bicycle racks and an onsite sidewalk network, which will provide safe connectivity from the right-of-way through the site and integrate with the master development's pedestrian circulation network.

8. Will the proposed use have an adverse impact on housing and social conditions, including a variety of housing unit types and prices, and neighborhood quality? If no, why not?
Response: The proposed development does not anticipate adverse impact on housing or social conditions.

9. Will the proposed use avoid significant adverse odor, emission, noise, glare, and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other sire elements? If no, why not?
Response: The proposed Wawa at Winter Spring Marketplace does not anticipate emitting significant adverse odors, emission, noise, glare, or vibration impacts on adjacent properties. The site has been designed with adequate parking, lighting, and refuse collection. While the proposed project will utilize ten additional parking spaces adjacent to the stormwater pond, these spaces will be dedicated to employees and ensure sufficient parking for customers.

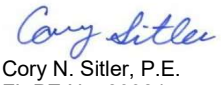
10. Demonstrate that the conditional use and associated site plan have been designed to incorporate mitigative techniques and plans needed to prevent adverse impacts addressed in the criteria stated herein or to adjacent and surrounding uses and properties.
Response: The proposed development includes adequate screening and buffering along the applicable property boundaries. The site was planned for future development within the Winter Springs Marketplace master development and is consistent with the overall look and feel of the area. Residential impacts are not anticipated as part of this project.

11. If the proposed conditional use is a residential use, whether the elementary, middle and high schools (K-12) that will be initially assigned to the residential project by the School District at the time the city commission considers final approval of the conditional use have both sufficient capacity, are in close proximity to the project so as to make each of the assigned schools accessible and convenient (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the school population that will be drawn from the project, and promote and support the integration of future residents of the project into the existing city of Winter Springs community in a sustainable manner.
Response: Not Applicable. The project proposes a gas station/ convenience store use.

If you have any further questions, please do not hesitate to contact our office at 407-536-4440 or by email at **cory.sitler@kimley-horn.com**.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Cory N. Sitler, P.E.
FL PE No. 89984
Associate

K:\ORL_Civil\149170026-Winter Springs Wawa\LETTERS\2025-05-13 Conditional Use Cover Letter.docx

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Site Plan Review

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Florida Statue 419.001. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. By submitting this application, you hereby grant temporary right of entry for City officials to enter upon the subject property for purposes of evaluating this application.

Site Plan Type

Type of Development: ____ Residential __X__ Non-Residential

___Preliminary Review __X__Final Review ___Combined Preliminary/Final ___Resubmittal ___ Recorded Plat

Project Name: Wawa At Winter Springs Marketplace Date: 5/13/2025

Applicant/Agent Information

Applicant(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Person Who Will Upload Plans: Cory Sitler

Email: cory.sitler@kimley-horn.com Phone#: 407-536-4440

Property Owner(s) Name (If Applicant is not the Property Owner)

Name: _____

Email: _____ Phone #: _____

Mailing Address: _____

Phone Number: _____

Site Information

Project Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Existing Use: Commercial

Proposed Use: Commercial

Zoning District: T-5 Urban Ceneter

Future Land Use: Commercial

Is the property located in the Town Center District? _X__Yes _____No

Is the property within the S.R. 434 Corridor Overlay District? _X__Yes _____No

Is the property located in the Greeneway Interchange Zoning District? _____Yes _X__No

The Planning and Zoning Board/Local Planning Agency shall review Site Plan Applications and make a written recommendation to the City Commission. The City Commission shall render all final decisions regarding Preliminary and Final Engineering Plans and may impose reasonable conditions on any approved plans to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the City Code and Comprehensive Plan. All formal decisions shall be based upon the applicable criteria as set forth in the City's Code of Ordinances Chapter 9, Land Development and Chapter 20, Zoning.

Applicants are advised, that if they decide to appeal any decisions made at the meetings or hearings, with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to ensure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per 286.0105, Florida Statutes.

Application Fees

Fees are as reflected on the Fee Schedule plus actual costs incurred for advertising or notification, and reimbursement for technical, and/or professional services which may be required in connection with the review, inspection, or approval of any development (based on accounting submitted by the City Consultant), payable prior to approval of the pertinent stage of development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Site Plan Review

THIS APPLICATION MUST BE SIGNED IN THE PRESENCE OF A NOTARY

This is to certify that I am the owner in simple fee of the subject property as described in this application for Site Plan Review.

Property Owner(s) Name (Print): Tuscawilla Property Investors, LLC - Ryan Stahl

Property Owner Signature: _____ Date: 5/9/25

Property Owner(s) Name (Print): _____

Property Owner Signature: _____ Date: _____

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 9th day of May, 20 25, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 5/9/25 (seal):

Notary Public Signature: Kristin Banks

My Commission Expires: June 4, 2027

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: If the applicant is not the property owner the Property Owner shall sign and have their signature notarized below, authorizing the applicant and/or agent permission to submit the Site Plan Review application.

Property Owner's Name (Print): _____

Property Owner Signature: _____ Date _____

STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: _____ (seal):

Notary Public Signature: _____

My Commission Expires: _____

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Aesthetic Review

REQUIRED INFORMATION

Applicant(s): Tuscawilla Property Investors, LLC Date: 5/13/2025
Mailing address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751
Email: RStahl@equinox-development.com
Phone Number: (407) 628-0077

Property Owner(s): Tuscawilla Property Investors, LLC
Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751
Email: RStahl@equinox-development.com
Phone Number: (407) 628-0077

Project Name: Wawa At Winter Springs Marketplace
Property Address: Northwest corner of FL-434 & Tuskawilla Rd
Parcel ID(s): 36-20-30-502-0000-0090
Parcel Size: 1.21 Acres
Existing Use: Commercial

List all witnesses that the applicant intends to present to the City Commission to provide testimony:
Ryan Stahl and Cory Sitler

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:
Site plan, building/signage elevations and renderings

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Aesthetic Review

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 9–Aesthetic Review Sec.9-605. All applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. Once the application is deemed sufficient, the applicant shall move forward with the Community Workshop, required per Chapter 20–Zoning Sec.20-29.1.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Conditional Use is quasi-judicial in nature. Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Aesthetic Review recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Aesthetic Review and may impose reasonable conditions on any approved Aesthetic Review to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 9, Aesthetic Review Standards. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

An Aesthetic Review Approval by the City Commission under this article shall be valid for a maximum of eighteen (18) months from the date the city commission renders its approval at a public meeting. If the applicant fails to obtain a building permit within the eighteen (18) month period, the city commission's approval shall expire at the end of the period. However, once a building permit is issued, the approval shall be valid for a time period equal to the permit and shall expire only if the building permit expires. Reasonable extensions may be granted by the city commission upon good cause shown by the applicant, provided substantial changes have not occurred in the surrounding area that would make the prior approval inconsistent with the criteria set forth in Chapter 9-Aesthetic Review Sec.9-9603

Criteria for Review

1. The plans and specifications of the proposed project indicate that the setting, landscaping, proportions, materials, colors, texture, scale, unity, balance, rhythm, contrast, and simplicity are coordinated in a harmonious manner relevant to the particular proposal, surrounding area and cultural character of the community.
2. The plans for the proposed project are in harmony with any future development which has been formally approved by the City within the surrounding area.
3. The plans for the proposed project are not excessively similar or dissimilar to any other building, structure or sign which is either fully constructed, permitted but not fully constructed, or included on the same permit application, and facing upon the same or intersecting street within five hundred (500) feet of the proposed site, with respect to one or more of the following features of exterior design and appearance:
    a. Front or side elevations;
    b. Size and arrangement of elevation facing the street, including reverse arrangement; or
    c. Other significant features of design such as, but not limited to: materials, roof line, hardscape improvements, and height or design elements.
4. The plans for the proposed project are in harmony with, or significantly enhance, the established character of other buildings, structures or signs in the surrounding area with respect to architectural specifications and design features deemed significant based upon commonly accepted architectural principles of the local community.
5. The proposed project is consistent and compatible with the intent and purpose of this article, the Comprehensive Plan for Winter Springs, design criteria adopted by the City (e.g. Town Center guidelines, SR 434 design specifications) and other applicable federal, state or local laws.
6. The proposed project has incorporated significant architectural enhancements such as concrete masonry units with stucco, marble, termite-resistant wood, wrought iron, brick, columns and piers, porches, arches, fountains, planting areas, display windows, and other distinctive design detailing and promoting the character of the community.

REQUIRED DOCUMENTATION

___ A complete Application and applicable fee

- X Minor (Site less than 2 acres)
- ___ Major (Site greater than 2 acres)
- ___ Modification of previously approved Aesthetic Review

X A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

X Site Plan

X Building Elevations (color) illustrating all sides of structures

X Color rendering illustrating street view with landscaping at time of planting;

X Illustrations of all walls, fences, and other accessory structures and indication of their height and the materials proposed for their construction;

X Signage elevations of proposed exterior permanent signs, outdoor advertising or other constructed elements other than habitable space, if any;

X Identification of materials, textures, and colors to be used on all buildings, accessory structures, exterior signs, and other constructed elements;

X Other architectural and engineering data as may be requested to clarify the application.

___ For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Aesthetic Review

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for an Aesthetic Review for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl

Applicant Signature: _____ Date: 5/9/25

Business Name: Tuscawilla Property Investors, LLC

Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 36-20-30-502-0000-0090

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 9th day of May, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 5/9/25 (seal):

Notary Public Signature: _____

My Commission Expires: June 4, 2027

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): _____

Property Owner Signature: _____ Date _____

STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____Date: _____ (seal):

Notary Public Signature: _____

My Commission Expires: _____

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Development Agreement

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per all applicable City Codes and the City Comprehensive Plan. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. Once the application is deemed sufficient, the applicant shall move forward with the Community Workshop, required per Chapter 20–Zoning Sec.20-29.1.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Development Agreement is quasi-judicial in nature. Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Development Agreement recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Development Agreements and may impose reasonable conditions on any approved Development Agreement to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan.

REQUIRED INFORMATION

Applicant(s): Tuscawilla Property Investors, LLC

Applicant Signature: _____ Date: 7/21/2025

Mailing address: 630 South Maitland Avenue, Suite 100, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Property Owner(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 100, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Development Agreement

Property Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Project Name: Wawa At Winter Springs Marketplace

A general description of the relief sought under this division.

The request is to revise the Development Agreement to incorporate the development of parcel 36-20-30-502-0000-0090 per the plans submitted under FDEP-2025-0016.

A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in the City Zoning Code and City Comprehensive Plan.

This project satisfies the review criteria as proposed under the conditional use, waivers, and aesthetic applications that are currently under review.

List all witnesses that the applicant intends to present to the City Commission to provide testimony:

Cory Sitler and Ryan Stahl

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

Photos (if needed)

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Development Agreement

REQUIRED DOCUMENTATION

_X_ A complete Application and Fee

_X_ An Electronic copy of the most recent survey of the subject property.

_X_ An Electronic copy of the Legal Description of the subject property.

_X_ Documentation and Data supporting the request.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@wintersprings fl.org

Application – Development Agreement

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Development Agreement for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl

Applicant Signature: _____ Date: 7.21.25

Business Name: Tuscawilla Property Investors, LLC

Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 36-20-30-502-0000-0090

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 21st day of July, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 7/21/2025 (seal):

Notary Public Signature: Kristin Banks

My Commission expires: June 4, 2027

NOTARY PUBLIC STATE OF FLORIDA

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): _____

Property Owner Signature: _____ Date _____

STATE OF _____ COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: _____ (seal):

Notary Public Signature: _____

My Commission expires: _____

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20 – Zoning Sec. 20-34. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Waiver is quasi-judicial in nature.

Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Waiver recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Waivers and may impose reasonable conditions on any approved Waiver to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Waiver which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Waiver, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Waiver shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED INFORMATION

Applicant(s): Tuscawilla Property Investors, LLC Date: 5/13/2025

Mailing address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Property Owner(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Project Name: Wawa At Winter Springs Marketplace

Property Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Existing Use: Commercial

All waiver requests shall be written in the following format: A waiver is requested from Winter Springs City Code 'X' to allow 'Y' in lieu of 'Z'. After the request, the applicant shall provide a justification for each waiver request.

List Waiver(s)(provide additional sheets if necessary): See attached cover letter.

Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

See attached cover letter.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

See attached cover letter.

Will the proposed development plan significantly enhance the real property?

See attached cover letter.

Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

See attached cover letter.

Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

See attached cover letter.

Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

See attached cover letter.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org
Application – Waiver

Is the proposed development plan compatible and harmonious with the surrounding neighborhood?
See attached cover letter.

List all witnesses that the applicant intends to present to the City Commission to provide testimony:
Ryan Stahl, Cory Sitler, and Jonathan Martin

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:
Photos (if needed)

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED DOCUMENTATION

_x_ A complete Application and Fee

_x_ A general description of the relief sought under this division

_x_ A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

_x_ A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

_x_ An Excel mailing list with the names and addresses of each property owner within 500 ft. of each property line, along with the HOA Associations within 1/2 mile of each property line.

___ For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for an Aesthetic Review for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl

Applicant Signature: _____ Date: 5/9/25

Business Name: Tuscawilla Property Investors, LLC

Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 36-20-30-502-0000-0090

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 9th day of May, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 5/9/25 (seal):

Notary Public Signature: Kristin Banks

My Commission Expires: June 4, 2027

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): _____

Property Owner Signature: _____ Date _____

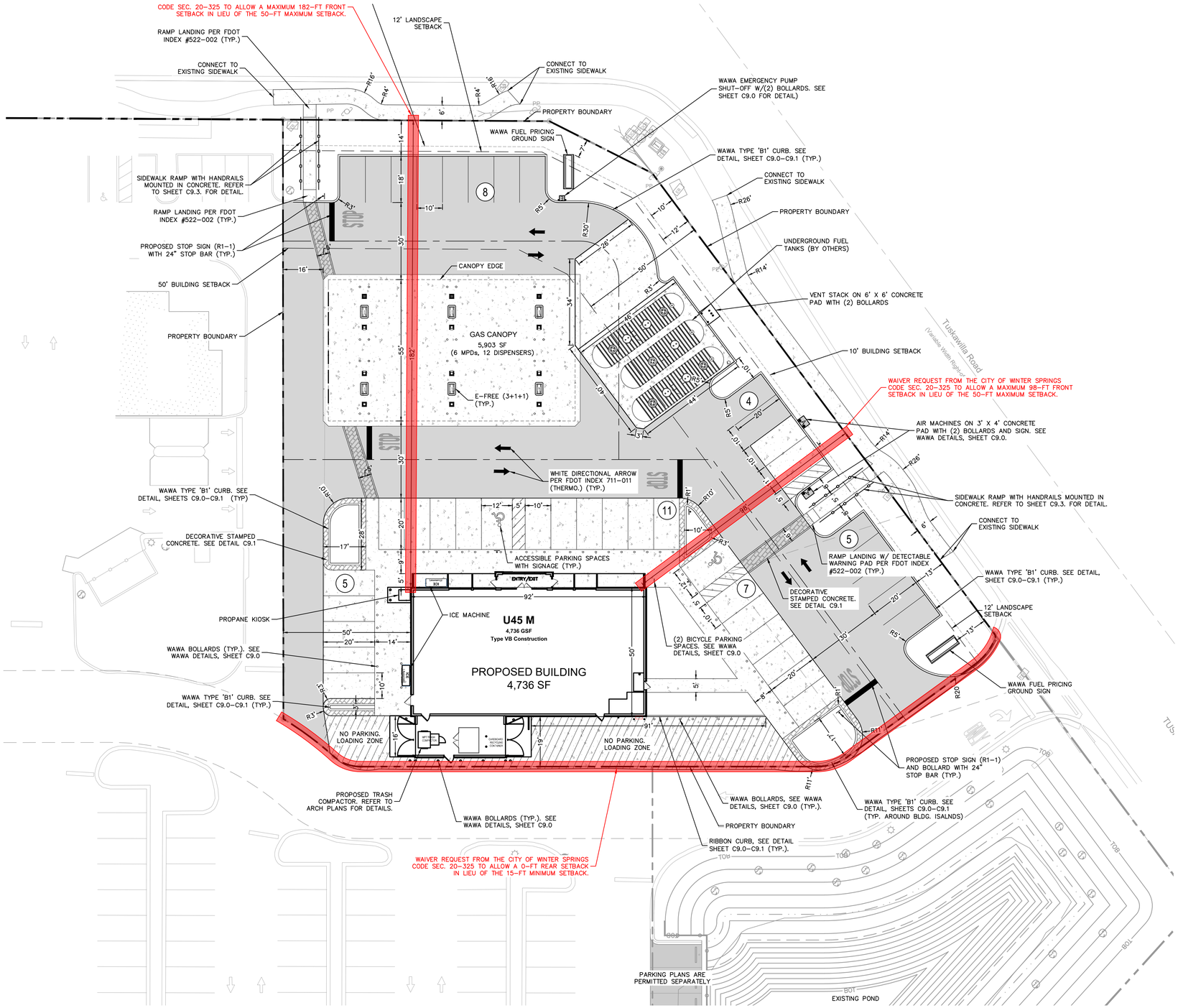
STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____Date: _____ (seal):

Notary Public Signature: _____

My Commission Expires: _____



LEGEND

- PROPERTY LINE
- (11) PARKING SPACE COUNT
- PROPOSED CONCRETE, SEE SHEET C9.1 FOR DETAILS
- PROPOSED STAMPED CONCRETE, SEE SHEET C9.0 FOR DETAILS
- STANDARD DUTY ASPHALT, SEE SHEET C9.1 FOR DETAILS

PROVIDED BUILDING HEIGHTS

WAWA:	33 FT
CANOPY:	25 FT

REQUIRED BUILDING SETBACKS

FRONT (TUSKAWILLA RD):	25 FT MIN TO 50 FT MAX
FRONT (S.R. 434):	25 FT MIN TO 50 FT MAX
SIDE:	5 FT MIN TO 100 FT MAX
REAR:	15 FT MIN

PROVIDED BUILDING SETBACKS

FRONT (TUSKAWILLA RD):	50 FT
FRONT (S.R. 434):	50 FT
SIDE:	0 FT
REAR:	0 FT

REQUIRED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
FRONT (S.R. 434):	12 FT
SIDE:	10 FT
REAR:	10 FT

PROVIDED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
FRONT (S.R. 434):	12 FT
SIDE:	0 FT
REAR:	0 FT

OVERALL SITE DATA:

PROJECT AREA:	52,833 SQ. FT (1.21 AC)
ZONING:	T-5 URBAN CENTER ZONE
PARCEL ID:	36-20-30-502-0000-0090
FUTURE LAND USE:	COMMERCIAL
PROPOSED USE:	COMMERCIAL
MINIMUM BUILDING HEIGHT:	2-STORIES
MAXIMUM BUILDING HEIGHT:	5-STORIES

ABUTTING PARCEL DATA:

ADJACENT PARCEL ID:	ZONING
36-20-30-502-0000-0080	T-5 URBAN CENTER ZONE
01-21-30-5VK-0000-0040	T-5 URBAN CENTER ZONE
01-21-30-5VK-0C00-0000	T-5 URBAN CENTER ZONE

BUILDING COVERAGE:

PROPOSED FLOOR AREA:	
WAWA:	4,736 SF
TOTAL FLOOR AREA:	4,736 SF
F.A.R. (4,736 SF/52,833 SF)	0.20
MAXIMUM ALLOWABLE F.A.R.	1.0 MAXIMUM

OVERALL IMPERVIOUS CALCULATIONS

MAXIMUM IMP. AREA (PER DRAINAGE CALCS):	1.02 AC
BUILDING AREA:	0.24 AC (9.0%)
PAVEMENT AREA:	0.78 AC (50.8%)
TOTAL IMPERVIOUS AREA:	1.02 AC (84.3%)
TOTAL OPEN SPACE:	0.19 AC (15.7%)

REQUIRED PARKING:

FROM PARKING STUDY:	FUTURE LAND USE	
WAWA PARKING:	COMMERCIAL COMMERCIAL	50 SPACES
TOTAL PARKING SPACES REQUIRED:	COMMERCIAL	50 SPACES

PROVIDED PARKING:

REGULAR SPACES (10'X20'):	38 SPACES
ADA SPACES (ALL VAN ACCESSIBLE):	2 SPACES
OFF-SITE EMPLOYEE PARKING: (UNDER SEPARATE PERMIT)	10 SPACES
TOTAL PARKING SPACES PROVIDED:	50 SPACES

REQUIRED BICYCLE PARKING:

FROM TRAFFIC IMPACT ANALYSIS:	
1 SPACE PER 5,000 SF OR 2 SPACES MIN.	2 SPACES
TOTAL PARKING SPACES REQUIRED:	2 SPACES

PROVIDED BICYCLE PARKING:

WAWA – GAS STATION/CONVENIENCE STORE	2 SPACES
TOTAL BICYCLE PARKING SPACES:	2 SPACES

LANDSCAPING

ALL LANDSCAPING SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE

SITE SIGNAGE

PERMANENT SITE SIGNAGE WILL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE.

REGULATORY SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH MUTCD (2009 ED.) AND FDOT DESIGN STANDARDS (LATEST ED.)

STORMWATER MANAGEMENT

STORMWATER RUNOFF FOR THE PROPOSED ONSITE IMPROVEMENTS WILL BE MANAGED THROUGH THE EXISTING WET DETENTION, DRY DETENTION, AND EXFILTRATION STORMWATER MANAGEMENT SYSTEM WHICH HAS BEEN DESIGNED TO MEET THE CITY OF WINTER SPRINGS CODE AND THE REQUIREMENTS OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD).

100-YEAR FLOOD PLAIN

THE PROPERTY IS LOCATED OUTSIDE THE FLOODPLAIN WITHIN "ZONE X" – AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN – PER FEMA FIRM, MAP NUMBER 12117C0160F, REVISED ON SEPTEMBER 28, 2007.

PHASING

ALL SITE WORK AND INFRASTRUCTURE WILL BE COMPLETED IN ONE (1) PHASE

GENERAL NOTES:

1. HANDICAP ACCESSIBLE PARKING SPACES AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE (2012 ED.).
2. HANDICAP ACCESSIBLE PARKING SPACES PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH FDOT INDEX #711-001, SHEET 12 (LATEST ED.).
3. ALL LANDSCAPE ISLANDS CURB RADII ARE 5-FT UNLESS OTHERWISE NOTED.
4. TYPICAL AT ALL INTERNAL ON SITE INTERSECTIONS (PRIVATE), UNLESS OTHERWISE NOTED: PROVIDE 24" WHITE STOP BAR WITH 24" STOP SIGN
5. PEDESTRIAN CIRCULATION – SIDEWALKS, SIDEWALK CROSSINGS, RAMPINGS (PEDESTRIAN ACCESS SHALL CONNECTION EACH OF THE BUILDINGS TO ONE ANOTHER AN SHALL CONNECT TO THE RIGHT-OF-WA UTILIZING ALTERNATIVE PAVEMENT THROUGHOUT – PAINT/THERMOPLASTIC IS NOT ACCEPTABLE). PEDESTRIAN CROSSWALKS SHALL BE OF CONTRASTING MATERIALS OR TEXTURED OR STAMPED CONCRETE OR ASPHALT TO GIVE THE APPEARANCE OF CONTRASTING MATERIALS. PLEASE REFER TO SHEET C9.0 FOR DETAILS.

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

Kimley»Horn

EX-1

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS, FLORIDA

SETBACKS EXHIBIT

07/18/2025 - CONTACT CORY N. SITLER, P.E. (407) 427-1612

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS WAWA Layout:SITE PLAN July 18, 2025 12:29:12pm K:\ORL_Civil\149170026-Winter Springs Wawa\CAD\EXHIBITS\Waiver Exhibits\C4.0 SITE PLAN-SETBACKS.dwg

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20 – Zoning Sec. 20-34. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Waiver is quasi-judicial in nature.

Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Waiver recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Waivers and may impose reasonable conditions on any approved Waiver to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Waiver which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Waiver, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Waiver shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED INFORMATION

Applicant(s): Tuscawilla Property Investors, LLC Date: 5/13/2025

Mailing address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Property Owner(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Project Name: Wawa At Winter Springs Marketplace

Property Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Existing Use: Commercial

All waiver requests shall be written in the following format: A waiver is requested from Winter Springs City Code 'X' to allow 'Y' in lieu of 'Z'. After the request, the applicant shall provide a justification for each waiver request.

List Waiver(s)(provide additional sheets if necessary): See attached cover letter.

Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

See attached cover letter.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org
Application – Waiver

Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

See attached cover letter.

Will the proposed development plan significantly enhance the real property?

See attached cover letter.

Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

See attached cover letter.

Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

See attached cover letter.

Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

See attached cover letter.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

See attached cover letter.

List all witnesses that the applicant intends to present to the City Commission to provide testimony:

Ryan Stahl, Cory Sitler, and Jonathan Martin

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

Photos (if needed)

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing_

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED DOCUMENTATION

_x_ A complete Application and Fee

_x_ A general description of the relief sought under this division

_x_ A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

_x_ A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

_x_ An Excel mailing list with the names and addresses of each property owner within 500 ft. of each property line, along with the HOA Associations within 1/2 mile of each property line.

___ For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for an Aesthetic Review for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl

Applicant Signature: _____ Date: 5/9/25

Business Name: Tuscawilla Property Investors, LLC

Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 36-20-30-502-0000-0090

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 9th day of May, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 5/9/25 (seal):

Notary Public Signature: Kristin Banks

My Commission Expires: June 4, 2027

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): _____

Property Owner Signature: _____ Date _____

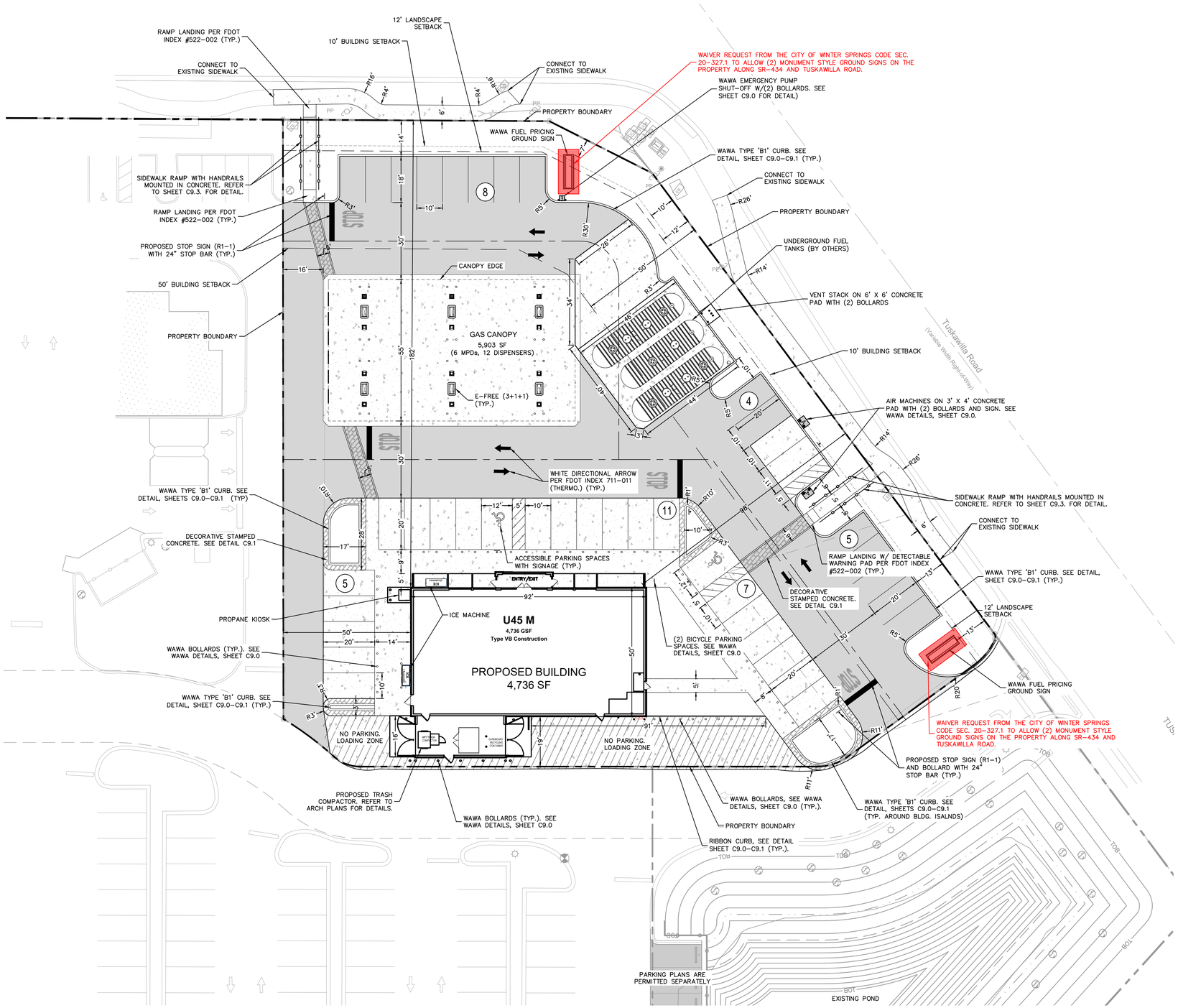
STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____Date: _____ (seal):

Notary Public Signature: _____

My Commission Expires: _____



LEGEND

- PROPERTY LINE
- (11) PARKING SPACE COUNT
- PROPOSED CONCRETE, SEE SHEET C9.1 FOR DETAILS
- PROPOSED STAMPED CONCRETE, SEE SHEET C9.0 FOR DETAILS
- STANDARD DUTY ASPHALT, SEE SHEET C9.1 FOR DETAILS

PROVIDED BUILDING HEIGHTS

WAWA:	33 FT
CANOPY:	25 FT

REQUIRED BUILDING SETBACKS

FRONT (TUSKAWILLA RD):	25 FT MIN TO 50 FT MAX
FRONT (S.R. 434):	25 FT MIN TO 50 FT MAX
SIDE:	5 FT MIN TO 100 FT MAX
REAR:	15 FT MIN

PROVIDED BUILDING SETBACKS

FRONT (TUSKAWILLA RD):	50 FT
FRONT (S.R. 434):	50 FT
SIDE:	0 FT
REAR:	0 FT

REQUIRED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
FRONT (S.R. 434):	12 FT
SIDE:	10 FT
REAR:	10 FT

PROVIDED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
FRONT (S.R. 434):	12 FT
SIDE:	0 FT
REAR:	0 FT

OVERALL SITE DATA:

PROJECT AREA:	52,833 SQ. FT (1.21 AC)
ZONING:	T-5 URBAN CENTER ZONE
PARCEL ID:	36-20-30-502-0000-0090
FUTURE LAND USE:	COMMERCIAL
PROPOSED USE:	COMMERCIAL
MINIMUM BUILDING HEIGHT:	2-STORIES
MAXIMUM BUILDING HEIGHT:	5-STORIES

ABUTTING PARCEL DATA:

ADJACENT PARCEL ID:	ZONING
36-20-30-502-0000-0080	T-5 URBAN CENTER ZONE
01-21-30-5VK-0000-0040	T-5 URBAN CENTER ZONE
01-21-30-5VK-0C00-0000	T-5 URBAN CENTER ZONE

BUILDING COVERAGE:

PROPOSED FLOOR AREA:	
WAWA:	4,736 SF
TOTAL FLOOR AREA:	4,736 SF
F.A.R. (4,736 SF/52,833 SF)	0.20
MAXIMUM ALLOWABLE F.A.R.	1.0 MAXIMUM

OVERALL IMPERVIOUS CALCULATIONS

MAXIMUM IMP. AREA (PER DRAINAGE CALCS):	1.02 AC
BUILDING AREA:	0.24 AC (9.0%)
PAVEMENT AREA:	0.78 AC (50.8%)
TOTAL IMPERVIOUS AREA:	1.02 AC (84.3%)
TOTAL OPEN SPACE:	0.19 AC (15.7%)

REQUIRED PARKING:

FROM PARKING STUDY:	FUTURE LAND USE	
WAWA PARKING:	COMMERCIAL	50 SPACES
	COMMERCIAL	
TOTAL PARKING SPACES REQUIRED:	COMMERCIAL	50 SPACES

PROVIDED PARKING:

REGULAR SPACES (10'X20'):	38 SPACES
ADA SPACES (ALL VAN ACCESSIBLE):	2 SPACES
OFF-SITE EMPLOYEE PARKING: (UNDER SEPARATE PERMIT)	10 SPACES
TOTAL PARKING SPACES PROVIDED:	50 SPACES

REQUIRED BICYCLE PARKING:

FROM TRAFFIC IMPACT ANALYSIS: 1 SPACE PER 5,000 SF OR 2 SPACES MIN.	2 SPACES
TOTAL PARKING SPACES REQUIRED:	2 SPACES

PROVIDED BICYCLE PARKING:

WAWA – GAS STATION/CONVENIENCE STORE	2 SPACES
TOTAL BICYCLE PARKING SPACES:	2 SPACES

LANDSCAPING

ALL LANDSCAPING SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE

SITE SIGNAGE

PERMANENT SITE SIGNAGE WILL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE.

REGULATORY SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH MUTCD (2009 ED.) AND FDOT DESIGN STANDARDS (LATEST ED.)

STORMWATER MANAGEMENT

STORMWATER RUNOFF FOR THE PROPOSED ONSITE IMPROVEMENTS WILL BE MANAGED THROUGH THE EXISTING WET DETENTION, DRY DETENTION, AND EXFILTRATION STORMWATER MANAGEMENT SYSTEM WHICH HAS BEEN DESIGNED TO MEET THE CITY OF WINTER SPRINGS CODE AND THE REQUIREMENTS OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD).

100-YEAR FLOOD PLAIN

THE PROPERTY IS LOCATED OUTSIDE THE FLOODPLAIN WITHIN "ZONE X" – AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN – PER FEMA FIRM, MAP NUMBER 12117C0160F, REVISED ON SEPTEMBER 28, 2007.

PHASING

ALL SITE WORK AND INFRASTRUCTURE WILL BE COMPLETED IN ONE (1) PHASE

GENERAL NOTES:

1. HANDICAP ACCESSIBLE PARKING SPACES AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE (2012 ED.).
2. HANDICAP ACCESSIBLE PARKING SPACES PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH FDOT INDEX #711-001, SHEET 12 (LATEST ED.).
3. ALL LANDSCAPE ISLANDS CURB RADII ARE 5-FT UNLESS OTHERWISE NOTED.
4. TYPICAL AT ALL INTERNAL ON SITE INTERSECTIONS (PRIVATE), UNLESS OTHERWISE NOTED: PROVIDE 24" WHITE STOP BAR WITH 24" STOP SIGN
5. PEDESTRIAN CIRCULATION – SIDEWALKS, SIDEWALK CROSSINGS, RAMPINGS (PEDESTRIAN ACCESS SHALL CONNECTION EACH OF THE BUILDINGS TO ONE ANOTHER AN SHALL CONNECT TO THE RIGHT-OF-WA UTILIZING ALTERNATIVE PAVEMENT THROUGHOUT – PAINT/THERMOPLASTIC IS NOT ACCEPTABLE). PEDESTRIAN CROSSWALKS SHALL BE OF CONTRASTING MATERIALS OR TEXTURED OR STAMPED CONCRETE OR ASPHALT TO GIVE THE APPEARANCE OF CONTRASTING MATERIALS. PLEASE REFER TO SHEET C9.0 FOR DETAILS.

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

EX-1

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS, FLORIDA

MONUMENT SIGNS EXHIBIT

07/18/2025 - CONTACT CORY N. SITLER, P.E. (407) 427-1612

Kimley»Horn

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS WAWA Layout:SITE PLAN July 18, 2025 12:22:07pm K:\ORL_Civil\149170026-Winter Springs Wawa\CAD\EXHIBITS\Waiver Exhibits\C4.0 SITE PLAN-SIGNS.dwg

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20 – Zoning Sec. 20-34. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Waiver is quasi-judicial in nature.

Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Waiver recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Waivers and may impose reasonable conditions on any approved Waiver to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Waiver which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Waiver, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Waiver shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

REQUIRED INFORMATION

Applicant(s): Tuscawilla Property Investors, LLC Date: 5/13/2025

Mailing address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Property Owner(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Project Name: Wawa At Winter Springs Marketplace

Property Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Existing Use: Commercial

All waiver requests shall be written in the following format: A waiver is requested from Winter Springs City Code 'X' to allow 'Y' in lieu of 'Z'. After the request, the applicant shall provide a justification for each waiver request.

List Waiver(s)(provide additional sheets if necessary): See attached cover letter.

Demonstrate that the applicable term or condition clearly creates an illogical, impossible, impractical, or patently unreasonable result related to the proposed property and development?

See attached cover letter.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org
Application – Waiver

Demonstrate that the proposed development plan is in substantial compliance with Chapter 20 of the City's Code of Ordinances and in compliance with the Comprehensive Plan?

See attached cover letter.

Will the proposed development plan significantly enhance the real property?

See attached cover letter.

Will the proposed development plan serve the public health, safety, and welfare of the City of Winter Springs?

See attached cover letter.

Will the waiver diminish property values in or alter the essential character of the surrounding neighborhood?

See attached cover letter.

Is the waiver request the minimum waiver that will eliminate or reduce the illogical, impossible, impractical, or patently unreasonable result caused by the applicable term or condition under Chapter 20 – Zoning?

See attached cover letter.

Is the proposed development plan compatible and harmonious with the surrounding neighborhood?

See attached cover letter.

List all witnesses that the applicant intends to present to the City Commission to provide testimony:

Ryan Stahl, Cory Sitler, and Jonathan Martin

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

Photos (if needed)

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing_

REQUIRED DOCUMENTATION

_x_ A complete Application and Fee

_x_ A general description of the relief sought under this division

_x_ A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

_x_ A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (To scale).

_x_ An Excel mailing list with the names and addresses of each property owner within 500 ft. of each property line, along with the HOA Associations within 1/2 mile of each property line.

___ For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Waiver

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for an Aesthetic Review for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl

Applicant Signature: _____ Date: 5/9/25

Business Name: Tuscawilla Property Investors, LLC

Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 36-20-30-502-0000-0090

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 9th day of May, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 5/9/25 (seal):

Notary Public Signature: Kristin Banks

My Commission Expires: June 4, 2027

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): _____

Property Owner Signature: _____ Date _____

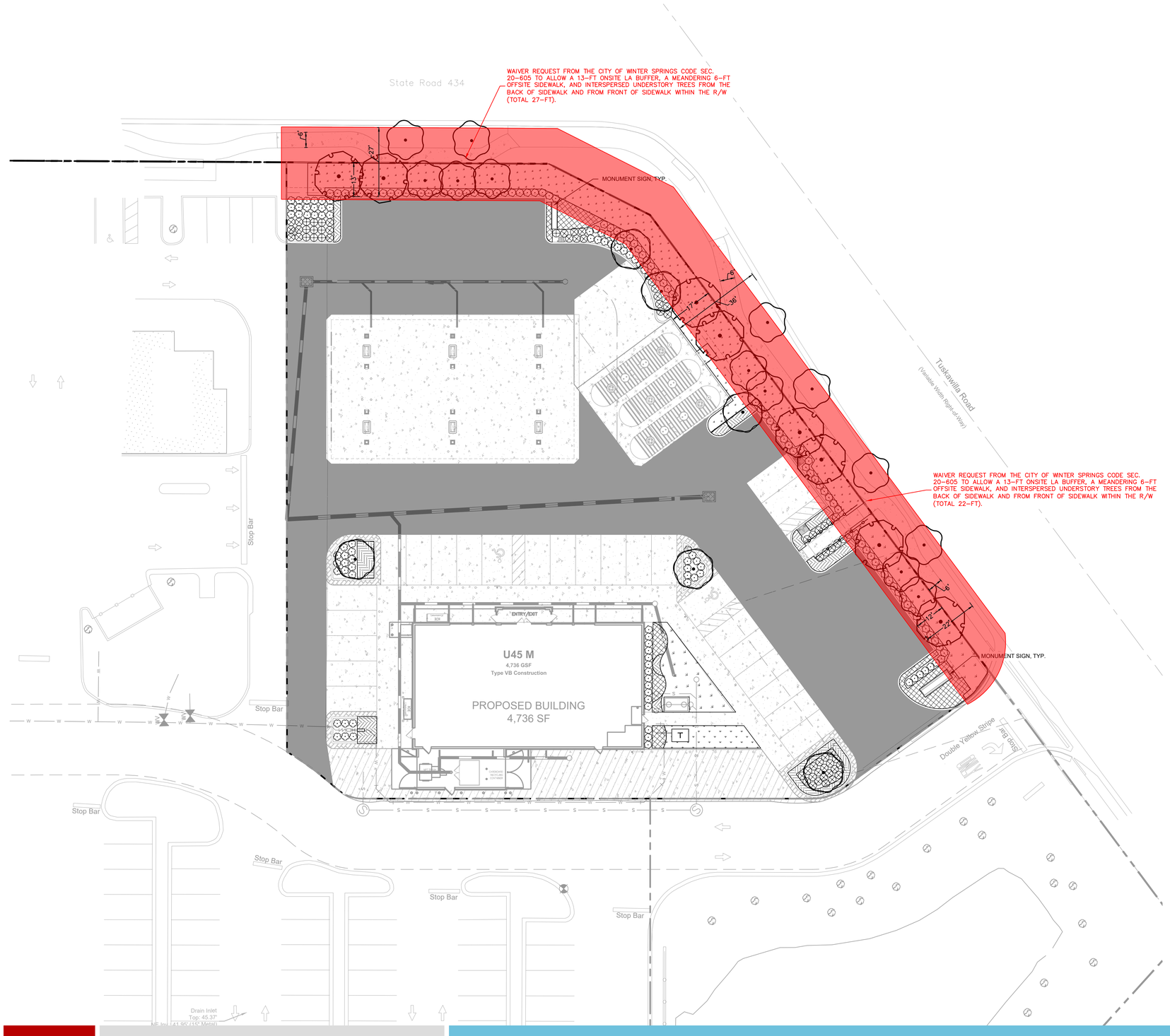
STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____Date: _____ (seal):

Notary Public Signature: _____

My Commission Expires: _____



PLANT SCHEDULE

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	CAL	SIZE
CANOPY TREE							
	MB	6	BRACKEN`S SOUTHERN MAGNOLIA SINGLE, STRAIGHT, FULL, FL#1	MAGNOLIA GRANDIFLORA `BRACKENS BROWN BEAUTY`	FG	3" CAL MIN	10` HT., 4` SPR.
	QV	8	SOUTHERN LIVE OAK 'CATHEDRAL' STRAIGHT, SINGLE LEADER, FL#1, FULL	QUERCUS VIRGINIANA 'CATHEDRAL'	FG	4" CAL MIN	12` HT., 4` SPR.
ORNAMENTAL							
	LD	13	NATCHEZ CRAPE MYRTLE STRAIGHT,SINGLE LEADER, FL #1	LAGERSTROEMIA INDICA `NATCHEZ`	FG	2" CAL MIN	10` HT MIN
SYMBOL	**CODE**	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**SIZE**	**SPACING**
SHRUBS							
	DE	67	GOLD MOUND DEWDROPS FULL	DURANTA ERECTA 'GOLD MOUND'	3 GAL	36" FULL	36" OC
	IS	73	DWARF YAUPON HOLLY FULL	ILEX VOMITORIA `STOKES DWARF	3 GAL	24" FULL	36" OC
	VS	101	SWEET VIBURNUM FULL	VIBURNUM ODORATISSIMUM	3 GAL	30" FULL	36" OC
GROUND COVERS							
	LM	670	LILYTURF FL #1, FULL	LIRIOPE MUSCARI	1 GAL	12" FULL	12" OC
	TM	631	MINIMA ASIATIC JASMINE FULL	TRACHELOSPERMUM ASIATICUM 'MINIMA'	1 GAL	12" FULL	12" OC
SOD							
	PA	4,540 SF	ARGENTINE BAHIAGRASS ROLLED TIGHT, 100% INSECT, WEED, DISEASE, DEBRIS FREE	PASPALUM NOTATUM 'ARGENTINE'	SOD	-	-

MISC.	QTY	MATERIAL DESCRIPTION	SPECIFICATIONS
MULCH	TBD	~~DESIGNER BROWN HARDWOOD MULCH~~	3" DEPTH MINIMUM, SHREDDED, FREE OF WEEDS/INVASIVE PLANT MATERIAL

NOTE: NO TREES PROVIDED FOR SR434 AND TUSKAWILLA ROAD CORRIDOR DUE TO EASEMENT

LANDSCAPE NOTES:

1. ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY
2. ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.
3. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA 2) TO PROTECT ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
11. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
12. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
13. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
14. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
15. ALL INVASIVE / EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
16. ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
17. TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS "ESTABLISHED" (AS APPROVED BY THE LANDSCAPE ARCHITECT).
18. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.
19. ALL PLANTED LANDSCAPE AREAS TO HAVE 3" DEEP DESIGNER BROWN HARDWOOD MULCH TO FULLY COVER DRIP IRRIGATION & AMENDED SOILS. REPAIR AS NEEDED DURING CONSTRUCTION. SUBMIT ALTERNATIVE MULCH SPECIFICATION FOR LANDSCAPE ARCHITECT APPROVAL.

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

Sunshine811.com

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

Kimley»Horn

EX-1

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS, FLORIDA

STREETSCAPE EXHIBIT

07/18/2025 - CONTACT CORY N. SITLER, P.E. (407) 427-1612

Plotted By:Sitler, Cory Sheet Set:WINTER SPRINGS WAWA Layout:LANDSCAPE PLAN July 28, 2025 03:49:12pm K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\EXHIBITS\Waiver Exhibits\L1.00 LANDSCAPE PLAN-STREETSCAPE.dwg

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Conditional Use

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Chapter 20–Zoning Sec.20-33. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. Once the application is deemed sufficient, the applicant shall move forward with the Community Workshop, required per Chapter 20–Zoning Sec.20-29.1.

All applicants shall be afforded minimal due process as required by law, including the right to receive notice, be heard, present evidence, cross-examine witnesses, and be represented by a duly authorized representative. Applicants are further advised that a Conditional Use is quasi-judicial in nature. Therefore, APPLICANT ACKNOWLEDGES and AGREES, by signing below, that he or she:

- May be sworn-in as a witness in order to provide testimony to the City Commission;
- Shall be subject to cross-examination by party intervenors (if requested); and
- Shall be required to qualify expert witnesses, as appropriate.

Applicants are encouraged to familiarize themselves with Chapter 2 – Administration Sec. 2-30 of the Winter Springs City Code relating to Quasi-Judicial Rules and Procedures of the City Commission. All Conditional Use recommendations shall be based from the required information/documentation provided, the Winter Springs Code of Ordinances, and the Winter Springs Comprehensive Plan (to the extent applicable).

The City Commission (CC) shall render all final decisions regarding Conditional Uses and may impose reasonable conditions on any approved Conditional Use to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the Winter Springs Code of Ordinances and the Winter Springs Comprehensive Plan. All formal decisions shall be based on competent substantial evidence and the applicable criteria as set forth in Chapter 20, Zoning. Applicants are advised that if, they decide to appeal any decisions made at the meetings or hearings with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to insure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per Florida Statute 286.0105.

A Conditional Use which may be granted by the City Commission shall expire two (2) years after the effective date of such approval by the City Commission, unless a building permit based upon and incorporating the Conditional Use, is issued by the City within said time period. Upon written request of the property owner, the City Commission may extend the expiration date, without public hearing, an additional six (6) months, provided the property owner demonstrates good cause for the extension In addition, if the aforementioned building permit is timely issued, and the building permit subsequently expires and the subject development project is abandoned or discontinued for a period of six months, the Conditional Use shall be deemed expired and null and void, per Chapter 20 – Sec.20-36.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Conditional Use

REQUIRED INFORMATION

Applicant(s): Tuscawilla Property Investors, LLC Date: 5/13/2025

Mailing address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Property Owner(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Project Name: Wawa At Winter Springs Marketplace

Property Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Existing Use: Commercial

Conditional Use that is being requested? Wawa - Gas station/convenience store

How is the Conditional Use (density, height, scale and intensity, hours of operation, building and lighting design, setbacks, buffers, noise, refuse, odor, particulates, smoke, fumes and other emissions parking and traffic generating characteristics, number of persons anticipated using, residing or working under the conditional use, and other offsite impacts) compatible and harmonious with adjacent land uses?

See attached cover letter.

Will the Conditional Use adversely impact land use activities in the immediate vicinity? If no, why not?

See attached cover letter.

Demonstrate the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale and intensity of the conditional use requested. The site shall be of sufficient size to accommodate design amenities such as screening, buffers, landscaping, open space, off-street parking, safe and convenient automobile, bicycle, and

pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.

See attached cover letter.

Will the proposed use have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values? If no, why not?

See attached cover letter.

Will the proposed use have an adverse impact on natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards? If no, why not?

See attached cover letter.

Will the proposed use have an adverse impact on historic, scenic and cultural resources, including views and vistas, and loss or degradation of cultural and historic resources? If no, why not?

See attached cover letter.

Will the proposed use have an adverse impact on public services, including water, sewer, stormwater and surface water management, police, fire, parks and recreation, streets, public transportation, marina and waterways, and bicycle and pedestrian facilities? If no, why not?

See attached cover letter.

Will the proposed use have an adverse impact on housing and social conditions, including a variety of housing unit types and prices, and neighborhood quality? If no, why not?

See attached cover letter.

Will the proposed use avoids significant adverse odor, emission, noise, glare, and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs,

lighting, and other sire elements? If no, why not?

See attached cover letter.

Demonstrate that the conditional use and associated site plan have been designed to incorporate mitigative techniques and plans needed to prevent adverse impacts addressed in the criteria stated herein or to adjacent and surrounding uses and properties.

See attached cover letter.

If the proposed conditional use is a residential use, whether the elementary, middle and high schools (K-12) that will be initially assigned to the residential project by the School District at the time the city commission considers final approval of the conditional use have both sufficient capacity, are in close proximity to the project so as to make each of the assigned schools accessible and convenient (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the school population that will be drawn from the project, and promote and support the integration of future residents of the project into the existing city of Winter Springs community in a sustainable manner.

See attached cover letter.

List all witnesses that the applicant intends to present to the City Commission to provide testimony:

Ryan Stahl, Cory Sitler, and Jonathan Martin

Describe with specificity any evidence which the applicant intends to present to the City Commission, including oral factual testimony, maps, photographs, records or reports and/or expert testimony:

Photos (if needed)

Attach all documentary evidence which the applicant intends to present to the city commission to the back of this application. The Applicant has a continuing duty to update the list of witnesses, description of evidence, and documentary evidence throughout the application process. Additional witnesses or evidence will not be admitted at the city commission hearing if not submitted at least seven (7) days prior to such hearing

REQUIRED DOCUMENTATION

X A complete Application and Fee

X A general description of the relief sought under this division

X A brief explanation, with applicable supporting competent substantial evidence and documents, as to why the application satisfies the relevant criteria set forth in this division

X A Legal Description accompanied by a certified survey or the portion of the map maintained by the Seminole County Property Appraiser reflecting the boundaries of the subject property (to scale).

X An acceptable security plan for the proposed establishment that addresses the safety and security needs of the establishment and its users and employees and minimizes impacts on the neighborhood.

___ An acceptable plan for the mass delivery of merchandise for new large footprint buildings (greater than 20,000 square feet) including the hours of operation for delivery trucks to come into and exit the property and surrounding neighborhood.

___ For all new commercial development and new residential subdivisions of ten (10) or more lots or existing commercial buildings being altered by 50 percent or greater of the original floor plan or seating capacity and requiring a modified site plan, or development agreements process under section 20-28.1 of the City Code, or as otherwise deemed applicable by the city to relevantly and competently examine an application for compliance with the city code and the affect and impact the proposed use will have on neighborhood and surrounding properties, applicants shall be required to submit with the following additional information referenced in Chapter 20 – Zoning Sec.20.29 Applications (7) – (11).

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Conditional Use

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for an Aesthetic Review for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl

Applicant Signature: _____ Date: 5/9/25

Business Name: Tuscawilla Property Investors, LLC

Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 36-20-30-502-0000-0090

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 9th day of May, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 5/9/25 (seal):

Notary Public Signature: Kristin Banks

My Commission Expires: June 4, 2027

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): _____

Property Owner Signature: _____ Date _____

STATE OF_____COUNTY OF _____

The foregoing instrument was acknowledged before me this_____day of_____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____Date: _____ (seal):

Notary Public Signature: _____

My Commission Expires: _____

LEGAL DESCRIPTION:

THAT PART OF LOT 9, JOE E. JOHNSTON'S SURVEY, RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, AND ALSO BEING THAT PART OF LOT 8 BLOCK A, AND THAT PART OF THE UNPLATTED PART OF BLOCK B OF D. R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, AND ALSO THAT PART OF THE VACATED STREET AS SET FORTH IN RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 2972, PAGE 373 MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF JESUP'S RESERVE TOWNHOMES REPLAT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 71, PAGES 86 THROUGH 93, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA; THENCE RUN S39'45'03"E ALONG THE SOUTHWESTERLY RIGHT OF WAY LINE OF STATE ROAD NO. 434 PER OFFICIAL RECORDS BOOK 2803, PAGE 1023, AND OFFICIAL RECORDS BOOK 2831, PAGE 1024, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, A DISTANCE OF 442.36 FEET FOR THE POINT OF BEGINNING; THENCE CONTINUE S39'45'03"E ALONG SAID SOUTH RIGHT OF WAY LINE, A DISTANCE OF 103.50 FEET; THENCE RUN S13'15'20"E ALONG THE WEST RIGHT OF WAY LINE OF TUSKAWILLA ROAD PER OFFICIAL RECORDS BOOK 8377, PAGE 27, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, A DISTANCE OF 44.85 FEET; THENCE CONTINUE S13'18'28"W ALONG SAID WEST RIGHT OF WAY LINE, A DISTANCE OF 223.26 FEET TO A POINT ON A NON-TANGENT CURVE CONCAVE TO THE NORTHWEST, HAVING A RADIUS OF 2.00 FEET; THENCE FROM A RADIAL BEARING OF N76'41'29"W RUN SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 59'49'28", AN ARC DISTANCE OF 2.09 FEET, HAVING A CHORD BEARING OF S43'13'15"W AND A CHORD DISTANCE OF 1.99 FEET TO A POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 24.33 FEET; THENCE RUN WESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 30'50'10", AN ARC DISTANCE OF 13.09 FEET, HAVING A CHORD BEARING OF S88'33'05"W AND A CHORD DISTANCE OF 12.94 FEET; THENCE RUN N76'01'50"W, A DISTANCE OF 60.93 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 20.00 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 35'56'47", AN ARC DISTANCE OF 12.55 FEET, HAVING A CHORD BEARING OF N58'03'27"W AND A CHORD DISTANCE OF 12.34 FEET; THENCE RUN N40'05'03"W, A DISTANCE OF 178.00 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 15.00 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 42'05'15", AN ARC DISTANCE OF 11.02 FEET, HAVING A CHORD

BEARING OF N19'02'26"W AND A CHORD DISTANCE OF 10.77 FEET TO A POINT OF REVERSE CURVATURE OF A CURVE CONCAVE TO THE WEST HAVING A RADIUS OF 130.00 FEET; THENCE RUN NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 10'50'21", AN ARC DISTANCE OF 24.59 FEET, HAVING A CHORD BEARING OF N03'24'59"W AND A CHORD DISTANCE OF 24.56 FEET; THENCE RUN N49'54'57"E, A DISTANCE OF 233.19 FEET TO THE POINT OF BEGINNING;

Drainage Calculations for
SJRWMD & City of Winter Springs

Winter Springs Marketplace

Winter Springs, FL

Prepared by:

Kimley-Horn and Associates, Inc.
Orlando, Florida
149170016

July 14, 2020
(Revised 11/03/2020)

© Kimley-Horn and Associates, Inc. 2020

Kimley»Horn

Drainage Calculations for
SJRWMD & City of Winter Springs

Winter Springs Marketplace

Winter Springs, FL

Prepared for:

Tuscawilla Property Investors, LLC

Prepared by:

Kimley-Horn and Associates, Inc.
189 South Orange Avenue, Suite 1000
Orlando, Florida
CA 00000696
149170016

Marcus I. Geiger, P.E., State of Florida, Professional Engineer, License No. 89199

This item has been digitally signed and sealed by Marcus I. Geiger, P.E. on the date indicated here.

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

Digitally signed by Marcus I Geiger
DN: cn=Marcus I Geiger, c=US, o=KIMLEY-HORN AND ASSOCIATES, ou=A01410D00000172C79918990000F4E7, email=Marcus.Geiger@Kimley-Horn.com
Date: 2020.09.25 18:43:33 -04'00'

July 14, 2020
(Revised 11/03/2020)

Marcus I. Geiger, P.E.
FL P.E. # 89199

© Kimley-Horn and Associates, Inc. 2020

TABLE OF CONTENTS

1 SUMMARY 3

2 EXISTING CONDITIONS 3

2.1 SOILS 3

2.2 GROUNDWATER 3

2.3 WETLANDS 4

2.4 EXISTING DRAINAGE 4

2.4.1 Basins 5

2.4.2 CN Calculations 5

2.4.3 Time of Concentration 5

2.4.4 Tailwater Condition 5

2.4.5 Existing Development Runoff 5

3 PROPOSED CONDITIONS 6

3.1 REQUIRED PERMITS AND REVIEWS 6

3.2 BASINS 6

3.2.1 CN Calculations 7

3.2.2 Time of Concentration 7

3.2.3 Seasonal High Water Table and Control Elevations 7

3.3 STORMWATER MANAGEMENT 7

3.3.1 Tailwater Conditions 8

3.3.2 Water Quality (Treatment Volume) 8

3.3.3 Water Quality Volume Recovery (Bleed Down) 10

3.3.4 Proposed Development Runoff 10

3.4 CONCLUSION 11

APPENDICES

FIGURES..... APPENDIX A

Figure 1 General Location Map
Figure 2 Aerial Photograph
Figure 3 USGS Quad Map
Figure 4 FEMA F.I.R.M.
Figure 5 SCS soil survey
Figure 6 Pre-Development Basin Node Map
Figure 7 Post-Development Basin Node Map

PRE-DEVELOPMENT DRAINAGE CALCULATIONS AND ICPR ANALYSIS..... APPENDIX B

POST-DEVELOPMENT DRAINAGE CALCULATIONS ..... APPENDIX C

POST-DEVELOPMENT ICPR ANALYSIS..... APPENDIX D

WET & DRY POND RECOVERY ANALYSIS..... APPENDIX E

1 SUMMARY

The Winter Springs Marketplace project is a 10.23-acre development located at the southwest corner of State Road 434 and Tuskawilla Road in Winter Springs, Florida (Sections 1 & 6, Township 21 South, Ranges 30 & 31 East). See **Appendix A** for the limits of the project site superimposed on a general location map, aerial imagery, the USGS Quad map, and Map No. 12117C0160F of the FEMA Flood Insurance Rate Map (FIRM), effective date September 28, 2007.

The proposed commercial property consists of six (6) commercial buildings and associated surface parking and utility infrastructure. The majority of the site is currently undeveloped and vacant. There is an existing abandoned building and surface parking lot located at the eastern corner of the site. The eastern portion of the site has been previously permitted through St. John's River Water Management District (SJRWMD) under Permit No. 83445-1 for the outfall to the drainage structure immediately south of the site's Tuskawilla Road driveway connection. The site has also been included in permitting for its outfall to the west under Permit No. 97490-1. Stormwater runoff from the proposed site will be managed via exfiltration trench and dry retention pond which drain into an onsite wet detention pond. These systems will meet or exceed all requirements of SJRWMD and the City of Winter Springs.

2 EXISTING CONDITIONS

The property is currently undeveloped and vacant. Per the FEMA FIRM located in **Appendix A**, the site is considered "Zone X – Area determined to be outside the 0.2% annual chance floodplain." Based on existing SJRWMD permitting and topographic data collected via survey, there is a high point ridge through the middle of the site. As a result, the site discharges to the east and west. SJRWMD Permit No. 83445-1 covers the existing allowable discharges to the east. SJRWMD Permit No. 97490-1 covers the allowable discharges from the site to the west.

2.1 SOILS

ECS Florida, LLA (ECS) has performed a geotechnical report for the proposed site. Please refer to the Preliminary Geotechnical Engineering Report prepared by ECS, dated November 15, 2018, which has been included in this application submittal, for details. The SCS Soil Survey for the proposed site can be found in **Appendix A** of the Drainage Calculations.

2.2 GROUNDWATER

The groundwater levels were investigated and determined by ECS and are included as part of their Geotechnical Report. Please refer to the Geotechnical Report prepared by ECS (dated November 15, 2018), which has been included with this submittal.

The table below summarizes the groundwater elevations obtained for each boring based on the provided geotechnical report by Terracon. Based on these results, Terracon estimates the seasonal high groundwater level to be at a depth ranging from 2.5 to 5 ft below existing grade across the site.

Table 1: Groundwater Elevations for Each Boring Location

Boring Label	Depth to Encountered Water Table (ft)	Boring Label	Depth to Encountered Water Table (ft)
B-1	4.5	**B-11**	5.5
B-2	5.0	**B-12**	5.5
B-3	3.5	**B-13**	4.0
B-4	4.5	**B-14**	5.0
B-5	5.5	**B-15**	5.0
B-6	5.0	**B-16**	5.0
B-7	4.0	**B-17**	4.5
B-8	4.5	**B-18**	4.5
B-9	5.5	**B-19**	4.0
B-10	5.5		

2.3 WETLANDS

There are no wetland impacts proposed for this project.

2.4 EXISTING DRAINAGE

Stormwater management systems are not provided for the currently undeveloped portion of the site. The Jesup's Reserve SJRWMD Permit (No. 97490-1) included the flows from the western portion of the site in their ultimate design of the 30" HDPE storm sewer trunk line. This 30" HDPE trunk line runs along the western site boundary and flows into wetlands located west of the site.

The Walgreens Drug Store #6575 SJRWMD Permit (No. 83445-1) determines the flows from the existing abandoned facility located at the eastern corner of the site. Flows from this portion of the site are captured within a dry retention pond within this abandoned parcel. The dry retention pond drains via a 150-ft 12" VPP discharge line to a drainage manhole just south of the abandoned parcel's driveway. Refer to the USGS Quad Map in addition to the pre-condition basin maps from each of these permits in ***Appendix A***.

2.4.1 BASINS

The property consists of two (2) basins. One basin drains west towards existing wetlands. The other basin drains east to the FDOT SR 434 right of way. Refer to Table 2 below for the pre-development basin summary and the Pre-Development Drainage Basin Map located in **Appendix A** for details.

Table 2: Pre-Development Basin Summary Table

	*Basin 100	**ONDICK
Drainage Basin Area (acres)	3.56	10.56
Total Impervious Area (acres)	0.82	1.27
% Impervious	23.0%	12.0%
Time of Conc., TC (min.)	38.5	82.0
Composite Curve Number, CN	60.3	61
Node	NODE 10	ONDICK

*This basin's data is based on SJRWMD Permit 83445-1

**This basin's data is based on SJRWMD Permit No. 97490-1

2.4.2 CN CALCULATIONS

The pre-development CN calculations utilized for the pre-development basins can be found in ***Appendix B***.

2.4.3 TIME OF CONCENTRATION

The time of concentration ('Tc') calculations utilized for the pre-development basins can be found in ***Appendix B***.

2.4.4 TAILWATER CONDITION

Tailwater conditions are based on the existing SJRWMD data provided in Permit No. 83445-1 previously permitted for the site. "Node 99" within this permit utilizes stages of 40 (NGVD) at hour Zero and 41 (NGVD) at hour 24. These values have been converted to NAVD using the 1.056-ft conversion factor for the area. See ***Appendix B*** for the associated permit data.

2.4.5 EXISTING DEVELOPMENT RUNOFF

The stormwater runoff from the pre-development basins is based on the existing SJRWMD data previously permitted for the site. Please refer to ***Appendix B*** for the historic permit data utilized to calculate pre-development flows for the site.

3 PROPOSED CONDITIONS

The 10.23-acre Winter Springs Marketplace project consists of six (6) commercial buildings and associated surface parking and utility infrastructure. The eastern corner of the project is reserved for future commercial usage. The stormwater runoff from the proposed site will be managed via exfiltration trench and dry pond which drain into an onsite wet detention pond to provide adequate water treatment (quality) and attenuation (quantity) volumes. The stormwater management system has been designed to meet or exceed the requirements of the City of Winter Springs and St. John's River Water Management District (SJRWMD).

3.1 REQUIRED PERMITS AND REVIEWS

- City of Winter Springs, FL
- St. John's River Water Management District (SJRWMD)

3.2 BASINS

Proposed conditions will divide onsite basins into sub basins for each of the exfiltration trenches throughout the site. The back of the site along Natures Way (Basin A) will drain into the dry retention pond at the back of the site. The wet detention pond at the front of the site along Tuskawilla Road sits within its own basin (Basin B). All onsite basins ultimately drain through this basin before draining offsite.

The remaining basins consist of the onsite exfiltration trench throughout the site. The delineation between each of the exfiltration trench basins (Basins C through G) are based on the surface grading which determines the greatest areas generating runoff to each system. Basin C includes the future commercial parcel which is assumed to have 80% impervious area. Basins H through J are the parking areas at the center of the site which must first drain into retention swales before draining into the exfiltration trenches. Table 3 below provides an on-site post-development basin summary. See **Appendix A** for the Post-Development Drainage Basin Map.

Table 3: Proposed Post-Development Basin Summary Table

	Basin A	Basin B	Basin C	Basin D	Basin E
Drainage Basin Area (acres)	0.83	1.12	2.97	0.88	0.49
***Total Impervious Area (acres)**	0.42	0.31	2.58	0.68	0.38
% Impervious	50.6%	27.7%	86.7%	77.3%	77.6%
Time of Conc., TC (min.)	10	10	10	10	10
Composite Curve Number, CN	68.6	73.5	90.1	84.5	84.6
Node	SMA-A.1	SMA-B	SMA-C	SMA-D	SMA-E

*Any wet pond water surface area not included in this figure.

	Basin F	Basin G.1	Basin G.2	Basin H	Basin I	Basin J
Drainage Basin Area (acres)	0.95	0.67	0.56	0.79	0.44	0.53
***Total Impervious Area (acres)**	0.67	0.67	0.56	0.54	0.34	0.45
% Impervious	70.5%	100%	100%	68.3%	77.3%	84.9%
Time of Conc., TC (min.)	10	15	15	10	10	10
Composite Curve Number, CN	80.2	98.0	98.0	79.1	84.8	89.5
Node	SMA-F	SMA-A.2	SMA-B	SWALE-1	SWALE-2	SWALE-3

*Any wet pond water surface area not included in this figure.

3.2.1 CN CALCULATIONS

The CN calculations for the post-development conditions can be found in ***Appendix C***.

3.2.2 TIME OF CONCENTRATION

The time of concentration ('Tc') calculations for the post-development drainage basins was determined to be the minimum of 10 minutes. Please refer to the Post-Development Drainage Basin Map in **Appendix A**.

3.2.3 SEASONAL HIGH WATER TABLE AND CONTROL ELEVATIONS

Seasonal High Water Table (SHWT) elevations were determined using the Geotechnical Report provided by ECS, which has been included with this submittal for details. Based on the provided ECS Report, the estimated seasonal high water table elevation occurs within 2.5 to 5-ft below existing grade.

3.3 STORMWATER MANAGEMENT

Stormwater runoff for the proposed Winter Springs Marketplace property will be treated and attenuated through the use of off-line exfiltration trenches and a dry pond along with a wet detention pond which ultimately receives all on site flows prior to discharging. Runoff from the on-site post-development basins will sheet flow into the proposed inlets which will route flows to the exfiltration trenches and dry retention ponds. See **Appendix C** for the exfiltration trench, dry retention pond, and wet detention pond calculations.

Dry retention pond SMA-A will utilize a Type D control structure to route flows to wet detention pond SMA-B. Wet retention pond SMA-B will utilize Type E boxes to discharge to the offsite outfalls. The exfiltration trenches will utilize a diversion box near pond SMA-B along with weir structures to intermediate manholes to outfall to the wet detention pond. The parking lot swales utilize Type D boxes with elevated tops to convey flows from the swales to the exfiltration trenches. See Table 4 below for a summary of the controls structures proposed for the site.

Table 4: Control Structure Design for the Proposed Ponds

Post-Development Node	Weir Dimensions	Weir Elevation (ft.)	Top Elevation (ft.)	Structure Type
SMA-A (Combined)	5-ft Wide Rectangular	45.60	46.00	Type-D Inlet
SMA-B (To West Outfall)	N/A	N/A	44.50	Type-E Inlet
	1.4-ft Wide Rectangular	43.00	44.5	Sharp Crested Vertical Weir Within Control Structure
	3-in Circular	40.50	N/A	Circular Orifice
SMA-B (To East Outfall)	N/A	N/A	44.50	Type-E Inlet
	0.5-ft Wide Rectangular	43.35	44.5	Sharp Crested Vertical Weir Within Control Structure
SMA-C	8.75-ft Wide Rectangular	43.33	44.94	Diversion Structure Built into Type-H 4-Grate Inlet
	18-in Circular	43.33	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-D	18-in Circular (2)	43.66	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-E	18-in Circular	43.06	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-F	18-in Circular (2)	43.00	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-G	18-in Circular (2)	43.33	N/A	*18-in CMP Connection to Secondary Outfall Trunk Line
SMA-H	N/A	N/A	45.25	Type-D Inlet
SMA-I	N/A	N/A	45.25	Type-D Inlet
SMA-J	N/A	N/A	45.25	Type-D Inlet

*The secondary outfalls within the exfiltration trenches are 18-inch CMP which tie into the bottom elevation of each trench system at 42.0-ft and connect to the secondary outfall manhole at their associated weir elevations.

3.3.1 TAILWATER CONDITIONS

The tailwater conditions for the post-development condition are the same as the pre-development condition. Please refer to Section 2.4.4.

3.3.2 WATER QUALITY (TREATMENT VOLUME)

Offline exfiltration trenches, dry retention ponds, and dry retention swales interconnected with a wet detention pond are utilized as the Best Management Practice (BMP) to reduce the discharge of pollutants associated with stormwater runoff. Due to the site's ultimate discharge to Lake Jessup, the volume required for the removal of phosphorous is a third criteria used in finding the required water quality volume. The following standards were utilized for the treatment volume requirements for off-line exfiltration trenches.

The greater of:

0.5 inch of runoff over the site (SJRWMD)

OR

1.25 inches of runoff over the impervious area (SJRWMD)

OR

Inches of runoff over basin area provided in BMPTrains analysis (SJRWMD)

Table 5: Dry Retention Pond Treatment Volume Required vs. Provided

Drainage Area	Drainage Area (acres)	*Imp. Area (acres)	Required TV						Provided TV
			0.5" Over Site	1.25" Over Impervious Area	Add'l 0.5" Over Site	Pres. Criteria Volume Req.	TV Required for Nutrient Removal	Total Required	
SMA-A	1.49	1.08	0.06 ac-ft	0.11 ac-ft	0.06 ac-ft	0.17 ac-ft	0.14 ac-ft	0.17 ac-ft	0.21 ac-ft
SMA C	2.97	2.58	0.12 ac-ft	0.27 ac-ft	0.12 ac-ft	0.39 ac-ft	0.35 ac-ft	0.39 ac-ft	**0.35 ac-ft
SMA D	0.88	0.68	0.04 ac-ft	0.07 ac-ft	0.04 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft
SMA E	0.49	0.38	0.02 ac-ft	0.04 ac-ft	0.02 ac-ft	0.06 ac-ft	0.09 ac-ft	0.09 ac-ft	0.09 ac-ft
SMA F	0.95	0.67	0.04 ac-ft	0.07 ac-ft	0.04 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft	0.11 ac-ft
SMA G	1.76	1.33	0.07 ac-ft	0.14 ac-ft	0.07 ac-ft	0.21 ac-ft	N/A	0.21 ac-ft	0.40 ac-ft
BASIN H	0.79	0.54	0.03 ac-ft	0.06 ac-ft	0.03 ac-ft	0.09 ac-ft	0.06 ac-ft	0.09 ac-ft	***0.06 ac-ft
BASIN I	0.44	0.34	0.02 ac-ft	0.04 ac-ft	0.02 ac-ft	0.06 ac-ft	0.06 ac-ft	0.08 ac-ft	***0.06 ac-ft
BASIN J	0.53	0.45	0.02 ac-ft	0.05 ac-ft	0.02 ac-ft	0.07 ac-ft	0.02 ac-ft	0.07 ac-ft	***0.02 ac-ft
							Total:	**1.21 ac-ft**	**1.315 ac-ft**

***** Impervious area does not include pond surface area.

****** Remainder of required volume is provided within interconnected exfiltration system SMA-G.

******* This system holds volume for nutrient removal pretreatment. Treatment volume in accordance with SJRWMD Applicant's Handbook (Vol. 2) Section 8.2 is provided within SMA-G.
******** SMA-G provides additional nutrient removal pre-treatment volume and attenuation. Basins flowing through this system have previously met nutrient removal criteria. The additional volume provided within this system assists interconnected SMA-C, H, I, & J in meeting presumptive criteria treatment volume.

The following standards were utilized for the treatment volume associated with incidental areas draining to interconnected wet ponds A and B.

The greater of:

1.0 inch of runoff over the site (SJRWMD)

OR

2.5 inches of runoff over the impervious area (SJRWMD)

Table 6: *Wet Detention Pond Treatment Volume Required vs. Provided*

Drainage Area	Drainage Area (acres)	*Imp. Area (acres)	Required TV			Provided TV
			1.0" Over Site	2.5" Over Impervious Area	Total Required	
SMA B	1.68	0.87	0.14 ac-ft	0.18 ac-ft	0.18 ac-ft	1.02 ac-ft

*Impervious area does not include pond surface area.

** SMA B provides treatment for Basins B & G.2 in accordance with Section 8.2 of the SJRWMD Applicant's Handbook (Vol. 2).

As shown in the Tables 5 & 6 above, the provided Treatment Volume is greater than the required Treatment Volume per SJRWMD criteria. Please see **Appendix C** for treatment volume calculations.

3.3.3 WATER QUALITY VOLUME RECOVERY (BLEED DOWN)

Per SJRWMD criteria, the dry retention areas are required to provide the capacity for the appropriate treatment volume within 72-hours following a storm event. The wet pond is required to drawdown one-half of its required treatment volume within 24 to 30 hours following a storm event, but no more than half in the first 24 hours. Refer to the tables below for summary of permeability constants used with the exfiltration drawdown analysis.

Table 7: Design Permeability Rates

K (Horizontal) ft/day	K (Vertical) ft/day
51	17*

**Value includes safety factor of 2*

Recovery time was determined utilizing Advanced Interconnected Channel & Pond Routing (ICPR Ver. 4.04.00). As designed, the proposed dry retention ponds will drawdown the required water quality volume in less than 72 hours. The wet ponds will drawdown the volume within the 24 to 30 hour period provided in SJRWMD criteria. See **Appendix E** for supporting recovery analysis and results.

3.3.4 PROPOSED DEVELOPMENT RUNOFF

The stormwater runoff from the post-development basins was determined using Advanced Interconnected Channel & Pond Routing (ICPR Ver. 4.04.00) by Streamline Technologies, Inc. Please refer to ***Appendix A*** for the nodal exhibit and ***Appendix D*** for the input report and summary of results.

Please refer to the table below for a summary of the pre- vs. post- development peak discharge rates (Q) and the resulting maximum stage within the proposed BMP.

Table 8: Runoff Analysis

Storm Event	Tuskawilla Outfall (EAST) Q_{max} (CFS)		Wetland Outfall (WEST) Q_{max} (CFS)	
	Pre	Post	Pre	Post
25yr-24hr	3.01	0.57	28.14	25.46

Table 9: Proposed Max Stages

Storm Event	SMA-A.1 Max Stage (ft.) (NAVD)	SMA-A.2 Max Stage (ft.) (NAVD)	SMA-B Max Stage (ft.) (NAVD)	SMA-C Max Stage (ft.) (NAVD)	SMA-D Max Stage (ft.) (NAVD)	SMA-E Max Stage (ft.) (NAVD)
Mean Annual	45.67	45.67	41.70	43.39	43.84	43.13
10yr-24hr	46.01	46.06	43.66	43.85	44.34	43.68
25yr-24hr	46.05	46.11	43.85	43.97	44.40	43.88
100yr-24hr	46.11	46.24	44.46	44.63	44.61	44.63
Top of Bank/Trench	46.50	46.50	45.00	44.63	44.30	44.25

Storm Event	SMA-F Max Stage (ft.) (NAVD)	SMA-G Max Stage (ft.) (NAVD)	SWALE 1 Max Stage (ft.) (NAVD)	SWALE 2 Max Stage (ft.) (NAVD)	SWALE 3 Max Stage (ft.) (NAVD)
Mean Annual	43.07	43.39	45.29	45.26	45.30
10yr-24hr	43.69	43.88	45.35	45.32	45.34
25yr-24hr	43.89	44.00	45.36	45.33	45.34
100yr-24hr	44.63	44.64	45.38	45.34	45.36
Top of Bank/Trench	44.65	44.52	45.35	45.35	45.35

3.3.5 MINIMUM BUILDING FINISHED FLOORS (100-YEAR STORM EVENTS)

As required by SJRWMD ERP Applicants Handbook (Volume II), all building finished floor elevations must be designed to be above the pond design high elevation of the 100 year storm event. Please refer to Table 7 below for a summary of the design high water elevations for the 100-year storm events.

As demonstrated, all building finished floor elevations are established above the recommended elevations.

Table 10: Minimum Building Finished Floors (100yr Storm Event)

	100yr-24hr Max. Stage	Min. Allowed Finished Floor El. (ft.) (NAVD)		100yr-24hr Max. Stage	Min. Allowed Finished Floor El. (ft.) (NAVD)
SMA A.1	46.11	46.30	**SMA F**	44.63	46.30
SMA A.2	46.24		**SMA G**	44.64	
SMA B	44.46		**SWALE 1**	45.38	
SMA C	44.63		**SWALE 2**	45.34	
SMA D	44.61		**SWALE 3**	45.36	
SMA E	44.63				

3.4 NUTRIENT LOADING ANALYSIS

A nutrient loading analysis was performed to provide a pre- versus post- nutrient loading analysis to show that the proposed development does not add to the impairment of the receiving water body by increasing the post-development nitrogen and phosphorus annual mass loading.

The requirements dictated by SJRWMD are that the post-development nutrient loading rate will not be greater than the pre-development loading rate. The proposed stormwater systems utilize a combination of exfiltration trench, dry retention pond, and dry retention swales in series with a wet detention pond to treat and attenuate post-development runoff.

The resulting PRE-development annual mass loading rates were calculated to be:

	Pre-Development Nitrogen Loading Rate (kg/year)	Pre-Development Phosphorous Loading Rate (kg/year)		Pre-Development Nitrogen Loading Rate (kg/year)	Pre-Development Phosphorous Loading Rate (kg/year)
BASIN A & G.1	0.176	0.058	**BASIN F**	0.565	0.188
BASIN B	0.062	0.021	**BASIN G.2**	0.019	0.006
BASIN C	3.134	1.041	**BASIN H**	0.470	0.156
BASIN D	0.521	0.173	**BASIN I**	0.145	0.048
BASIN E	0.224	0.074	**BASIN J**	0.018	0.006

The resulting POST-development annual mass loading rates were calculated to be:

	Post-Development Nitrogen Loading Rate (kg/year)	Post-Development Phosphorous Loading Rate (kg/year)		Post-Development Nitrogen Loading Rate (kg/year)	Post-Development Phosphorous Loading Rate (kg/year)
BASIN A & G.1	5.096	0.848	**BASIN F**	3.161	0.526
BASIN B	1.036	0.172	**BASIN G.2**	2.632	0.438
BASIN C	12.149	2.021	**BASIN H**	2.547	0.424
BASIN D	3.206	0.533	**BASIN I**	1.603	0.267
BASIN E	1.790	0.298	**BASIN J**	2.119	0.352

Based on the pre- vs. post- development loading rates, the treatment systems have been sequenced in the following order to provide the removal efficiencies needed.

BMPTrains System Routing						
Catchment 8 (SWALE 1)	↘	Catchment 3 (SMA-C)	↘			
Catchment 9 (SWALE 2)	→	Catchment 7 (SMA-G)	↘			
Catchment 10 (SWALE 3)	↗	Catchment 4 (SMA-D)	→	Catchment 2 (SMA-B)	→	OUTLET
		Catchment 5 (SMA-E)	↗			
		Catchment 6 (SMA-F)	↗			
				Catchment 1 (SMA-A.1 & A.2)	→	OUTLET

As shown in the table above, Basin A drains into Basin B's wet detention for further nutrient removal. Basin C through Basin G route through Basin B's wet detention pond for further nutrient removal. Basin H through Basin J pass through Basin G and Basin B for additional nutrient removal. See ***Appendix C*** for the removal efficiencies of each of the individual systems. The summary report within ***Appendix C*** provides the overall removal efficiency of the site given the sequence in which drainage must flow before it is discharged from the site. The table below provides the summary of the sites overall removal efficiency.

	Nitrogen Loading Rate (kg/year)	Nitrogen Removal Efficiency (%)	Phosphorous Loading Rate (kg/year)	Phosphorous Removal Efficiency (%)
Target	5.33	85%	1.771	70%
Provided	4.59	87%	0.472	92%

As designed, the proposed BMPs provide sufficient removal of the resulting post-development nitrogen and phosphorus nutrient loading. Please refer to Appendix C for the loading calculations, per BMP Trains 2020 Ver. 2.1.

3.5 CONCLUSION

This Drainage Analysis demonstrates the proposed improvements and design of the proposed stormwater management system(s) meet or exceeds all the requirements of the St. John's River Water Management District (SJRWMD) and the City of Winter Springs.

APPENDICES

FIGURES..... APPENDIX A

Figure 1 Aerial Photograph
Figure 2 General Location Map
Figure 3 SCS soil survey
Figure 4 USGS Quad Map
Figure 5 FEMA F.I.R.M.
Figure 6 Pre-Development Basin Node Map
Figure 7 Post-Development Basin Node Map

PRE-DEVELOPMENT DRAINAGE CALCULATIONS AND ICPR ANALYSIS..... APPENDIX B

POST-DEVELOPMENT DRAINAGE CALCULATIONS ..... APPENDIX C

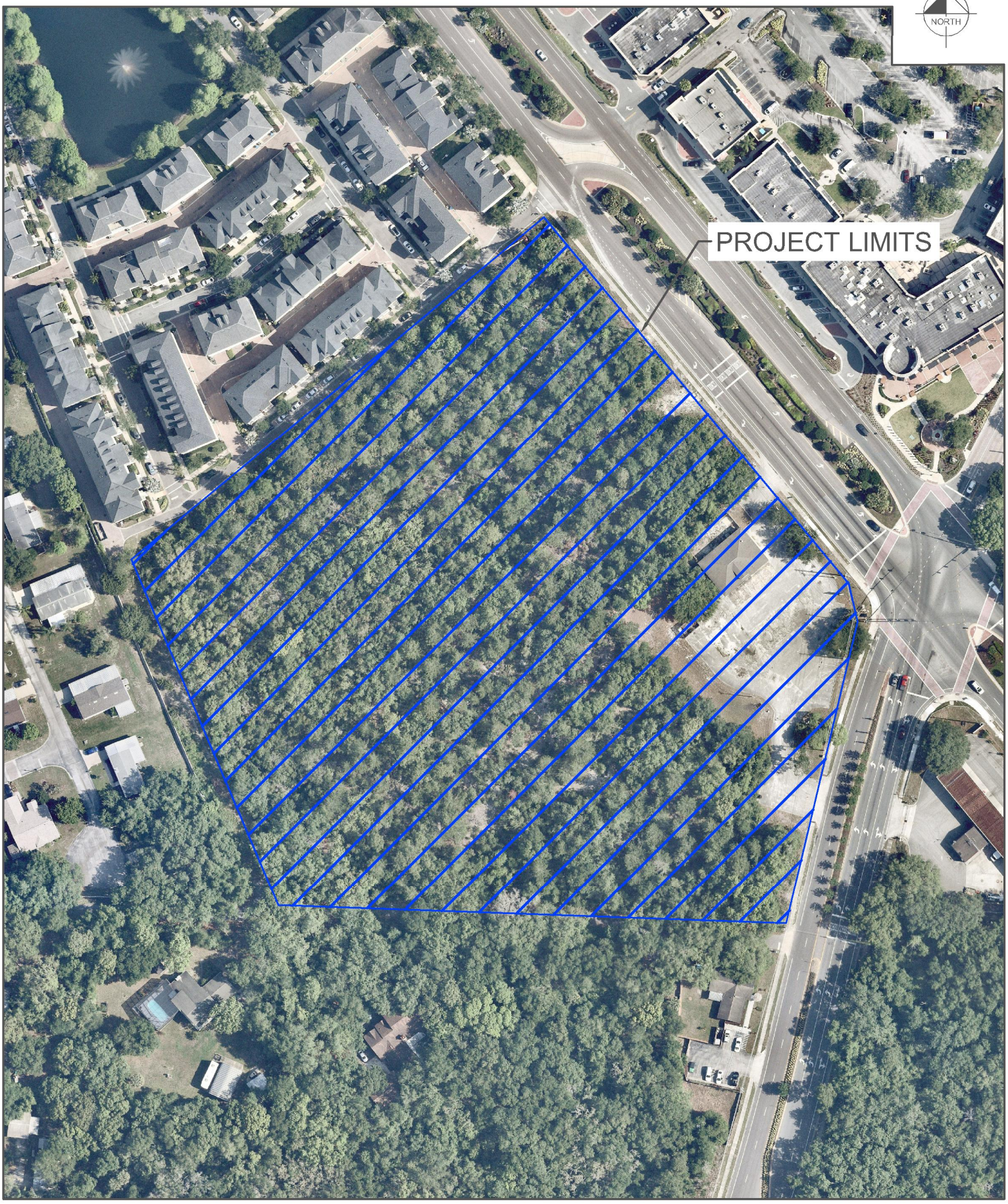
POST-DEVELOPMENT ICPR ANALYSIS..... APPENDIX D

WET & DRY POND RECOVERY ANALYSIS..... APPENDIX E

APPENDIX A

FIGURES

Aerial Photograph
General Location Map
SCS soil survey
USGS Quad Map
FEMA F.I.R.M.
Pre-Development Basin Node Map
Post-Development Basin Node Map



EX-1

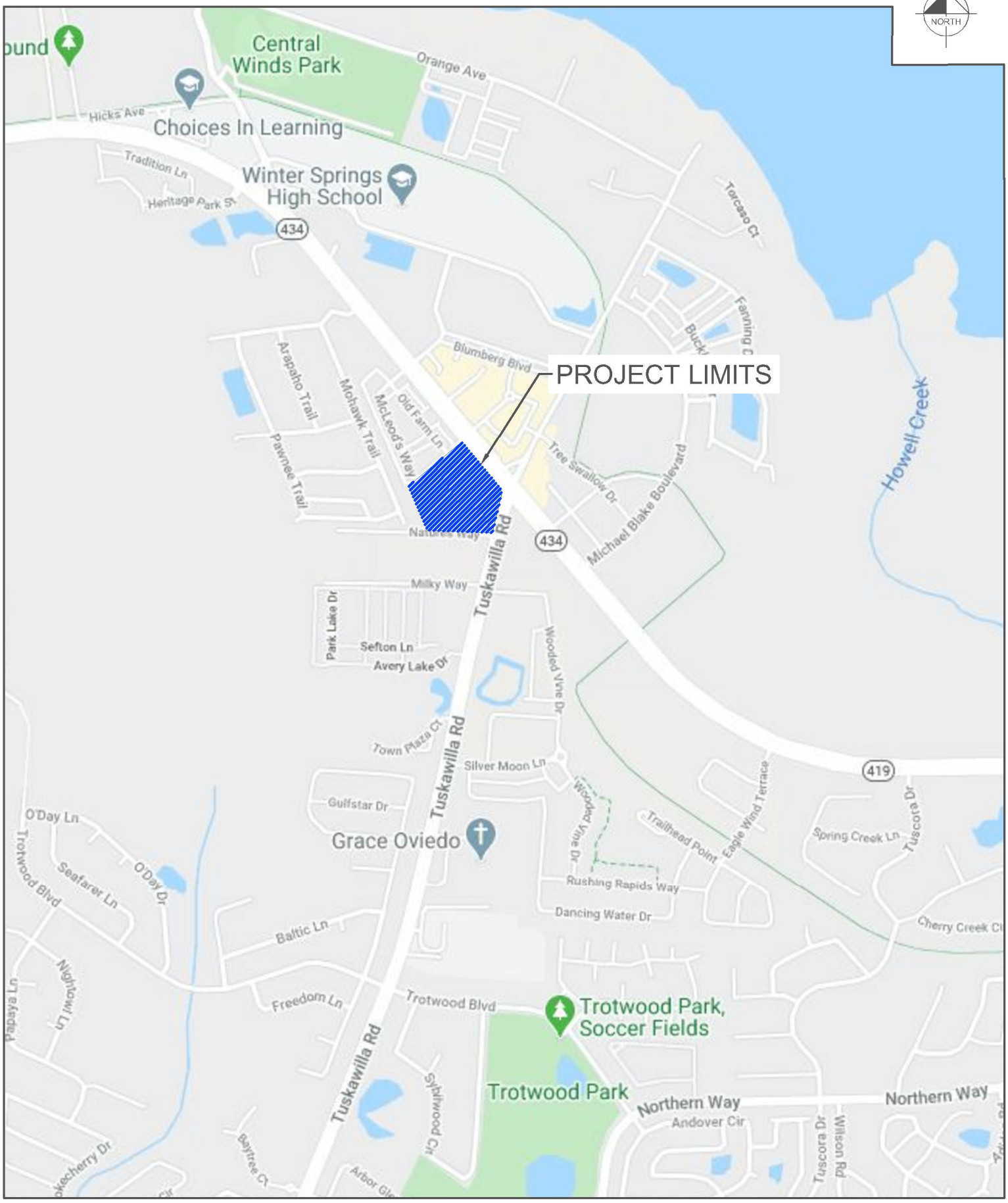
WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

LOCATION MAP

Kimley»Horn

K:\ORL_Civil\149170016-Winter Springs Marketplace\CADD\EXHIBITS\DRAINAGE REPORT EXHIBITS.dwg



K:\ORL_Civil\149170016-Winter Springs Marketplace\CADD\EXHIBITS\DRAINAGE REPORT EXHIBITS.dwg

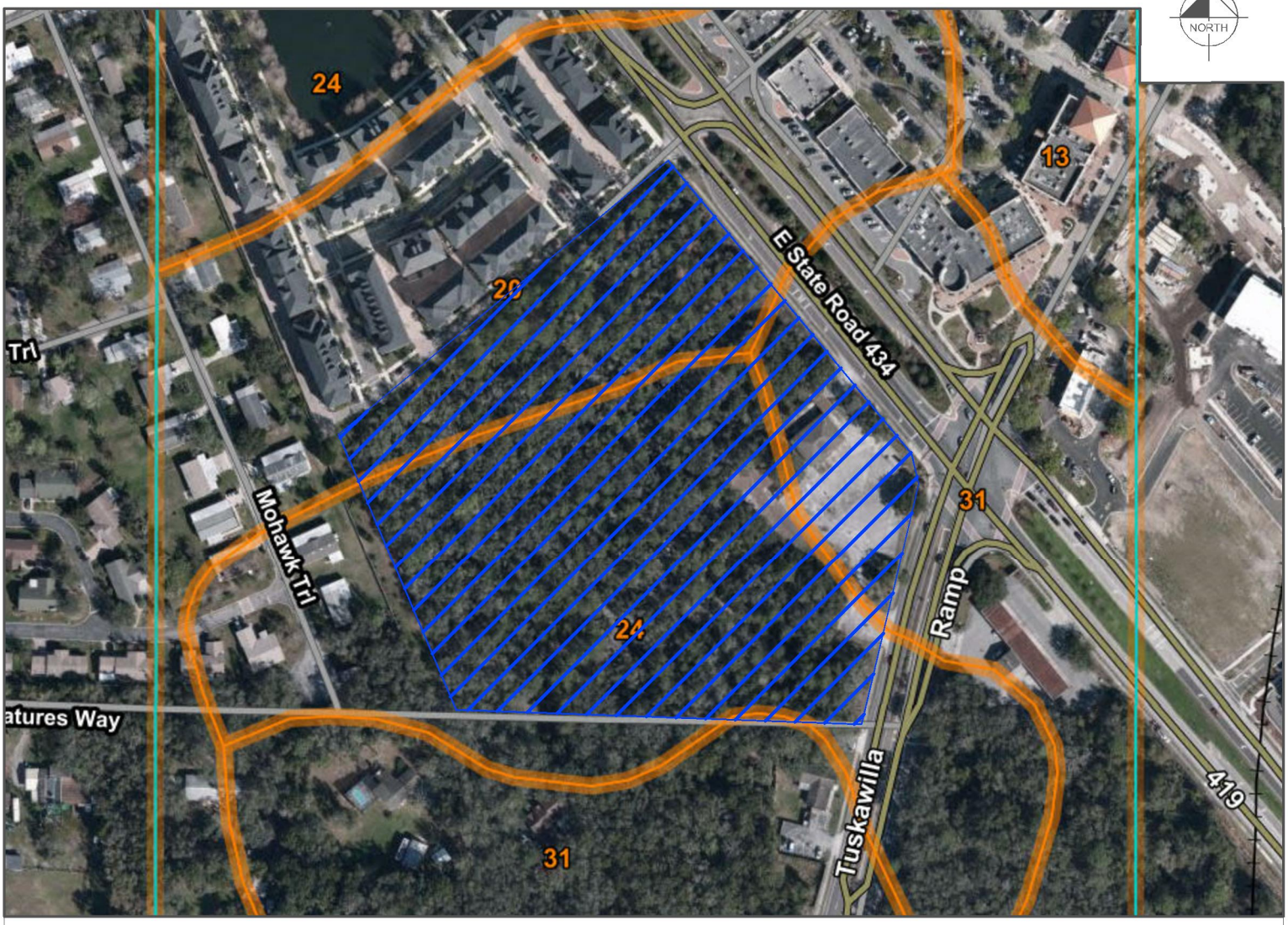
EX-2

WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

LOCATION MAP

Kimley»Horn



RUSLE2 Related Attributes–Seminole County, Florida								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
20—Myakka and EauGallie fine sands								
Myakka	58	151	A/D	.02	5	97.0	1.0	2.0
EauGallie	32	151	A/D	.02	5	97.0	1.0	2.0
24—Paola-St. Lucie sands, 0 to 5 percent slopes								
Paola	52	151	A	.02	5	98.0	1.0	1.0
St. Lucie	43	151	A	.02	5	99.0	0.5	0.5
31—Tavares-Millhopper complex, 0 to 5 percent slopes								
Tavares	63	151	A	.05	5	97.0	1.0	2.0
Millhopper	32	151	A	.05	5	94.0	1.0	5.0

K:\ORL_Civil\149170016-Winter Springs Marketplace\CADD\EXHIBITS\DRAINAGE REPORT EXHIBITS.dwg

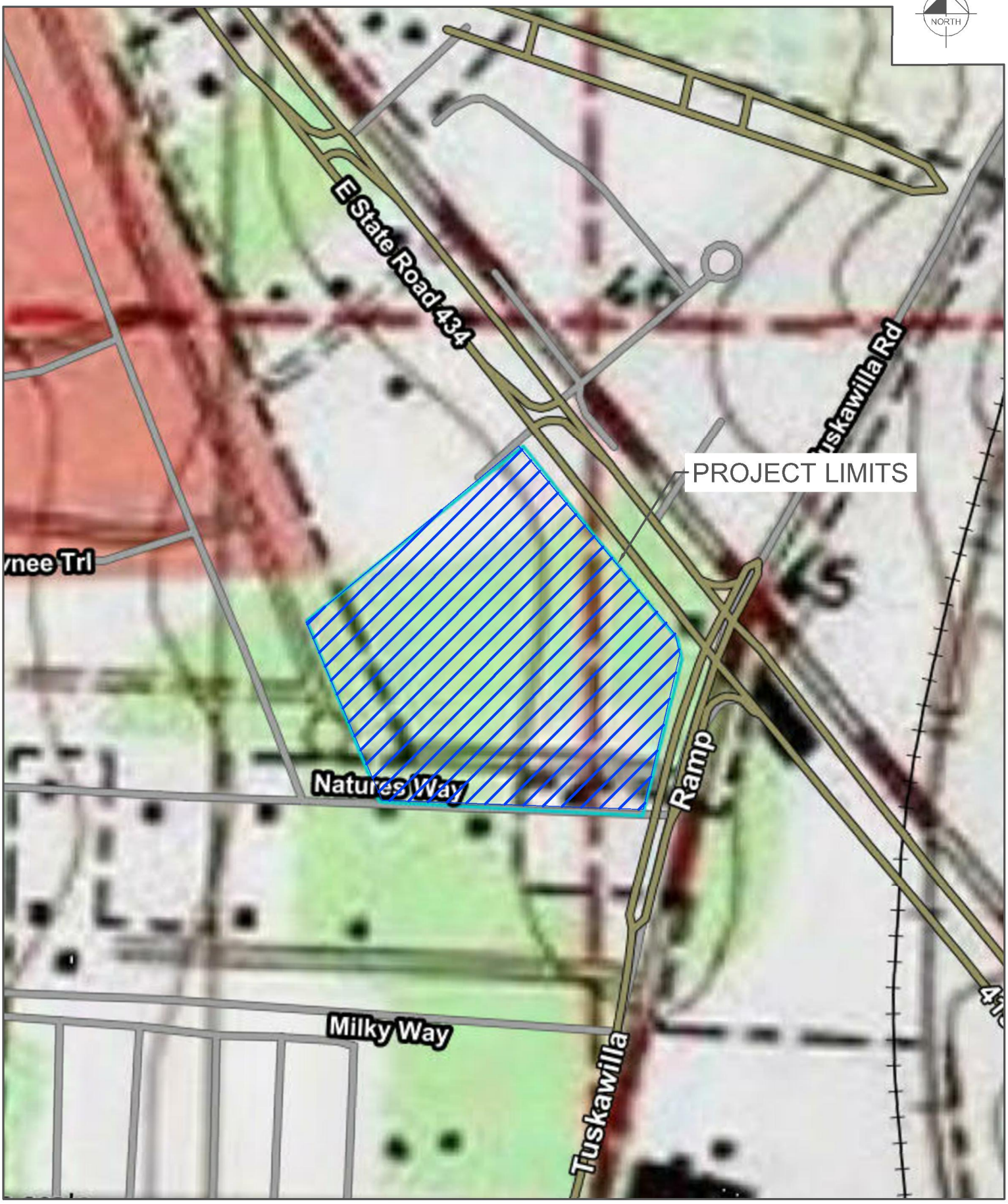
EX-3

WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

SOILS MAP

Kimley»Horn



EX-4

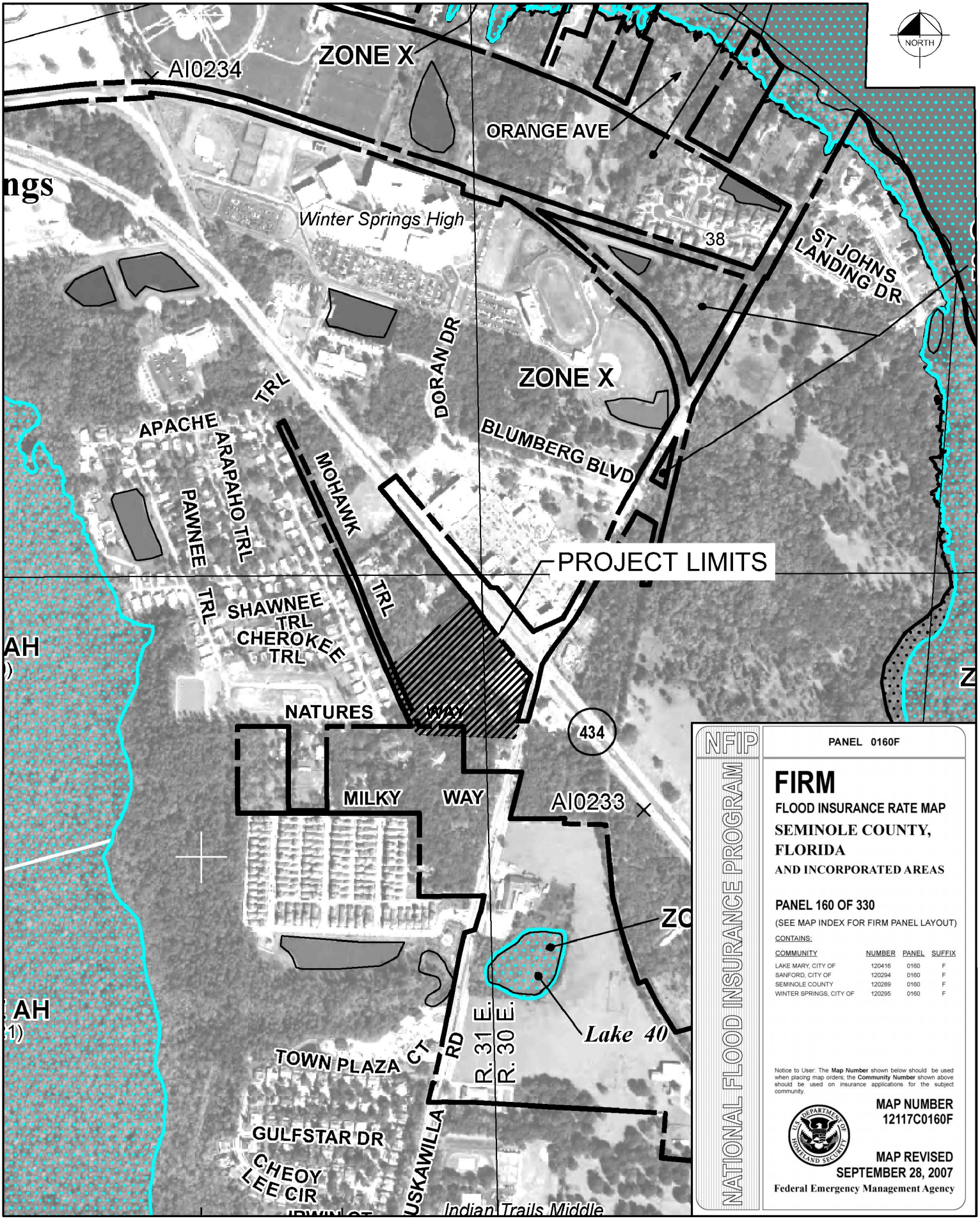
WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

USGS QUAD MAP

Kimley»Horn

K:\ORL_Civil\149170016-Winter Springs Marketplace\CADD\EXHIBITS\DRAINAGE REPORT EXHIBITS.dwg



EX-5

WINTER SPRINGS MARKETPLACE

CITY OF WINTER SPRINGS, FL

FEMA F.I.R.M. MAP

K:\ORL_Civil\149170016-Winter Springs Marketplace\CADD\EXHIBITS\DRAINAGE REPORT EXHIBITS.dwg

PLAT OF SURVEY

ALTA/ACSM LAND TITLE SURVEY

GRAPHIC SCALE

0' 20' 40' 80' 120'

1" = 40'

LEGEND

BB – BOTTOM OF BANK
BC – BACK OF CURB
BF – BACKFLOW PREVENTER
BM – BENCHMARK
BPC – BURIED POWER CABLE
CALC – CALCULATED
C&M – CALCULATED & MEASURED
Δ – CENTRAL ANGLE
CBW – CONCRETE BLOCK WALL
CF – CONCRETE FLUME
CHW – CONCRETE HEAD WALL
CLF – CHAIN LINK FENCE
℄ – CENTERLINE
CM – CONCRETE MONUMENT
CMP – CORRUGATED METAL PIPE
CO – CLEAN OUT
CONC – CONCRETE
COVD – COVERED
CP – CONCRETE PAD
CPP – CORRUGATED PLASTIC PIPE
CR – CONCRETE RAILWAY
D&M – DEED/DESC & MEASURED
DE – DRAINAGE EASEMENT
DESC – DESCRIPTION
DM – DUMPSTER
DW – DRIVEWAY
EB – ELECTRIC METER
EB – ELECTRICAL BOX
ESMT – EASEMENT
E/P – EDGE OF PAVEMENT
FIRM – FLOOD INSURANCE RATE MAP
FFE – FINISHED FLOOR ELEVATION
FH – FIRE HYDRANT
FL – FLOW LINE
FND – FOUND
–G– – GAS LINE
GB – GAS METER
GW – GUY WIRE ANCHOR
HP – HANDICAP PARKING
HR – HANDICAP RAMP
INV – INVERT ELEVATION
IP – IRON PIPE
IR – IRON ROD
L – ARC LENGTH
LP – LIGHT POLE
LSA – LANDSCAPED AREA
MEAS – MEASURED
– WITERED END SECTION
– MONITORING WELL
NAD – NAIL & DISK
NTS – NOT TO SCALE
OHE – OVERHEAD ELECTRIC
OL – ON LINE
ORB – OFFICIAL RECORDS BOOK
PC – POINT OF CURVATURE
PER – PER ENGINEERING PLANS
PG – PAGE
PI – POINT OF INTERSECTION
POB – POINT OF BEGINNING
POC – POINT OF COMMENCEMENT
PP – POWER POLE
PS – PARKING SPACES
PT – POINT OF TANGENCY
PVC – PLASTIC PIPE
R – RADIUS
RCP – REINFORCED CONCRETE PIPE
R/W – RIGHT OF WAY
– SANITARY MANHOLE
SAN – SANITARY LINE
SN – SIGN
00.00 – SPOT ELEVATION
–SD– – STORM/DRAIN LINE
– STORM MANHOLE
T – TRANSFORMER
– STORM INLET
TB – TOP OF BANK
TP – TRAFFIC POLE
TS – TRAFFIC SIGN
TR – TELEPHONE RISER
TSB – TRAFFIC SIGNAL BOX
TSW – TRAFFIC SIGNAL WIRE
TV – CABLE TV RISER
TYP – TYPICAL
UE – UTILITY EASEMENT
UVTL – UNDERGROUND TELEPHONE
–W– – WATER LINE
WF – WOOD FENCE
– WATER METER
– WATER VALVE
– NUMBER
– EASEMENT NUMBER

INVERTS

DOT INLET A
TOP = 45.88'
W INV (6" CPP) = 42.55'
NE INV (18" RCP) = 39.20'

DOT INLET B
TOP = 45.06'
NW INV (6" CPP) = 41.29'
NE INV (18" RCP) = 39.09'

INLET C
TOP = 44.64'
SW INV (18" RCP) = 39.04'

MANHOLE D
TOP = 43.36'
NW INV (18" RCP) = 38.43'
NE INV (18" RCP) = 38.72'
SW INV (18" RCP) = 38.55'

MANHOLE E
TOP = 43.26'
NE INV (18" RCP) = 38.88'
NW INV (18" RCP) = 39.01'

INLET F
TOP = 42.99'
SE INV (18" RCP) = 39.37'

INLET G
TOP = 44.86'
NE INV (12" CPP) = 42.33'
SE INV (18" RCP) = 40.61'
SW INV (18" RCP) = 40.71'

CONTROL STRUCTURE H
TOP = 44.77'
NE INV (12" CPP) = 42.82'
NW INV (12" CPP) = 41.87'
WEIR = 44.36'

INLET I
TOP = 44.14'
W INV (2-12" CPP) = 41.99'

GREASE TRAP J
TOP = 45.43'
E INV (4" PVC) = 44.04'

GREASE TRAP K
TOP = 45.59'
W INV (4" PVC) = 44.00'

REACH #1

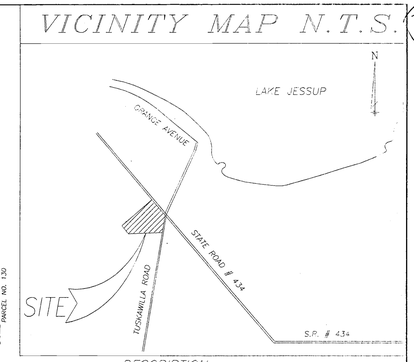
LINE CHART

L1	S 12°13'40" E	44.87' C&M

TREE CHART

114 – 12" OAK	501 – 8" PINE	608 – 6" OAK	695 – 5" OAK	827 – 24" OAK	1035 – 18" PINE	1188 – 6" OAK	
115 – 15" OAK	502 – 15" PINE	607 – 16" PINE	696 – 11" OAK	828 – 12" OAK	1036 – 8" PINE	1189 – 8" PINE	
116 – 12" OAK	504 – 12" OAK	608 – 6" OAK	697 – 6" OAK	829 – 12" OAK	1037 – 8" PINE	1190 – 6" OAK	
117 – 8" OAK	505 – 7" OAK	609 – 6" OAK	698 – 6" OAK	830 – 15" OAK	1038 – 7" PINE	1191 – 8" PINE	
118 – 8" OAK	506 – 20" PINE	610 – 6" OAK	699 – 6" OAK	831 – 12" OAK	1039 – 7" PINE	1192 – 6" OAK	
119 – 8" OAK	507 – 8" PINE	611 – 6" OAK	700 – 6" OAK	832 – 12" OAK	1040 – 6" PINE	1193 – 6" OAK	
120 – 8" OAK	508 – 8" PINE	612 – 6" OAK	701 – 6" OAK	833 – 12" OAK	1041 – 6" PINE	1194 – 6" OAK	
121 – 8" OAK	509 – 8" PINE	613 – 6" OAK	702 – 6" OAK	834 – 12" OAK	1042 – 6" PINE	1195 – 6" OAK	
122 – 8" OAK	510 – 8" PINE	614 – 6" OAK	703 – 6" OAK	835 – 12" OAK	1043 – 6" PINE	1196 – 6" OAK	
123 – 8" OAK	511 – 8" PINE	615 – 6" OAK	704 – 6" OAK	836 – 12" OAK	1044 – 6" PINE	1197 – 6" OAK	
124 – 8" OAK	512 – 8" PINE	616 – 6" OAK	705 – 6" OAK	837 – 12" OAK	1045 – 6" PINE	1198 – 6" OAK	
125 – 8" OAK	513 – 8" PINE	617 – 6" OAK	706 – 6" OAK	838 – 12" OAK	1046 – 6" PINE	1199 – 6" OAK	
126 – 8" OAK	514 – 8" PINE	618 – 6" OAK	707 – 6" OAK	839 – 12" OAK	1047 – 6" PINE	1200 – 6" OAK	
127 – 8" OAK	515 – 8" PINE	619 – 6" OAK	708 – 6" OAK	840 – 12" OAK	1048 – 6" PINE	1201 – 6" OAK	
128 – 8" OAK	516 – 8" PINE	620 – 6" OAK	709 – 6" OAK	841 – 12" OAK	1049 – 6" PINE	1202 – 6" OAK	
129 – 8" OAK	517 – 8" PINE	621 – 6" OAK	710 – 6" OAK	842 – 12" OAK	1050 – 6" PINE	1203 – 6" OAK	
130 – 8" OAK	518 – 8" PINE	622 – 6" OAK	711 – 6" OAK	843 – 12" OAK	1051 – 6" PINE	1204 – 6" OAK	
131 – 8" OAK	519 – 8" PINE	623 – 6" OAK	712 – 6" OAK	844 – 12" OAK	1052 – 6" PINE	1205 – 6" OAK	
132 – 8" OAK	520 – 8" PINE	624 – 6" OAK	713 – 6" OAK	845 – 12" OAK	1053 – 6" PINE	1206 – 6" OAK	
133 – 8" OAK	521 – 8" PINE	625 – 6" OAK	714 – 6" OAK	846 – 12" OAK	1054 – 6" PINE	1207 – 6" OAK	
134 – 8" OAK	522 – 8" PINE	626 – 6" OAK	715 – 6" OAK	847 – 12" OAK	1055 – 6" PINE	1208 – 6" OAK	
135 – 8" OAK	523 – 8" PINE	627 – 6" OAK	716 – 6" OAK	848 – 12" OAK	1056 – 6" PINE	1209 – 6" OAK	
136 – 8" OAK	524 – 8" PINE	628 – 6" OAK	717 – 6" OAK	849 – 12" OAK	1057 – 6" PINE	1210 – 6" OAK	
137 – 8" OAK	525 – 8" PINE	629 – 6" OAK	718 – 6" OAK	850 – 12" OAK	1058 – 6" PINE	1211 – 6" OAK	
138 – 8" OAK	526 – 8" PINE	630 – 6" OAK	719 – 6" OAK	851 – 12" OAK	1059 – 6" PINE	1212 – 6" OAK	
139 – 8" OAK	527 – 8" PINE	631 – 6" OAK	720 – 6" OAK	852 – 12" OAK	1060 – 6" PINE	1213 – 6" OAK	
140 – 8" OAK	528 – 8" PINE	632 – 6" OAK	721 – 6" OAK	853 – 12" OAK	1061 – 6" PINE	1214 – 6" OAK	
141 – 8" OAK	529 – 8" PINE	633 – 6" OAK	722 – 6" OAK	854 – 12" OAK	1062 – 6" PINE	1215 – 6" OAK	
142 – 8" OAK	530 – 8" PINE	634 – 6" OAK	723 – 6" OAK	855 – 12" OAK	1063 – 6" PINE	1216 – 6" OAK	
143 – 8" OAK	531 – 8" PINE	635 – 6" OAK	724 – 6" OAK	856 – 12" OAK	1064 – 6" PINE	1217 – 6" OAK	
144 – 8" OAK	532 – 8" PINE	636 – 6" OAK	725 – 6" OAK	857 – 12" OAK	1065 – 6" PINE	1218 – 6" OAK	
145 – 8" OAK	533 – 8" PINE	637 – 6" OAK	726 – 6" OAK	858 – 12" OAK	1066 – 6" PINE	1219 – 6" OAK	
146 – 8" OAK	534 – 8" PINE	638 – 6" OAK	727 – 6" OAK	859 – 12" OAK	1067 – 6" PINE	1220 – 6" OAK	
147 – 8" OAK	535 – 8" PINE	639 – 6" OAK	728 – 6" OAK	860 – 12" OAK	1068 – 6" PINE	1221 – 6" OAK	
148 – 8" OAK	536 – 8" PINE	640 – 6" OAK	729 – 6" OAK	861 – 12" OAK	1069 – 6" PINE	1222 – 6" OAK	
149 – 8" OAK	537 – 8" PINE	641 – 6" OAK	730 – 6" OAK	862 – 12" OAK	1070 – 6" PINE	1223 – 6" OAK	
150 – 8" OAK	538 – 8" PINE	642 – 6" OAK	731 – 6" OAK	863 – 12" OAK	1071 – 6" PINE	1224 – 6" OAK	
151 – 8" OAK	539 – 8" PINE	643 – 6" OAK	732 – 6" OAK	864 – 12" OAK	1072 – 6" PINE	1225 – 6" OAK	
152 – 8" OAK	540 – 8" PINE	644 – 6" OAK	733 – 6" OAK	865 – 12" OAK	1073 – 6" PINE	1226 – 6" OAK	
153 – 8" OAK	541 – 8" PINE	645 – 6" OAK	734 – 6" OAK	866 – 12" OAK	1074 – 6" PINE	1227 – 6" OAK	
154 – 8" OAK	542 – 8" PINE	646 – 6" OAK	735 – 6" OAK	867 – 12" OAK	1075 – 6" PINE	1228 – 6" OAK	
155 – 8" OAK	543 – 8" PINE	647 – 6" OAK	736 – 6" OAK	868 – 12" OAK	1076 – 6" PINE	1229 – 6" OAK	
156 – 8" OAK	544 – 8" PINE	648 – 6" OAK	737 – 6" OAK	869 – 12" OAK	1077 – 6" PINE	1230 – 6" OAK	
157 – 8" OAK	545 – 8" PINE	649 – 6" OAK	738 – 6" OAK	870 – 12" OAK	1078 – 6" PINE	1231 – 6" OAK	
158 – 8" OAK	546 – 8" PINE	650 – 6" OAK	739 – 6" OAK	871 – 12" OAK	1079 – 6" PINE	1232 – 6" OAK	
159 – 8" OAK	547 – 8" PINE	651 – 6" OAK	740 – 6" OAK	872 – 12" OAK	1080 – 6" PINE	1233 – 6" OAK	
160 – 8" OAK	548 – 8" PINE	652 – 6" OAK	741 – 6" OAK	873 – 12" OAK	1081 – 6" PINE	1234 – 6" OAK	
161 – 8" OAK	549 – 8" PINE	653 – 6" OAK	742 – 6" OAK	874 – 12" OAK	1082 – 6" PINE	1235 – 6" OAK	
162 – 8" OAK	550 – 8" PINE	654 – 6" OAK	743 – 6" OAK	875 – 12" OAK	1083 – 6" PINE	1236 – 6" OAK	
163 – 8" OAK	551 – 8" PINE	655 – 6" OAK	744 – 6" OAK	876 – 12" OAK	1084 – 6" PINE	1237 – 6" OAK	
164 – 8" OAK	552 – 8" PINE	656 – 6" OAK	745 – 6" OAK	877 – 12" OAK	1085 – 6" PINE	1238 – 6" OAK	
165 – 8" OAK	553 – 8" PINE	657 – 6" OAK	746 – 6" OAK	878 – 12" OAK	1086 – 6" PINE	1239 – 6" OAK	
166 – 8" OAK	554 – 8" PINE	658 – 6" OAK	747 – 6" OAK	879 – 12" OAK	1087 – 6" PINE	1240 – 6" OAK	
167 – 8" OAK	555 – 8" PINE	659 – 6" OAK	748 – 6" OAK	880 – 12" OAK	1088 – 6" PINE	1241 – 6" OAK	
168 – 8" OAK	556 – 8" PINE	660 – 6" OAK	749 – 6" OAK	881 – 12" OAK	1089 – 6" PINE	1242 – 6" OAK	
169 – 8" OAK	557 – 8" PINE	661 – 6" OAK	750 – 6" OAK	882 – 12" OAK	1090 – 6" PINE	1243 – 6" OAK	
170 – 8" OAK	558 – 8" PINE	662 – 6" OAK	751 – 6" OAK	883 – 12" OAK	1091 – 6" PINE	1244 – 6" OAK	
171 – 8" OAK	559 – 8" PINE	663 – 6" OAK	752 – 6" OAK	884 – 12" OAK	1092 – 6" PINE	1245 – 6" OAK	
172 – 8" OAK	560 – 8" PINE	664 – 6" OAK	753 – 6" OAK	885 – 12" OAK	1093 – 6" PINE	1246 – 6" OAK	
173 – 8" OAK	561 – 8" PINE	665 – 6" OAK	754 – 6" OAK	886 – 12" OAK	1094 – 6" PINE	1247 – 6" OAK	
174 – 8" OAK	562 – 8" PINE	666 – 6" OAK	755 – 6" OAK	887 – 12" OAK	1095 – 6" PINE	1248 – 6" OAK	
175 – 8" OAK	563 – 8" PINE	667 – 6" OAK	756 – 6" OAK	888 – 12" OAK	1096 – 6" PINE	1249 – 6" OAK	
176 – 8" OAK	564 – 8" PINE	668 – 6" OAK	757 – 6" OAK	889 – 12" OAK	1097 – 6" PINE	1250 – 6" OAK	
177 – 8" OAK	565 – 8" PINE	669 – 6" OAK	758 – 6" OAK	890 – 12" OAK	1098 – 6" PINE	1251 – 6" OAK	
178 – 8" OAK	566 – 8" PINE	670 – 6" OAK	759 – 6" OAK	891 – 12" OAK	1099 – 6" PINE	1252 – 6" OAK	
179 – 8" OAK	567 – 8" PINE	671 – 6" OAK	760 – 6" OAK	892 – 12" OAK	1100 – 6" PINE	1253 – 6" OAK	
180 – 8" OAK	568 – 8" PINE	672 – 6" OAK	761 – 6" OAK	893 – 12" OAK	1101 – 6" PINE	1254 – 6" OAK	
181 – 8" OAK	569 – 8" PINE	673 – 6" OAK	762 – 6" OAK	894 – 12" OAK	1102 – 6" PINE	1255 – 6" OAK	
182 – 8" OAK	570 – 8" PINE	674 – 6" OAK	763 – 6" OAK	895 – 12" OAK	1103 – 6" PINE	1256 – 6" OAK	
183 – 8" OAK	571 – 8" PINE	675 – 6" OAK	764 – 6" OAK	896 – 12" OAK	1104 – 6" PINE	1257 – 6" OAK	
184 – 8" OAK	572 – 8" PINE	676 – 6" OAK	765 – 6" OAK	897 – 12" OAK	1105 – 6" PINE	1258 – 6" OAK	
185 – 8" OAK	573 – 8" PINE	677 – 6" OAK	766 – 6" OAK	898 – 12" OAK	1106 – 6" PINE	1259 – 6" OAK	
186 – 8" OAK	574 – 8" PINE	678 – 6" OAK	767 – 6" OAK	899 – 12" OAK	1107 – 6" PINE	1260 – 6" OAK	
187 – 8" OAK	575 – 8" PINE	679 – 6" OAK	768 – 6" OAK	900 – 12" OAK	1108 – 6" PINE	1261 – 6" OAK	
188 – 8" OAK	576 – 8" PINE	680 – 6" OAK	769 – 6" OAK	901 – 12" OAK	1109 – 6" PINE	1262 – 6" OAK	
189 – 8" OAK	577 – 8" PINE	681 – 6" OAK	770 – 6" OAK	902 – 12" OAK	1110 – 6" PINE	1263 – 6" OAK	
190 – 8" OAK	578 – 8" PINE	682 – 6" OAK	771 – 6" OAK	903 – 12" OAK	1111 – 6" PINE	1264 – 6" OAK	
191 – 8" OAK	579 – 8" PINE	683 – 6" OAK	772 – 6" OAK	904 – 12" OAK	1112 – 6" PINE	1265 – 6" OAK	
192 – 8" OAK	580 – 8" PINE	684 – 6" OAK	773 – 6" OAK	905 – 12" OAK	1113 – 6" PINE	1266 – 6" OAK	
193 – 8" OAK	581 – 8" PINE	685 – 6" OAK	774 – 6" OAK	906 – 12" OAK	1114 – 6" PINE	1267 – 6" OAK	
194 – 8" OAK	582 – 8" PINE	686 – 6" OAK	775 – 6" OAK	907 – 12" OAK	1115 – 6" PINE	1268 – 6" OAK	
195 – 8" OAK	583 – 8" PINE	687 – 6" OAK	776 – 6" OAK	908 – 12" OAK	1116 – 6" PINE	1269 – 6" OAK	
196 – 8" OAK	584 – 8" PINE	688 – 6" OAK	777 – 6" OAK	909 – 12" OAK	1117 – 6" PINE	1270 – 6" OAK	
197 – 8" OAK	585 – 8" PINE	689 – 6" OAK	778 – 6" OAK	910 – 12" OAK	1118 – 6" PINE	1271 – 6" OAK	
198 – 8" OAK	586 – 8" PINE	690 – 6" OAK	779 – 6" OAK	911 – 12" OAK	1119 – 6" PINE	1272 – 6" OAK	
199 – 8" OAK	587 – 8" PINE	691 – 6" OAK	780 – 6" OAK	912 – 12" OAK	1120 – 6" PINE	1273 – 6" OAK	
200 – 8" OAK	588 – 8" PINE	692 – 6" OAK	781 – 6" OAK	913 – 12" OAK	1121 – 6" PINE	1274 – 6" OAK	
500 – 10" PINE	589 – 8" PINE	693 – 6" OAK	782 – 6" OAK	914 – 12" OAK	1122 – 6" PINE	1275 – 6" OAK	
	590 – 10" PINE	694 – 6" OAK	783 – 6" OAK	915 – 12" OAK	1123 – 6" PINE	1276 – 6" OAK	
	591 – 8" PINE	695 – 6" OAK	784 – 6" OAK	916 – 12" OAK	1124 – 6" PINE	1277 – 6" OAK	
	592 – 8" PINE	696 – 6" OAK	785 – 6" OAK	917 – 12" OAK	1125 – 6" PINE	1278 – 6" OAK	
	593 – 8" PINE	697 – 6" OAK	786 – 6" OAK	918 – 12" OAK	1126 – 6" PINE	1279 – 6" OAK	
	594 – 8" PINE	698 – 6" OAK	787 – 6" OAK	919 – 12" OAK	1127 – 6" PINE	1280 – 6" OAK	
	595 – 8" PINE	699 – 6" OAK	788 – 6" OAK	920 – 12" OAK	1128 – 6" PINE	1281 – 6" OAK	
	596 – 8" PINE	700 – 6" OAK	789 – 6" OAK	921 – 12" OAK	1129 – 6" PINE	1282 – 6" PINE	
	597 – 8" PINE	701 – 6" OAK	790 – 6" OAK	922 – 12" OAK	1130 – 6" PINE		
	598 – 8" PINE	702 – 6" OAK	791 – 6" OAK	923 – 12" OAK	1131 – 6" PINE		
	599 – 8" PINE	703 – 6" OAK	792 – 6" OAK	924 – 12" OAK	1132 – 6" PINE		
	600 – 8" PINE	704 – 6" OAK	793 – 6" OAK	925 – 12" OAK	1133 – 6" PINE		
	601 – 8" PINE	705 – 6" OAK	794 – 6" OAK	926 – 12" OAK	1134 – 6" PINE		
	602 – 8" PINE	706 – 6" OAK	795 – 6" OAK	927 – 12" OAK	1135 – 6" PINE		
	603 – 8" PINE	707 – 6" OAK	796 – 6" OAK	928 – 12" OAK	1136 – 6" PINE		
	604 – 8" PINE	708 – 6" OAK	797 – 6" OAK	929 – 12" OAK	1137 – 6" PINE		
	605 – 8" PINE	709 – 6" OAK	798 – 6" OAK	930 – 12" OAK	1138 – 6" PINE		

VICINITY MAP N.T.S.



DESCRIPTION

PARENT TRACT

THAT PART OF THE UNPLATTED PART OF BLOCK B OF D.R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 3 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT 185 FEET NORTH 38°45' WEST OF THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK B LYING SOUTHWEST OF THE SANFORD ORLANDO ROAD AND RUNNING NORTH 38°45' WEST 200 FEET ALONG THE WESTERLY LINE OF THE SANFORD OVIEDO HIGHWAY; THENCE SOUTH 51°15' WEST 710.14 FEET; THENCE SOUTH 22°15' EAST 208 FEET; THENCE NORTH 51°15' EAST 770 FEET TO THE POINT OF BEGINNING. ALSO DESCRIBED AS LOT 8 ACCORDING TO JOE E. JOHNSTON'S SURVEY AS RECORDED IN DEED BOOK 147, PAGE 221, SEMINOLE COUNTY, FLORIDA.

LESS THAT PORTION OF PARCEL 130 IN ORDER OF TAKING IN OFFICIAL RECORDS BOOK 2831, PAGE 1024 THAT LIES WITHIN ABOVE DESCRIBED PROPERTY.

THAT PART OF THE UNPLATTED PART OF BLOCK "B" OF MITCHELL'S SURVEY OF THE LEVY GRANT DESCRIBED AS BEGINNING AT THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK "B" LYING SOUTHWEST OF THE SANFORD-OVIEDO HIGHWAY AND RUNNING NORTH 38°45' WEST 186.0 FEET ALONG THE WESTERLY LINE OF THE RIGHT OF WAY OF THE SANFORD-OVIEDO HIGHWAY; THENCE SOUTH 51°15' WEST 770.0 FEET; THENCE SOUTH 22°15' EAST 13.5 FEET TO THE SOUTHWEST CORNER OF THE UNPLATTED PART OF BLOCK "B"; THENCE EAST ALONG THE NORTH LINE OF TUSCAWILLA A DISTANCE OF 497.0 FEET; THENCE NORTH 30° EAST 420.0 FEET TO THE POINT OF BEGINNING.

ALSO DESCRIBED AS LOT 9, ACCORDING TO JOE E. JOHNSTON'S SURVEY AS RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

LESS THAT PART OF PARCEL 130 IN ORDER OF TAKING IN OFFICIAL RECORDS BOOK 2831, PAGE 1024, PUBLIC RECORDS OF SEMINOLE COUNTY THAT LIES WITHIN ABOVE DESCRIBED PROPERTY.

TOGETHER WITH THAT PORTION OF LOCATED ROAD LYING SOUTHERLY OF ABOVE DESCRIBED PROPERTY AS DESCRIBED IN OFFICIAL RECORDS BOOK 2972, PAGE 373, PUBLIC RECORDS OF SEMINOLE COUNTY.

TOGETHER WITH THAT PART OF LOT 8, BLOCK A, LYING WESTERLY OF TUSKAWILLA ROAD, OF D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

AND THAT PART OF LOT 8, BLOCK A, D.R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, LYING WESTERLY FROM THE NESTERLY FIFTY FEET FROM THE CENTER LINE OF TUSKAWILLA ROAD, AS RECORDED IN O.R.B 2860, PAGE 510, SEMINOLE COUNTY, FLORIDA.

TOGETHER WITH

LOT 7, JOE E. JOHNSTON'S SURVEY RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA. ALSO BEING THAT PART OF THE UNPLATTED PART OF BLOCK B OF D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS BEGINNING AT A POINT 386 FEET NORTH 38 DEGREES 45 MINUTES WEST OF THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK B LYING SOUTHWEST OF THE SANFORD-OVIEDO ROAD AND RUNNING NORTH 38 DEGREES 15 MINUTES WEST 200 FEET ALONG THE WESTERLY LINE OF THE SANFORD-OVIEDO ROAD; THENCE SOUTH 51 DEGREES 15 MINUTES WEST 600.30 FEET; THENCE SOUTH 22 DEGREES 15 MINUTES EAST 208.8 FEET; THENCE NORTH 51 DEGREES 15 MINUTES EAST 710.14 FEET TO THE POINT OF BEGINNING. LESS AND EXCEPT THAT PART TAKEN FOR POND RIGHT OF WAY BY THE ORDER OF TAKING RECORDED JULY 21, 1994, IN OFFICIAL RECORDS BOOK 2803, PAGE 1024, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

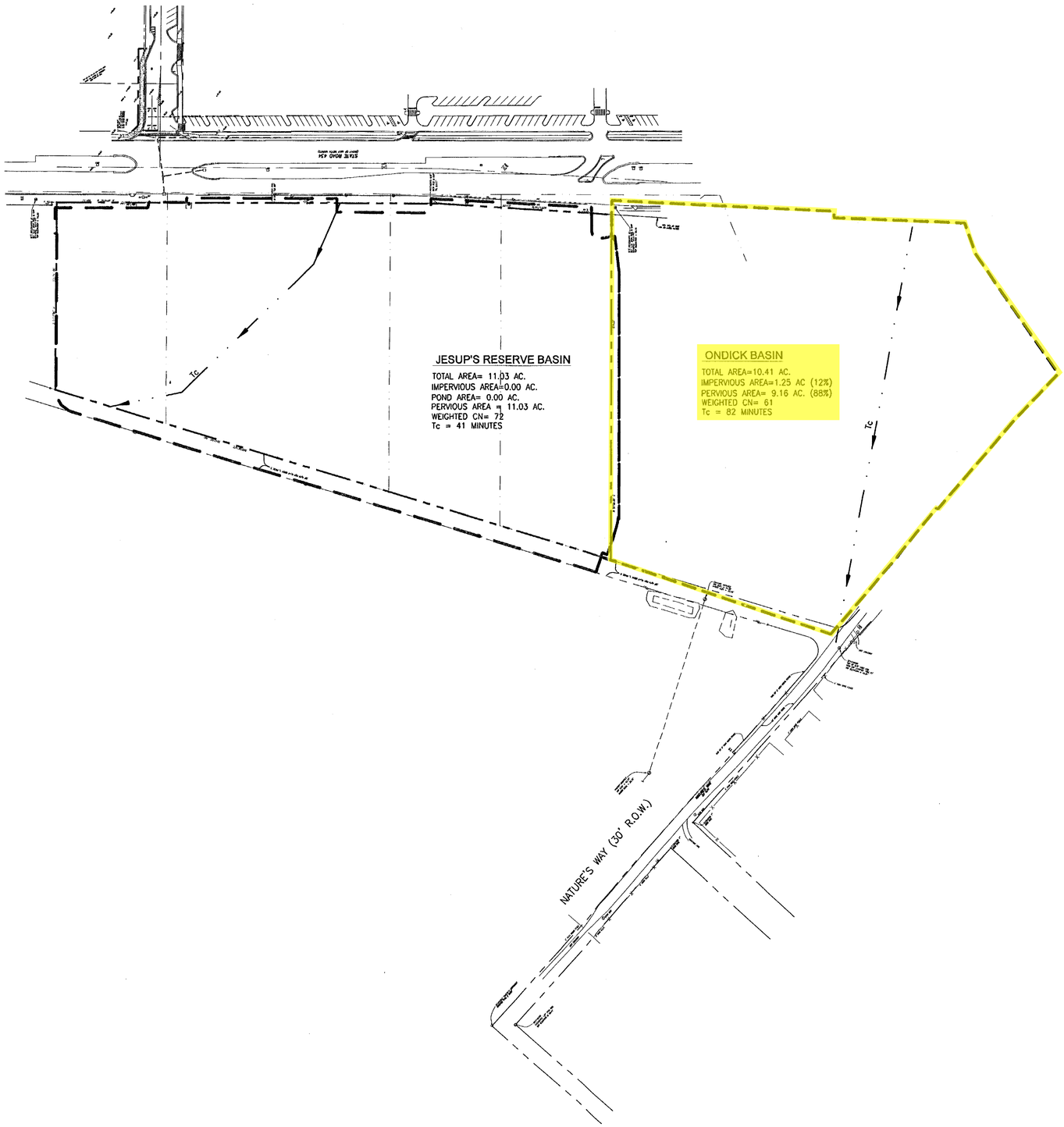
CONTAINS 448,300 SQUARE FEET OR 10.292 ACRES MORE OR LESS.

RIGHT-OF-WAY TAKING:

PARCEL NO. 130

A PART OF LOTS 8 AND 9 OF JOE E. JOHNSTON'S SURVEY AS RECORDED IN DEED BOOK 147, PAGE 221 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA ALSO BEING A PART OF THE UNNUMBERED LOT IN BLOCK B, D.R. MITCHELL'S SURVEY OF THE LEVY GRANT ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5 OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF SAID UNNUMBERED LOT IN BLOCK B, BEING THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT OF WAY LINE OF FIRST STREET, A 30-FOOT WIDE UNOPENED RIGHT OF WAY AND THE WESTERLY RIGHT OF WAY LINE OF BRAYLEY AVENUE, A 50-FOOT WIDE RIGHT OF WAY; THENCE RUN NORTH 51°27'39" WEST ALONG THE SOUTHERLY RIGHT OF WAY LINE OF SAID FIRST STREET AND THE NORTH LINE OF SAID UNNUMBERED LOT IN BLOCK B A DISTANCE OF 1823.57 FEET TO A POINT ON THE BASELINE OF SURVEY OF S.R. 434 ACCORDING TO F.D.O.T. RIGHT OF WAY MAP SECTION 77070-2516; THENCE RUN SOUTH 38°32'22" EAST ALONG SAID BASELINE OF SURVEY OF S.R. 434 A DISTANCE OF 0.33 FEET; THENCE DEPARTING SAID BASELINE OF SURVEY OF S.R. 434 RUN NORTH 51°28'23" WEST A DISTANCE OF 55.26 FEET TO THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT OF WAY LINE OF SAID FIRST STREET AND THE SOUTHEASTERLY RIGHT OF WAY LINE OF SAID S.R. 434; THENCE RUN SOUTH 38°32'22" EAST ALONG SAID SOUTHEASTERLY RIGHT OF WAY LINE A DISTANCE OF 1600.79 FEET TO THE NORTHEARST CORNER OF SAID LOT 8 FOR A POINT OF BEGINNING; THENCE CONTINUE SOUTH 38°32'22" EAST ALONG SAID SOUTHWESTERLY RIGHT OF WAY LINE OF S.R.434 A DISTANCE OF 361.83 FEET TO THE WESTERLY RIGHT OF WAY LINE OF TUSKAWILLA ROAD, A 50-FOOT WIDE RIGHT OF WAY; THENCE SOUTH 14°15'06" WEST ALONG SAID WESTERLY RIGHT OF WAY LINE OF TUSKAWILLA ROAD A DISTANCE OF 12.03 FEET TO THE WESTERLY RIGHT OF WAY LINE OF A 30-FOOT WIDE UNOPENED RIGHT OF WAY; THENCE RUN SOUTH 29°20'39" WEST ALONG SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 24.85 FEET; THENCE DEPARTING SAID WESTERLY RIGHT OF WAY LINE RUN NORTH 38°43'16" WEST A DISTANCE OF 398.46 FEET TO THE NORTHWESTERLY LINE OF SAID LOT 8; THENCE RUN NORTH 51°27'38" EAST ALONG SAID NORTHWES



100' 0 100'

SCALE: 1"=100'

2 of 7

97490-1

RECEIVED
APR 01 2005
PDS
ALTAMONTE SVC. CTR

Pulled from SJRWMD Permit No. 97490-1

RS&H®
Architectural, Engineering, Planning and Environmental Services

Reynolds, Smith and Hills, Inc.
10748 DEERWOOD PARK BLVD SOUTH
JACKSONVILLE, FLORIDA 32256

904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001886 · EB0005620 · LCC000210

HIGHLANDER INVESTMENTS, LTD
1085 WEST MORSE AVENUE,
SUITE A
WINTER PARK, FLORIDA 32789

JESUP'S RESERVE

WINTER SPRINGS,
FLORIDA

SEAL

3/30/05

DAVID F. PEIGLER, PE
FL. NO. 44100

REVISIONS

NO.	DESCRIPTION	DATE

DATE ISSUED: MARCH 18, 2005
REVIEWED BY: D. PEIGLER
DRAWN BY: J. NESS
DESIGNED BY: J. WARFLE

AEP PROJECT NUMBER
501-5760-000

© 2004 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

PRE-DEVELOPEMENT DRAINAGE PLAN

SHEET NUMBER
C-4

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

NOTES:
THE FOLLOWING NOTES ARE PROVIDED TO ALLOW FOR CLARIFICATION OF ROUTING WITHIN THE SYSTEM.
1. BASIN G.1 FLOWS TO SMA-A.2
2. BASIN G.2 FLOWS TO SMA-B
3. BASIN H FLOWS TO SWALE 1
4. BASIN I FLOWS TO SWALE 2
5. BASIN J FLOWS TO SWALE 3
6. SWALES 1, 2, & 3 FLOW INTO SMA-G TO ALLOW FOR FURTHER NUTRIENT REMOVAL.

LEGEND:
- STAGE VOLUME NODE
- STAGE AREA NODE
- TIME STAGE NODE
- PIPE LINK
- DROP STRUCTURE LINK
- WEIR LINK
- PERCOLATION LINK
- BASIN BOUNDARY

No.	REVISIONS	DATE	BY

Kimley»Horn
189 S. ORANGE AVE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM CA 00000696

LICENSED PROFESSIONAL
DATE:

KHA PROJECT
DATE
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

POST-DEVELOPMENT BASIN & NODE MAP

WINTER SPRINGS MARKETPLACE

SHEET NUMBER

APPENDIX B

Pre- Development Drainage Calculations and ICPR Analysis

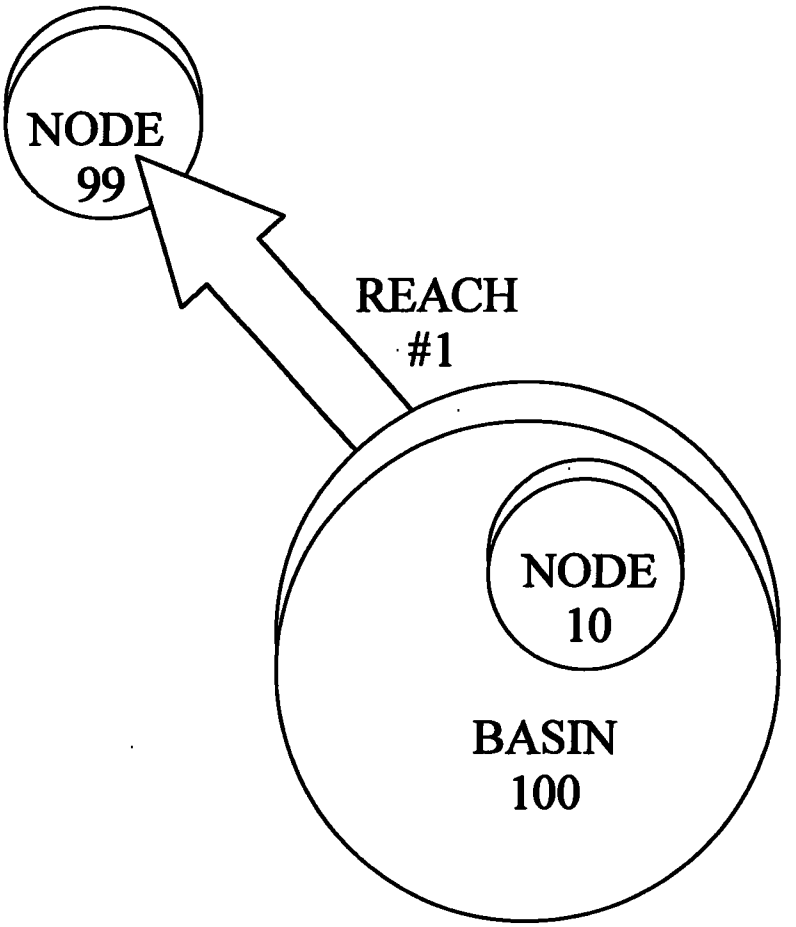
SJRWMD PERMIT NO. 83445-1

WALGREENS DRUG STORE #6575 EXISTING CONDITIONS MODELING OF SR 434 OUTFALL

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE DEVELOPMENT ANALYSIS

PRE-DEVELOPED HYD. SCHEMATIC:



AMERICAN CIVIL ENGINEERING COMPANY
207 N. MOSS ROAD, SUITE 211
WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700
FAX: (407) 327-0227

PAGE:

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE-DEVELOPED ANALYSIS:

HYDROGRAPH DATA:

BASIN NO. **100**

TOTAL AREA (AC)	**3.56 ACRES**
PERVIOUS AREA (AC)	**2.74 ACRE**
IMPERVIOUS AREA (AC)	**0.82 ACRE**
WATER SURFACE AREA (AC)	**0.00 ACRE**

SCS SOIL TYPE	**PAOLA/MILLHOPPER HYD. GRP. A/A**	
PERVIOUS CN	**49**	
IMPERVIOUS CN	**98**	
WATER SURFACE CN	**100**	
COMPOSITE CN	[(2.74)(49) + (0.82)(98)] / [3.56]	**60.3**

TIME OF CONCENTRATION:

38.5 MINUTES

AMERICAN CIVIL ENGINEERING COMPANY
207 N. MOSS ROAD, SUITE 211
WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700
FAX: (407) 327-0227

PAGE:

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE-DEVELOPED TIME OF CONCENTRATION COMPUTATIONS:
BASED ON SOIL CONVERSATION SERVICE (SCS) TECHNICAL RELEASE 55 (TR-55)

BASIN NUMBER: **100**

1. **OVERLAND FLOW:** $T_1 = [0.007 (nL)^{0.8}] / (P)^{0.5}(s)^{0.4}$

n = MANNING'S ROUGHNESS	**0.40**
L = FLOW LENGTH (ft)	**175**
P = 4.75 INCHES	
S = SLOPE OF HYD. GR. (ft/ft)	**0.0087**
T_1 = TRAVEL TIME (hr)	**0.64 HOUR**

2. CONCENTRATED FLOW: T2 = L/V

L = FLOW LENGTH (ft)
V = VELOCITY BASED ON TR55
T2 = TRAVEL TIME (hr) **0.0 HOUR**

3. PIPE FLOW: T3 = L/V

L = FLOW LENGTH (ft)
V = VEL. IN PIPE, ASSUME 4.0 ft/s
T2 = TRAVEL TIME (hr) **0.0 HOUR**

4. TOTAL TIME OF CONCENTRATION:

Tc = T1 + T2 + T3

Tc = 0.5 + 0.0 + 0.0 = **0.64 HOUR**

38.5 MIN.

PROJECT: **WALGREENS DRUG STORE #6575**
SEMINOLE COUNTY, FLORIDA

PRE-DEVELOPMENT ANALYSIS

STAGE/STORAGE DATA:

NODE **10**

STAGE (ELEV)	AREA (ACRE)	AVE. AREA (ACRE)	DEPTH (FEET)	INCREM. VOLUME (AC-FT)	ACCUM. VOLUME (AC-FT)
44.00	**0.18**	-	-	-	-
45.00	**0.26**	**0.22**	**1.00**	**0.22**	**0.22**

EXISTING OVERFLOW STRUCTURE:
TOP EL. = 44.77
INV. (NE) = 42.82
WEIR EL. = 44.36

AMERICAN CIVIL ENGINEERING COMPANY
207 N. MOSS ROAD, SUITE 211
WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700
FAX: (407) 327-0227

PAGE:

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.30)
Copyright 1989-1990, Streamline Technologies, Inc.

WALGREENS DRUG STORE #6575 - PRE DEVELOPED - 25 YR/24 HR
APRIL 19, 2002

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AREA/TIME (ac)/(hr)
10	AREA	44.000	.000	.000	.000	44.000	.180
						45.000	.260
						46.000	2.500
99	TIME	40.000	.000	.000	.000	40.000	.000
						41.000	24.000

REACH SUMMARY

INDEX	RCHNAME	FRMNODE	TONODE	REACH TYPE
1	1	10	99	CIRCULAR CULVERT

Node-99 time stage node data in NGVD

>>REACH NAME : 1
FROM NODE : 10
TO NODE : 99
REACH TYPE : CIRCULAR CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 12.000 RISE (in): 12.000 LENGTH (ft): 150.000
U/S INVERT (ft): 42.820 D/S INVERT (ft): 39.370 MANNING N: .026
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 44.770 CREST LN. (ft): 10.167 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : RECTANGULAR RISER SLOT
CREST EL. (ft): 44.360 CREST LN. (ft): 2.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

NOTE:

PRE DEVELOPMENT HYDROGRAPHS & ROUTINGS

SCSIIMOD
25 YEAR/24 HOUR

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.30)
Copyright 1989-1990, Streamline Technologies, Inc.

WALGREENS DRUG STORE #6575 - PRE DEVELOPED - 25 YR/24 HR
APRIL 19, 2002

BASIN NAME	100
NODE NAME	10
TIME INCREMENT (min)	5.00
RAINFALL FILE	SCSIIMOD
RAIN AMOUNT (in)	8.60
STORM DURATION (hrs)	24.00
AREA (ac)	3.56
CURVE NUMBER	60.30
DCIA (%)	.00
TC (mins)	38.50
LAG TIME (hrs)	.00
BASIN STATUS	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100	5.21	12.00	3.82	

NODAL MIN/MAX/TIME CONDITIONS REPORT

NODE ID	PARAMETER	MINIMUMS VALUE	MINIMUMS TIME (hr)	MAXIMUMS VALUE	MAXIMUMS TIME (hr)
10	STAGE (ft):	44.00	8.50	45.05	13.00
	VOLUME (af):	.00	8.50	.29	13.00
	RUNOFF (cfs):	.00	8.50	5.21	12.00
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	24.00	.00	24.00
	OUTFLOW (cfs):	.00	11.50	3.01	12.50
99	STAGE (ft):	40.00	.00	41.00	24.00
	VOLUME (af):	.00	11.75	1.02	24.00
	RUNOFF (cfs):	.00	24.00	.00	24.00
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	11.50	3.01	12.50
	OUTFLOW (cfs):	.00	24.00	.00	24.00

NODAL MAXIMUM CONDITIONS REPORT

NODE ID	STAGE (ft)	VOLUME (af)	INFLOW RUNOFF (cfs)	INFLOW OFFSITE (cfs)	INFLOW OTHER (cfs)	OUTFLOW (cfs)
10	45.05	.29	5.21	.00	.00	3.01
99	41.00	1.02	.00	.00	3.01	.00

Max allowable out-flow rate

REACH MAXIMUM FLOW REPORT

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
1	12.50	3.01	10	45.02	99	40.52

MEAN ANNUAL

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.30)
Copyright 1989-1990, Streamline Technologies, Inc.

WALGREENS DRUG STORE #6575 - PRE DEVELOPED - MEAN ANNUAL
APRIL 19, 2002

BASIN NAME	100
NODE NAME	10
TIME INCREMENT (min)	5.00
RAINFALL FILE	MEAN23
RAIN AMOUNT (in)	4.50
STORM DURATION (hrs)	24.00
AREA (ac)	3.56
CURVE NUMBER	60.30
DCIA (%)	.00
TC (mins)	38.50
LAG TIME (hrs)	.00
BASIN STATUS	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100	1.46	12.17	1.04	

NODAL MIN/MAX/TIME CONDITIONS REPORT

NODE ID	PARAMETER	MINIMUMS VALUE	MINIMUMS TIME (hr)	MAXIMUMS VALUE	MAXIMUMS TIME (hr)
10	STAGE (ft):	44.00	11.25	44.59	13.50
	VOLUME (af):	.00	11.25	.13	13.50
	RUNOFF (cfs):	.00	11.25	1.45	12.25
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	24.00	.00	24.00
	OUTFLOW (cfs):	.00	12.50	.69	13.50
99	STAGE (ft):	40.00	.00	41.00	24.00
	VOLUME (af):	.00	12.50	.22	24.00
	RUNOFF (cfs):	.00	24.00	.00	24.00
	OFFSITE (cfs):	.00	24.00	.00	24.00
	OTHER (cfs):	.00	12.50	.69	13.50
	OUTFLOW (cfs):	.00	24.00	.00	24.00

NODAL MAXIMUM CONDITIONS REPORT

NODE ID	STAGE (ft)	VOLUME (af)	INFLOW RUNOFF (cfs)	INFLOW OFFSITE (cfs)	INFLOW OTHER (cfs)	OUTFLOW (cfs)
10	44.59	.13	1.45	.00	.00	.69
99	41.00	.22	.00	.00	.69	.00

REACH MAXIMUM FLOW REPORT

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
1	13.50	.69	10	44.59	99	40.56

SJRWMD PERMIT NO. 97490-1

JESUP'S RESERVE EXISTING CONDITIONS MODELING OF WETLAND OUTFALL

Runoff curve number and runoff

Project:	Jesup's Reserve	By:	EMB	Date:	3/15/2005
Location:	Seminole County	Checked:	JSG	Date:	3/15/2005

Highlight one: [Present] Developed

Highlight one: [Jesup (on-site)] Ondick (off-site)

1. Runoff curve number

soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious, unconnected/connected impervious area ratio)	CN Table 2-2	CN Figure 2-3	CN Figure 2-4	Area ☐ acre ☒ %	Product of CN x area
Myakka and Eau Gallie, B/D	Wood or forest land: good cover	77			37.0	2849
Paola-St. Lucie, A	Wood or forest land: thin stand, poor cover	45			8.0	360
Paola-St. Lucie, A	Open space: poor condition	68			40.0	2720
Pomello, C	Open space: poor condition	86			10.0	860
Pomello, C	Wood or forest land: thin stand, poor cover	77			5.0	385
				Totals ➡	100	7,174

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{7174}{100} = 71.74$$

Use CN ➡ **72**

2. Runoff

S = 1000/CN - 10 = 3.89

	Storm #1	Storm #2	Storm #3
Frecuency ..... yr			
Rainfall, P (24 hr) ..... in			
Runoff, Q ..... in			

Runoff curve number and runoff

Project:	Jesup's Reserve	By:	EMB	Date:	3/15/2005
Location:	Seminole County	Checked:	JSG	Date:	3/15/2005

Highlight one: [Present] Developed

Highlight one: [Jesup (on-site)] Ondick (off-site)

1. Runoff curve number

soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious, unconnected/connected impervious area ratio)	CN Table 2-2	CN Figure 2-3	CN Figure 2-4	Area ☐ acre ☒ %	Product of CN x area
Myakka and Eau Gallie, B/D	Wood or forest: good condition	77			28.0	2156
Myakka and Eau Gallie, B/D	Open space: poor condition	89			7.0	623
Paola-St. Lucie, A	Wood or forest: good condition	25			20.0	500
Paola-St. Lucie, A	Wood or forest: poor condition	45			27.0	1215
Tavares-Millhopper, A	Open space: poor condition	68			6.0	408
Impervious	Impervious Land	98			12.0	1176
				Totals ➡	100	6,078

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{6078}{100} = 60.78$$

Use CN ➡ **61**

2. Runoff

$S = 1000/CN - 10 = 6.39$

	Storm #1	Storm #2	Storm #3
Frecuency ..... yr			
Rainfall, P (24 hr) ..... in			
Runoff, Q ..... in			

Runoff curve number and runoff

Project:	Jesup's Reserve	By:	EMB	Date:	3/15/2005
Location:	Seminole County	Checked:	JSG	Date:	3/15/2005

Highlight one: Present | Developed

Highlight one: Jesup (on-site) | Ondick (off-site)

1. Runoff curve number

soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious, unconnected/connected impervious area ratio)	CN Table 2-2	CN Figure 2-3	CN Figure 2-4	Area ☐ acre ☒ %	Product of CN x area
Myakka and Eau Gallie, B/D	Open Space: good condition	80			6.9	552
Paola-St. Lucie, A	Open Space: good condition	39			9.0	351
Pomello, C	Open Space: good condition	74			3.0	222
Impervious	Impervious Land	98			64.6	6,331
Impervious	Impervious Pond Area	100			10.0	1000
Paola-St. Lucie, A	Pervious Pond Area	39			6.5	253.5
				Totals ➡	100	8,709

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{8{,}709}{100} = 87.09$$

Use CN ➡ **87**

2. Runoff

S = 1000/CN - 10 = 1.49

	Storm #1	Storm #2	Storm #3
Frecuency ..... yr			
Rainfall, P (24 hr) ..... in			
Runoff, Q ..... in			

Time of Concentration (TR-55)

Project:	Jesup's Reserve	By:	EMB	Date:	03/15/05
Location:	Seminole County	Checked:	JSG	Date:	03/15/05

Highlight one: **Present** | Developed

Highlight one: **Jesup (on-site)** | Ondick (off-site)

Sheet flow

	Segment ID	1		
1. Surface Description (Table 3-1)		Range		
2. Manning's roughness coeff., n (Table 3-1)		0.13		
3. Flow Length, L (total <= 300 ft)	ft	300		
4. 2-year 24-hour rainfall, P_2	in	5.0		
5. Land slope, s	ft/ft	0.005		
6. $Tt = (0.007 * (nL)^{4/5})/((P_2^{1/2})*(s^{2/5}))$	hr	0.489	+ 0.000	= 0.489

Shallow concentrated flow

	Segment ID	2		
7. Surface description (paved or unpaved)		Unpaved	Unpaved	
8. Flow length, L	ft	220	90	
9. Watercourse slope, s	ft/ft	0.003	0.008	
10. Average velocity, V (figure 3-1)	ft/s	0.433	0.483	
11. Tt = (L/(3600*V)	hr	0.141	+ 0.052	= 0.193

Channel flow

	Segment ID			
12. Cross section flow area, a	ft^2			
13. Wetted perimeter, Pw	ft			
14. Hydraulic radius, r = a/Pw	ft			
15. Channel slope, s	ft/ft			
16. Manning/s roughness coeff.	n			
17. $V = (1.49*(r^{2/3})*(s^{1/2}))/n$	ft/s			
18. Flow length, L	ft			
19. Tt = (L/3600*V)	hr	0.000	+ 0.000	= 0.000

Total

20. Total Tc (add 6,11,and 19)	hr	0.681
21. Total Tc	min	40.88
Notes:	Plus pipe flow ... min	0
	Total ..... min	**40.9**
	→ Use .....min	**41.0**

Time of Concentration (TR-55)

Project:	Jesup's Reserve	By:	EMB	Date:	03/15/05
Location:	Seminole County	Checked:	JSG	Date:	03/15/05

Highlight one: Present | Developed

Highlight one: Jesup (on-site) | Ondick (off-site)

Sheet flow

	Segment ID			
1. Surface Description (Table 3-1)	1			
2. Manning's roughness coeff., n (Table 3-1)	Woods			
3. Flow Length, L (total <= 300 ft) ... ft	0.4			
4. 2-year 24-hour rainfall, P_2 ... in	300			
5. Land slope, s ... ft/ft	5.00			
6. Tt =(0.007 * $(nL)^{4/5}$)/(($P_2^{1/4}$)*($s^{2/5}$)) ... hr	0.006			
	1.116	+ 0.000	=	1.116

Shallow concentrate flow

	Segment ID			
7. Surface description (paved or unpaved) ...	2			
8. Flow length, L ... ft	Unpaved			
9. Watercourse slope, s ... ft/ft	453			
10. Average velocity, V (figure 3-1) ... ft/s	0.010			
11. Tt = (L/(3600*V) ... hr	0.50			
	0.252	+ 0.000	=	0.252

Channel flow

	Segment ID			
12. Cross section flow area, a ... ft^2				
13. Wetted perimeter, Pw ... ft				
14. Hydraulic radius, r = a/Pw ... ft				
15. Channel slope, s ... ft/ft				
16. Manning/s roughness coeff. ... n				
17. V = (1.49*($r^{2/3}$)*($s^{1/2}$))/n ... ft/s				
18. Flow length, L ... ft				
19. Tt = (L/3600*V) ... hr	0.000	+ 0.000	=	0.000

Total

20. Total Tc (add 6,11,and 19) ... hr		1.368
21. Total Tc ... min		82.07
Notes: Plus pipe flow ... min		0
Total ... min		82.1
→ Use ...min		82.0

Time of Concentration (TR-55)

Project:	Jesup's Reserve	By:	EMB	Date:	03/15/05
Location:	Seminole County	Checked:	JSG	Date:	03/15/05

Highlight one: **Present** | Developed

Highlight one: **Jesup (on-site)** | Ondick (off-site)

Sheet flow

	Segment ID				
1. Surface Description (Table 3-1)	1				
2. Manning's roughness coeff., n (Table 3-1)	Grass				
3. Flow Length, L (total <= 300 ft) ft	0.41				
4. 2-year 24-hour rainfall, P_2 in	10				
5. Land slope, s ft/ft	5.000				
6. Tt =(0.007 * (nL)$^{4/5}$)/((P$_2$ $^{1/2}$)*(s$^{2/5}$)) hr	0.015				
	0.052	+	0.000	=	0.052

Shallow concentrate flow

	Segment ID				
7. Surface description (paved or unpaved)	2				
8. Flow length, L ft	Unpaved				
9. Watercourse slope, s ft/ft	50				
10. Average velocity, V (figure 3-1) ft/s	0.015				
11. Tt = (L/(3600*V) hr	0.08				
	0.167	+	0.000	=	0.167

Channel flow

	Segment ID	Pipe Flow			
12. Cross section flow area, a ft^2		1.77			
13. Wetted perimeter, Pw ft		4.71			
14. Hydraulic radius, r = a/Pw ft		0.376			
15. Channel slope, s ft/ft		0.002			
16. Manning/s roughness coeff. n		0.012			
17. V = (1.49*(r$^{2/3}$)*(s$^{1/2}$))/n ft/s		2.50			
18. Flow length, L ft		835			
19. Tt = (L/3600*V) hr		0.093	+	0.000	= 0.093

Total

20. Total Tc (add 6,11,and 19) hr	0.312
21. Total Tc min	18.72
Plus pipe flow ... min	0
Total ..... min	18.7
→ Use .....min	19.0

Notes:

AdICPR Model Results

Hydrologic and Hydraulic Calculations

Jesup's Reserve Pre-Development Conditions
Input Summary

==========
==== Basins ====
==========

Name: Jessup
Group: BASE

Node: Jessup
Type: SCS Unit Hydrograph

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 11.030
Curve Number: 72.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 41.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: Ondick
Group: BASE

Node: Ondick
Type: SCS Unit Hydrograph

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 10.410
Curve Number: 61.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 82.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Includes five parcels at the northwest quadrant of the
intersection of SR 434 and Tuskawilla Road.

==========
==== Hydrology Simulations ====
==========

Name: 100Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Pre\100Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 10.80

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 25Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Pre\25Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 8.64

Time(hrs)	Print Inc(min)

30.000 5.00

==== Routing Simulations ====

Name: Hydrology Sim:
Filename:

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 0.00 Delta Z Factor: 0.00000
Time Step Optimizer: 0.000
Start Time(hrs): 0.000 End Time(hrs): 0.00
Min Calc Time(sec): 0.0000 Max Calc Time(sec): 0.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)

Group	Run
BASE	Yes

==== Boundary Conditions ====

Jesup's Reserve Pre-Development Conditions
Basin Summary

Basin Name:	Jessup
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Jessup
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	5.47
Comp Time Inc (min):	5.47
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	41.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	72.000
DCIA (%):	0.000
Time Max (hrs):	12.39
Flow Max (cfs):	27.829
Runoff Volume (in):	7.214
Runoff Volume (ft3):	288851.667

Basin Name:	Ondick
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	12.885
Runoff Volume (in):	5.683
Runoff Volume (ft3):	214739.698

Jesup's Reserve Pre-Development Conditions
Basin Summary

Basin Name:	Jessup
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Jessup
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	5.47
Comp Time Inc (min):	5.47
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	41.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	72.000
DCIA (%):	0.000
Time Max (hrs):	12.39
Flow Max (cfs):	20.235
Runoff Volume (in):	5.256
Runoff Volume (ft3):	210429.379

Basin Name:	Ondick
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	8.727
Runoff Volume (in):	3.930
Runoff Volume (ft3):	148492.145

Jesup's Reserve Post-Development Conditions
Input Summary

==========
==== Basins ====
==========

Name: Jessup
Group: BASE
Node: Pond1
Type: SCS Unit Hydrograph
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 11.030
Curve Number: 87.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 19.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: Ondick
Group: BASE
Node: Ondick
Type: SCS Unit Hydrograph
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 10.410
Curve Number: 61.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 82.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Includes five parcels at the northwest quadrant of the
intersection of SR 434 and Tuskawilla Road.

==========
==== Nodes ====
==========

Name: Ondick
Group: BASE
Type: Manhole, 1/2 Diameter Grooved
Base Flow(cfs): 0.000
Plunge Factor: 1.00
Init Stage(ft): 35.450
Warn Stage(ft): 43.000

Stage(ft)	Area(ac)

Name: Pond1
Group: BASE
Type: Stage/Area
Base Flow(cfs): 0.000
Init Stage(ft): 41.200
Warn Stage(ft): 44.000

Stage(ft)	Area(ac)
41.200	1.1010
45.000	1.3490

Name: Wetland
Group: BASE
Type: Time/Stage
Base Flow(cfs): 0.000
Init Stage(ft): 35.000
Warn Stage(ft): 35.300

Time(hrs)	Stage(ft)
0.00	35.000
48.00	35.000

==========
==== Operating Tables ====
==========

Name:
Group: BASE

Type: Bottom Clip
Function: Time vs. Depth of Clip

Time(hrs)	Clip Depth(in)

==== Pipes ====

Name: Outfall
Group: BASE
From Node: Ondick
To Node: Wetland
Length(ft): 1319.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 1.00
Exit Loss Coef: 1.00
Bend Loss Coef: 0.50
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	30.00	30.00
Rise(in):	30.00	30.00
Invert(ft):	34.770	29.500
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

==== Drop Structures ====

Name: Pond1Outlet
Group: BASE
From Node: Pond1
To Node: Ondick
Length(ft): 564.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 1.000
Exit Loss Coef: 0.500
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Solution Incs: 10

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	30.00	30.00
Rise(in):	30.00	30.00
Invert(ft):	36.300	34.770
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 3 for Drop Structure Pond1Outlet ***

Count: 1
Type: Vertical: Mavis
Flow: Both
Geometry: Circular
TABLE
Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Disc Coef: 3.200
Orifice Disc Coef: 0.600
Span(in): 2.84
Rise(in): 2.84
Invert(ft): 40.700
Control Elev(ft): 41.200

*** Weir 2 of 3 for Drop Structure Pond1Outlet ***

Count: 2
Type: Vertical: Mavis
Flow: Both
TABLE
Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Disc Coef: 3.200

Geometry: Rectangular
Span(in): 33.00
Rise(in): 13.12
Orifice Disc Coef: 0.600
Invert(ft): 42.440
Control Elev(ft): 42.440

*** Weir 3 of 3 for Drop Structure Pond1Outlet ***

Count: 1
Type: Horizontal
Flow: Both
Geometry: Rectangular
Span(in): 48.00
Rise(in): 36.00
TABLE
Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Disc Coef: 3.200
Orifice Disc Coef: 0.600
Invert(ft): 43.700
Control Elev(ft): 43.700

==== Hydrology Simulations ====

Name: 100Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\100Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 10.80

Time(hrs)	Print Inc(min)
48.000	5.00

Name: 25Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\25Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 8.64

Time(hrs)	Print Inc(min)
48.000	5.00

Name: 3Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\3Yr-24Hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 5.64

Time(hrs)	Print Inc(min)
48.000	5.00

==== Routing Simulations ====

Name: 100Yr-24Hr
Hydrology Sim: 100Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\100Yr-24Hr.I32

Execute: Yes
Restart: No
Patch: No
Alternative: No

Max Delta Z(ft): 1.00
Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000
End Time(hrs): 48.00
Min Calc Time(sec): 0.5000
Max Calc Time(sec): 60.0000
Boundary Stages: 100Yr-24Hr
Boundary Flows:

Time(hrs)	Print Inc(min)
48.000	5.000

Group	Run
BASE	Yes

Name: 25Yr-24Hr Hydrology Sim: 25Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\25Yr-24Hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 48.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: 25Yr-24Hr Boundary Flows:

Time(hrs)	Print Inc(min)
48.000	5.000

Group	Run
BASE	Yes

Name: 3Yr-24Hr Hydrology Sim: 3Yr-24Hr
Filename: X:\501-5760-000\T\drainage\ICPR\Post\3Yr-24Hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 48.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
48.000	5.000

Group	Run
BASE	Yes

==== Boundary Conditions ====

Name: 25Yr-24Hr Node: Wetland Type: Stage

Time(hrs)	Stage(ft)
0.000	35.230
48.000	35.230

Name: 100Yr-24Hr Node: Wetland Type: Stage

Time(hrs)	Stage(ft)
0.000	35.290
48.000	35.290

Jesup's Reserve Post-Development Conditions
Basin Summary

Basin Name:	Jessup
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Pond1
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	2.53
Comp Time Inc (min):	2.53
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	19.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	87.000
DCIA (%):	0.000
Time Max (hrs):	12.12
Flow Max (cfs):	51.588
Runoff Volume (in):	9.188
Runoff Volume (ft3):	367879.063

Basin Name:	Ondick
Group Name:	BASE
Simulation:	100Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	10.800
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	12.885
Runoff Volume (in):	5.683
Runoff Volume (ft3):	214739.698

Basin Name:	Jessup
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Pond1
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	2.53
Comp Time Inc (min):	2.53
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	19.00
Time Shift (hrs):	0.00
Area (ac):	11.030
Vol of Unit Hyd (in):	1.000
Curve Number:	87.000
DCIA (%):	0.000
Time Max (hrs):	12.12
Flow Max (cfs):	40.164
Runoff Volume (in):	7.070
Runoff Volume (ft3):	283075.943

Basin Name:	Ondick
Group Name:	BASE
Simulation:	25Yr-24Hr
Node Name:	Ondick
Basin Type:	SCS Unit Hydrograph
Unit Hydrograph:	Uh256
Peaking Fator:	256.0
Spec Time Inc (min):	10.93
Comp Time Inc (min):	10.93
Rainfall File:	Flmod
Rainfall Amount (in):	8.640
Storm Duration (hrs):	24.00
Status:	Onsite
Time of Conc (min):	82.00
Time Shift (hrs):	0.00
Area (ac):	10.410
Vol of Unit Hyd (in):	1.000
Curve Number:	61.000
DCIA (%):	0.000
Time Max (hrs):	12.94
Flow Max (cfs):	8.727
Runoff Volume (in):	3.930
Runoff Volume (ft3):	148492.145

Jesup's Reserve Post-Development Conditions
Node Maximums

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
Ondick	BASE	100Yr-24Hr	12.94	42.712	43.000	0.0090	195	12.91	31.374	12.93	31.364
Pond1	BASE	100Yr-24Hr	13.03	44.260	44.000	0.0050	56660	12.17	50.821	12.23	21.173
Wetland	BASE	100Yr-24Hr	0.00	35.290	35.300	0.2900	429	12.93	31.364	0.00	0.000
Ondick	BASE	25Yr-24Hr	12.84	41.180	43.000	0.0076	195	12.82	28.141	12.84	28.140
Pond1	BASE	25Yr-24Hr	12.78	43.561	44.000	0.0050	54671	12.17	39.606	12.56	19.941
Wetland	BASE	25Yr-24Hr	0.00	35.230	35.300	0.2300	429	12.84	28.140	0.00	0.000

MAX ALLOWABLE 25YR-24HR STORM DISCHARGE RATE

Jesup's Reserve Post-Development Conditions
Link Maximums

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
Outfall	BASE	100Yr-24Hr	12.93	31.364	1.718	12.94	42.712	0.00	35.290
Pond1Outlet	BASE	100Yr-24Hr	12.23	21.173	0.050	13.03	44.260	12.94	42.712
Outfall	BASE	25Yr-24Hr	12.84	28.140	1.913	12.84	41.180	0.00	35.230
Pond1Outlet	BASE	25Yr-24Hr	12.56	19.941	0.054	12.78	43.561	12.84	41.180

Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

APPENDIX C

Post- Development Drainage Calculations

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-A"

Basin Area = 0.83 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.41	A	Cover > 75%	39	16.1
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.42	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	40.7
			WEIGHTED CURVE NUMBER =	**68.6**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-B"

Basin Area = 1.12 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.46	A	Cover > 75%	39	18.1
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.34	A,B,C,D	Impervious (Pond)	98	33.6
0.31	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	30.5
			WEIGHTED CURVE NUMBER =	**73.5**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-C"

Basin Area = 2.97 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.40	A	Cover > 75%	39	15.5
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
2.58	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	252.4
			WEIGHTED CURVE NUMBER =	**90.1**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-D"

Basin Area = 0.88 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.20	A	Cover > 75%	39	7.9
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.68	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	66.7
			WEIGHTED CURVE NUMBER =	**84.5**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-E"

Basin Area = 0.49 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.11	A	Cover > 75%	39	4.3
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.38	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	36.9
			WEIGHTED CURVE NUMBER =	**84.6**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-F"

Basin Area = 0.95 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.29	A	Cover > 75%	39	11.2
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.67	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	65.2
			WEIGHTED CURVE NUMBER =	**80.2**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-G.1"

Basin Area = 0.67 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
	A	Cover > 75%	39	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.67	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	65.3
			WEIGHTED CURVE NUMBER =	**98.0**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-G.2"

Basin Area = 0.56 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
	A	Cover > 75%	39	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.56	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	54.8
			WEIGHTED CURVE NUMBER =	**98.0**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-H"

Basin Area = 0.79 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.25	A	Cover > 75%	39	9.8
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.54	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	52.5
			WEIGHTED CURVE NUMBER =	**79.1**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-I"

Basin Area = 0.44 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.10	A	Cover > 75%	39	3.9
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.34	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	33.8
			WEIGHTED CURVE NUMBER =	**84.8**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

CURVE NUMBER WORKSHEET

WINTER SPRINGS MARKETPLACE POST-DEVELOPMENT BASIN "BASIN-J"

Basin Area = 0.53 acres

AREA	SCS SOIL TYPE	COVER TYPE AND CONDITIONS	CURVE NUMBER	SUB TOTAL
		Grass (Lawns, Parks, Golf Courses, etc.)		
	A	Cover < 50%	68	0.0
	A	Cover 50% to 75%	49	0.0
0.08	A	Cover > 75%	39	3.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	B	Cover < 50%	79	0.0
	B	Cover 50% to 75%	69	0.0
	B	Cover > 75%	61	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	C	Cover < 50%	86	0.0
	C	Cover 50% to 75%	79	0.0
	C	Cover > 75%	74	0.0
		Grass (Lawns, Parks, Golf Courses, etc.)		
	D	Cover < 50%	89	0.0
	D	Cover 50% to 75%	84	0.0
	D	Cover > 75%	80	0.0
		Woods(Forest, Orchard)		
	A	Cover < 50%	45	0.0
	A	Cover 50% to 75%	35	0.0
	A	Cover > 75%	25	0.0
		Woods(Forest, Orchard)		
	B	Cover < 50%	66	0.0
	B	Cover 50% to 75%	60	0.0
	B	Cover > 75%	55	0.0
		Woods(Forest, Orchard)		
	C	Cover < 50%	77	0.0
	C	Cover 50% to 75%	74	0.0
	C	Cover > 75%	70	0.0
		Woods(Forest, Orchard)		
	D	Cover < 50%	83	0.0
	D	Cover 50% to 75%	80	0.0
	D	Cover > 75%	77	0.0
0.00	A,B,C,D	Impervious (Pond)	98	0.0
0.45	A,B,C,D	Impervious (Pavement, Concrete, Roofs)	98	44.5
			WEIGHTED CURVE NUMBER =	**89.5**

WEIGHTED CURVE NUMBER = SUM (CN*AREA) / TOTAL AREA

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION POND "SMA-A" (COMBINED VOLUME)

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**Online**

Basin A Area =	0.83	acres
Basin G.1 Area =	0.67	acres
Total Basin Area =	1.49	acres
Basin A Impervious Area =	0.42	acres
Basin G.1 Impervious Area =	0.67	acres
Total Impervious Area =	1.08	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.06	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.11	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.06	acre-ft.
OR		
*Nutrient Removal = **1.165"** of runoff from drainage area = [(Basin Area-NWL Area)(1.165")]/12" =	0.14	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.17**	**acre-ft.**
	7,614	**CF**
Required Treatment Volume at Elevation =	45.42	ft
Provided Treatment Volume =	**0.21**	**acre-ft.**
	9,021	**CF**
Provided Treatment Volume at Elevation =	45.60	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	46.5	3	9,156	0.210	15,984	0.367
	45.5	2	6,360	0.146	8,226	0.189
	44.5	1	3,966	0.091	3,063	0.070
BOTTOM	43.5	0	2,159	0.050	0	0.000

* Slopes > Elev. 43.5 ft (4:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION POND "SMA-A.1"

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	46.5	3	6,112	0.140	11,368	0.261
	45.5	2	4,457	0.102	6,084	0.140
	44.5	1	2,967	0.068	2,372	0.054
BOTTOM	43.5	0	1,776	0.041	0	0.000

* Slopes > Elev. 43.5 ft (4:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION POND "SMA-A.2"

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	46.5	3	3,044	0.070	4,616	0.106
	45.5	2	1,903	0.044	2,142	0.049
	44.5	1	999	0.023	691	0.016
BOTTOM	43.5	0	383	0.009	0	0.000

* Slopes > Elev. 43.5 ft (4:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

WET DETENTION PROPOSED POND SMA-B

Littoral Zone OR Pre-Treatment Provided?	**YES**
Discharge Directly to Class I, II, III or OFW?	**NO**

Basin B Area =	1.12	acres
Basin G.2 Area =	0.56	acres
Total Basin Area =	1.68	acres
Basin B Impervious Area =	0.31	acres
Basin G.2 Impervious Area =	0.56	acres
Total Impervious Area (Excluding pond area) =	0.87	acres
TV = 1" of runoff over site = [(Basin Area)(1")]/12" =	0.14	acre-ft.
OR		
TV = 2.5" of runoff from imp. area = [(Imp Area)(2.5")]/12" =	0.18	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.18**	**acre-ft.**
	7,902	**CF**
Required Treatment Volume at Elevation =	41.01	ft
1/2 Required Treatment Volume =	0.09	acre-ft.
1/2 Required Treatment Volume at Elevation =	40.75	ft

Provided Treatment Volume =	**1.02**	**acre-ft.**
	44,608	**CF**
Provided Treatment Volume at Elevation =	43.00	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45	4.5	26,001	0.597	91,417	2.10
	44	3.5	23,385	0.537	66,724	1.53
	43	2.5	20,848	0.479	44,608	1.02
	42	1.5	18,398	0.422	24,985	0.57
	41	0.5	16,066	0.369	7,753	0.18
NWL	40.5	0	14,945	0.343	0	0.00
	39.5	1	12,218	0.280	13,582	0.31
	38.5	2	9,696	0.223	24,539	0.56
	37.5	3	8,742	0.201	33,758	0.77
	36.5	4	7,820	0.180	42,039	0.97
	35.5	5	6,928	0.159	49,413	1.13
	34.5	6	6,075	0.139	55,914	1.28
	33.5	7	5,262	0.121	61,583	1.41
	32.5	8	4,488	0.103	66,458	1.53
	31.5	9	3,758	0.086	70,581	1.62
	30.5	10	3,112	0.071	74,016	1.70
	29.5	11	2,553	0.059	76,848	1.76
BOTTOM	28.5	12	2,061	0.047	79,155	1.82

* Slopes > Elev. 40.5 ft (5:1), < Elev. 40.5 ft (2:1)

Mean Depth =	**5.30 ft**

REQUIRED PERMANENT POOL VOLUME

WET DETENTION PROPOSED POND SMA-B

Littoral Zone OR Pre-Treatment Provided?	**YES**
Discharge Directly to Class I, II, III or OFW?	**NO**

PPV = (DA*C*R*RT)/(WS* CF)

POND SMA-B

DA = Drainage Area =	1.68	acres
C = Runoff Coefficient =	0.550	
R = Wet Season Rainfall Depth =	31.0	inches
RT = Residence Time =	14	days
WS = Wet Season =	153	days
CF = Conversion Factor =	12	in/ft
Required PPV	0.22	ac-ft
additional 50% for no littoral Zone	N/A	ac-ft
additional 50% for OFW discharge	N/A	ac-ft

PPV Required	**0.22 ac-ft**
PPV Provided	**1.82 ac-ft**

Runoff Coefficient Calculation

	AREA (AC)	RUNOFF COEFFICIENT
IMPERVIOUS AREA	0.87	0.90
PERVIOUS AREA	0.46	0.30

C = [(Impervious Area)x(0.90) + (Pervious Area)x(0.30)] / (Total Area)

RUNOFF COEFFICIENT =	0.550

DRAWDOWN CALCULATION

WET DETENTION PROPOSED POND SMA-B

Q = TV / 2 t CF = 0.041 CFS

WHERE:	TV = TREATMENT VOLUME =	7902	CF
	t = RECOVERY TIME =	27	HrS
	CF = CONV FACTOR =	3600	sec/Hr

$H = (H_1 + H_2) / 2$ = 0.38 Ft.

WHERE:	H_1 = DEPTH OF TOTAL TREATMENT VOLUME =	0.51	Ft.
	H_2 = DEPTH OF HALF THE TREATMENT VOLUME =	0.25	Ft.

ORIFICE

$Q = C A (2 g h)^{1/2}$ ORIFICE FLOW EQUATION

$A = Q / C (2 g H)^{1/2}$ = 0.01 SF

WHERE:	C = ORIFICE COEFFICIENT =	0.6	
	g = CONSTANT =	32.2	Ft/S^2
	H = HEAD =	0.38	Ft.
	Q = RATE OF DISCHARGE =	0.041	CFS

THEREFORE: CALCULATED ORIFICE DIAMETER

$D = (4 A / PI)^{1/2}$ = **1.58** INCHES **Min. = 2.75 inches**

PROVIDED = 3.0 INCHES

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH C

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin C Area =	2.97	acres
Basin C Impervious Area =	2.58	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.12	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.27	acre-ft.
PLUS		
ne TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.12	acre-ft.
OR		
*Nutrient Removal = **1.396"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.396"**)]/12" =	0.35	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.39**	**acre-ft.**
	17,082	**CF**

*See BMPTrains analysis for required inches over catchment area.

**0.35-ac-ft of volume provided within Exfiltration Trench C system, remainder of the 0.39-ac-ft of required volume provided within interconnected exfiltration system SMA-G.

SMA-C (COMBINED) STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Elevation nutrient volume is provided:	43.33	ft.
Required Nutrient Treatment Volume:	0.39	ac.ft.
Provided Nutrient Removal Volume:	0.35	ac.ft.

			PIPE		STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	43.58	1.58	0.00	0.0	0.0	0.0	16,579.2	0.381
	43.58	1.58	0.00	0.0	0.0	0.0	16,579.2	0.381
PIPE	43.58	1.58	0.04	141.2	196.3	337.5	16,579.2	0.381
	43.50	1.50	0.07	251.6	163.2	414.8	16,241.7	0.373
	43.42	1.42	0.09	437.1	319.0	756.0	15,827.0	0.363
	43.33	1.33	0.10	577.5	276.9	854.3	15,070.9	0.346
	43.25	1.25	0.11	666.9	250.0	917.0	14,216.6	0.326
	43.17	1.17	0.12	731.9	230.5	962.5	13,299.6	0.305
	43.08	1.08	0.13	779.7	216.2	995.9	12,337.2	0.283
	43.00	1.00	0.13	813.5	206.1	1,019.5	11,341.3	0.260
	42.92	0.92	0.13	835.2	199.6	1,034.7	10,321.7	0.237
	42.83	0.83	0.13	845.8	196.4	1,042.2	9,287.0	0.213
	42.75	0.75	0.13	845.9	196.4	1,042.2	8,244.8	0.189
	42.67	0.67	0.13	835.3	199.5	1,034.8	7,202.6	0.165
	42.58	0.58	0.13	813.8	206.0	1,019.7	6,167.7	0.142
	42.50	0.50	0.12	780.3	216.0	996.3	5,148.0	0.118
	42.42	0.42	0.11	733.3	230.1	963.4	4,151.7	0.095
	42.33	0.33	0.10	670.0	249.1	919.1	3,188.2	0.073
	42.25	0.25	0.09	584.9	274.7	859.5	2,269.1	0.052
	42.17	0.17	0.07	465.8	310.4	776.2	1,409.6	0.032
	42.08	0.08	0.04	261.8	371.6	633.4	633.4	0.015
	42.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

SMA-C (17" CMP) STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	8,458	sf
Pipe Diameter =	17	in
Pipe Invert =	42.00	ft
Total Pipe Length =	3,218	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	43.42	1.42	1.42	1.58	0.00	0.0	0.0	0.0	7,144.9	0.164
	43.42	1.42	1.42	1.58	0.00	0.0	0.0	0.0	7,144.9	0.164
PIPE	43.42	1.42	1.42	1.58	0.04	120.6	175.2	295.9	7,144.9	0.164
	43.33	1.33	1.33	1.54	0.07	214.3	147.2	361.4	6,849.0	0.157
	43.25	1.25	1.25	1.47	0.08	268.4	130.9	399.4	6,487.6	0.149
	43.17	1.17	1.17	1.39	0.10	306.8	119.4	426.2	6,088.2	0.140
	43.08	1.08	1.08	1.29	0.10	334.9	111.0	445.8	5,662.0	0.130
	43.00	1.00	1.00	1.19	0.11	355.2	104.9	460.1	5,216.2	0.120
	42.92	0.92	0.92	1.08	0.11	369.0	100.8	469.7	4,756.1	0.109
	42.83	0.83	0.83	0.96	0.12	377.0	98.3	475.3	4,286.4	0.098
	42.75	0.75	0.75	0.85	0.12	379.6	97.6	477.2	3,811.1	0.087
	42.67	0.67	0.67	0.73	0.12	377.0	98.3	475.3	3,333.9	0.077
	42.58	0.58	0.58	0.61	0.11	369.0	100.8	469.7	2,858.5	0.066
	42.50	0.50	0.50	0.50	0.11	355.2	104.9	460.1	2,388.8	0.055
	42.42	0.42	0.42	0.39	0.10	334.9	111.0	445.8	1,928.7	0.044
	42.33	0.33	0.33	0.28	0.10	306.8	119.4	426.2	1,482.9	0.034
	42.25	0.25	0.25	0.19	0.08	268.4	130.9	399.4	1,056.7	0.024
	42.17	0.17	0.17	0.10	0.07	214.3	147.2	361.4	657.3	0.015
	42.08	0.08	0.08	0.04	0.04	120.6	175.3	295.9	295.9	0.007
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

SMA-C (19" CMP) STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	9,547	sf
Pipe Diameter =	19	in
Pipe Invert =	42.00	ft
Total Pipe Length =	3,555	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	43.58	1.58	1.58	1.97	0.00	0.0	0.0	0.0	9,434.3	0.217
	43.58	1.58	1.58	1.97	0.00	0.0	0.0	0.0	9,434.3	0.217
PIPE	43.58	1.58	1.58	1.97	0.04	141.2	196.3	337.5	9,434.3	0.217
	43.50	1.50	1.50	1.93	0.07	251.6	163.2	414.8	9,096.8	0.209
	43.42	1.42	1.42	1.86	0.09	316.4	143.7	460.2	8,682.1	0.199
	43.33	1.33	1.33	1.77	0.10	363.2	129.7	492.9	8,221.9	0.189
	43.25	1.25	1.25	1.67	0.11	398.5	119.1	517.6	7,729.0	0.177
	43.17	1.17	1.17	1.56	0.12	425.2	111.1	536.3	7,211.4	0.166
	43.08	1.08	1.08	1.44	0.13	444.8	105.2	550.0	6,675.1	0.153
	43.00	1.00	1.00	1.31	0.13	458.3	101.2	559.5	6,125.1	0.141
	42.92	0.92	0.92	1.18	0.13	466.2	98.8	565.0	5,565.6	0.128
	42.83	0.83	0.83	1.05	0.13	468.8	98.0	566.9	5,000.6	0.115
	42.75	0.75	0.75	0.92	0.13	466.2	98.8	565.0	4,433.7	0.102
	42.67	0.67	0.67	0.79	0.13	458.3	101.2	559.5	3,868.7	0.089
	42.58	0.58	0.58	0.66	0.13	444.8	105.2	550.0	3,309.2	0.076
	42.50	0.50	0.50	0.53	0.12	425.2	111.1	536.3	2,759.2	0.063
	42.42	0.42	0.42	0.41	0.11	398.5	119.1	517.6	2,222.9	0.051
	42.33	0.33	0.33	0.30	0.10	363.2	129.7	492.9	1,705.3	0.039
	42.25	0.25	0.25	0.20	0.09	316.4	143.7	460.2	1,212.4	0.028
	42.17	0.17	0.17	0.11	0.07	251.6	163.2	414.8	752.3	0.017
	42.08	0.08	0.08	0.04	0.04	141.2	196.3	337.5	337.5	0.008
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH D

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin D Area =	0.88	acres
Impervious Area =	0.68	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.07	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
*Nutrient Removal = **1.469"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.469"**)]/12" =	0.11	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.11** **4,710**	**acre-ft.** **CF**

*See BMPTrains analysis for required inches over catchment area.

SMA-D STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	4,422	sf
Pipe Diameter =	24	in
Pipe Invert =	42.00	ft
Total Pipe Length =	1,287	ft
Stone Porosity =	30	%
Stone Above Pipe =		in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.66	ft.
Required Nutrient Treatment Volume:	0.11	ac.ft.
Provided Nutrient Removal Volume:	0.11	ac.ft.

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	44.00	2.00	2.00	3.14	0.00	0.0	0.0	0.0	5,482.1	0.126
	44.00	2.00	2.00	3.14	0.00	0.0	0.0	0.0	5,482.1	0.126
PIPE	44.00	2.00	2.00	3.14	0.04	57.6	93.3	150.9	5,482.1	0.126
	43.92	1.92	1.92	3.10	0.08	103.2	79.6	182.8	5,331.2	0.122
	43.83	1.83	1.83	3.02	0.10	130.7	71.3	202.0	5,148.4	0.118
	43.75	1.75	1.75	2.91	0.12	151.2	65.2	216.4	4,946.3	0.114
	43.67	1.67	1.67	2.80	0.13	167.2	60.4	227.6	4,730.0	0.109
	43.58	1.58	1.58	2.67	0.14	180.1	56.5	236.6	4,502.4	0.103
	43.50	1.50	1.50	2.53	0.15	190.5	53.4	243.9	4,265.7	0.098
	43.42	1.42	1.42	2.38	0.15	198.7	50.9	249.6	4,021.9	0.092
	43.33	1.33	1.33	2.22	0.16	205.0	49.0	254.1	3,772.2	0.087
	43.25	1.25	1.25	2.07	0.16	209.6	47.6	257.3	3,518.2	0.081
	43.17	1.17	1.17	1.90	0.17	212.7	46.7	259.4	3,260.9	0.075
	43.08	1.08	1.08	1.74	0.17	214.2	46.3	260.5	3,001.5	0.069
	43.00	1.00	1.00	1.57	0.17	214.2	46.3	260.5	2,741.0	0.063
	42.92	0.92	0.92	1.40	0.17	212.7	46.7	259.4	2,480.6	0.057
	42.83	0.83	0.83	1.24	0.16	209.6	47.6	257.3	2,221.2	0.051
	42.75	0.75	0.75	1.08	0.16	205.0	49.0	254.1	1,963.9	0.045
	42.67	0.67	0.67	0.92	0.15	198.7	50.9	249.6	1,709.8	0.039
	42.58	0.58	0.58	0.76	0.15	190.5	53.4	243.9	1,460.2	0.034
	42.50	0.50	0.50	0.61	0.14	180.1	56.5	236.6	1,216.3	0.028
	42.42	0.42	0.42	0.47	0.13	167.2	60.4	227.6	979.7	0.022
	42.33	0.33	0.33	0.34	0.12	151.2	65.2	216.4	752.1	0.017
	42.25	0.25	0.25	0.23	0.10	130.7	71.3	202.0	535.7	0.012
	42.17	0.17	0.17	0.13	0.08	103.2	79.6	182.8	333.7	0.008
	42.08	0.08	0.08	0.04	0.04	57.6	93.3	150.9	150.9	0.003
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH E

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin E Area =	0.49	acres
Impervious Area =	0.38	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.04	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
*Nutrient Removal = **2.261"** of runoff from drainage area = [(Basin Area-NWL Area)(**2.261"**)]/12" =	0.09	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.09**	**acre-ft.**
	3,999	**CF**

*See BMPTrains analysis for required inches over catchment area.

SMA-E STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	5,960	sf
Pipe Diameter =	23	in
Pipe Invert =	42.00	ft
Total Pipe Length =	1,856	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.06	ft.
Required Nutrient Treatment Volume:	0.09	ac.ft.
Provided Nutrient Removal Volume:	0.09	ac.ft.

	Elevation (ft)	System Depth (ft)	PIPE Section Depth	PIPE Section Area	PIPE Incr. Area (cf)	PIPE Incr. Volume (cf)	STONE Incr. Volume (cf)	SYSTEM Incr. Volume (cf)	SYSTEM Cummulative Volume (cf)	SYSTEM Cummulative Volume (ac.-ft.)
STONE	43.92	1.92	1.92	2.89	0.00	0.0	0.0	0.0	7,175.4	0.165
	43.92	1.92	1.92	2.89	0.00	0.0	0.0	0.0	7,175.4	0.165
PIPE	43.92	1.92	1.92	2.89	0.04	81.3	124.6	205.9	7,175.4	0.165
	43.83	1.83	1.83	2.84	0.08	145.6	105.3	250.9	6,969.5	0.160
	43.75	1.75	1.75	2.76	0.10	184.1	93.8	277.9	6,718.6	0.154
	43.67	1.67	1.67	2.66	0.11	212.7	85.2	297.9	6,440.7	0.148
	43.58	1.58	1.58	2.55	0.13	235.0	78.5	313.5	6,142.8	0.141
	43.50	1.50	1.50	2.42	0.14	252.7	73.2	325.9	5,829.3	0.134
	43.42	1.42	1.42	2.29	0.14	266.8	69.0	335.8	5,503.4	0.126
	43.33	1.33	1.33	2.14	0.15	277.8	65.7	343.5	5,167.6	0.119
	43.25	1.25	1.25	1.99	0.15	286.1	63.2	349.2	4,824.1	0.111
	43.17	1.17	1.17	1.84	0.16	291.8	61.5	353.3	4,474.9	0.103
	43.08	1.08	1.08	1.68	0.16	295.2	60.4	355.7	4,121.6	0.095
	43.00	1.00	1.00	1.52	0.16	296.3	60.1	356.4	3,765.9	0.086
	42.92	0.92	0.92	1.36	0.16	295.2	60.4	355.7	3,409.5	0.078
	42.83	0.83	0.83	1.20	0.16	291.8	61.5	353.3	3,053.9	0.070
	42.75	0.75	0.75	1.05	0.15	286.1	63.2	349.2	2,700.6	0.062
	42.67	0.67	0.67	0.89	0.15	277.8	65.7	343.5	2,351.3	0.054
	42.58	0.58	0.58	0.74	0.14	266.8	69.0	335.8	2,007.9	0.046
	42.50	0.50	0.50	0.60	0.14	252.7	73.2	325.9	1,672.1	0.038
	42.42	0.42	0.42	0.46	0.13	235.0	78.5	313.5	1,346.2	0.031
	42.33	0.33	0.33	0.34	0.11	212.7	85.2	297.9	1,032.7	0.024
	42.25	0.25	0.25	0.22	0.10	184.1	93.8	277.9	734.8	0.017
	42.17	0.17	0.17	0.12	0.08	145.6	105.3	250.9	456.9	0.010
	42.08	0.08	0.08	0.04	0.04	81.3	124.6	205.9	205.9	0.005
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH F

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin F Area =	0.95	acres
Impervious Area =	0.67	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.07	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.04	acre-ft.
OR		
*Nutrient Removal = **1.369"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.369"**)]/12" =	0.11	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.11** **4,749**	**acre-ft.** **CF**

*See BMPTrains analysis for required inches over catchment area.
**0.02 ac-ft of nutrient removal volume provided within Exfiltration Trench F system.
Remainder of the 0.11-ac-ft of volume provided within wet detention pond SMA-B.

SMA-F STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	4,551	sf
Pipe Diameter =	37	in
Pipe Invert =	41.50	ft
Total Pipe Length =	1,069	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.00	ft.
Required Nutrient Treatment Volume:	0.11	ac.ft.
Provided Nutrient Removal Volume:	0.11	ac.ft.

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	44.58	3.08	3.08	7.47	0.00	0.0	0.0	0.0	9,797.8	0.22
	44.58	3.08	3.08	7.47	0.00	0.0	0.0	0.0	9,797.8	0.22
	44.58	3.08	3.08	7.47	0.06	59.7	95.9	155.6	9,797.8	0.22
	44.50	3.00	3.00	7.41	0.10	107.8	81.4	189.2	9,642.3	0.22
	44.42	2.92	2.92	7.31	0.13	137.6	72.5	210.1	9,453.0	0.22
	44.33	2.83	2.83	7.18	0.15	160.6	65.6	226.2	9,242.9	0.21
	44.25	2.75	2.75	7.03	0.17	179.5	59.9	239.4	9,016.7	0.21
	44.17	2.67	2.67	6.86	0.18	195.4	55.2	250.5	8,777.3	0.20
	44.08	2.58	2.58	6.68	0.20	209.0	51.1	260.1	8,526.8	0.20
	44.00	2.50	2.50	6.49	0.21	220.8	47.5	268.3	8,266.7	0.19
	43.92	2.42	2.42	6.28	0.22	231.1	44.5	275.5	7,998.3	0.18
	43.83	2.33	2.33	6.06	0.22	240.0	41.8	281.7	7,722.8	0.18
	43.75	2.25	2.25	5.84	0.23	247.7	39.5	287.1	7,441.1	0.17
	43.67	2.17	2.17	5.61	0.24	254.2	37.5	291.7	7,153.9	0.16
	43.58	2.08	2.08	5.37	0.24	259.8	35.8	295.7	6,862.2	0.16
	43.50	2.00	2.00	5.13	0.25	264.5	34.4	298.9	6,566.5	0.15
	43.42	1.92	1.92	4.88	0.25	268.2	33.3	301.5	6,267.6	0.14
	43.33	1.83	1.83	4.63	0.25	271.0	32.5	303.5	5,966.1	0.14
	43.25	1.75	1.75	4.37	0.26	273.1	31.9	304.9	5,662.6	0.13
	43.17	1.67	1.67	4.12	0.26	274.3	31.5	305.8	5,357.7	0.12
PIPE	43.08	1.58	1.58	3.86	0.26	274.7	31.4	306.0	5,051.9	0.12
	43.00	1.50	1.50	3.60	0.26	274.3	31.5	305.8	4,745.9	0.11
	42.92	1.42	1.42	3.35	0.26	273.1	31.9	304.9	4,440.1	0.10
	42.83	1.33	1.33	3.09	0.25	271.0	32.5	303.5	4,135.2	0.09
	42.75	1.25	1.25	2.84	0.25	268.2	33.3	301.5	3,831.7	0.09
	42.67	1.17	1.17	2.59	0.25	264.5	34.4	298.9	3,530.2	0.08
	42.58	1.08	1.08	2.34	0.24	259.8	35.8	295.7	3,231.3	0.07
	42.50	1.00	1.00	2.10	0.24	254.2	37.5	291.7	2,935.7	0.07
	42.42	0.92	0.92	1.86	0.23	247.7	39.5	287.1	2,643.9	0.06
	42.33	0.83	0.83	1.63	0.22	240.0	41.8	281.7	2,356.8	0.05
	42.25	0.75	0.75	1.40	0.22	231.1	44.5	275.5	2,075.0	0.05
	42.17	0.67	0.67	1.19	0.21	220.8	47.5	268.3	1,799.5	0.04
	42.08	0.58	0.58	0.98	0.20	209.0	51.1	260.1	1,531.2	0.04
	42.00	0.50	0.50	0.79	0.18	195.4	55.2	250.5	1,271.1	0.03
	41.92	0.42	0.42	0.60	0.17	179.5	59.9	239.4	1,020.5	0.02
	41.83	0.33	0.33	0.44	0.15	160.6	65.6	226.2	781.2	0.02
	41.75	0.25	0.25	0.29	0.13	137.6	72.5	210.1	554.9	0.01
	41.67	0.17	0.17	0.16	0.10	107.8	81.4	189.2	344.8	0.01
	41.58	0.08	0.08	0.06	0.06	59.7	95.9	155.6	155.6	0.00
	41.50	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00
STONE	41.50	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00
	41.50	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED EXFILTRATION TRENCH G

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin H Area =	0.79	acres
Basin I Area =	0.44	acres
Basin J Area =	0.53	acres
Total Basin Area =	1.76	acres
Basin H ImperviousArea =	0.54	acres
Basin I Impervious Area =	0.34	acres
Basin J Impervious Area =	0.45	acres
Total Impervious Area (Excluding Pond Area) =	1.33	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.07	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.14	acre-ft.
PLUS		
e TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.07	acre-ft.
TOTAL REQUIRED TREATMENT VOLUME =	**0.21**	**acre-ft.**
	9,251	**CF**

*See BMPTrains analysis for required inches over catchment area.

SMA-G STAGE VERSUS STORAGE RELATIONSHIP

Winter Springs Marketplace
Winter Springs, FL
CES#: 653,316

Overall System Footprint =	19,282	sf
Pipe Diameter =	27	in
Pipe Invert =	42.00	ft
Total Pipe Length =	5,797	ft
Stone Porosity =	30	%
Stone Above Pipe =	0	in
Stone Below Invert =	0	in

Elevation nutrient volume is provided:	43.33	ft.
Required Nutrient Treatment Volume:	0.25	ac.-ft.
Provided Nutrient Removal Volume:	0.40	ac.-ft.

			PIPE				STONE	SYSTEM		
	Elevation (ft)	System Depth (ft)	Section Depth	Section Area	Incr. Area (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Incr. Volume (cf)	Cummulative Volume (cf)	Cummulative Volume (ac.-ft.)
STONE	44.25	2.25	2.25	3.98	0.00	0.0	0.0	0.0	29,150.6	0.669
	44.25	2.25	2.25	3.98	0.00	0.0	0.0	0.0	29,150.6	0.669
PIPE	44.25	2.25	2.25	3.98	0.05	275.8	399.3	675.1	29,150.6	0.669
	44.17	2.17	2.17	3.93	0.09	495.3	333.5	828.8	28,475.5	0.654
	44.08	2.08	2.08	3.84	0.11	628.9	293.4	922.3	27,646.7	0.635
	44.00	2.00	2.00	3.73	0.13	729.4	263.2	992.6	26,724.4	0.614
	43.92	1.92	1.92	3.61	0.14	809.6	239.2	1,048.8	25,731.8	0.591
	43.83	1.83	1.83	3.47	0.15	875.1	219.5	1,094.6	24,683.0	0.567
	43.75	1.75	1.75	3.32	0.16	929.0	203.3	1,132.4	23,588.4	0.542
	43.67	1.67	1.67	3.16	0.17	973.4	190.0	1,163.4	22,456.0	0.516
	43.58	1.58	1.58	2.99	0.17	1,009.4	179.2	1,188.6	21,292.6	0.489
	43.50	1.50	1.50	2.82	0.18	1,037.9	170.7	1,208.6	20,104.0	0.462
	43.42	1.42	1.42	2.64	0.18	1,059.5	164.2	1,223.7	18,895.4	0.434
	43.33	1.33	1.33	2.45	0.19	1,074.7	159.6	1,234.4	17,671.7	0.406
	43.25	1.25	1.25	2.27	0.19	1,083.7	156.9	1,240.7	16,437.3	0.377
	43.17	1.17	1.17	2.08	0.19	1,086.7	156.0	1,242.8	15,196.7	0.349
	43.08	1.08	1.08	1.89	0.19	1,083.7	156.9	1,240.7	13,953.9	0.320
	43.00	1.00	1.00	1.71	0.19	1,074.7	159.6	1,234.4	12,713.2	0.292
	42.92	0.92	0.92	1.52	0.18	1,059.5	164.2	1,223.7	11,478.9	0.264
	42.83	0.83	0.83	1.34	0.18	1,037.9	170.7	1,208.6	10,255.2	0.235
	42.75	0.75	0.75	1.16	0.17	1,009.4	179.2	1,188.6	9,046.6	0.208
	42.67	0.67	0.67	0.99	0.17	973.4	190.0	1,163.4	7,858.0	0.180
	42.58	0.58	0.58	0.82	0.16	929.0	203.3	1,132.4	6,694.5	0.154
	42.50	0.50	0.50	0.66	0.15	875.1	219.5	1,094.6	5,562.2	0.128
	42.42	0.42	0.42	0.51	0.14	809.6	239.2	1,048.8	4,467.5	0.103
	42.33	0.33	0.33	0.37	0.13	729.4	263.2	992.6	3,418.8	0.078
	42.25	0.25	0.25	0.24	0.11	628.9	293.4	922.3	2,426.2	0.056
	42.17	0.17	0.17	0.13	0.09	495.3	333.5	828.8	1,503.9	0.035
	42.08	0.08	0.08	0.05	0.05	275.8	399.3	675.1	675.1	0.015
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
STONE	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000
	42.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.000

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED SWALE 1

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin H Area =	0.79	acres
Impervious Area =	0.54	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.03	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.06	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.03	acre-ft.
OR		
*Nutrient Removal = **0.93"** of runoff from drainage area = [(Basin Area-NWL Area)(**0.93"**)]/12" =	0.06	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.09**	**acre-ft.**
	3,859	**CF**
Required Treatment Volume at Elevation =	45.88	ft

Provided Treatment Volume =	**0.06**	**acre-ft.**
	2,658	**CF**
Provided Treatment Volume at Elevation =	45.25	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45.35	2	2,500	0.057	2,893	0.066
TOP OF STRUCTURE	45.25	1.9	2,390	0.055	2,648	0.061
	44.35	1	1,432	0.033	929	0.021
BOTTOM	43.35	0	425	0.010	0	0.000

* Slopes > Elev. 43.35 ft (3:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED SWALE 2

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin I Area =	0.44	acres
Impervious Area =	0.34	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.04	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
*Nutrient Removal = **1.65"** of runoff from drainage area = [(Basin Area-NWL Area)(**1.65"**)]/12" =	0.06	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.06**	**acre-ft.**
	2,659	**CF**
Required Treatment Volume at Elevation =	45.26	ft

Provided Treatment Volume =	**0.06**	**acre-ft.**
	2,658	**CF**
Provided Treatment Volume at Elevation =	45.25	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45.35	2	2,500	0.057	2,893	0.066
TOP OF STRUCTURE	45.25	1.9	2,390	0.055	2,648	0.061
	44.35	1	1,432	0.033	929	0.021
BOTTOM	43.35	0	425	0.010	0	0.000

* Slopes > Elev. 43.35 ft (3:1)

REQUIRED TREATMENT VOLUME & STAGE/STORAGE

DRY RETENTION PROPOSED SWALE 3

Littoral Zone Provided?	**NO**
Discharge Directly to Class I, II, III or OFW?	**NO**
Offline or Online?	**ONLINE**

Basin J Area =	0.53	acres
Impervious Area =	0.45	acres
TV = 0.5" of runoff over site = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
TV = 1.25" of runoff from imp. area = [(Imp Area)(1.25")]/12" =	0.05	acre-ft.
PLUS		
Online TV = 0.5" of runoff from drainage area = [(Basin Area)(0.5")]/12" =	0.02	acre-ft.
OR		
*Nutrient Removal = **0.53"** of runoff from drainage area = [(Basin Area-NWL Area)(**0.53"**)]/12" =	0.02	acre-ft.

TOTAL REQUIRED TREATMENT VOLUME =	**0.07**	**acre-ft.**
	3,023	**CF**
Required Treatment Volume at Elevation =	47.30	ft

Provided Treatment Volume =	**0.02**	**acre-ft.**
	1,025	**CF**
Provided Treatment Volume at Elevation =	45.25	ft

	Elevation (FT)	Feet	Area (SF)	Area (AC)	Volume Sum (CF)	Volume Sum (Ac-Ft)
T.O.B.	45.35	1.5	1,504	0.035	1,165	0.027
TOP OF STRUCTURE	45.25	1.4	1,406	0.032	1,020	0.023
	44.35	0.5	553	0.013	138	0.003
BOTTOM	43.85	0	0	0.000	0	0.000

* Slopes > Elev. 43.85 ft (3:1)

BMPTRAINS NUTRIENT REMOVAL REPORT

Complete Report (not including cost) Ver 2.1.0

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020 11:10:16 AM

Site and Catchment Information

Analysis: Net Improvement

Catchment Name	BASIN A & G.1	Basin B	Basin C	Basin D	Basin E	Basin F	Basin G.2	Basin H	Basin I	Basin J
Rainfall Zone	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2
Annual Mean Rainfall	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03	50.03

Pre-Condition Landuse Information

Landuse	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346	Undeveloped - Upland Hardwood : TN=1.042 TP=0.346
Area (acres)	1.49	1.12	2.97	0.88	0.49	0.95	0.56	0.79	0.44	0.53
Rational Coefficient (0-1)	0.02	0.01	0.20	0.11	0.09	0.11	0.01	0.11	0.06	0.01

Non DCIA Curve Number	55.00	39.00	39.00	39.00	76.00	80.00	39.00	80.00	71.00	39.00
DCIA Percent (0-100)	0.00	0.50	23.80	13.00	0.00	0.00	0.00	0.00	0.00	0.00
Nitrogen EMC (mg/l)	1.042	1.042	1.042	1.042	1.042	1.042	1.042	1.042	1.042	1.042
Phosphorus EMC (mg/l)	0.346	0.346	0.346	0.346	0.346	0.346	0.346	0.346	0.346	0.346
Runoff Volume (ac-ft/yr)	0.137	0.049	2.439	0.406	0.174	0.440	0.015	0.366	0.113	0.014
Nitrogen Loading (kg/yr)	0.176	0.062	3.134	0.521	0.224	0.565	0.019	0.470	0.145	0.018
Phosphorus Loading (kg/yr)	0.058	0.021	1.041	0.173	0.074	0.188	0.006	0.156	0.048	0.006

PRE-CONDITION NITROGEN LOADING RATE

PRE-CONDITION PHOSPHOROUS LOADING RATE

Post-Condition Landuse Information

Landuse	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188	Low-Intensity Commercial: TN=1.13 TP=0.188

Area (acres)	1.49	1.12	2.97	0.88	0.49	0.95	0.56	0.79	0.44	0.53
Rational Coefficient (0-1)	0.59	0.23	0.70	0.63	0.63	0.57	0.81	0.55	0.63	0.69
Non DCIA Curve Number	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00	39.00
DCIA Percent (0-100)	72.50	27.70	86.90	77.30	77.50	70.50	100.00	68.30	77.30	84.90
Wet Pond Area (ac)	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nitrogen EMC (mg/l)	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130
Phosphorus EMC (mg/l)	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.188	0.188
Runoff Volume (ac-ft/yr)	3.658	0.744	8.720	2.301	1.285	2.269	1.889	1.828	1.151	1.521
Nitrogen Loading (kg/yr)	5.096	1.036	12.149	3.206	1.790	3.161	2.632	2.547	1.603	2.119
Phosphorus Loading (kg/yr)	0.848	0.172	2.021	0.533	0.298	0.526	0.438	0.424	0.267	0.352

PRE-CONDITION NITROGEN LOADING RATE

PRE-CONDITION PHOSPHOROUS LOADING RATE

Catchment Number: 1 Name: BASIN A & G.1

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Retention Design

Retention Depth (in)	1.670
Retention Volume (ac-ft)	0.207

Watershed Characteristics

Catchment Area (acres)	1.49
Contributing Area (acres)	1.490
Non-DCIA Curve Number	39.00
DCIA Percent	72.50
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	97
Provided TN Treatment Efficiency (%)	91
Required TP Treatment Efficiency (%)	93
Provided TP Treatment Efficiency (%)	91

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

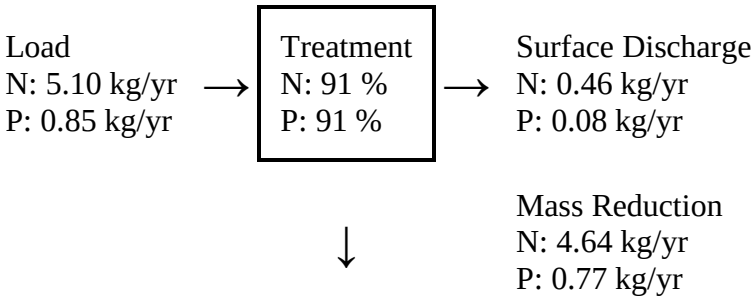
Type of Media Mix	Not Specified
Media N Reduction (%)	

Media P Reduction (%)

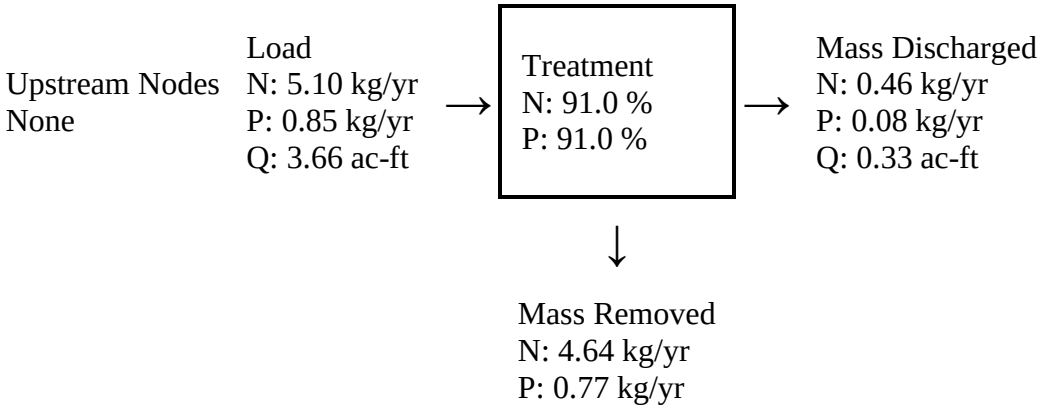
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	4.638
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.772
TP Concentration (mg/L)	0.000

Load Diagram for Retention (stand-alone)



Load Diagram for Retention (As Used In Routing)



Catchment Number: 2 Name: Basin B

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Wet Detention Design

Permanent Pool Volume (ac-ft)	0.063
Permanent Pool Volume (ac-ft) for 31 days residence	0.063
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

Watershed Characteristics

Catchment Area (acres)	1.12
Contributing Area (acres)	0.780
Non-DCIA Curve Number	39.00
DCIA Percent	27.70

Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	94
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	88
Provided TP Treatment Efficiency (%)	65

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

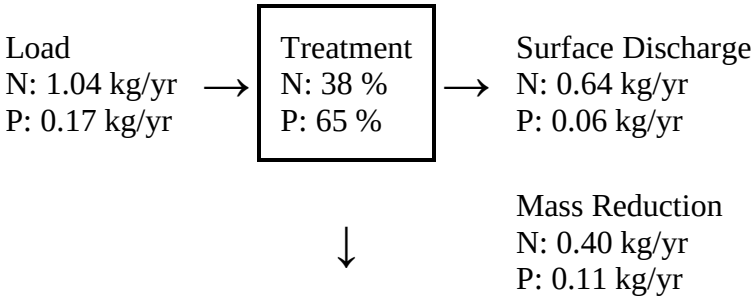
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

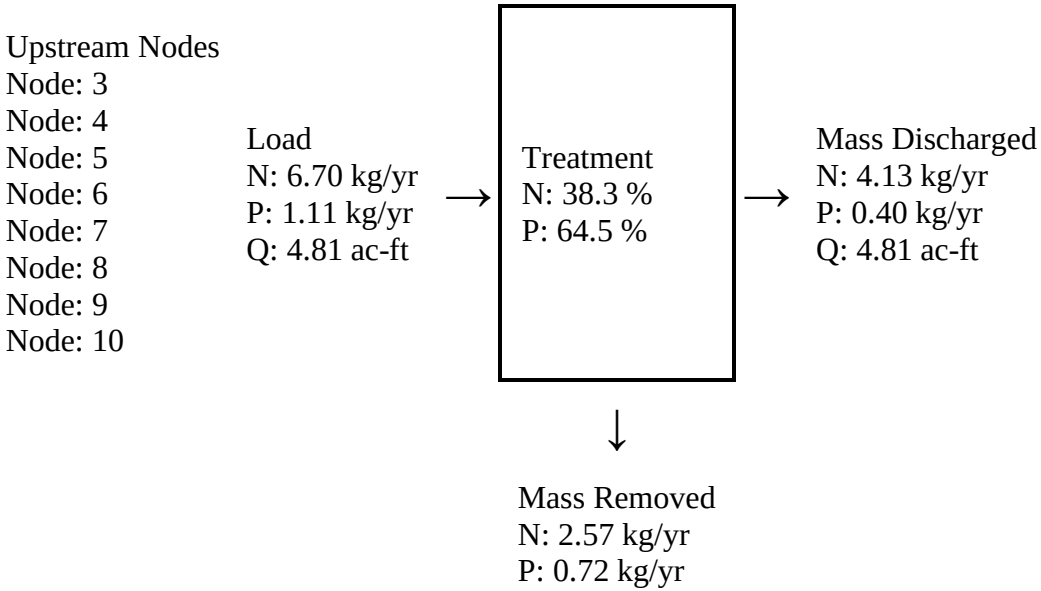
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



Load Diagram for Wet Detention (As Used In Routing)



Catchment Number: 3 Name: Basin C

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	18.0
Pipe Rise (in)	18.0
Pipe Length (ft)	5,352.0
Trench Width (ft)	3.5
Trench Depth (ft)	1.5
Trench Length (ft)	5,355.5
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.35
Retention Depth (in over CA)	1.396

Watershed Characteristics

Catchment Area (acres)	2.97
Contributing Area (acres)	2.970
Non-DCIA Curve Number	39.00
DCIA Percent	86.90
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	74
Provided TN Treatment Efficiency (%)	83
Required TP Treatment Efficiency (%)	49

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Provided TP Treatment Efficiency (%) 83

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

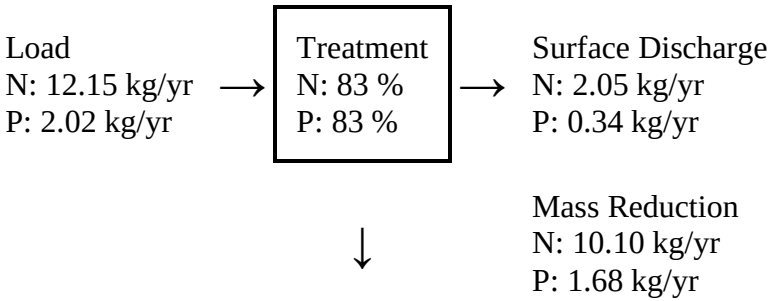
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

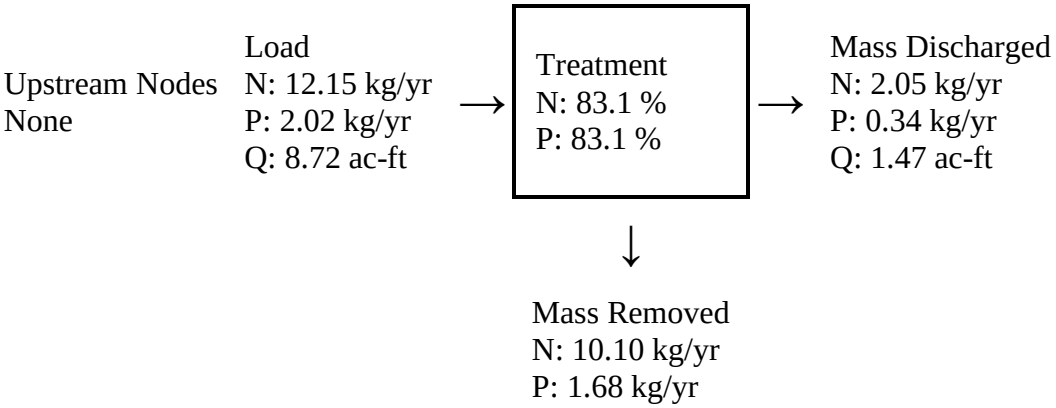
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	10.097
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	1.680
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 4 Name: Basin D

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	24.0
Pipe Rise (in)	24.0
Pipe Length (ft)	1,018.0
Trench Width (ft)	4.0
Trench Depth (ft)	2.0
Trench Length (ft)	1,022.0
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.11

Retention Depth (in over CA) 1.469

Watershed Characteristics

Catchment Area (acres)	0.88
Contributing Area (acres)	0.880
Non-DCIA Curve Number	39.00
DCIA Percent	77.30
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	84
Provided TN Treatment Efficiency (%)	87
Required TP Treatment Efficiency (%)	68
Provided TP Treatment Efficiency (%)	87

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

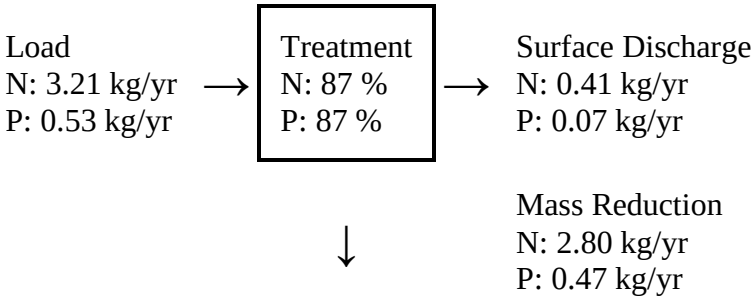
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

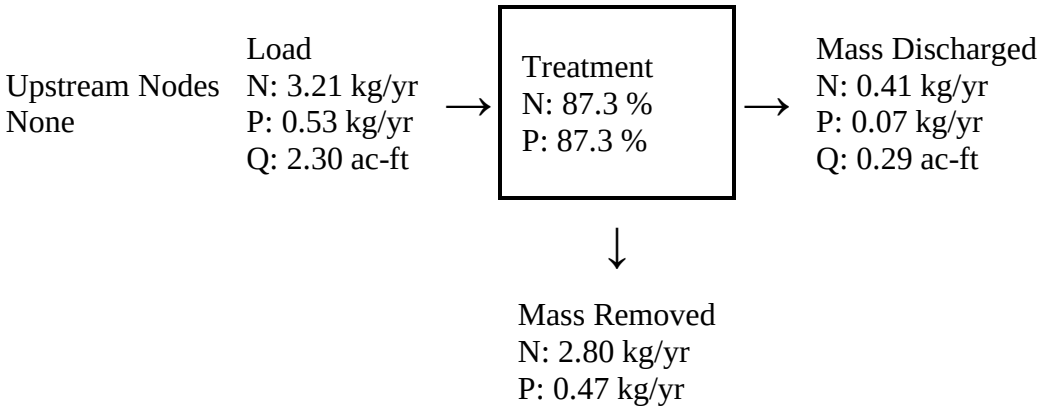
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	2.798
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.465
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 5 Name: Basin E

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	23.0
Pipe Rise (in)	23.0
Pipe Length (ft)	946.0
Trench Width (ft)	3.9
Trench Depth (ft)	1.9
Trench Length (ft)	949.9
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.09
Retention Depth (in over CA)	2.261

Watershed Characteristics

Catchment Area (acres)	0.49
Contributing Area (acres)	0.490
Non-DCIA Curve Number	39.00
DCIA Percent	77.50
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	87
Provided TN Treatment Efficiency (%)	95
Required TP Treatment Efficiency (%)	75

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Provided TP Treatment Efficiency (%) 95

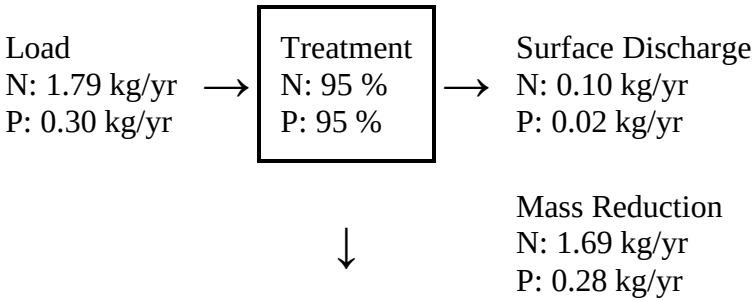
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

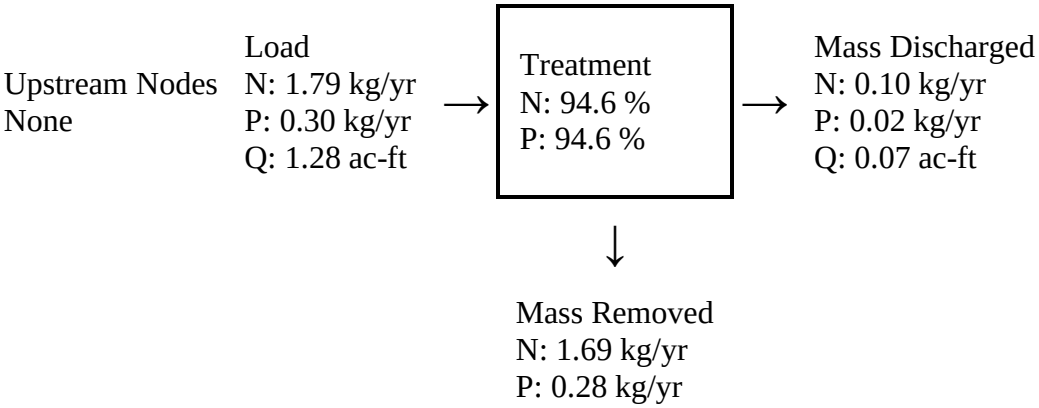
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	1.694
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.282
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 6 Name: Basin F

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Exfiltration Trench Design

Pipe Span (in)	37.0
Pipe Rise (in)	37.0
Pipe Length (ft)	471.0
Trench Width (ft)	5.1
Trench Depth (ft)	3.1
Trench Length (ft)	476.1
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.11

Retention Depth (in over CA) 1.369

Watershed Characteristics

Catchment Area (acres)	0.95
Contributing Area (acres)	0.950
Non-DCIA Curve Number	39.00
DCIA Percent	70.50
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	82
Provided TN Treatment Efficiency (%)	88
Required TP Treatment Efficiency (%)	64
Provided TP Treatment Efficiency (%)	88

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

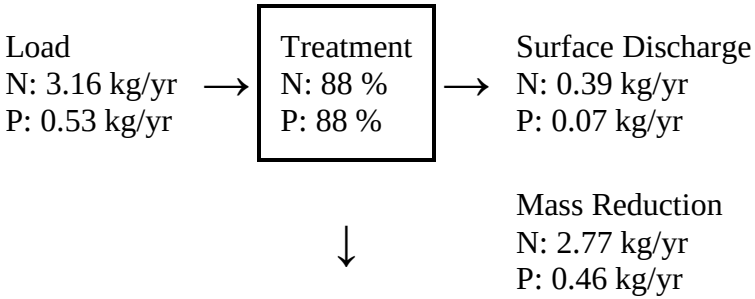
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

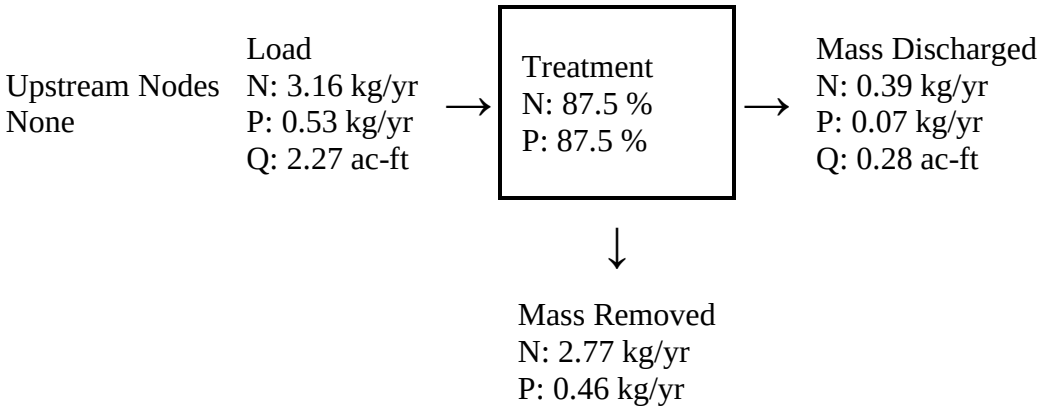
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	2.766
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.460
TP Concentration (mg/L)	0.000

Load Diagram for Exfiltration Trench (stand-alone)



Load Diagram for Exfiltration (As Used In Routing)



Catchment Number: 7 Name: Basin G.2

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

None Design

Watershed Characteristics

Catchment Area (acres)	0.56
Contributing Area (acres)	0.560
Non-DCIA Curve Number	39.00
DCIA Percent	100.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	99
Provided TN Treatment Efficiency (%)	
Required TP Treatment Efficiency (%)	99
Provided TP Treatment Efficiency (%)	

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

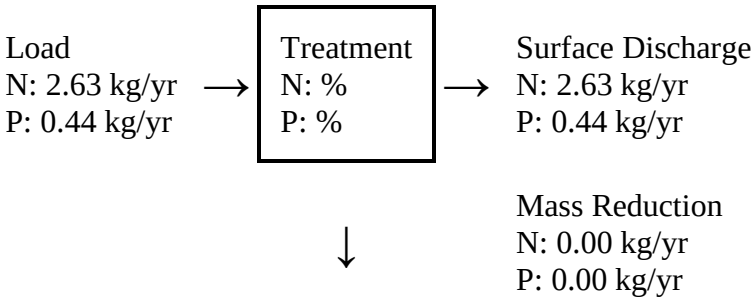
Media Mix Information

Type of Media Mix	
Media N Reduction (%)	0.000
Media P Reduction (%)	0.000

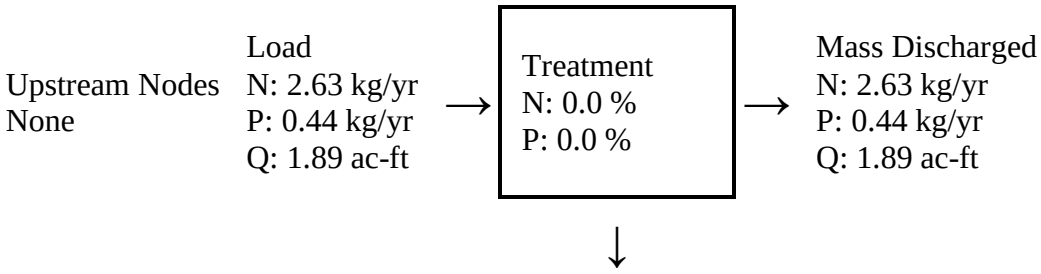
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for None (stand-alone)



Load Diagram for None (As Used In Routing)



Mass Removed
N: 0.00 kg/yr
P: 0.00 kg/yr

Catchment Number: 8 Name: Basin H

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Multiple BMP in Series Design Parameters

BMP in Series Number: 1
BMP Type: Retention

Retention Depth (in)	0.930
Retention Volume (ac-ft)	0.061

BMP in Series Number: 2
BMP Type: Exfiltration

Pipe Span (in)	27.0
Pipe Rise (in)	27.0
Pipe Length (ft)	2,550.0
Trench Width (ft)	4.3
Trench Depth (ft)	2.3
Trench Length (ft)	2,554.3
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.34
Retention Depth (in over CA)	5.118

BMP in Series Number: 3
BMP Type: None

BMP in Series Number: 4
BMP Type: None

Watershed Characteristics

Catchment Area (acres)	0.79
Contributing Area (acres)	0.790
Non-DCIA Curve Number	39.00
DCIA Percent	68.30
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	82
Provided TN Treatment Efficiency (%)	99
Required TP Treatment Efficiency (%)	63
Provided TP Treatment Efficiency (%)	99

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

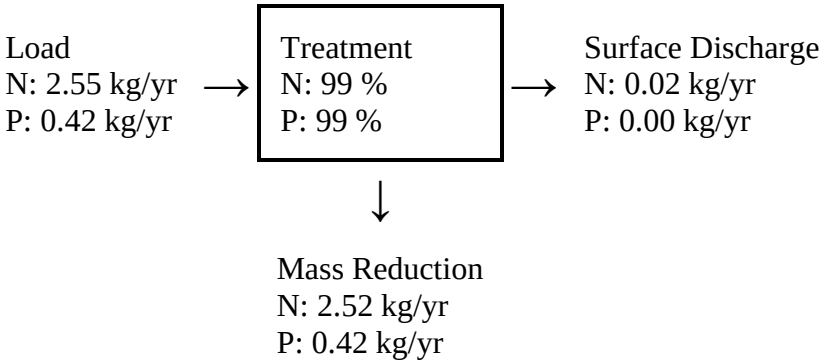
Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

Groundwater Discharge (Stand-Alone)

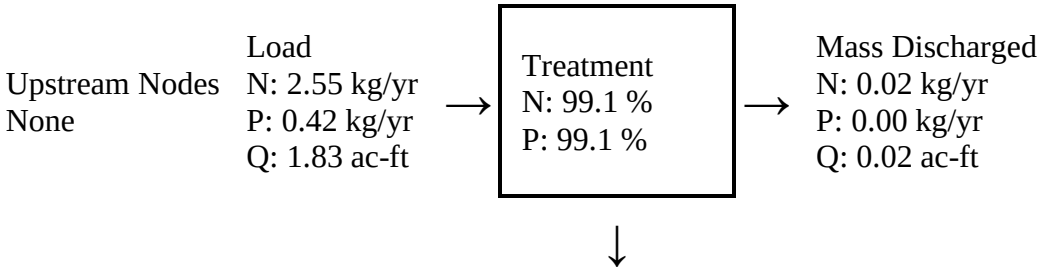
Treatment Rate (MG/yr)	0.000

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

Load for Multiple BMP in Series



Load Diagram for Multiple BMP (As Used In Routing)



Mass Removed
N: 2.52 kg/yr
P: 0.42 kg/yr

Catchment Number: 9 Name: Basin I

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Multiple BMP in Series Design Parameters

BMP in Series Number: 1
BMP Type: Retention

Retention Depth (in)	1.650
Retention Volume (ac-ft)	0.061

BMP in Series Number: 2
BMP Type: Exfiltration

Pipe Span (in)	27.0
Pipe Rise (in)	27.0
Pipe Length (ft)	2,550.0
Trench Width (ft)	4.3
Trench Depth (ft)	2.3
Trench Length (ft)	2,554.3
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.34
Retention Depth (in over CA)	9.189

BMP in Series Number: 3
BMP Type: None

BMP in Series Number: 4
BMP Type: None

Watershed Characteristics

Catchment Area (acres)	0.44
Contributing Area (acres)	0.440
Non-DCIA Curve Number	39.00
DCIA Percent	77.30
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	91
Provided TN Treatment Efficiency (%)	99
Required TP Treatment Efficiency (%)	82
Provided TP Treatment Efficiency (%)	99

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

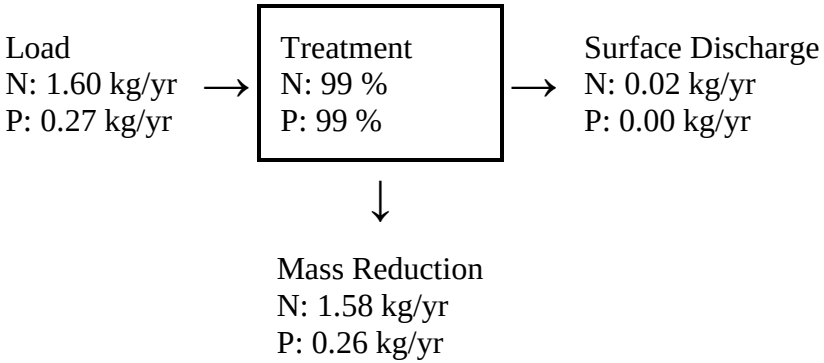
Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

Groundwater Discharge (Stand-Alone)

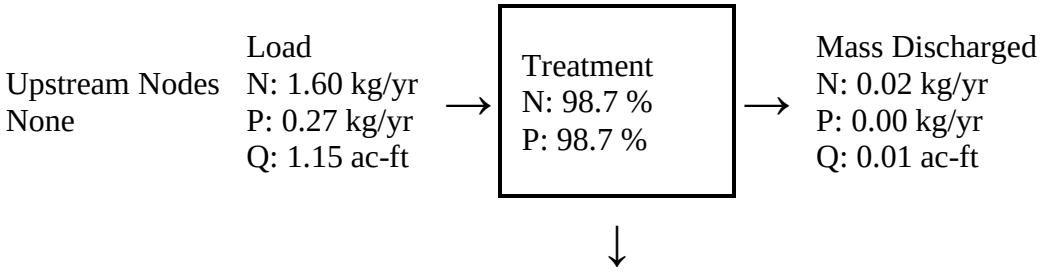
Treatment Rate (MG/yr)	0.000

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

Load for Multiple BMP in Series



Load Diagram for Multiple BMP (As Used In Routing)



Mass Removed
N: 1.58 kg/yr
P: 0.26 kg/yr

Catchment Number: 10 Name: Basin J

Project: Winter Springs Marketplace (Rev. 5)
Date: 11/12/2020

Multiple BMP in Series Design Parameters

BMP in Series Number: 1
BMP Type: Retention

Retention Depth (in)	0.530
Retention Volume (ac-ft)	0.023

BMP in Series Number: 2
BMP Type: Exfiltration

Pipe Span (in)	27.0
Pipe Rise (in)	27.0
Pipe Length (ft)	2,550.0
Trench Width (ft)	4.3
Trench Depth (ft)	2.3
Trench Length (ft)	2,554.3
Aggregate Void %	0.30
Storage Volume (Ac-ft)	0.34
Retention Depth (in over CA)	7.628

BMP in Series Number: 3
BMP Type: None

BMP in Series Number: 4
BMP Type: None

Watershed Characteristics

Catchment Area (acres)	0.53
Contributing Area (acres)	0.530
Non-DCIA Curve Number	39.00
DCIA Percent	84.90
Rainfall Zone	Florida Zone 2
Rainfall (in)	50.03

Surface Water Discharge

Required TN Treatment Efficiency (%)	99
Provided TN Treatment Efficiency (%)	98
Required TP Treatment Efficiency (%)	98
Provided TP Treatment Efficiency (%)	98

REQUIRED & PROVIDED INDIVIDUAL BMP NITROGEN & PHOSPHOROUS REMOVAL EFFICIENCY

Media Mix Information

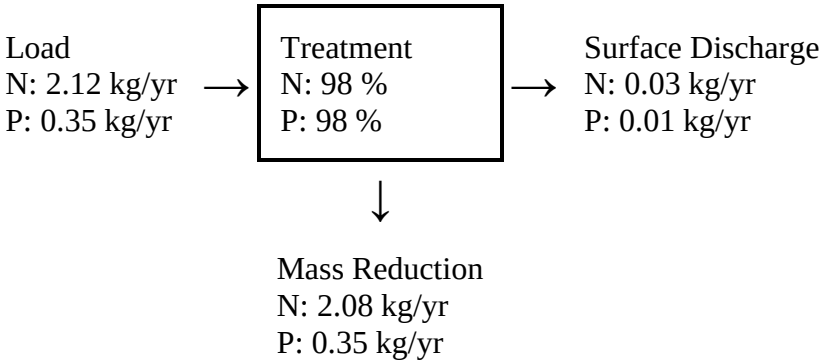
Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

Groundwater Discharge (Stand-Alone)

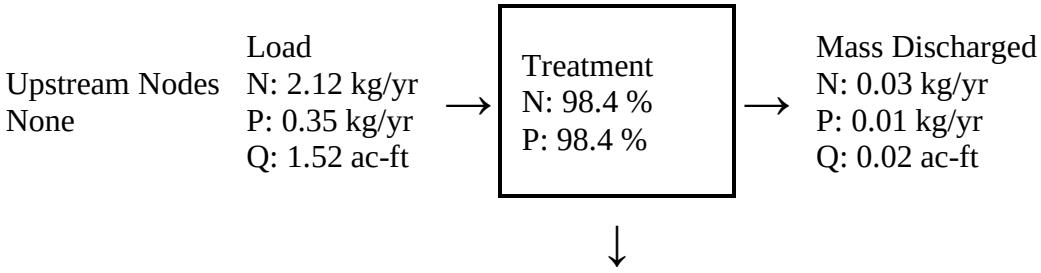
Treatment Rate (MG/yr)	0.000

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

Load for Multiple BMP in Series



Load Diagram for Multiple BMP (As Used In Routing)



Mass Removed
N: 2.08 kg/yr
P: 0.35 kg/yr

Summary Treatment Report Version: 2.1.0

Project: Winter Springs Marketplace (Rev. 5)

Date:11/12/2020

Analysis Type: Net Improvement
BMP Types:

- Catchment 1 - Retention
- Catchment 2 - Wet Detention
- Catchment 3 - Exfiltration Trench
- Catchment 4 - Exfiltration Trench
- Catchment 5 - Exfiltration Trench
- Catchment 6 - Exfiltration Trench
- Catchment 7 - None
- Catchment 8 - Multiple BMP
- Catchment 9 - Multiple BMP
- Catchment 10 - Multiple BMP

Total nitrogen target removal met? YES
Total phosphorus target removal met? YES

Treatment system each catchment provides

Routing Summary
Catchment 1 Routed to Outlet
Catchment 2 Routed to Outlet
Catchment 3 Routed to Catchment 2
Catchment 4 Routed to Catchment 2
Catchment 5 Routed to Catchment 2
Catchment 6 Routed to Catchment 2
Catchment 7 Routed to Catchment 2
Catchment 8 Routed to Catchment 2
Catchment 9 Routed to Catchment 2
Catchment 10 Routed to Catchment 2

How each of the catchments are routed to the ultimate outfall.

Confirmation the system, as designed, treats for nitrogen and phosphorous in the ultimate discharge from site

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	5.33 kg/yr	
Total N post load	35.34 kg/yr	
Target N load reduction	85 %	
Target N discharge load	5.33 kg/yr	
Percent N load reduction	87 %	
Provided N discharge load	4.59 kg/yr	10.12 lb/yr
Provided N load removed	30.75 kg/yr	67.8 lb/yr

Target overall site loading rate based on existing conditions loading rate

Provided overall site loading rate

Phosphorus

Surface Water Discharge

Total P pre load	1.771 kg/yr	
Total P post load	5.879 kg/yr	
Target P load reduction	70 %	
Target P discharge load	1.771 kg/yr	
Percent P load reduction	92 %	
Provided P discharge load	.472 kg/yr	1.04 lb/yr
Provided P load removed	5.407 kg/yr	11.924 lb/yr

Target overall site loading rate based on existing conditions loading rate

Provided overall site loading rate

From Pre-Condition Loads

Existing N Discharge	5.33 (kg/yr)
Existing P Discharge	1.771 (kg/yr)

REQUIRED SMA-B PPV CHECK

WET DETENTION PROPOSED POND SMA-B

Littoral Zone OR Pre-Treatment Provided?	**YES**
Discharge Directly to Class I, II, III or OFW?	**NO**

Basin B Area =	1.12	acres
Basin C Area =	2.97	acres
Basin D Area =	0.88	acres
Basin E Area =	0.49	acres
Basin F Area =	0.95	acres
Basin G.2 Area =	0.56	acres
Basin H Area =	0.79	acres
Basin I Area =	0.44	acres
Basin J Area =	0.53	acres
Total Basin Area =	8.74	acres

Basin B Impervious Area =	0.31	acres
Basin C Impervious Area =	2.58	acres
Basin D Impervious Area =	0.68	acres
Basin E Impervious Area =	0.38	acres
Basin F Impervious Area =	0.67	acres
Basin G.2 Impervious Area =	0.56	acres
Basin H Impervious Area =	0.54	acres
Basin I Impervious Area =	0.34	acres
Basin J Impervious Area =	0.45	acres
Total Impervious Area (Excluding pond area) =	6.50	acres

PPV = (DA*C*R*RT)/(WS* CF)

POND SMA-B

DA = Drainage Area =	8.74	acres
C = Runoff Coefficient =	0.735	
R = Wet Season Rainfall Depth =	31.0	inches
RT = Residence Time =	14	days
WS = Wet Season =	153	days
CF = Conversion Factor =	12	in/ft
Required PPV	1.52	ac-ft
additional 50% for no littoral Zone	N/A	ac-ft
additional 50% for OFW discharge	N/A	ac-ft

PPV Required for area of upstream basins draining through SMA-B in nutrient removal treatment train

PPV Required	**1.52 ac-ft**
PPV Provided	**1.82 ac-ft**

Runoff Coefficient Calculation

	AREA (AC)	RUNOFF COEFFICIENT
IMPERVIOUS AREA	6.50	0.90
PERVIOUS AREA	1.89	0.30

C = [(Impervious Area)x(0.90) + (Pervious Area)x(0.30)] / (Total Area)

RUNOFF COEFFICIENT =	0.735

APPENDIX D

Post- Development ICPR Analysis

Node Max Conditions [POST-CONDITIONS (DIVERSION)]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
CS-C	100YR-24HR	47.08	40.70	0.0014	11.18	11.18	460
D15	100YR-24HR	46.78	44.63	0.0036	8.06	6.34	137
D16	100YR-24HR	46.89	44.62	-0.0014	8.86	8.64	309
D17	100YR-24HR	47.22	44.60	0.0015	16.13	15.96	238
D18	100YR-24HR	46.22	44.57	0.0014	15.96	15.80	325
D19	100YR-24HR	46.12	44.55	0.0107	15.80	15.64	293
D32	100YR-24HR	44.76	44.62	0.0145	14.48	10.88	100
D33	100YR-24HR	45.52	44.51	0.0210	36.62	25.61	196
D34	100YR-24HR	45.96	44.48	0.0835	83.54	36.62	151
D38	100YR-24HR	44.24	40.89	0.0010	8.31	8.33	367
D39	100YR-24HR	46.26	44.46	0.0010	2.69	2.52	177
D40	100YR-24HR	46.62	44.46	0.0010	2.86	2.69	191
D43	100YR-24HR	46.28	44.52	0.0010	3.03	2.86	178
GWT D & E	100YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	100YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	100YR-24HR	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	100YR-24HR	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	100YR-24HR	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	100YR-24HR	45.00	44.08	0.0004	50.50	24.21	56160
ONDICK	100YR-24HR	45.12	40.51	0.0019	34.97	34.97	568
POST-EAST-OUTFALL	100YR-24HR	39.94	39.94	0.0002	1.86	0.00	0
SMA-A.1	100YR-24HR	46.50	46.11	0.0003	6.74	6.60	5457
SMA-A.2	100YR-24HR	46.50	46.24	0.0007	3.61	3.36	2754
SMA-B	100YR-24HR	45.00	44.46	-0.0535	33.41	83.54	24586
SMA-C	100YR-24HR	44.63	44.63	-0.0145	18.21	15.62	13197
SMA-D	100YR-24HR	44.30	44.61	0.0006	5.17	4.83	3308
SMA-E	100YR-24HR	44.25	44.63	0.0004	3.10	0.95	4673
SMA-F	100YR-24HR	44.65	44.63	0.0004	5.32	6.51	3811
SMA-G	100YR-24HR	44.52	44.64	0.0005	12.75	7.24	15012
SWALE 1	100YR-24HR	45.35	45.38	0.0003	4.33	4.31	2483
SWALE 2	100YR-24HR	45.35	45.34	0.0003	2.61	2.59	2477

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SWALE 3	100YR-24HR	45.35	45.36	0.0002	3.24	3.23	1525
WETLAND	100YR-24HR	35.01	35.00	0.0000	34.97	9.73	0
CS-C	10YR-24HR	47.08	36.87	0.0014	6.44	3.90	460
D15	10YR-24HR	46.78	43.68	0.0009	3.83	3.81	139
D16	10YR-24HR	46.89	43.68	-0.0014	5.16	5.17	309
D17	10YR-24HR	47.22	43.68	-0.0017	8.57	8.37	238
D18	10YR-24HR	46.22	43.68	0.0014	8.37	8.26	325
D19	10YR-24HR	46.12	43.67	0.0107	12.03	8.16	293
D32	10YR-24HR	44.76	43.77	0.0145	14.48	8.26	100
D33	10YR-24HR	45.52	43.67	0.0210	36.62	16.32	196
D34	10YR-24HR	45.96	43.67	0.0835	83.54	36.62	151
D38	10YR-24HR	44.24	36.88	0.0010	3.64	2.88	367
D39	10YR-24HR	46.26	43.66	0.0010	2.06	1.97	177
D40	10YR-24HR	46.62	43.67	0.0010	2.16	2.06	191
D43	10YR-24HR	46.28	43.67	0.0010	2.26	2.16	180
GWT D & E	10YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	10YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	10YR-24HR	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	10YR-24HR	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	10YR-24HR	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	10YR-24HR	45.00	43.52	0.0005	36.21	16.51	54546
ONDICK	10YR-24HR	45.12	36.85	0.0019	20.26	20.25	568
POST-EAST-OUTFALL	10YR-24HR	39.94	39.94	0.0003	0.28	0.00	0
SMA-A.1	10YR-24HR	46.50	46.01	0.0005	4.02	3.71	5289
SMA-A.2	10YR-24HR	46.50	46.06	0.0007	2.69	2.08	2551
SMA-B	10YR-24HR	45.00	43.66	-0.0535	20.15	83.54	22538
SMA-C	10YR-24HR	44.63	43.85	-0.0145	13.27	14.48	13198
SMA-D	10YR-24HR	44.30	44.34	0.0009	3.67	3.16	3308
SMA-E	10YR-24HR	44.25	43.68	0.0003	2.03	0.67	4673
SMA-F	10YR-24HR	44.65	43.69	0.0006	3.69	3.11	3812
SMA-G	10YR-24HR	44.52	43.88	0.0006	11.95	4.21	15008
SWALE 1	10YR-24HR	45.35	45.35	0.0004	2.99	2.97	2483

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SWALE 2	10YR-24HR	45.35	45.32	0.0005	1.85	1.84	2460
SWALE 3	10YR-24HR	45.35	45.34	0.0001	2.35	2.35	1507
WETLAND	10YR-24HR	35.01	35.00	0.0000	20.25	9.73	0
CS-C	25YR-24HR	47.08	37.97	0.0014	6.44	5.72	460
D15	25YR-24HR	46.78	43.88	0.0010	4.72	4.63	139
D16	25YR-24HR	46.89	43.88	-0.0011	6.63	6.51	309
D17	25YR-24HR	47.22	43.88	-0.0014	11.08	10.96	238
D18	25YR-24HR	46.22	43.87	0.0014	10.96	10.85	325
D19	25YR-24HR	46.12	43.87	0.0107	12.03	10.73	293
D32	25YR-24HR	44.76	43.90	0.0145	14.48	9.45	100
D33	25YR-24HR	45.52	43.86	0.0210	36.62	19.62	196
D34	25YR-24HR	45.96	43.86	0.0835	83.54	36.62	151
D38	25YR-24HR	44.24	38.00	0.0010	3.95	4.02	367
D39	25YR-24HR	46.26	43.86	0.0010	2.20	2.08	177
D40	25YR-24HR	46.62	43.86	0.0010	2.33	2.20	191
D43	25YR-24HR	46.28	43.87	0.0010	2.46	2.33	178
GWT D & E	25YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	25YR-24HR	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	25YR-24HR	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	25YR-24HR	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	25YR-24HR	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	25YR-24HR	45.00	43.64	0.0004	39.93	19.90	54907
ONDICK	25YR-24HR	45.12	37.92	0.0019	25.47	25.46	568
POST-EAST-OUTFALL	25YR-24HR	39.94	39.94	0.0003	0.57	0.00	0
SMA-A.1	25YR-24HR	46.50	46.05	0.0005	4.72	4.54	5348
SMA-A.2	25YR-24HR	46.50	46.11	0.0007	2.93	2.45	2613
SMA-B	25YR-24HR	45.00	43.85	-0.0535	24.40	83.54	23023
SMA-C	25YR-24HR	44.63	43.97	-0.0145	14.56	14.48	13198
SMA-D	25YR-24HR	44.30	44.40	0.0010	4.06	3.66	3308
SMA-E	25YR-24HR	44.25	43.88	0.0003	2.24	0.88	4673
SMA-F	25YR-24HR	44.65	43.89	0.0006	4.11	3.71	3811
SMA-G	25YR-24HR	44.52	44.00	0.0005	12.49	4.63	15010

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SWALE 1	25YR-24HR	45.35	45.36	0.0004	3.34	3.32	2483
SWALE 2	25YR-24HR	45.35	45.33	0.0005	2.05	2.04	2465
SWALE 3	25YR-24HR	45.35	45.34	0.0001	2.58	2.58	1515
WETLAND	25YR-24HR	35.01	35.00	0.0000	25.46	9.73	0
CS-C	MEAN ANNUAL	47.08	35.02	0.0014	6.44	3.64	460
D15	MEAN ANNUAL	46.78	41.71	-0.0001	0.16	0.16	100
D16	MEAN ANNUAL	46.89	41.71	0.0008	0.39	0.27	301
D17	MEAN ANNUAL	47.22	41.71	0.0010	0.89	0.99	238
D18	MEAN ANNUAL	46.22	41.70	0.0012	2.29	1.40	325
D19	MEAN ANNUAL	46.12	41.70	0.0107	12.03	2.29	293
D32	MEAN ANNUAL	44.76	43.39	0.0145	14.48	0.40	100
D33	MEAN ANNUAL	45.52	41.70	0.0210	36.62	12.03	196
D34	MEAN ANNUAL	45.96	41.70	0.0835	83.54	36.62	151
D38	MEAN ANNUAL	44.24	35.02	0.0010	3.64	0.32	367
D39	MEAN ANNUAL	46.26	41.70	0.0010	1.19	1.17	203
D40	MEAN ANNUAL	46.62	41.70	0.0010	1.22	1.19	193
D43	MEAN ANNUAL	46.28	41.70	0.0010	1.22	1.22	232
GWT D & E	MEAN ANNUAL	40.01	40.00	0.0000	0.00	0.00	0
GWT G & SWALES	MEAN ANNUAL	40.01	40.00	0.0000	0.00	0.00	0
GWT-A	MEAN ANNUAL	42.01	42.00	0.0000	0.00	0.00	0
GWT-C	MEAN ANNUAL	41.01	41.00	0.0000	0.00	0.00	0
GWT-F	MEAN ANNUAL	40.51	40.50	0.0000	0.00	0.00	0
JESUP POND 1	MEAN ANNUAL	45.00	42.77	0.0004	16.99	1.76	52411
ONDICK	MEAN ANNUAL	45.12	35.02	0.0019	9.73	6.44	568
POST-EAST-OUTFALL	MEAN ANNUAL	39.94	39.94	0.0006	0.00	0.00	0
SMA-A.1	MEAN ANNUAL	46.50	45.67	0.0003	1.61	0.26	4726
SMA-A.2	MEAN ANNUAL	46.50	45.67	0.0007	1.45	0.82	2114
SMA-B	MEAN ANNUAL	45.00	41.70	-0.0535	2.52	83.54	17695
SMA-C	MEAN ANNUAL	44.63	43.39	-0.0145	6.59	14.48	13198
SMA-D	MEAN ANNUAL	44.30	43.84	0.0004	1.67	0.26	3308
SMA-E	MEAN ANNUAL	44.25	43.13	0.0002	0.92	0.02	4673
SMA-F	MEAN ANNUAL	44.65	43.07	0.0003	1.55	0.16	3811

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
SMA-G	MEAN ANNUAL	44.52	43.39	0.0003	4.56	0.17	15010
SWALE 1	MEAN ANNUAL	45.35	45.29	0.0004	1.23	0.70	2430
SWALE 2	MEAN ANNUAL	45.35	45.26	0.0003	0.85	0.15	2408
SWALE 3	MEAN ANNUAL	45.35	45.30	0.0001	1.16	1.15	1465
WETLAND	MEAN ANNUAL	35.01	35.00	0.0000	2.12	9.73	0

Simple Basin Runoff Summary [POST-CONDITIONS (DIVERSION)]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN A	100YR-24HR	3.83	12.0500	10.60	6.57	0.8267	68.6	0.00	0.00
BASIN B	100YR-24HR	5.67	12.0500	10.60	7.23	1.1200	73.5	0.00	0.00
BASIN C	100YR-24HR	18.21	12.0500	10.60	9.38	2.9700	90.1	0.00	0.00
BASIN D	100YR-24HR	5.17	12.0500	10.60	8.67	0.8832	84.5	0.00	0.00
BASIN E	100YR-24HR	2.85	12.0500	10.60	8.68	0.4872	84.6	0.00	0.00
BASIN F	100YR-24HR	5.32	12.0500	10.60	8.11	0.9536	80.2	0.00	0.00
BASIN G.1	100YR-24HR	3.61	12.0833	10.60	10.36	0.6659	98.0	0.00	0.00
BASIN G.2	100YR-24HR	3.03	12.0833	10.60	10.36	0.5591	98.0	0.00	0.00
BASIN H	100YR-24HR	4.33	12.0500	10.60	7.97	0.7877	79.1	0.00	0.00
BASIN I	100YR-24HR	2.61	12.0500	10.60	8.71	0.4439	84.8	0.00	0.00
BASIN J	100YR-24HR	3.24	12.0500	10.60	9.30	0.5302	89.5	0.00	0.00
JESSUP	100YR-24HR	50.50	12.1333	10.60	8.99	11.0300	87.0	0.00	0.00
BASIN A	10YR-24HR	2.46	12.0500	7.90	4.21	0.8267	68.6	0.00	0.00
BASIN B	10YR-24HR	3.77	12.0500	7.90	4.77	1.1200	73.5	0.00	0.00
BASIN C	10YR-24HR	13.27	12.0500	7.90	6.71	2.9700	90.1	0.00	0.00
BASIN D	10YR-24HR	3.67	12.0500	7.90	6.05	0.8832	84.5	0.00	0.00
BASIN E	10YR-24HR	2.03	12.0500	7.90	6.06	0.4872	84.6	0.00	0.00
BASIN F	10YR-24HR	3.69	12.0500	7.90	5.55	0.9536	80.2	0.00	0.00
BASIN G.1	10YR-24HR	2.69	12.0833	7.90	7.66	0.6659	98.0	0.00	0.00
BASIN G.2	10YR-24HR	2.26	12.0833	7.90	7.66	0.5591	98.0	0.00	0.00
BASIN H	10YR-24HR	2.99	12.0500	7.90	5.42	0.7877	79.1	0.00	0.00
BASIN I	10YR-24HR	1.85	12.0500	7.90	6.09	0.4439	84.8	0.00	0.00
BASIN J	10YR-24HR	2.35	12.0500	7.90	6.64	0.5302	89.5	0.00	0.00
JESSUP	10YR-24HR	36.21	12.1333	7.90	6.35	11.0300	87.0	0.00	0.00
BASIN A	25YR-24HR	2.81	12.0500	8.60	4.81	0.8267	68.6	0.00	0.00
BASIN B	25YR-24HR	4.26	12.0500	8.60	5.40	1.1200	73.5	0.00	0.00
BASIN C	25YR-24HR	14.56	12.0500	8.60	7.40	2.9700	90.1	0.00	0.00
BASIN D	25YR-24HR	4.06	12.0500	8.60	6.73	0.8832	84.5	0.00	0.00
BASIN E	25YR-24HR	2.24	12.0500	8.60	6.74	0.4872	84.6	0.00	0.00
BASIN F	25YR-24HR	4.11	12.0500	8.60	6.21	0.9536	80.2	0.00	0.00
BASIN G.1	25YR-24HR	2.93	12.0833	8.60	8.36	0.6659	98.0	0.00	0.00
BASIN G.2	25YR-24HR	2.46	12.0833	8.60	8.36	0.5591	98.0	0.00	0.00

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN H	25YR-24HR	3.34	12.0500	8.60	6.07	0.7877	79.1	0.00	0.00
BASIN I	25YR-24HR	2.05	12.0500	8.60	6.76	0.4439	84.8	0.00	0.00
BASIN J	25YR-24HR	2.58	12.0500	8.60	7.33	0.5302	89.5	0.00	0.00
JESSUP	25YR-24HR	39.93	12.1333	8.60	7.03	11.0300	87.0	0.00	0.00
BASIN A	MEAN ANNUAL	0.79	12.0667	4.30	1.44	0.8267	68.6	0.00	0.00
BASIN B	MEAN ANNUAL	1.38	12.0667	4.30	1.78	1.1200	73.5	0.00	0.00
BASIN C	MEAN ANNUAL	6.59	12.0500	4.30	3.21	2.9700	90.1	0.00	0.00
BASIN D	MEAN ANNUAL	1.67	12.0500	4.30	2.68	0.8832	84.5	0.00	0.00
BASIN E	MEAN ANNUAL	0.92	12.0500	4.30	2.69	0.4872	84.6	0.00	0.00
BASIN F	MEAN ANNUAL	1.55	12.0500	4.30	2.31	0.9536	80.2	0.00	0.00
BASIN G.1	MEAN ANNUAL	1.45	12.0833	4.30	4.06	0.6659	98.0	0.00	0.00
BASIN G.2	MEAN ANNUAL	1.22	12.0833	4.30	4.06	0.5591	98.0	0.00	0.00
BASIN H	MEAN ANNUAL	1.23	12.0500	4.30	2.22	0.7877	79.1	0.00	0.00
BASIN I	MEAN ANNUAL	0.85	12.0500	4.30	2.71	0.4439	84.8	0.00	0.00
BASIN J	MEAN ANNUAL	1.16	12.0500	4.30	3.15	0.5302	89.5	0.00	0.00
JESSUP	MEAN ANNUAL	16.99	12.1500	4.30	2.91	11.0300	87.0	0.00	0.00

Simple Basin: BASIN A

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-A.1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.8267 ac
Curve Number:	68.6
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN B

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-B
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	1.1200 ac
Curve Number:	73.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN C

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-C
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs

Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	2.9700 ac
Curve Number:	90.1
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN D

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-D
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.8832 ac
Curve Number:	84.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN E

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-E
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.4872 ac
Curve Number:	84.6
% Impervious:	0.00
% DCIA:	0.00

% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN F

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-F
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	9999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.9536 ac
Curve Number:	80.2
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN G.1

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SMA-A.2
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	15.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.6659 ac
Curve Number:	98.0
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN G.2

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	D43
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	15.0000 min
Max Allowable Q:	999999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.5591 ac
Curve Number:	98.0
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN H

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SWALE 1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.7877 ac
Curve Number:	79.1
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN I

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SWALE 2
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs

Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.4439 ac
Curve Number:	84.8
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: BASIN J

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	SWALE 3
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	10.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	0.5302 ac
Curve Number:	89.5
% Impervious:	0.00
% DCIA:	0.00
% Direct:	0.00
Rainfall Name:	

Comment:

Simple Basin: JESSUP

Scenario:	POST-CONDITIONS (DIVERSION)
Node:	JESUP POND 1
Hydrograph Method:	NRCS Unit Hydrograph
Infiltration Method:	Curve Number
Time of Concentration:	19.0000 min
Max Allowable Q:	999999.00 cfs
Time Shift:	0.0000 hr
Unit Hydrograph:	UH256
Peaking Factor:	256.0
Area:	11.0300 ac
Curve Number:	87.0
% Impervious:	0.00
% DCIA:	0.00

% Direct: 0.00
Rainfall Name:

Comment: BASED ON SJRWMD APP. NO. 97490-1

Node: CS-C

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 33.30 ft
Warning Stage: 47.08 ft

Comment:

Node: D15

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 41.30 ft
Warning Stage: 46.78 ft

Comment:

Node: D16

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 40.18 ft
Warning Stage: 46.89 ft

Comment:

Node: D17

Scenario: POST-CONDITIONS

(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 35.15 ft
Warning Stage: 47.22 ft

Comment:

Node: D18

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 35.06 ft
Warning Stage: 46.22 ft

Comment:

Node: D19

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 34.93 ft
Warning Stage: 46.12 ft

Comment:

Node: D32

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 40.25 ft
Warning Stage: 44.76 ft

Comment:

Node: D33

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 34.86 ft
Warning Stage: 45.52 ft

Comment:

Node: D34

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 34.34 ft
Warning Stage: 45.96 ft

Comment:

Node: D38

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 33.80 ft
Warning Stage: 44.24 ft

Comment:

Node: D39

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 39.23 ft
Warning Stage: 46.26 ft

Comment:

Node: D40

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 39.37 ft
Warning Stage: 46.62 ft

Comment:

Node: D43

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 39.29 ft
Warning Stage: 46.28 ft

Comment:

Node: GWT D & E

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 40.00 ft
Warning Stage: 40.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	40.00
0	0	0	72.0000	40.00

Comment: SYSTEM SMA-E - SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-4, B-6, B-9

SYSTEM SMA-D - SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-9, B-11, B-12, B-15

Node: GWT G & SWALES

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 40.00 ft
Warning Stage: 40.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	40.00
0	0	0	72.0000	40.00

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-2, B-3, B-5, B-6

Node: GWT-A

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 42.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	42.00
0	0	0	72.0000	42.00

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-7 & B-13

Node: GWT-C

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 41.00 ft
Warning Stage: 41.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	41.00
0	0	0	72.0000	41.00

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-8, B-11, B-16

Node: GWT-F

Scenario: POST-CONDITIONS (DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 40.50 ft
Warning Stage: 40.51 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	40.50
0	0	0	72.0000	40.50

Comment: SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-3, B-4, B-6

Node: JESUP POND 1

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 41.20 ft
Warning Stage: 45.00 ft

Stage [ft]	Area [ac]	Area [ft2]
41.20	1.1010	47960
45.00	1.3490	58762

Comment: BASED ON SJRWMD APP. NO. 97490-1, NODE "POND 1"

Node: ONDICK

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 32.89 ft
Warning Stage: 45.12 ft

Comment: BASED ON AS-BUILTS FOR STRUCTURE "S-7" PROVIDED BY THE CITY OF WINTER SPRINGS.

Node: POST-EAST-OUTFALL

Scenario: POST-CONDITIONS

(DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 38.94 ft
Warning Stage: 39.94 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	38.94
0	0	0	24.0000	39.94

Comment: BASED ON OUTFALL "NODE 99" FROM SJRWMD PERMIT NO. 83445-1. CONVERTED FROM NGVD29 TO NAVD88 USING 1.056-FT CONVERSION FACTOR.

Node: SMA-A.1

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.50 ft
Warning Stage: 46.50 ft

Stage [ft]	Area [ac]	Area [ft2]
43.50	0.0410	1786
44.50	0.0680	2962
45.50	0.1020	4443
46.50	0.1400	6098

Comment:

Node: SMA-A.2

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.50 ft
Warning Stage: 46.50 ft

Stage [ft]	Area [ac]	Area [ft2]
43.50	0.0090	392
44.50	0.0230	1002
45.50	0.0440	1917
46.50	0.0700	3049

Comment:

Node: SMA-B

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 40.50 ft
Warning Stage: 45.00 ft

Stage [ft]	Area [ac]	Area [ft2]
40.50	0.3430	14941
41.00	0.3690	16074
42.00	0.4220	18382
43.00	0.4790	20865
44.00	0.5370	23392
45.00	0.5970	26005

Comment:

Node: SMA-C

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.63 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.02	653
42.17	0.03	1394
42.25	0.05	2265
42.33	0.07	3180
42.42	0.10	4138
42.50	0.12	5140
42.58	0.14	6186
42.67	0.17	7187
42.75	0.19	8233
42.83	0.21	9278
42.92	0.24	10324
43.00	0.26	11326
43.08	0.28	12327
43.17	0.31	13286
43.25	0.33	14201
43.33	0.35	15072
43.42	0.36	15812
43.50	0.37	16248
43.58	0.38	16596

Comment: SHWT ASSUMED TO BE 41-FT NAVD-88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-8, B-11, B-16

Node: SMA-D

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.30 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.00	131
42.17	0.01	348
42.25	0.01	523
42.33	0.02	741
42.42	0.02	958
42.50	0.03	1220
42.58	0.03	1481
42.67	0.04	1699
42.75	0.05	1960
42.83	0.05	2222
42.92	0.06	2483
43.00	0.06	2744
43.08	0.07	3006
43.17	0.08	3267
43.25	0.08	3528
43.33	0.09	3790
43.42	0.09	4008
43.50	0.10	4269
43.58	0.10	4487
43.67	0.11	4748
43.75	0.11	4966
43.83	0.12	5140
43.92	0.12	5314
44.00	0.13	5489

Comment: SHWT ASSUMED TO BE 40-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-9, B-11, B-12, B-15

Node: SMA-E

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.25 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.01	218
42.17	0.01	436
42.25	0.02	741
42.33	0.02	1045
42.42	0.03	1350
42.50	0.04	1655
42.58	0.05	2004
42.67	0.05	2352
42.75	0.06	2701
42.83	0.07	3049
42.92	0.08	3398
43.00	0.09	3746
43.08	0.10	4138
43.17	0.10	4487
43.25	0.11	4835
43.33	0.12	5184
43.42	0.13	5489
43.50	0.13	5837
43.58	0.14	6142
43.67	0.15	6447
43.75	0.15	6708
43.83	0.16	6970
43.92	0.17	7187

Comment: SHWT ASSUMED TO BE 40-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-4, B-6, B-9

Node: SMA-F

Scenario: POST-CONDITIONS
(DIVERSION)
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 41.50 ft
Warning Stage: 44.65 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
44.58	0.23	9888

Stage [ft]	Volume [ac-ft]	Volume [ft3]
44.50	0.22	9757
44.42	0.22	9540
44.33	0.21	9322
44.25	0.21	9104
44.17	0.20	8886
44.08	0.20	8625
44.00	0.19	8364
43.92	0.19	8102
43.83	0.18	7797
43.75	0.17	7536
43.67	0.17	7231
43.58	0.16	6926
43.50	0.15	6621
43.42	0.14	6316
43.33	0.14	6011
43.25	0.13	5706
43.17	0.12	5401
43.08	0.12	5097
43.00	0.11	4792
42.92	0.10	4487
42.83	0.10	4182
42.75	0.09	3877
42.67	0.08	3572
42.58	0.08	3267
42.50	0.07	2962
42.42	0.06	2657
42.33	0.06	2396
42.25	0.05	2091
42.17	0.04	1830
42.08	0.04	1525
42.00	0.03	1263
41.92	0.02	1045
41.83	0.02	784
41.75	0.01	566
41.67	0.01	348
41.58	0.00	174
41.50	0.00	0

Comment: SHWT ASSUMED TO BE 40.5-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-3, B-4, B-6

Node: SMA-G

Scenario: POST-CONDITIONS (DIVERSION)

Type: Stage/Volume

Base Flow: 0.00 cfs
Initial Stage: 42.00 ft
Warning Stage: 44.52 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
42.00	0.00	0
42.08	0.02	653
42.17	0.04	1525
42.25	0.06	2439
42.33	0.08	3398
42.42	0.10	4487
42.50	0.13	5576
42.58	0.15	6708
42.67	0.18	7841
42.75	0.21	9060
42.83	0.24	10237
42.92	0.26	11500
43.00	0.29	12720
43.08	0.32	13939
43.17	0.35	15202
43.25	0.38	16422
43.33	0.41	17685
43.42	0.43	18905
43.50	0.46	20125
43.58	0.49	21301
43.67	0.52	22477
43.75	0.54	23610
43.83	0.57	24699
43.92	0.59	25744
44.00	0.61	26746
44.08	0.64	27661
44.17	0.65	28488
44.25	0.67	29142

Comment: SHWT ASSUMED TO BE 40.0-FT NAVD88

SHWT BASED ON THE AVERAGE OF DATA FROM SOIL BORINGS B-2, B-3, B-5, B-6

Node: SWALE 1

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.35 ft
Warning Stage: 45.35 ft

Stage [ft]	Area [ac]	Area [ft2]
43.35	0.0100	436
44.35	0.0330	1437
45.25	0.0550	2396
45.35	0.0570	2483

Comment:

Node: SWALE 2

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.35 ft
Warning Stage: 45.35 ft

Stage [ft]	Area [ac]	Area [ft2]
43.35	0.0100	436
44.35	0.0330	1437
45.25	0.0550	2396
45.35	0.0570	2483

Comment:

Node: SWALE 3

Scenario: POST-CONDITIONS (DIVERSION)
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 43.85 ft
Warning Stage: 45.35 ft

Stage [ft]	Area [ac]	Area [ft2]
43.85	0.0000	0
44.35	0.0130	566
45.25	0.0320	1394
45.35	0.0350	1525

Comment:

Node: WETLAND

Scenario: POST-CONDITIONS

(DIVERSION)
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 35.00 ft
Warning Stage: 35.01 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	35.00
0	0	0	48.0000	35.00

Comment: BASED ON SJRWMD APP. NO. 97490-1

Pipe Link: CS-C > ONDICK		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	33.20 ft	Invert:	33.10 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	CS-C	Geometry: Circular		Geometry: Circular	
To Node:	ONDICK	Max Depth:	2.50 ft	Max Depth:	2.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	49.05 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D-38 > CS-C		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	33.80 ft	Invert:	33.20 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D38	Geometry: Circular		Geometry: Circular	
To Node:	CS-C	Max Depth:	2.50 ft	Max Depth:	2.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	295.59 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D15 > D16		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	41.30 ft	Invert:	41.15 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D15	Geometry: Circular		Geometry: Circular	
To Node:	D16	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	75.10 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D16 > D17		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	40.18 ft	Invert:	40.03 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D16	Geometry: Circular		Geometry: Circular	
To Node:	D17	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	157.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	0.50	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: D17 > D18		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	35.15 ft	Invert:	35.06 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D17	Geometry: Circular		Geometry: Circular	
To Node:	D18	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			

Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	89.40 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	0.50	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D18 > D19		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	35.06 ft	Invert:	35.93 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D18	Geometry: Circular		Geometry: Circular	
To Node:	D19	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	128.96 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	0.50	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D19 > D33		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	34.93 ft	Invert:	34.86 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D19	Geometry: Circular		Geometry: Circular	
To Node:	D33	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	74.84 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Drop Structure Link: D32 > D33		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	40.92 ft	Invert:	38.73 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D32	Geometry: Circular		Geometry: Circular	
To Node:	D33	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	72.59 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Sharp Crested Vertical	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	43.33 ft	Ref Node:	
Control Elevation:	43.33 ft	Discharge Coefficients	
Max Depth:	999999999.00 ft	Weir Default:	3.200
Max Width:	8.75 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Pipe Link: D33 > D34		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	34.86 ft	Invert:	34.34 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D33	Geometry: Circular		Geometry: Circular	
To Node:	D34	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	48.00 ft	Ref Node:		Ref Node:	

FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00		Top Clip		
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D34 > SMA-B		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	34.34 ft	Invert:	33.93 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D34	Geometry: Circular		Geometry: Circular	
To Node:	SMA-B	Max Depth:	3.50 ft	Max Depth:	3.50 ft
Link Count:	1		Bottom Clip		
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	38.41 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00		Top Clip		
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D39 > SMA-B		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	39.23 ft	Invert:	39.00 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D39	Geometry: Circular		Geometry: Circular	
To Node:	SMA-B	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1		Bottom Clip		
Flow Direction:	Positive	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	105.71 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00		Top Clip		
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D40 > D39		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	39.37 ft	Invert:	39.23 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D40	Geometry: Circular		Geometry: Circular	
To Node:	D39	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	71.33 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	1.00	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: D43 > D40		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	40.29 ft	Invert:	39.90 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	D43	Geometry: Circular		Geometry: Circular	
To Node:	D40	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	196.50 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Drop Structure Link: JESUP POND OUTFALL		Upstream Pipe		Downstream Pipe	
		Invert:	38.25 ft	Invert:	32.89 ft
Scenario:	POST-CONDITIONS (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
		Geometry: Circular		Geometry: Circular	
From Node:	JESUP POND 1	Max Depth:	2.50 ft	Max Depth:	2.50 ft
To Node:	ONDICK	Bottom Clip			
Link Count:	1	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Solution:	Combine	Ref Node:		Ref Node:	
Increments:	0	Manning's N:	0.0000	Manning's N:	0.0000
Pipe Count:	1	Top Clip			

Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1004.00 ft	Op Table:		Op Table:	
FHWA Code:	1	Ref Node:		Ref Node:	
Entr Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50				
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment: LENGTH OF PIPE AND INVERTS BASED ON AS-BUILTS PROVIDED BY CITY OF WINTER SPRINGS

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	43.64 ft
Control Elevation:	43.64 ft
Max Depth:	3.00 ft
Max Width:	4.50 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: TYPE E INLET

Weir Component

Weir:	2
Weir Count:	2
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	42.57 ft
Control Elevation:	42.57 ft
Max Depth:	999999999.00 ft
Max Width:	2.75 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Weir Component

Weir:	3
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Circular
Invert:	41.46 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	

Control Elevation:	41.46 ft
Max Depth:	0.24 ft

Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Pipe Link: OUTFALL

		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	32.89 ft	Invert:	29.53 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	ONDICK	Geometry: Circular		Geometry: Circular	
To Node:	WETLAND	Max Depth:	2.50 ft	Max Depth:	2.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	890.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment: BASED ON ELEVATIONS AND LENGTHS PROVIDED WITHIN AS-BUILTS PROVIDED BY CITY OF WINTER SPRINGS.

Percolation Link: SMA A.1 > GWT

Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	SMA-A.1	Vertical Flow Termination:	Horizontal Flow Algorithm
To Node:	GWT-A	Perimeter 1:	200.00 ft
Link Count:	1	Perimeter 2:	200.00 ft
Flow Direction:	Both	Perimeter 3:	200.00 ft
Aquifer Base Elevation:	25.00 ft	Distance P1 to P2:	50.00 ft
Water Table Elevation:	42.00 ft	Distance P2 to P3:	450.00 ft
Annual Recharge Rate:	0 ipy	# of Cells P1 to P2:	10
Horizontal Conductivity:	25.500 fpd	# of Cells P2 to P3:	45
Vertical Conductivity:	0.000 fpd		
Fillable Porosity:	0.250		
Layer Thickness:	1.50 ft		

Comment:

Percolation Link: SMA A.2 > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	SMA-A.2	Vertical Flow Termination:	Horizontal Flow Algorithm
To Node:	GWT-A	Perimeter 1:	200.00 ft
Link Count:	1	Perimeter 2:	200.00 ft
Flow Direction:	Both	Perimeter 3:	200.00 ft
Aquifer Base Elevation:	25.00 ft	Distance P1 to P2:	50.00 ft
Water Table Elevation:	42.00 ft	Distance P2 to P3:	450.00 ft
Annual Recharge Rate:	0 ipy	# of Cells P1 to P2:	10
Horizontal Conductivity:	25.500 fpd	# of Cells P2 to P3:	45
Vertical Conductivity:	0.000 fpd		
Fillable Porosity:	0.250		
Layer Thickness:	1.50 ft		

Comment:

Drop Structure Link: SMA B > EAST OUTFALL		Upstream Pipe		Downstream Pipe	
		Invert:	39.84 ft	Invert:	39.55 ft
Scenario:	POST-CONDITIONS (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
		Geometry: Circular		Geometry: Circular	
From Node:	SMA-B	Max Depth:	1.50 ft	Max Depth:	1.50 ft
To Node:	POST-EAST-OUTFALL	Bottom Clip			
		Default:	0.00 ft	Default:	0.00 ft
Link Count:	1	Op Table:		Op Table:	
Flow Direction:	Both	Ref Node:		Ref Node:	
Solution:	Combine	Manning's N:	0.0000	Manning's N:	0.0000
Increments:	0	Top Clip			
Pipe Count:	1	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	59.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00				
Exit Loss Coef:	0.00				
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment: NGVD TO NAVD CONVERSION FACTOR OF 1.056.
POND OUTFALL TO TIE INTO LOWEST ELEVATION OF EXISTING STRUCTURE AT INVERT 40.61 (NGVD)

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	44.50 ft		

Control Elevation:	44.50 ft
Max Depth:	3.00 ft
Max Width:	4.50 ft
Fillet:	0.00 ft

Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: TYPE E BOX

Weir Component

Weir:	2
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Sharp Crested Vertical
Geometry Type:	Rectangular
Invert:	43.35 ft
Control Elevation:	43.35 ft
Max Depth:	999999999.00 ft
Max Width:	0.50 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: SMA B > WEST OUTFALL		Upstream Pipe		Downstream Pipe	
		Invert:	34.26 ft	Invert:	33.80 ft
Scenario:	POST-CONDITIONS (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
		Geometry: Circular		Geometry: Circular	
From Node:	SMA-B	Max Depth:	2.50 ft	Max Depth:	2.50 ft
To Node:	D38	Bottom Clip			
Link Count:	1	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Solution:	Combine	Ref Node:		Ref Node:	
Increments:	0	Manning's N:	0.0000	Manning's N:	0.0000
Pipe Count:	1	Top Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	230.08 ft	Op Table:		Op Table:	
FHWA Code:	1	Ref Node:		Ref Node:	
Entr Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.50				
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	44.50 ft	Ref Node:	
Control Elevation:	44.50 ft	Discharge Coefficients	
Max Depth:	3.00 ft	Weir Default:	3.200
Max Width:	4.50 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment: TYPE E BOX

Weir Component		Bottom Clip	
Weir:	2	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Sharp Crested Vertical	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	43.00 ft	Ref Node:	
Control Elevation:	43.00 ft	Discharge Coefficients	
Max Depth:	999999999.00 ft	Weir Default:	3.200
Max Width:	1.40 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Weir Component		Bottom Clip	
Weir:	3	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Sharp Crested Vertical	Default:	0.00 ft
Geometry Type:	Circular	Op Table:	
Invert:	40.50 ft	Ref Node:	
Control Elevation:	40.50 ft	Discharge Coefficients	
Max Depth:	0.25 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Pipe Link: SMA C > D32		Upstream		Downstream	
Scenario:	POST-CONDITION S (DIVERSION)	Invert:	39.80 ft	Invert:	39.73 ft
		Manning's N:	0.0120	Manning's N:	0.0120
From Node:	SMA-C	Geometry: Circular		Geometry: Circular	
To Node:	D32	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	70.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Percolation Link: SMA C > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-C	Surface Area:	0.7185 ac
To Node:	GWT-C	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	354.00 ft
Flow Direction:	Both	Perimeter 2:	432.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	490.00 ft
Water Table Elevation:	41.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	1.00 ft		
Comment:			

Percolation Link: SMA D > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-D	Surface Area:	0.3090 ac
To Node:	GWT D & E	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	254.00 ft
Flow Direction:	Both	Perimeter 2:	337.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	1044.00 ft
Water Table Elevation:	40.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45

Fillable Porosity:	0.250
Layer Thickness:	2.00 ft

Comment:

Percolation Link: SMA E > GWT

Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-E	Surface Area:	0.5063 ac
To Node:	GWT D & E	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	120.00 ft
Flow Direction:	Both	Perimeter 2:	120.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	120.00 ft
Water Table Elevation:	40.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	2.00 ft		

Comment:

Percolation Link: SMA G > GWT

Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	42.00 ft
From Node:	SMA-G	Surface Area:	0.8593 ac
To Node:	GWT G & SWALES	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	389.00 ft
Flow Direction:	Both	Perimeter 2:	468.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	1161.00 ft
Water Table Elevation:	40.00 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	2.00 ft		

Comment:

Pipe Link: SMA G > SMA C

		Upstream	Downstream
Scenario:	POST-CONDITIONS (DIVERSION)	Invert: 42.00 ft	Invert: 42.00 ft
		Manning's N: 0.0200	Manning's N: 0.0200
From Node:	SMA-G	Geometry: Circular	Geometry: Circular
To Node:	SMA-C	Max Depth: 1.25 ft	Max Depth: 1.25 ft
Link Count:	2	Bottom Clip	

Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	95.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: SMA-A > CS-C (1)

Scenario:	POST-CONDITIONS (DIVERSION)	Bottom Clip	
		Default:	0.00 ft
From Node:	SMA-A.1	Op Table:	
To Node:	CS-C	Ref Node:	
Link Count:	1	Top Clip	
Flow Direction:	Both	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:	
Weir Type:	Sharp Crested Vertical	Ref Node:	
Geometry Type:	Rectangular	Discharge Coefficients	
Invert:	45.60 ft	Weir Default:	2.800
Control Elevation:	45.60 ft	Weir Table:	
Max Depth:	999999.00 ft	Orifice Default:	0.600
Max Width:	5.00 ft	Orifice Table:	
Fillet:	0.00 ft		

Comment:

Weir Link: SMA-A > CS-C (2)

Scenario:	POST-CONDITIONS (DIVERSION)	Bottom Clip	
		Default:	0.00 ft
From Node:	SMA-A.1	Op Table:	
To Node:	CS-C	Ref Node:	
Link Count:	1	Top Clip	
Flow Direction:	Both	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:	
Weir Type:	Horizontal	Ref Node:	
Geometry Type:	Rectangular	Discharge Coefficients	
Invert:	46.00 ft	Weir Default:	2.800
Control Elevation:	46.00 ft	Weir Table:	
Max Depth:	3.08 ft	Orifice Default:	0.600
Max Width:	4.08 ft	Orifice Table:	
Fillet:	0.00 ft		

Comment:

Pipe Link: SMA-A EQUALIZER		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	44.00 ft	Invert:	43.50 ft
	S (DIVERSION)	Manning's N:	0.0120	Manning's N:	0.0120
From Node:	SMA-A.2	Geometry: Circular		Geometry: Circular	
To Node:	SMA-A.1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	146.00 ft	Ref Node:		Ref Node:	
FHWA Code:	5	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: SMA-C > D17		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.33 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-C	Geometry: Circular		Geometry: Circular	
To Node:	D17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	27.70 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: SMA-D > D17		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.66 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-D	Geometry: Circular		Geometry: Circular	
To Node:	D17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	48.00 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			

Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: SMA-E > D16		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	42.00 ft	Invert:	43.06 ft
		Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-E	Geometry: Circular		Geometry: Circular	
To Node:	D16	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	67.10 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Percolation Link: SMA-F > GWT			
Scenario:	POST-CONDITIONS (DIVERSION)	Surface Area Option:	User Specified
		Bottom Elevation:	41.50 ft
From Node:	SMA-F	Surface Area:	0.1354 ac
To Node:	GWT-F	Vertical Flow Termination:	Horizontal Flow Algorithm
Link Count:	1	Perimeter 1:	157.00 ft
Flow Direction:	Both	Perimeter 2:	236.00 ft
Aquifer Base Elevation:	25.00 ft	Perimeter 3:	943.00 ft
Water Table Elevation:	40.50 ft	Distance P1 to P2:	50.00 ft
Annual Recharge Rate:	0 ipy	Distance P2 to P3:	450.00 ft
Horizontal Conductivity:	25.500 fpd	# of Cells P1 to P2:	10
Vertical Conductivity:	0.000 fpd	# of Cells P2 to P3:	45
Fillable Porosity:	0.250		
Layer Thickness:	1.00 ft		

Comment:

Pipe Link: SMA-G > D15		Upstream		Downstream	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	42.00 ft	Invert:	43.33 ft
		Manning's N:	0.0200	Manning's N:	0.0200

From Node:	SMA-G	Geometry: Circular		Geometry: Circular	
To Node:	D15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	27.70 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: SMA-G > D16		Upstream		Downstream	
Scenario:	POST-CONDITION	Invert:	42.00 ft	Invert:	43.33 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SMA-G	Geometry: Circular		Geometry: Circular	
To Node:	D16	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	53.40 ft	Ref Node:		Ref Node:	
FHWA Code:	1	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Drop Structure Link: SWALE 1 > SMA G		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITION	Invert:	42.10 ft	Invert:	42.00 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SWALE 1	Geometry: Circular		Geometry: Circular	
To Node:	SMA-G	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	4.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	

Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	45.25 ft
Control Elevation:	45.25 ft
Max Depth:	3.08 ft
Max Width:	4.08 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: TYPE D BOX

Drop Structure Comment:

Drop Structure Link: SWALE 2 > SMA G		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITION	Invert:	42.10 ft	Invert:	42.00 ft
	S (DIVERSION)	Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SWALE 2	Geometry: Circular		Geometry: Circular	
To Node:	SMA-G	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	4.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1

Bottom Clip

Default:	0.00 ft

Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	45.25 ft
Control Elevation:	45.25 ft
Max Depth:	3.08 ft
Max Width:	4.08 ft
Fillet:	0.00 ft

Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: TYPE D BOX

Drop Structure Comment:

Drop Structure Link: SWALE 3 > SMA G		Upstream Pipe		Downstream Pipe	
Scenario:	POST-CONDITIONS (DIVERSION)	Invert:	42.10 ft	Invert:	42.00 ft
		Manning's N:	0.0200	Manning's N:	0.0200
From Node:	SWALE 3	Geometry: Circular		Geometry: Circular	
To Node:	SMA-G	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Link Count:	2	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	4.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	1	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	45.25 ft
Control Elevation:	45.25 ft
Max Depth:	3.08 ft
Max Width:	4.08 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200

Fillet: 0.00 ft

Weir Table:
Orifice Default: 0.600
Orifice Table:

Weir Comment: TYPE D BOX

Drop Structure Comment:

Weir Link: WEIR SMA-F > D40

Scenario: POST-CONDITIONS (DIVERSION)
From Node: SMA-F
To Node: D15
Link Count: 2
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Sharp Crested Vertical
Geometry Type: Arch Structural Plate
Invert: 43.00 ft
Control Elevation: 43.00 ft
Max Depth: 1.58 ft
Max Width: 3.08 ft

Bottom Clip
Default: 0.00 ft
Op Table:
Ref Node:

Top Clip
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients
Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Simulation: 100YR-24HR

Scenario: POST-CONDITIONS (DIVERSION)
Run Date/Time: 11/10/2020 6:11:39 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0050 ft

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~FLMOD
Rainfall Amount: 10.60 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft

Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 100 yr / 24 hr

Simulation: 10YR-24HR

Scenario: POST-CONDITIONS (DIVERSION)
Run Date/Time: 11/10/2020 6:27:23 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:	
Reference ET Folder:	
Unit Hydrograph Folder:	

Lookup Tables

Boundary Stage Set:	
Extern Hydrograph Set:	
Curve Number Set:	SITE
Green-Ampt Set:	
Vertical Layers Set:	
Impervious Set:	SITE
Roughness Set:	
Crop Coef Set:	
Fillable Porosity Set:	
Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	7.90 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 10 yr / 24 hr

Simulation: 25YR-24HR

Scenario:	POST-CONDITIONS (DIVERSION)
Run Date/Time:	11/10/2020 6:37:55 PM
Program Version:	ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
IA Recovery Time: 24.0000 hr
ET for Manual Basins: False

Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	8.60 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: 25 yr / 24 hr

Simulation: MEAN ANNUAL

Scenario: POST-CONDITIONS (DIVERSION)
Run Date/Time: 11/10/2020 6:49:02 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		60.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000
0	0	0	14.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000
0	0	0	8.0000	5.0000

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	14.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	360.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: SITE
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: SITE
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	4.30 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment: Mean Annual (2.33 yr / 24 hr)

APPENDIX E

Wet & Dry Pond Recovery Analysis

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.0000	45.60	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.2501	45.42	0.85
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.5003	45.25	0.80
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	0.7501	45.07	0.75
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.0001	44.90	0.70
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.2502	44.76	0.45
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.5004	44.65	0.36
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	1.7500	44.56	0.31
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.0000	44.48	0.28
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.2501	44.40	0.25
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.5002	44.32	0.23
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	2.7501	44.25	0.21
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.0001	44.19	0.19
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.2503	44.13	0.16
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.5002	44.08	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	3.7502	44.05	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.0002	44.02	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.2504	43.99	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.5004	43.96	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	4.7501	43.94	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.0005	43.91	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.2505	43.89	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.5000	43.87	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	5.7500	43.84	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.0005	43.82	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.2504	43.80	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.5005	43.78	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	6.7500	43.76	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.0000	43.74	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.2504	43.73	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.5005	43.71	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	7.7502	43.69	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.0001	43.68	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.2501	43.66	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.5000	43.64	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	8.7506	43.63	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.0002	43.61	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.2504	43.60	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.5003	43.59	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	9.7502	43.57	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.0000	43.56	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.2501	43.55	0.03

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.5006	43.53	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	10.7501	43.52	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.0004	43.51	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.5002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	11.7503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.2506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	12.7505	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.5000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	13.7500	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.0004	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.2507	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	14.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.0000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.2502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	15.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.2506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.5006	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	16.7504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.0006	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.2503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	17.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.0001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.2503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.5003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	18.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.0004	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.2502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	19.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.0007	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.2503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	20.7503	43.50	0.00

SMA-A.1 RECOVERS WITHIN 11.25 HOURS

REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.0034	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.2512	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.5007	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	63.7512	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.0007	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.5038	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	64.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.2508	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.5025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	65.7538	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.0030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.2532	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.5041	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	66.7503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.0029	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.2516	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.5030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	67.7530	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.0055	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	68.7527	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.2536	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.5040	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	69.7562	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.0025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.2514	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.5014	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	70.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.2558	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.5045	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	71.7544	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.1	72.0073	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.0000	45.60	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.2501	45.42	0.36
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.5003	45.25	0.34
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	0.7501	45.07	0.31
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.0001	44.90	0.28

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.2502	44.76	0.24
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.5004	44.65	0.22
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	1.7500	44.56	0.21
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.0000	44.47	0.19
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.2501	44.39	0.18
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.5002	44.32	0.18
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	2.7501	44.25	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.0001	44.18	0.16
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.2503	44.10	0.15
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.5002	43.99	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	3.7502	43.86	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.0002	43.76	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.2504	43.66	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.5004	43.58	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	4.7501	43.51	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.0005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.2505	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.5000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	5.7500	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.0005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	6.7500	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.0000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.5005	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	7.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.0001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.5000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	8.7506	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.5003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	9.7502	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.0000	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.5006	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	10.7501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	11.0004	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	11.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	11.5002	43.50	0.00

SMA-A.2 RECOVERS WITHIN 5.0 HOURS

REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	64.2501	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	64.5038	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	64.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.2508	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.5025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	65.7538	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.0030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.2532	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.5041	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	66.7503	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.0029	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.2516	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.5030	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	67.7530	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.0055	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.2504	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.5001	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	68.7527	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.0002	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.2536	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.5040	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	69.7562	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.0025	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.2514	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.5014	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	70.7510	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.0003	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.2558	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.5045	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	71.7544	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-A.2	72.0073	43.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.0000	41.01	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.2501	41.00	0.15
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.5003	40.99	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	0.7501	40.99	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.0001	40.98	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.2502	40.97	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.5004	40.96	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	1.7500	40.96	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.0000	40.95	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.2501	40.94	0.13

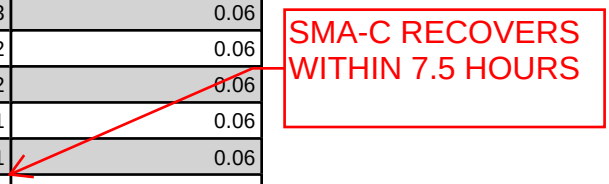
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.5002	40.94	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	2.7501	40.93	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.0001	40.92	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.2503	40.92	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.5002	40.91	0.13
RECOVERY (DIVERSION)	RECOVERY	SMA-B	3.7502	40.90	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.0002	40.90	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.2504	40.89	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.5004	40.88	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	4.7501	40.88	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.0005	40.87	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.2505	40.86	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.5000	40.86	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	5.7500	40.85	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.0005	40.85	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.2504	40.84	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.5005	40.83	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	6.7500	40.83	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.0000	40.82	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.2504	40.82	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.5005	40.81	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	7.7502	40.81	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.0001	40.80	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.2501	40.79	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.5000	40.79	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	8.7506	40.78	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.0002	40.78	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.2504	40.77	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.5003	40.77	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	9.7502	40.77	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.0000	40.76	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.2501	40.76	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.5006	40.75	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-B	10.7501	40.75	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.0004	40.74	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.2501	40.74	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.5002	40.74	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	11.7503	40.73	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.0003	40.73	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.2506	40.73	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.5005	40.72	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-B	12.7505	40.72	0.06

HALF OF SMA-B TREATMENT VOLUME RECOVERS WITHIN APPROXIMATELY 10.5 HOURS. (MINIMUM ORIFICE SIZING UTILIZED)

REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

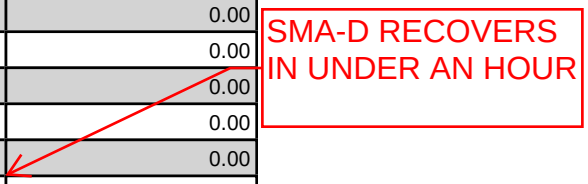
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-B	65.5025	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	65.7538	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.0030	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.2532	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.5041	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	66.7503	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.0029	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.2516	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.5030	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	67.7530	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.0055	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.2504	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.5001	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	68.7527	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.0002	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.2536	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.5040	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	69.7562	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.0025	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.2514	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.5014	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	70.7510	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.0003	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.2558	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.5045	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	71.7544	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-B	72.0073	40.54	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.0000	43.33	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.2501	42.59	2.03
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.5003	42.48	1.18
RECOVERY (DIVERSION)	RECOVERY	SMA-C	0.7501	42.41	0.82
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.0001	42.35	0.61
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.2502	42.31	0.47
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.5004	42.28	0.38
RECOVERY (DIVERSION)	RECOVERY	SMA-C	1.7500	42.25	0.31
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.0000	42.23	0.27
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.2501	42.20	0.23
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.5002	42.19	0.20
RECOVERY (DIVERSION)	RECOVERY	SMA-C	2.7501	42.17	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.0001	42.15	0.15
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.2503	42.14	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.5002	42.13	0.12

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-C	3.7502	42.12	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.0002	42.11	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.2504	42.10	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.5004	42.09	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-C	4.7501	42.08	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.0005	42.07	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.2505	42.06	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.5000	42.05	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-C	5.7500	42.04	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.0005	42.04	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.2504	42.03	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.5005	42.02	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	6.7500	42.02	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.0000	42.01	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.2504	42.01	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.5005	42.00	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-C	7.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	8.7506	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.5003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	9.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.5006	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	10.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.0004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	11.7503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.2506	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.5005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	12.7505	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	13.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	14.0004	42.00	0.00



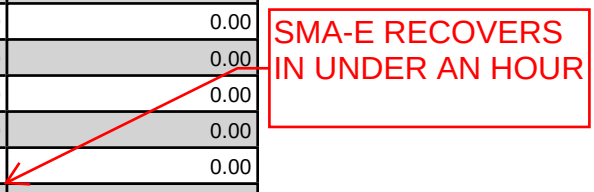
REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-C	66.7503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.0029	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.2516	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.5030	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	67.7530	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.0055	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.5001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	68.7527	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.2536	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.5040	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	69.7562	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.0025	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.2514	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.5014	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	70.7510	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.2558	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.5045	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	71.7544	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-C	72.0073	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.0000	43.66	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.5003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	0.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.2502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	1.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	2.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.2503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	3.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	4.7501	42.00	0.00



REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.0055	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.5001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	68.7527	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.2536	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.5040	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	69.7562	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.0025	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.2514	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.5014	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	70.7510	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.2558	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.5045	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	71.7544	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-D	72.0073	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.0000	43.06	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.5003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	0.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.2502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	1.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	2.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.2503	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.5002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	3.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.0002	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.5004	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	4.7501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.0005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.2505	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	5.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	6.0005	42.00	0.00



REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-E	69.2536	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	69.5040	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	69.7562	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.0025	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.2514	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.5014	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	70.7510	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.0003	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.2558	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.5045	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	71.7544	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-E	72.0073	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.0000	43.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.2501	42.49	0.41
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.5003	42.42	0.23
RECOVERY (DIVERSION)	RECOVERY	SMA-F	0.7501	42.37	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.0001	42.33	0.14
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.2502	42.29	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.5004	42.26	0.11
RECOVERY (DIVERSION)	RECOVERY	SMA-F	1.7500	42.23	0.10
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.0000	42.21	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.2501	42.19	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.5002	42.16	0.08
RECOVERY (DIVERSION)	RECOVERY	SMA-F	2.7501	42.14	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.0001	42.12	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.2503	42.11	0.07
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.5002	42.09	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-F	3.7502	42.07	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.0002	42.06	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.2504	42.04	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.5004	42.03	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	4.7501	42.01	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.0005	42.00	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.2505	41.98	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.5000	41.97	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	5.7500	41.95	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.0005	41.94	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.2504	41.93	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.5005	41.91	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	6.7500	41.90	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.0000	41.89	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.2504	41.88	0.04

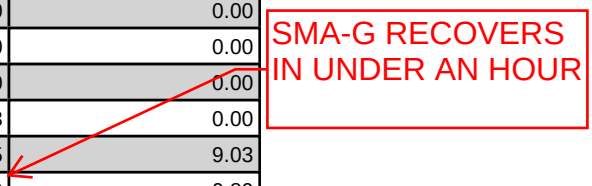
Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.5005	41.87	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	7.7502	41.86	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.0001	41.85	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.2501	41.84	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.5000	41.83	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	8.7506	41.82	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.0002	41.81	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.2504	41.80	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.5003	41.79	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	9.7502	41.78	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.0000	41.77	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.2501	41.76	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.5006	41.75	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-F	10.7501	41.74	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.0004	41.74	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.2501	41.73	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.5002	41.72	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	11.7503	41.71	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.0003	41.70	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.2506	41.70	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.5005	41.69	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	12.7505	41.68	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.0002	41.67	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.2501	41.66	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.5000	41.66	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	13.7500	41.65	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.0004	41.64	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.2507	41.63	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.5001	41.63	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	14.7506	41.62	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.0000	41.61	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.2502	41.61	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.5001	41.60	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	15.7502	41.59	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.0003	41.59	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.2506	41.58	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.5006	41.57	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	16.7504	41.57	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.0006	41.56	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.2503	41.55	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.5005	41.55	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	17.7502	41.54	0.01

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.0001	41.54	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.2503	41.53	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.5003	41.53	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	18.7506	41.52	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.0004	41.52	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.2502	41.51	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.5005	41.51	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	19.7506	41.50	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.0007	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.2503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.5005	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	20.7503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.0009	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.2510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.5005	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	21.7501	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.0003	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.2509	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.5006	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	22.7510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.0005	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.2506	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.5004	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	23.7503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.0011	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.2507	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.5000	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	24.7504	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.0004	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.2513	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.5010	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	25.7510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.0012	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.2501	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.5004	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	26.7503	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.0012	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.2506	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.5002	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	27.7513	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	28.0002	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	28.2505	41.50	0.00

SMA-F RECOVERS IN 19.75 HOURS

REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Rate [cfs]
RECOVERY (DIVERSION)	RECOVERY	SMA-F	70.5014	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	70.7510	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.0003	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.2558	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.5045	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	71.7544	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-F	72.0073	41.50	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.0000	43.33	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.2501	42.35	9.03
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.5003	42.00	0.80
RECOVERY (DIVERSION)	RECOVERY	SMA-G	0.7501	42.00	0.55
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.0001	42.00	0.39
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.2502	42.00	0.29
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.5004	42.00	0.22
RECOVERY (DIVERSION)	RECOVERY	SMA-G	1.7500	42.00	0.17
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.0000	42.00	0.12
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.2501	42.00	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.5002	42.00	0.09
RECOVERY (DIVERSION)	RECOVERY	SMA-G	2.7501	42.00	0.06
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.0001	42.00	0.05
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.2503	42.00	0.04
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.5002	42.00	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-G	3.7502	42.00	0.03
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.0002	42.00	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.2504	42.00	0.02
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.5004	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	4.7501	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.0005	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.2505	42.00	0.01
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.5000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	5.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.0005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.5005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	6.7500	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.0000	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.2504	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.5005	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	7.7502	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	8.0001	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	8.2501	42.00	0.00
RECOVERY (DIVERSION)	RECOVERY	SMA-G	8.5000	42.00	0.00



REMAINDER OF THIS RECOVERY TABLE HAS BEEN REMOVED TO LIMIT LENGTH OF REPORT

Potable Water System Report for
City of Winter Springs, FL

Winter Springs Marketplace Potable Water Analysis

Winter Springs, FL

Prepared by:

Kimley-Horn and Associates, Inc.
Orlando, Florida
July 28, 2020 (Revised September 24, 2020)

Potable Water System Report for
Winter Springs, FL

Winter Springs Marketplace
Winter Springs, FL

Prepared for:

EQUINOX DEVELOPMENT

Prepared by:

Kimley-Horn and Associates, Inc.
189 South Orange Avenue, Suite 1000
Orlando, Florida 32801
CA 00000696
149448010

July 28, 2020 (Revised September 24, 2020)

Marcus I. Geiger, P.E., State of Florida, Professional Engineer, License No. 89199

This item has been digitally signed and sealed by Marcus I. Geiger, P.E. on the date indicated here.

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

Digitally signed by Marcus I Geiger
DN: cn=Marcus I Geiger, c=US, o=KIMLEY-HORN AND ASSOCIATES, ou=A01410D00000172C79918990000F4E7, email=Marcus.Geiger@Kimley-Horn.com
Date: 2020.09.25 18:43:33 -04'00'

Marcus I. Geiger, P.E.
FL P.E. # 89199

© Kimley-Horn and Associates, Inc. 2020

TABLE OF CONTENTS

1 PROJECT DESCRIPTION

2 POTABLE WATER DISTRIBUTION SYSTEM

2.1 POTABLE WATER HYDRAULIC ANALYSIS SUMMARY

2.2 POTABLE WATER DEMAND DETERMINATION

2.3 NEEDED FIRE FLOW DETERMINATION

2.4 WATERCAD SCHEMATIC DIAGRAM

2.5 WATERCAD RESULTS

2.6 METER SPECIFICATIONS

APPENDICES

HYDRANT FLOW TEST RESULTS PER WIGINTON FIRE SYSTEMS ..... APPENDIX A

1 PROJECT DESCRIPTION

Winter Springs Marketplace is a proposed ±10.23 acre commercial retail project. The project will contain six (6) commercial retail buildings with associated parking (±9.11 AC.) and an area dedicated to Future Development (±1.12 AC.) The site is located south of SR-434, west of Tuskawilla Rd. in Winter Springs, FL.

2 POTABLE WATER DISTRIBUTION SYSTEM

The proposed potable water system will connect to the existing 12-inch water main located along SR-434.
A combined system will be utilized to provide potable water service, as well as fire protection. A Reduced Pressure Zone backflow preventer will be provided at the connection point to the City of Winter Springs Utility System while each of the businesses will be individually metered.

2.1 POTABLE WATER HYDRAULIC ANALYSIS SUMMARY

A complete water distribution system analysis has been performed for the proposed Winter Springs Marketplace development.
Estimated domestic potable water Average Daily Flows (ADF), Max Daily Flows (MDF), and Peak Hourly Flows (PHF) for the proposed site are shown in Section 2.2. The MDF was determined by multiplying the ADF by a peaking factor of 2.0, while the PHF uses a peaking factor of 4.0. Additional service and fire flow as a placeholder for the Future Development has been implemented into the demands and schematic.
Needed Fire Flow (NFF) calculations for buildings within the site were determined per NFPA 1 Uniform Code. The NFF for the future development was designed to provide the required flow rate based on NFPA requirements. Based on City of Winter Springs criteria (Section 23.2.2) no fire flows will be less than 1,250 gpm. The NFF Calculations are summarized in Section 2.3.
The domestic water distribution system has been modeled in WaterCAD V8i.
The model has been analyzed to ensure adequate flows and pressures are provided within the system during potential worst-case scenarios. Five (5) scenarios were analyzed within the WaterCAD model. Three (3) scenarios are comprised of the MDF plus the required fire flow split between two of the proposed hydrants on the site. The remaining scenarios analyzed were the ADF and PHF.

Wiginton Fire Systems has provided a static pressure of 57 PSI and a residual pressure of 64 PSI per a hydrant flow test performed on July 7, 2020. The results of the hydrant flow test, performed by Wiginton Fire Systems, can be found in Appendix A. The residual pressure (57 PSI) was converted to a pressure head of 131.67 ft and was added to the elevation of the tested flow hydrant (44 ft), resulting in a reservoir pressure head of 175.67 ft for both connection points.

Per City of Winter Springs Utility Manual (Section 3.2.B.iv), the system must provide a normal level of service of 20 PSI. The lowest pressure in the system during Average Daily Flow is 46 PSI. The lowest pressure in the system during Peak Hourly Flow is 45 PSI. During any Fire Flow scenario the potable system must maintain a minimum pressure of 20 PSI at all nodes per Winter Springs Utility Manual criteria (Section 3.2.B.ii). The minimum system pressure measured during any of the three (3) Fire Flow scenarios was 41 PSI (MDF+FF [H4+H5]).

The proposed system meets or exceeds all of the Winter Springs Utility Manual criteria (Section 3). Please see the WaterCAD results in Section 2.5 for more details regarding the flows and pressures provided during each scenario.

2.2 POTABLE WATER DEMAND DETERMINATION

Kimley»Horn

189 S. Orange Avenue, Suite 1000
Orlando, Florida 32801

Made By: DCB DATE: 9/24/2020
Checked By: MIG DATE: 9/24/2020
KHA Project Number: 149170016

Winter Springs Marketplace

Potable Water Demand

per Exhibit A of Seminole County Administrative Code and Seminole County Utilities Engineering Manual
GPM calculated by dividing GDP by 720 to simulate flow period of 12 hours, rather than 24 hours.

Building	Building Type	Number of Units	GPD/Unit	ADF		MDF		PHF	
				GPD	GPM (12 HR PERIOD)	GPD	GPM (12 HR PERIOD)	GPD	GPM (12 HR PERIOD)
Retail C	Store (Grocery)	19,209 SF	0.1	1,921	2.67	3,842	5.34	7,684	10.67
Retail B	Store	10,000 SF	0.1	1,000	1.39	2,000	2.78	4,000	5.56
Retail A	Store	19,000 SF	0.1	1,900	2.64	3,800	5.28	7,600	10.56
OP 1	Fast Food	82 Seats	25.0	2,050	2.85	4,100	5.69	8,200	11.39
OP 2	Fast Food	62 Seats	25.0	1,550	2.15	3,100	4.31	6,200	8.61
BLDG A	Store	4,280 SF	0.1	428	0.59	856	1.19	1,712	2.38
Future Dev.	Store	4,500 SF	0.1	450	0.63	900	1.25	1,800	2.50
TOTAL				**9,299**	**12.92**	**18,598**	**25.83**	**37,196**	**51.66**

Max Daily Flow (MDF)
MDF = ADF x 2.0

Peak Hourly Flow (PHF)
PHF = ADF x 4.0

2.3 NEEDED FIRE FLOW DETERMINATION

September 24, 2020
KHA Job #149170016

Winter Springs Marketplace

Retail A Needed Fire Flow (NFF)

per NFPA 1 Uniform Fire Code Handbook, 2015 Edition

19,000 SF Building

Building Fire Area=	19,000	**SF**
Building Type (per NFPA 220) =	V(III)	
Associated Min. Required Fire Flow=	2,500	**GPM**
(per Table 18.4.5.1.2 of the NFPA 1 Uniform Fire Code Handbook)		
Fire Sprinkler - Yes or No=	yes	
Calculated Fire Flow=	625	**GPM**
(with 75% fire sprinkler credit, if applicable)		
Minimum Fire Flow Required (City of Winter Springs) =	1,250	**GPM**

Fire Flow Provided= 2,000 GPM

September 24, 2020
KHA Job #149170016

Winter Springs Marketplace

Retail B Needed Fire Flow (NFF)

per NFPA 1 Uniform Fire Code Handbook, 2015 Edition

10,000 SF Building

Building Fire Area=	10,000	**SF**
Building Type (per NFPA 220) =	V(III)	
Associated Min. Required Fire Flow=	1,750	**GPM**
(per Table 18.4.5.1.2 of the NFPA 1 Uniform Fire Code Handbook)		
Fire Sprinkler - Yes or No=	yes	
Calculated Fire Flow=	438	**GPM**
(with 75% fire sprinkler credit, if applicable)		
Minimum Fire Flow Required (City of Winter Springs) =	1,250	**GPM**

Fire Flow Provided= 2,000 GPM

September 24, 2020
KHA Job #149170016

Winter Springs Marketplace

Retail C Needed Fire Flow (NFF)

per NFPA 1 Uniform Fire Code Handbook, 2015 Edition

19,209 SF Building

Building Fire Area=	19,209	**SF**
Building Type (per NFPA 220) =	V(III)	
Associated Min. Required Fire Flow=	2,500	**GPM**
(per Table 18.4.5.1.2 of the NFPA 1 Uniform Fire Code Handbook)		
Fire Sprinkler - Yes or No=	yes	
Calculated Fire Flow=	625	**GPM**
(with 75% fire sprinkler credit, if applicable)		
Minimum Fire Flow Required (City of Winter Springs) =	1,250	**GPM**

Fire Flow Provided= 2,000 GPM

September 24, 2020
KHA Job #149170016

Winter Springs Marketplace

Bldg A Needed Fire Flow (NFF)

per NFPA 1 Uniform Fire Code Handbook, 2015 Edition

4,280 SF Building

Building Fire Area=	4,280	**SF**
Building Type (per NFPA 220) =	V(III)	
Associated Min. Required Fire Flow=	1,500	**GPM**
(per Table 18.4.5.1.2 of the NFPA 1 Uniform Fire Code Handbook)		
Fire Sprinkler - Yes or No=	yes	
Calculated Fire Flow=	375	**GPM**
(with 75% fire sprinkler credit, if applicable)		
Minimum Fire Flow Required (City of Winter Springs) =	1,250	**GPM**

Fire Flow Provided= 2,000 GPM

September 24, 2020
KHA Job #149170016

Winter Springs Marketplace

Outparcel 1 Needed Fire Flow (NFF)

per NFPA 1 Uniform Fire Code Handbook, 2015 Edition

2,325 SF Building

Building Fire Area=	2,325	**SF**
Building Type (per NFPA 220) =	V(III)	
Associated Min. Required Fire Flow=	1,500	**GPM**
(per Table 18.4.5.1.2 of the NFPA 1 Uniform Fire Code Handbook)		
Fire Sprinkler - Yes or No=	yes	
Calculated Fire Flow=	375	**GPM**
(with 75% fire sprinkler credit, if applicable)		
Minimum Fire Flow Required (City of Winter Springs) =	1,250	**GPM**

Fire Flow Provided= 2,000 GPM

September 24, 2020
KHA Job #149170016

Winter Springs Marketplace

Outparcel 2 Needed Fire Flow (NFF)

per NFPA 1 Uniform Fire Code Handbook, 2015 Edition

3,056 SF Building

Building Fire Area=	3,056	**SF**
Building Type (per NFPA 220) =	V(III)	
Associated Min. Required Fire Flow=	1,500	**GPM**
(per Table 18.4.5.1.2 of the NFPA 1 Uniform Fire Code Handbook)		
Fire Sprinkler - Yes or No=	yes	
Calculated Fire Flow=	375	**GPM**
(with 75% fire sprinkler credit, if applicable)		
Minimum Fire Flow Required (City of Winter Springs) =	1,250	**GPM**

Fire Flow Provided= 2,000 GPM

2.4 WATERCAD SCHEMATIC DIAGRAM

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

- 1" PIPE
- 2" PIPE
- 6" PIPE
- 8" PIPE
- 10" PIPE
- 12" PIPE

No.	REVISIONS	DATE	BY
1	PER CLIENT AND AGENCY COMMENTS	09-18-20	MIC

Kimley»Horn
189 S.ORANGE AVENUE, SUITE 1000, ORLANDO FLORIDA 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM CA 00000696

LICENSED PROFESSIONAL

DATE:

KHA PROJECT

DATE

SCALE AS SHOWN

DESIGNED BY

DRAWN BY

CHECKED BY

WATERCAD POTABLE SCHEMATIC

WINTER SPRINGS MARKETPLACE

SHEET NUMBER

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

2.5 WATERCAD RESULTS

BUILD-OUT
AVERAGE DAILY FLOW (ADF) ANALYSIS

Winter Springs Marketplace WaterCAD Tables

ADF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Minor Loss Coefficient (Unified)	Velocity (ft/s)	Headloss (ft)
P-1	R-1	RPZ-1	16	12.0	PVC	120.0	13	0.050	0.04	0.00
P-2	RPZ-1	J-1	410	12.0	PVC	120.0	13	1.330	0.04	0.00
P-3	J-1	J-2	209	10.0	PVC	120.0	4	0.790	0.02	0.00
P-4	J-2	J-3	200	8.0	PVC	120.0	4	1.670	0.03	0.00
P-5	J-39	J-3	46	8.0	PVC	120.0	0	0.350	0.00	0.00
P-6	J-6	J-39	345	8.0	PVC	120.0	2	0.750	0.02	0.00
P-7	J-7	J-6	236	8.0	PVC	120.0	2	1.540	0.02	0.00
P-8	J-7	J-8	44	10.0	PVC	120.0	-3	0.890	0.01	0.00
P-9	J-8	J-9	55	10.0	PVC	120.0	-6	0.350	0.02	0.00
P-10	J-9	J-1	63	10.0	PVC	120.0	-6	1.490	0.02	0.00
P-11	J-10	H-1	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-12	J-1	J-10	75	8.0	PVC	120.0	3	0.790	0.02	0.00
P-13	J-10	J-11	42	8.0	PVC	120.0	3	0.350	0.02	0.00
P-14	J-11	J-12	36	8.0	PVC	120.0	1	0.350	0.00	0.00
P-15	J-11	OP-2	76	2.0	PVC	120.0	2	1.280	0.22	0.02
P-16	OP-2	OP-2	12	2.0	PVC	120.0	2	0.800	0.22	0.00
P-17	J-12	BLDG-A	90	1.0	PVC	120.0	1	0.800	0.24	0.05
P-18	BLDG-A	BLDG-A	10	1.0	PVC	120.0	1	0.800	0.24	0.01
P-19	J-8	OP-1	85	2.0	PVC	120.0	3	1.280	0.29	0.03
P-20	OP-1	OP-1	12	2.0	PVC	120.0	3	0.800	0.29	0.01
P-21	J-2	J-37	203	8.0	PVC	120.0	0	2.760	0.00	0.00
P-22	J-37	H-4	20	6.0	PVC	120.0	0	4.010	0.00	0.00
P-23	J-3	J-13	39	8.0	PVC	120.0	4	0.690	0.03	0.00
P-24	J-13	J-14	22	2.0	PVC	120.0	4	0.800	0.41	0.02
P-25	J-13	H-5	34	6.0	PVC	120.0	0	1.390	0.00	0.00
P-26	J-14	RTL-B	21	1.0	PVC	120.0	1	1.300	0.57	0.06
P-27	RTL-B	RTL-B	13	1.0	PVC	120.0	1	0.800	0.57	0.04
P-28	J-14	RTL-A	41	2.0	PVC	120.0	3	0.300	0.27	0.01
P-29	RTL-A	RTL-A	22	2.0	PVC	120.0	3	1.600	0.27	0.01
P-30	J-39	RTL-C	41	2.0	PVC	120.0	3	2.080	0.27	0.02
P-31	J-9	H-2	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-31	RTL-C	RTL-C	122	2.0	PVC	120.0	3	0.800	0.27	0.04
P-33	J-6	H-3	100	6.0	PVC	120.0	0	2.470	0.00	0.00
P-34	J-7	J-15	41	8.0	PVC	120.0	1	1.990	0.00	0.00
P-35	J-15	B-FUTURE	17	1.0	PVC	120.0	1	3.270	0.26	0.01
P-36	B-FUTURE	B-FUTURE	15	1.0	PVC	120.0	1	3.270	0.26	0.01
P-37	J-15	H-6	232	6.0	PVC	120.0	0	4.340	0.00	0.00

Winter Springs Marketplace WaterCAD Tables

ADF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
RTL-C	47.00	3	154.85	47
RTL-B	47.35	1	154.71	46
RTL-A	47.35	3	154.86	47
OP-2	47.00	2	154.93	47
OP-1	47.00	3	154.85	47
J-37	43.00	0	155.15	49
J-15	43.00	0	155.15	49
J-14	43.00	0	155.13	49
J-13	43.00	0	155.15	49
J-12	43.00	0	155.15	49
J-11	43.00	0	155.15	49
J-10	43.00	0	155.15	49
J-9	43.00	0	155.15	49
J-8	43.00	0	155.15	49
J-7	43.00	0	155.15	49
J-6	43.00	0	155.15	49
J-3	43.00	0	155.15	49
J-2	43.00	0	155.15	49
J-1	43.00	0	155.15	49
BLDG-A	47.00	1	154.95	47
B-FUTURE	47.00	1	154.97	47

Winter Springs Marketplace WaterCAD Tables

ADF

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	175.67	13	175.67

Winter Springs Marketplace WaterCAD Tables

ADF

GPV Table - Time: 0.00 hours

Label	Elevation (ft)	Diameter (Valve) (in)	General Purpose Valve Headloss Curve	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
BLDG-A	46.61	0.8	Sensus 3/4" MTR	1	155.10	154.96	0.14
OP-1	46.57	1.0	Sensus 1" MTR	3	155.11	154.85	0.26
OP-2	46.46	1.0	Sensus 1" MTR	2	155.13	154.93	0.20
RPZ-1	44.00	10.0	Watts 10" RPZ	13	175.67	155.15	20.52
RTL-A	45.85	1.0	Sensus 1" MTR	3	155.12	154.87	0.24
RTL-B	45.64	0.8	Sensus 3/4" MTR	1	155.07	154.75	0.32
RTL-C	44.00	1.0	Sensus 1" MTR	-3	154.89	155.13	0.25

BUILD-OUT
PEAK HOURLY FLOW (PHF) ANALYSIS

Winter Springs Marketplace WaterCAD Tables

PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Minor Loss Coefficient (Unified)	Velocity (ft/s)	Headloss (ft)
P-1	R-1	RPZ-1	16	12.0	PVC	120.0	52	0.050	0.15	0.00
P-2	RPZ-1	J-1	410	12.0	PVC	120.0	52	1.330	0.15	0.01
P-3	J-1	J-2	209	10.0	PVC	120.0	17	0.790	0.07	0.00
P-4	J-2	J-3	200	8.0	PVC	120.0	17	1.670	0.11	0.00
P-5	J-39	J-3	46	8.0	PVC	120.0	-1	0.350	0.01	0.00
P-6	J-6	J-39	345	8.0	PVC	120.0	9	0.750	0.06	0.00
P-7	J-7	J-6	236	8.0	PVC	120.0	9	1.540	0.06	0.00
P-8	J-7	J-8	44	10.0	PVC	120.0	-12	0.890	0.05	0.00
P-9	J-8	J-9	55	10.0	PVC	120.0	-23	0.350	0.10	0.00
P-10	J-9	J-1	63	10.0	PVC	120.0	-23	1.490	0.10	0.00
P-11	J-10	H-1	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-12	J-1	J-10	75	8.0	PVC	120.0	11	0.790	0.07	0.00
P-13	J-10	J-11	42	8.0	PVC	120.0	11	0.350	0.07	0.00
P-14	J-11	J-12	36	8.0	PVC	120.0	2	0.350	0.02	0.00
P-15	J-11	OP-2	76	2.0	PVC	120.0	9	1.280	0.88	0.22
P-16	OP-2	OP-2	12	2.0	PVC	120.0	9	0.800	0.88	0.04
P-17	J-12	BLDG-A	90	1.0	PVC	120.0	2	0.800	0.97	0.67
P-18	BLDG-A	BLDG-A	10	1.0	PVC	120.0	2	0.800	0.97	0.08
P-19	J-8	OP-1	85	2.0	PVC	120.0	11	1.280	1.16	0.42
P-20	OP-1	OP-1	12	2.0	PVC	120.0	11	0.800	1.16	0.07
P-21	J-2	J-37	203	8.0	PVC	120.0	0	2.760	0.00	0.00
P-22	J-37	H-4	20	6.0	PVC	120.0	0	4.010	0.00	0.00
P-23	J-3	J-13	39	8.0	PVC	120.0	16	0.690	0.10	0.00
P-24	J-13	J-14	22	2.0	PVC	120.0	16	0.800	1.65	0.23
P-25	J-13	H-5	34	6.0	PVC	120.0	0	1.390	0.00	0.00
P-26	J-14	RTL-B	21	1.0	PVC	120.0	6	1.300	2.27	0.84
P-27	RTL-B	RTL-B	13	1.0	PVC	120.0	6	0.800	2.27	0.54
P-28	J-14	RTL-A	41	2.0	PVC	120.0	11	0.300	1.08	0.17
P-29	RTL-A	RTL-A	22	2.0	PVC	120.0	11	1.600	1.08	0.11
P-30	J-39	RTL-C	41	2.0	PVC	120.0	11	2.080	1.09	0.20
P-31	J-9	H-2	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-31	RTL-C	RTL-C	122	2.0	PVC	120.0	11	0.800	1.09	0.51
P-33	J-6	H-3	100	6.0	PVC	120.0	0	2.470	0.00	0.00
P-34	J-7	J-15	41	8.0	PVC	120.0	3	1.990	0.02	0.00
P-35	J-15	B-FUTURE	17	1.0	PVC	120.0	3	3.270	1.02	0.19
P-36	B-FUTURE	B-FUTURE	15	1.0	PVC	120.0	3	3.270	1.02	0.17
P-37	J-15	H-6	232	6.0	PVC	120.0	0	4.340	0.00	0.00

Winter Springs Marketplace WaterCAD Tables

PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
RTL-C	47.00	11	152.50	46
RTL-B	47.35	6	151.18	45
RTL-A	47.35	11	152.71	46
OP-2	47.00	9	153.21	46
OP-1	47.00	11	152.66	46
J-37	43.00	0	154.20	48
J-15	43.00	0	154.20	48
J-14	43.00	0	153.97	48
J-13	43.00	0	154.20	48
J-12	43.00	0	154.20	48
J-11	43.00	0	154.20	48
J-10	43.00	0	154.20	48
J-9	43.00	0	154.20	48
J-8	43.00	0	154.20	48
J-7	43.00	0	154.20	48
J-6	43.00	0	154.20	48
J-3	43.00	0	154.20	48
J-2	43.00	0	154.20	48
J-1	43.00	0	154.20	48
BLDG-A	47.00	2	152.90	46
B-FUTURE	47.00	3	153.26	46

Winter Springs Marketplace WaterCAD Tables

PHF

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	175.67	52	175.67

Winter Springs Marketplace WaterCAD Tables

PHF

GPV Table - Time: 0.00 hours

Label	Elevation (ft)	Diameter (Valve) (in)	General Purpose Valve Headloss Curve	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
BLDG-A	46.61	0.8	Sensus 3/4" MTR	2	153.53	152.98	0.55
OP-1	46.57	1.0	Sensus 1" MTR	11	153.78	152.73	1.05
OP-2	46.46	1.0	Sensus 1" MTR	9	153.98	153.25	0.73
RPZ-1	44.00	10.0	Watts 10" RPZ	52	175.67	154.21	21.46
RTL-A	45.85	1.0	Sensus 1" MTR	11	153.80	152.83	0.97
RTL-B	45.64	0.8	Sensus 3/4" MTR	6	153.13	151.72	1.41
RTL-C	44.00	1.0	Sensus 1" MTR	-11	153.01	153.99	0.98

NEEDED FIRE FLOW (NFF) ANALYSIS
MDF+FF (H1+H2)

Winter Springs Marketplace WaterCAD Tables

MDF+H1+H2

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Minor Loss Coefficient (Unified)	Velocity (ft/s)	Headloss (ft)
P-1	R-1	RPZ-1	16	12.0	PVC	120.0	2,026	0.050	5.75	0.20
P-2	RPZ-1	J-1	410	12.0	PVC	120.0	2,026	1.330	5.75	5.14
P-3	J-1	J-2	209	10.0	PVC	120.0	156	0.790	0.64	0.05
P-4	J-2	J-3	200	8.0	PVC	120.0	156	1.670	0.99	0.16
P-5	J-39	J-3	46	8.0	PVC	120.0	-147	0.350	0.94	0.03
P-6	J-6	J-39	345	8.0	PVC	120.0	-142	0.750	0.91	0.21
P-7	J-7	J-6	236	8.0	PVC	120.0	-142	1.540	0.91	0.15
P-8	J-7	J-8	44	10.0	PVC	120.0	141	0.890	0.58	0.01
P-9	J-8	J-9	55	10.0	PVC	120.0	135	0.350	0.55	0.01
P-10	J-9	J-1	63	10.0	PVC	120.0	-865	1.490	3.53	0.63
P-11	J-10	H-1	21	6.0	PVC	120.0	1,000	2.470	11.35	6.77
P-12	J-1	J-10	75	8.0	PVC	120.0	1,005	0.790	6.42	2.10
P-13	J-10	J-11	42	8.0	PVC	120.0	6	0.350	0.04	0.00
P-14	J-11	J-12	36	8.0	PVC	120.0	1	0.350	0.01	0.00
P-15	J-11	OP-2	76	2.0	PVC	120.0	4	1.280	0.44	0.06
P-16	OP-2	OP-2	12	2.0	PVC	120.0	4	0.800	0.44	0.01
P-17	J-12	BLDG-A	90	1.0	PVC	120.0	1	0.800	0.49	0.19
P-18	BLDG-A	BLDG-A	10	1.0	PVC	120.0	1	0.800	0.49	0.02
P-19	J-8	OP-1	85	2.0	PVC	120.0	6	1.280	0.58	0.11
P-20	OP-1	OP-1	12	2.0	PVC	120.0	6	0.800	0.58	0.02
P-21	J-2	J-37	203	8.0	PVC	120.0	0	2.760	0.00	0.00
P-22	J-37	H-4	20	6.0	PVC	120.0	0	4.010	0.00	0.00
P-23	J-3	J-13	39	8.0	PVC	120.0	8	0.690	0.05	0.00
P-24	J-13	J-14	22	2.0	PVC	120.0	8	0.800	0.82	0.06
P-25	J-13	H-5	34	6.0	PVC	120.0	0	1.390	0.00	0.00
P-26	J-14	RTL-B	21	1.0	PVC	120.0	3	1.300	1.14	0.23
P-27	RTL-B	RTL-B	13	1.0	PVC	120.0	3	0.800	1.14	0.15
P-28	J-14	RTL-A	41	2.0	PVC	120.0	5	0.300	0.54	0.05
P-29	RTL-A	RTL-A	22	2.0	PVC	120.0	5	1.600	0.54	0.03
P-30	J-39	RTL-C	41	2.0	PVC	120.0	5	2.080	0.55	0.06
P-31	J-9	H-2	21	6.0	PVC	120.0	1,000	2.470	11.35	6.73
P-31	RTL-C	RTL-C	122	2.0	PVC	120.0	5	0.800	0.55	0.14
P-33	J-6	H-3	100	6.0	PVC	120.0	0	2.470	0.00	0.00
P-34	J-7	J-15	41	8.0	PVC	120.0	1	1.990	0.01	0.00
P-35	J-15	B-FUTURE	17	1.0	PVC	120.0	1	3.270	0.51	0.05
P-36	B-FUTURE	B-FUTURE	15	1.0	PVC	120.0	1	3.270	0.51	0.05
P-37	J-15	H-6	232	6.0	PVC	120.0	0	4.340	0.00	0.00

Winter Springs Marketplace WaterCAD Tables

MDF+H1+H2

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
RTL-C	47.00	5	147.98	44
RTL-B	47.35	3	147.61	43
RTL-A	47.35	5	148.07	44
OP-2	47.00	4	146.32	43
OP-1	47.00	6	147.65	44
J-37	43.00	0	148.85	46
J-15	43.00	0	148.29	46
J-14	43.00	0	148.62	46
J-13	43.00	0	148.68	46
J-12	43.00	0	146.79	45
J-11	43.00	0	146.79	45
J-10	43.00	0	146.79	45
J-9	43.00	0	148.27	46
J-8	43.00	0	148.28	46
J-7	43.00	0	148.29	46
J-6	43.00	0	148.44	46
J-3	43.00	0	148.69	46
J-2	43.00	0	148.85	46
J-1	43.00	0	148.90	46
BLDG-A	47.00	1	146.31	43
B-FUTURE	47.00	1	147.91	44

Winter Springs Marketplace WaterCAD Tables

MDF+H1+H2

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	175.67	2,026	175.67

Winter Springs Marketplace WaterCAD Tables

MDF+H1+H2

GPV Table - Time: 0.00 hours

Label	Elevation (ft)	Diameter (Valve) (in)	General Purpose Valve Headloss Curve	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
BLDG-A	46.61	0.8	Sensus 3/4" MTR	1	146.61	146.33	0.27
OP-1	46.57	1.0	Sensus 1" MTR	6	148.16	147.67	0.49
OP-2	46.46	1.0	Sensus 1" MTR	4	146.73	146.34	0.40
RPZ-1	44.00	10.0	Watts 10" RPZ	2,026	175.47	154.04	21.44
RTL-A	45.85	1.0	Sensus 1" MTR	5	148.58	148.10	0.47
RTL-B	45.64	0.8	Sensus 3/4" MTR	3	148.39	147.75	0.64
RTL-C	44.00	1.0	Sensus 1" MTR	-5	148.12	148.60	0.48

Winter Springs Marketplace WaterCAD Tables

MDF+H1+H2

Hydrant Table - Time: 0.00 hours

Label	Length (Hydrant Lateral) (ft)	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
H-1	20	45.00	1,000	140.03	41
H-2	20	45.00	1,000	141.53	42
H-3	20	45.00	0	148.44	45
H-4	20	45.00	0	148.85	45
H-5	20	45.00	0	148.68	45
H-6	20	45.00	0	148.29	45

NEEDED FIRE FLOW (NFF) ANALYSIS
MDF+FF (H4+H5)

Winter Springs Marketplace WaterCAD Tables

MDF+H4+H5

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Minor Loss Coefficient (Unified)	Velocity (ft/s)	Headloss (ft)
P-1	R-1	RPZ-1	16	12.0	PVC	120.0	2,026	0.050	5.75	0.20
P-2	RPZ-1	J-1	410	12.0	PVC	120.0	2,026	1.330	5.75	5.14
P-3	J-1	J-2	209	10.0	PVC	120.0	1,492	0.790	6.09	3.59
P-4	J-2	J-3	200	8.0	PVC	120.0	492	1.670	3.14	1.39
P-5	J-39	J-3	46	8.0	PVC	120.0	516	0.350	3.29	0.35
P-6	J-6	J-39	345	8.0	PVC	120.0	521	0.750	3.33	2.32
P-7	J-7	J-6	236	8.0	PVC	120.0	521	1.540	3.33	1.76
P-8	J-7	J-8	44	10.0	PVC	120.0	-523	0.890	2.14	0.16
P-9	J-8	J-9	55	10.0	PVC	120.0	-528	0.350	2.16	0.15
P-10	J-9	J-1	63	10.0	PVC	120.0	-528	1.490	2.16	0.25
P-11	J-10	H-1	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-12	J-1	J-10	75	8.0	PVC	120.0	6	0.790	0.04	0.00
P-13	J-10	J-11	42	8.0	PVC	120.0	6	0.350	0.04	0.00
P-14	J-11	J-12	36	8.0	PVC	120.0	1	0.350	0.01	0.00
P-15	J-11	OP-2	76	2.0	PVC	120.0	4	1.280	0.44	0.06
P-16	OP-2	OP-2	12	2.0	PVC	120.0	4	0.800	0.44	0.01
P-17	J-12	BLDG-A	90	1.0	PVC	120.0	1	0.800	0.49	0.19
P-18	BLDG-A	BLDG-A	10	1.0	PVC	120.0	1	0.800	0.49	0.02
P-19	J-8	OP-1	85	2.0	PVC	120.0	6	1.280	0.58	0.11
P-20	OP-1	OP-1	12	2.0	PVC	120.0	6	0.800	0.58	0.02
P-21	J-2	J-37	203	8.0	PVC	120.0	1,000	2.760	6.38	6.05
P-22	J-37	H-4	20	6.0	PVC	120.0	1,000	4.010	11.35	9.76
P-23	J-3	J-13	39	8.0	PVC	120.0	1,008	0.690	6.43	1.29
P-24	J-13	J-14	22	2.0	PVC	120.0	8	0.800	0.82	0.06
P-25	J-13	H-5	34	6.0	PVC	120.0	1,000	1.390	11.35	5.69
P-26	J-14	RTL-B	21	1.0	PVC	120.0	3	1.300	1.14	0.23
P-27	RTL-B	RTL-B	13	1.0	PVC	120.0	3	0.800	1.14	0.15
P-28	J-14	RTL-A	41	2.0	PVC	120.0	5	0.300	0.54	0.05
P-29	RTL-A	RTL-A	22	2.0	PVC	120.0	5	1.600	0.54	0.03
P-30	J-39	RTL-C	41	2.0	PVC	120.0	5	2.080	0.55	0.06
P-31	J-9	H-2	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-31	RTL-C	RTL-C	122	2.0	PVC	120.0	5	0.800	0.55	0.14
P-33	J-6	H-3	100	6.0	PVC	120.0	0	2.470	0.00	0.00
P-34	J-7	J-15	41	8.0	PVC	120.0	1	1.990	0.01	0.00
P-35	J-15	B-FUTURE	17	1.0	PVC	120.0	1	3.270	0.51	0.05
P-36	B-FUTURE	B-FUTURE	15	1.0	PVC	120.0	1	3.270	0.51	0.05
P-37	J-15	H-6	232	6.0	PVC	120.0	0	4.340	0.00	0.00

Winter Springs Marketplace WaterCAD Tables

MDF+H4+H5

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
RTL-C	47.00	5	143.59	42
RTL-B	47.35	3	141.55	41
RTL-A	47.35	5	142.01	41
OP-2	47.00	4	148.43	44
OP-1	47.00	6	147.88	44
J-37	43.00	0	139.26	42
J-15	43.00	0	148.35	46
J-14	43.00	0	142.56	43
J-13	43.00	0	142.63	43
J-12	43.00	0	148.90	46
J-11	43.00	0	148.90	46
J-10	43.00	0	148.90	46
J-9	43.00	0	148.65	46
J-8	43.00	0	148.51	46
J-7	43.00	0	148.35	46
J-6	43.00	0	146.59	45
J-3	43.00	0	143.92	44
J-2	43.00	0	145.31	44
J-1	43.00	0	148.90	46
BLDG-A	47.00	1	148.41	44
B-FUTURE	47.00	1	147.96	44

Winter Springs Marketplace WaterCAD Tables

MDF+H4+H5

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	175.67	2,026	175.67

Winter Springs Marketplace WaterCAD Tables

MDF+H4+H5

GPV Table - Time: 0.00 hours

Label	Elevation (ft)	Diameter (Valve) (in)	General Purpose Valve Headloss Curve	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
BLDG-A	46.61	0.8	Sensus 3/4" MTR	1	148.71	148.44	0.27
OP-1	46.57	1.0	Sensus 1" MTR	6	148.39	147.90	0.49
OP-2	46.46	1.0	Sensus 1" MTR	4	148.84	148.44	0.40
RPZ-1	44.00	10.0	Watts 10" RPZ	2,026	175.47	154.04	21.44
RTL-A	45.85	1.0	Sensus 1" MTR	5	142.52	142.05	0.47
RTL-B	45.64	0.8	Sensus 3/4" MTR	3	142.34	141.70	0.64
RTL-C	44.00	1.0	Sensus 1" MTR	-5	143.73	144.21	0.48

Winter Springs Marketplace WaterCAD Tables

MDF+H4+H5

Hydrant Table - Time: 0.00 hours

Label	Length (Hydrant Lateral) (ft)	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
H-1	20	45.00	0	148.90	45
H-2	20	45.00	0	148.65	45
H-3	20	45.00	0	146.59	44
H-4	20	45.00	1,000	129.50	37
H-5	20	45.00	1,000	136.94	40
H-6	20	45.00	0	148.35	45

NEEDED FIRE FLOW (NFF) ANALYSIS
MDF+FF (H3+H6)

Winter Springs Marketplace WaterCAD Tables

MDF+H3+H6

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Minor Loss Coefficient (Unified)	Velocity (ft/s)	Headloss (ft)
P-1	R-1	RPZ-1	16	12.0	PVC	120.0	2,026	0.050	5.75	0.20
P-2	RPZ-1	J-1	410	12.0	PVC	120.0	2,026	1.330	5.75	5.14
P-3	J-1	J-2	209	10.0	PVC	120.0	557	0.790	2.27	0.57
P-4	J-2	J-3	200	8.0	PVC	120.0	557	1.670	3.55	1.76
P-5	J-39	J-3	46	8.0	PVC	120.0	-549	0.350	3.50	0.39
P-6	J-6	J-39	345	8.0	PVC	120.0	-543	0.750	3.47	2.50
P-7	J-7	J-6	236	8.0	PVC	120.0	457	1.540	2.91	1.38
P-8	J-7	J-8	44	10.0	PVC	120.0	-1,458	0.890	5.96	1.12
P-9	J-8	J-9	55	10.0	PVC	120.0	-1,464	0.350	5.98	0.99
P-10	J-9	J-1	63	10.0	PVC	120.0	-1,464	1.490	5.98	1.74
P-11	J-10	H-1	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-12	J-1	J-10	75	8.0	PVC	120.0	6	0.790	0.04	0.00
P-13	J-10	J-11	42	8.0	PVC	120.0	6	0.350	0.04	0.00
P-14	J-11	J-12	36	8.0	PVC	120.0	1	0.350	0.01	0.00
P-15	J-11	OP-2	76	2.0	PVC	120.0	4	1.280	0.44	0.06
P-16	OP-2	OP-2	12	2.0	PVC	120.0	4	0.800	0.44	0.01
P-17	J-12	BLDG-A	90	1.0	PVC	120.0	1	0.800	0.49	0.19
P-18	BLDG-A	BLDG-A	10	1.0	PVC	120.0	1	0.800	0.49	0.02
P-19	J-8	OP-1	85	2.0	PVC	120.0	6	1.280	0.58	0.11
P-20	OP-1	OP-1	12	2.0	PVC	120.0	6	0.800	0.58	0.02
P-21	J-2	J-37	203	8.0	PVC	120.0	0	2.760	0.00	0.00
P-22	J-37	H-4	20	6.0	PVC	120.0	0	4.010	0.00	0.00
P-23	J-3	J-13	39	8.0	PVC	120.0	8	0.690	0.05	0.00
P-24	J-13	J-14	22	2.0	PVC	120.0	8	0.800	0.82	0.06
P-25	J-13	H-5	34	6.0	PVC	120.0	0	1.390	0.00	0.00
P-26	J-14	RTL-B	21	1.0	PVC	120.0	3	1.300	1.14	0.23
P-27	RTL-B	RTL-B	13	1.0	PVC	120.0	3	0.800	1.14	0.15
P-28	J-14	RTL-A	41	2.0	PVC	120.0	5	0.300	0.54	0.05
P-29	RTL-A	RTL-A	22	2.0	PVC	120.0	5	1.600	0.54	0.03
P-30	J-39	RTL-C	41	2.0	PVC	120.0	5	2.080	0.55	0.06
P-31	J-9	H-2	21	6.0	PVC	120.0	0	2.470	0.00	0.00
P-31	RTL-C	RTL-C	122	2.0	PVC	120.0	5	0.800	0.55	0.14
P-33	J-6	H-3	100	6.0	PVC	120.0	1,000	2.470	11.35	13.52
P-34	J-7	J-15	41	8.0	PVC	120.0	1,001	1.990	6.39	2.13
P-35	J-15	B-FUTURE	17	1.0	PVC	120.0	1	3.270	0.51	0.05
P-36	B-FUTURE	B-FUTURE	15	1.0	PVC	120.0	1	3.270	0.51	0.05
P-37	J-15	H-6	232	6.0	PVC	120.0	1,000	4.340	11.35	28.67

Winter Springs Marketplace WaterCAD Tables

MDF+H3+H6

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
RTL-C	47.00	5	145.51	43
RTL-B	47.35	3	145.49	42
RTL-A	47.35	5	145.96	43
OP-2	47.00	4	148.43	44
OP-1	47.00	6	145.54	43
J-37	43.00	0	148.33	46
J-15	43.00	0	142.93	43
J-14	43.00	0	146.51	45
J-13	43.00	0	146.57	45
J-12	43.00	0	148.90	46
J-11	43.00	0	148.90	46
J-10	43.00	0	148.90	46
J-9	43.00	0	147.16	45
J-8	43.00	0	146.17	45
J-7	43.00	0	145.06	44
J-6	43.00	0	143.68	44
J-3	43.00	0	146.57	45
J-2	43.00	0	148.33	46
J-1	43.00	0	148.90	46
BLDG-A	47.00	1	148.41	44
B-FUTURE	47.00	1	142.54	41

Winter Springs Marketplace WaterCAD Tables

MDF+H3+H6

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	175.67	2,026	175.67

Winter Springs Marketplace WaterCAD Tables

MDF+H3+H6

GPV Table - Time: 0.00 hours

Label	Elevation (ft)	Diameter (Valve) (in)	General Purpose Valve Headloss Curve	Flow (gpm)	Hydraulic Grade (From) (ft)	Hydraulic Grade (To) (ft)	Headloss (ft)
BLDG-A	46.61	0.8	Sensus 3/4" MTR	1	148.71	148.44	0.27
OP-1	46.57	1.0	Sensus 1" MTR	6	146.06	145.56	0.49
OP-2	46.46	1.0	Sensus 1" MTR	4	148.84	148.44	0.40
RPZ-1	44.00	10.0	Watts 10" RPZ	2,026	175.47	154.04	21.44
RTL-A	45.85	1.0	Sensus 1" MTR	5	146.47	145.99	0.47
RTL-B	45.64	0.8	Sensus 3/4" MTR	3	146.28	145.64	0.64
RTL-C	44.00	1.0	Sensus 1" MTR	-5	145.65	146.13	0.48

Winter Springs Marketplace WaterCAD Tables

MDF+H3+H6

Hydrant Table - Time: 0.00 hours

Label	Length (Hydrant Lateral) (ft)	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
H-1	20	45.00	0	148.90	45
H-2	20	45.00	0	147.16	44
H-3	20	45.00	1,000	130.17	37
H-4	20	45.00	0	148.33	45
H-5	20	45.00	0	146.57	44
H-6	20	45.00	1,000	114.26	30

2.6 METER SPECIFICATIONS

For Health Hazard Applications

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

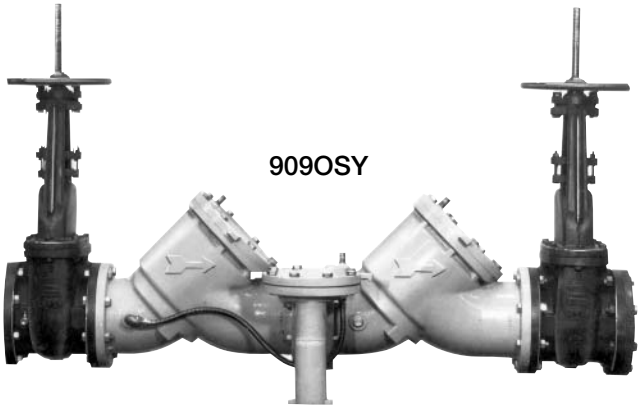
Approval _____ Representative _____

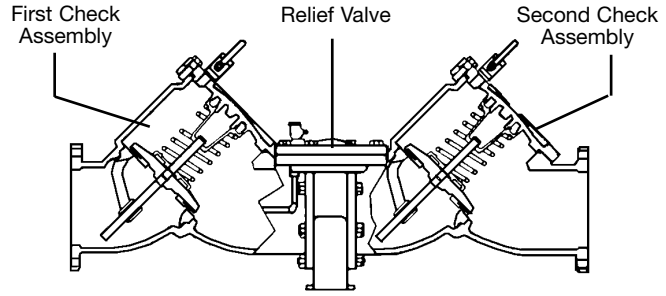
Series 909

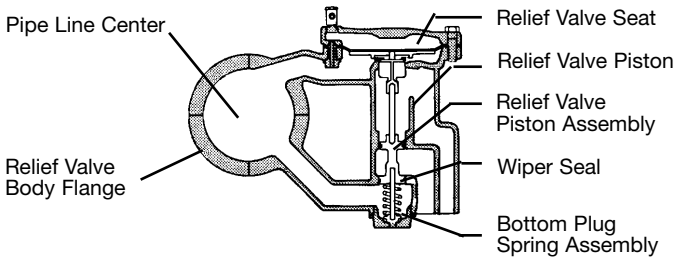
Reduced Pressure Zone Assemblies

Sizes: 2½" – 10" (65–250mm)

Series 909 Reduced Pressure Zone Assemblies are designed to provide cross-connection control protection of the potable water supply in accordance with national plumbing codes. This series can be utilized in a variety of installations, including health hazard cross-connections in plumbing systems or for containment at the service line entrance. With its exclusive patented relief valve design incorporating the "air-in/water-out" principle, it provides substantially improved relief valve discharge performance during the emergency conditions of combined backsiphonage and backpressure with both checks fouled.







Features

- Replaceable bronze seats
- Stainless steel internal parts
- No special tools required for servicing
- Captured spring check assemblies
- Fused epoxy coated & lined checks
- Industrial strength sensing hose
- Field reversible relief valve
- Air-in/water-out relief valve design provides maximum capacity during emergency conditions

Available Models

Suffix:

BB –	bronze body (2½", 3" only) (64, 76mm)
LF –	without shutoff valves
NRS –	non-rising stem resilient seated gate valves
OSY -	UL/FM outside stem & yoke resilient seated gate valves
QT-FDA –	FDA epoxy coated quarter-turn ball valves
S –	cast iron strainer
S-FDA –	FDA epoxy coated strainer

Note: The installation of a drain line is recommended. When installing a drain line, an air gap is necessary.

Specifications

A Reduced Pressure Zone Assembly shall be installed at each cross-connection to prevent backsiphonage and backpressure backflow of hazardous materials into the potable water supply. The assembly shall consist of a pressure differential relief valve located in a zone between two positive seating check valves and captured springs. Backsiphonage protection shall include provision to admit air directly into the reduced pressure zone via a separate channel from the water discharge channel. The assembly shall include two tightly closing shutoff valves before and after the valve and test cocks. The assembly shall meet the requirements of ASSE Std. 1013; AWWA Std. C511-92; CSA B64.5; and UL Classified File No. EX3185. Listed by IAPMO (UPC). Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. The assembly shall be a Watts Regulator Company Series 909.

Now Available
WattsBox Insulated Enclosures.
For more information, send for literature ES-WB.

IMPORTANT: *INQUIRE WITH GOVERNING AUTHORITIES FOR LOCAL INSTALLATION REQUIREMENTS*

WATTS®

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Materials

Check Valve Bodies: FDA epoxy coated cast iron or bronze
Seats: bronze
Trim: stainless steel
Relief Valve Body: 2½"-3" (60-80mm) bronze
4"-10" (100-250mm) FDA epoxy coated cast iron
Test Cocks: bronze body ball valve

Pressure — Temperature

Temperature Range: 33°F-110°F (5°C-43°C) continuous, 140°F (60°C) intermittent

Maximum Working Pressure: 175psi (12.06 bar)

Standards

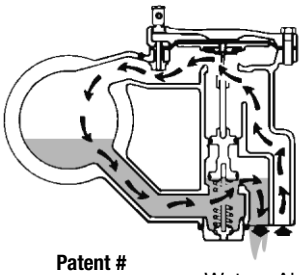
AWWA C511-92

IAPMO PS 31, SBCCI (Standard Plumbing Code)

USC manual for Cross-Connection Control, 8th Edition

How It Operates

The unique relief valve construction incorporates two channels: one for air, one for water. When the relief valve opens, as in the accompanying air-in/water-out diagram, the right-hand channel admits air to the top of the reduced pressure zone, relieving the zone vacuum. The channel on the left then drains the zone to atmosphere. Therefore, if both check valves foul, and simultaneous negative supply and positive backpressure develops, the relief valve uses the air-in/water-out principle to stop potential backflow.



Patent # 4,241,752

Approvals

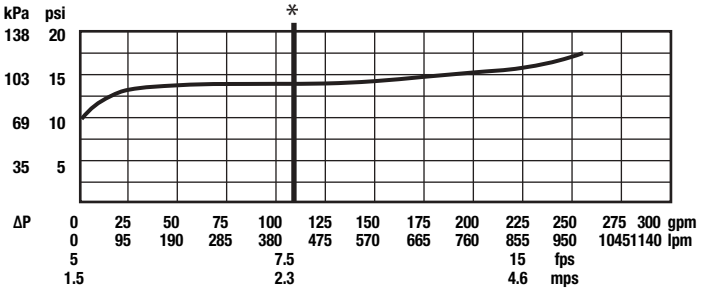
1013 B64.5

Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

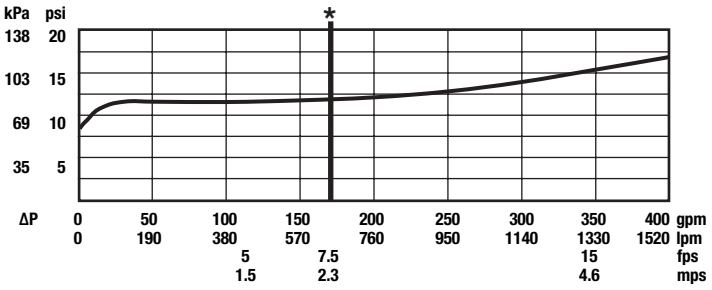
Capacity

*Typical maximum flow rate (7.5 feet/sec.)

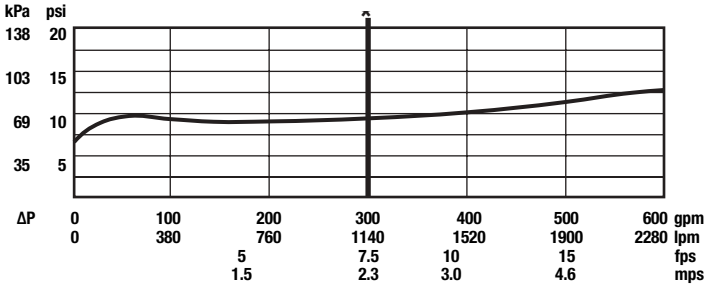
2½" (65mm)



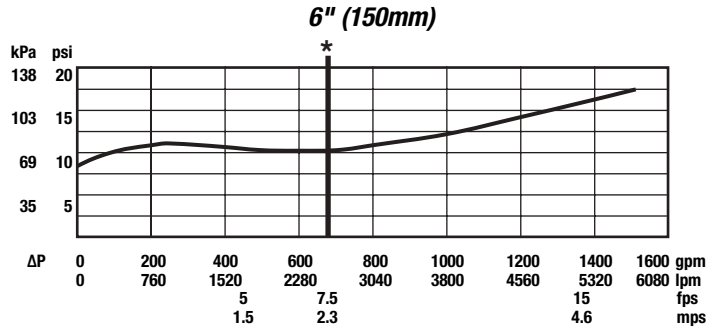
3" (80mm)



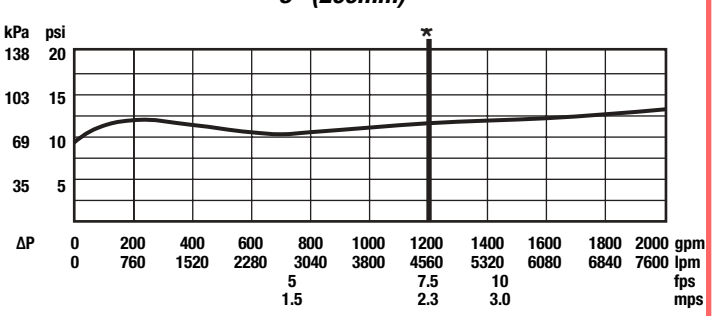
4" (100mm)



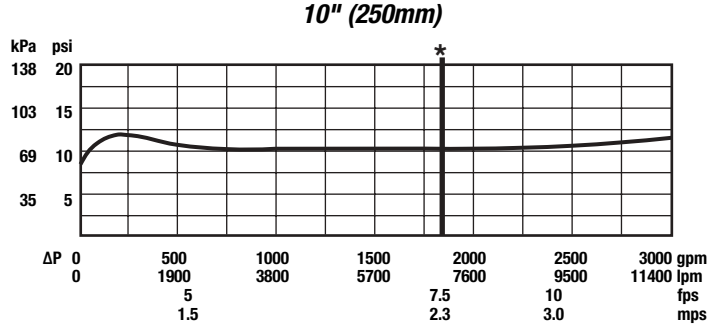
6" (150mm)



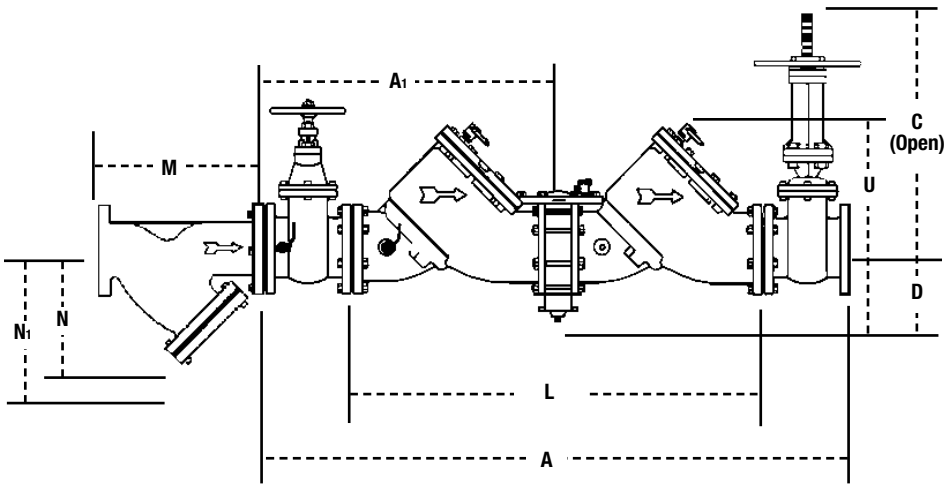
8" (200mm)

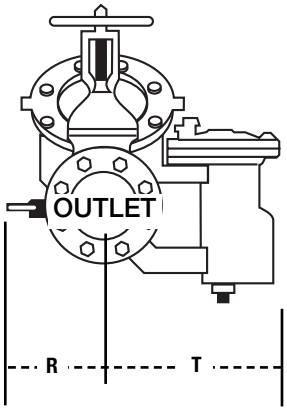


10" (250mm)

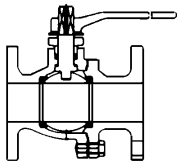


Dimensions — Weights





Quarter-turn (QT) Valve



Watts G-4000 Series Ball Valves Send for F-G4000

NOTE: Relief valve section is reversible, therefore, can be on either side and is furnished standardly as shown.

SIZE (DN)		DIMENSIONS																WEIGHT					
						C						clearance for check											
		A		A1		(OSY)*		(NRS)		D		L		U		R		R (QT)		T		NRS		OSY		QT	
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*	*lbs.*	*kgs.*	*lbs.*	*kgs.*
2½	65	41¼	1048	20⅝	524	16⅜	416	9⅜	238	5¼	133	26⅛	663	11	279	4	102	16	406	9 1/16	230	195	88.4	198	89.8	182	82.6
3	80	42¼	1073	21¼	540	18⅞	479	10¼	260	5¼	133	26⅛	663	11	279	5	127	16	406	9 1/16	230	225	102	230	104	190	86
4	100	55⅛	1400	27⅝	702	22¾	578	12 3/16	310	6	152	37	940	14	356	6	152	19¾	502	14⅜	365	455	206	470	213	352	160
6	150	65½	1664	32¾	832	30⅛	765	16	406	6	152	44½	1130	16	406	11	279	26	660	14⅜	365	718	326	798	362	762	346
8	200	78½	2000	39⅜	1000	37¾	959	19 15/16	506	9¾	248	55¼	1403	21	533	11¼	286	11¼	286	19¼	489	1350	612	1456	660	2286	1037
10	250	93⅝	2378	46⅞	1190	45¾	1162	23 13/16	605	9¾	248	67⅜	1711	21	533	12½	318	12½	318	21	533	2160	980	2230	1011	3716	1685

*UL, FM approved backflow preventers must include UL/FM approved OSY gate valves.

Strainer Dimensions

SIZE (DN)		DIMENSIONS						WEIGHT	
		M		N1†		N			
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
2½	65	10	254	10	254	6½	165	28	12.7
3	80	10⅛	257	10	254	7	178	34	15.4
4	100	12⅛	308	12	305	8¼	210	60	27
6	150	18½	470	20	508	13½	343	133	60
8	200	21⅝	549	22¾	578	15½	394	247	112
10	250	26	660	28	711	18½	470	370	168

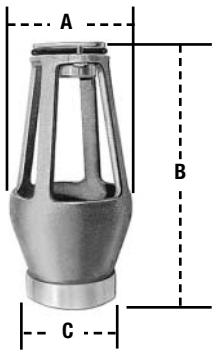
† – Dimension required for screen removal

Air Gap Dimensions

When installing a drain line on Series 909 backflow preventers that are installed horizontally, use 909 AG series air gaps.

			DIMENSIONS						WEIGHT	
Iron Body Model No.	Ordering Code	Series/Sizes	A		B		C			
			in.	mm	in.	mm	in.	mm	lbs	kgs
909AG-F	0881378	1¼" – 3" 009/909 1¼" – 2" 009 M1 2" 009 M2	4⅜	111	6¾	171	2	51	3.25	1.47
909AG-K	0881385	4" – 6" 909 8" – 10" 909 M1	6⅜	162	9⅝	244	3	76	6.25	2.83
909AG-M	0881387	8" – 10" 909	7⅜	187	11¼	286	4	102	15.50	7.03

For flange size backflow preventers installed vertically (flow down), a fabricated air gap is recommended.



For additional information, visit our website at: www.watts.com

WATTS®

ISO 9001 CERTIFIED

Backflow Prevention Products

USA: 815 Chestnut St., No. Andover, MA 01845-6098; www.watts.com
Canada: 5435 North Service Rd., Burlington, ONT. L7L 5H7; www.wattscanada.ca

ES-909L 0704

© Watts Regulator Company, 2007

SENSUS METERING SYSTEMS

SR® Water Meters

Displacement Type Magnetic Drive Cold Water Meters

5/8" (DN 15mm), 3/4" (DN 20mm) and 1" (DN 25mm) Sizes

Description

Applications: Measurement of cold water where flow is only in one direction; in residential, commercial and industrial services.

Conformance To Standards: Sensus Sealed Register® Water Meters comply with ANSI/AWWA Standard C700, latest revision. Each meter is tested to insure compliance.

Construction: Sensus SR Water Meters consist of three basic components: maincase; measuring chamber; and permanently, hermetically-sealed register. Maincases are of bronze with externally-threaded spuds. Measuring chambers are of Rocksyn®, a corrosion-resistant thermoplastic material. Bronze measuring chambers are available as an option.

Maincase bottom plates are available in bronze or, if frost protection is desired, in cast iron or synthetic polymer. Simplicity of design and precise machining of components allows interchangeability of parts among like-size meters to provide ease of maintenance. The register, measuring chamber and strainer can be removed without removing the maincase from the installation.

Sealed Register: Permanently, hermetically sealed; proven magnetic drive design; with integral tamper-proof locking device. Guaranteed for 25 years. The standard register includes a straight-reading, odometer-type totalization display; a 360° test circle with center sweep hand; and a low flow (leak) detector. Gears are self-lubricating, molded plastic for long life and minimum friction. The hermetic sealing of the register eliminates dirt and moisture, tampering, and lens fogging problems.

No change gears are required for accuracy calibration. Encoded-type remote reading systems are available for all SR Water Meters. (See back of sheet for additional information.)

Tamperproof Features: Removing the register to obtain free water is prevented by a locking system inside the meter. Removing the register requires a special tool that is available only to water utilities.

Magnetic Drive: The unique design of the direct magnetic drive is a positive, reliable, dependable drive coupling, proven in millions of SR Water Meters.

Operation: Water flows through the meter's strainer and into the measuring chamber where it operates the piston. The piston, which moves freely, oscillates around a central hub, guided by the rubber-coated division plate.

A drive magnet, incorporated in the piston, rotates around the outside of the hermetically sealed register well and magnetically drives the "follower" magnet sealed within the well. The "follower" magnet drives a crank connected to the register gear train, which translates the number of piston oscillations into volume totalization units displayed on the register face.

Maintenance: Sensus Sealed Register® Water Meters are engineered to provide long-term value and virtually maintenance-free operation because of their design simplicity and interchangeability of modules. Sensus SR® Water Meters are easy to repair, even without removing the maincase from the installation. As an alternate to repair by the utility, Sensus offers various maintenance programs which provide factory reconditioning of the maincase and replacement of components at low fixed prices.

Connections: Tailpieces/Unions for installing the meters on a variety of pipe types and sizes are available as an option.

Guarantee: Sensus SR® Water Meters are backed by "The Sensus Guarantee." Ask your Sensus representative for details, or see Bulletin G-500.

Specifications



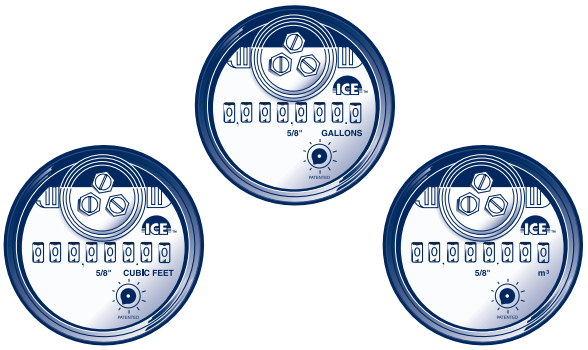
5/8" SR® (DN 15mm) | 3/4" SR® (DN 20mm) | 1" SR® (DN 25mm)

SERVICE	Measurement of cold water with flow in one direction only.
NORMAL OPERATING FLOW RANGE①	5/8" (DN 15mm) size: 1 to 20 gal/min. (0.25 to 4.5 m^3h) 3/4" (DN 20mm) size: 2 to 30 gal/min. (0.45 to 7.0 m^3h) 1" (DN 25mm) size: 3 to 50 gal/min. (0.7 to 11.0 m^3h)
ACCURACY	100% ± 1.5% of actual thruput
LOW FLOW REGISTRATION	5/8" (DN 15mm) size: 95% at 1/4 gal/min. (0.96 m^3h) 3/4" (DN 20mm) size: 95% at 1/2 gal/min. (0.10 m^3h) 1" (DN 25mm) size: 95% at 3/4 gal/min. (0.15 m^3h)
MAXIMUM PRESSURE LOSS	5/8" (DN 15mm) size: 10.8 psi at 20 gal/min. (0.7 bar at 4.5 m^3h) 3/4" (DN 20mm) size: 11.0 psi at 30 gal/min. (0.8 bar at 7.0 m^3h) 1" (DN 25mm) size: 10.9 psi at 50 gal/min. (0.8 bar at 11.0 m^3h)
MAXIMUM OPERATING PRESSURE	150 psi (10.0 bar)
MEASUREMENT ELEMENT	Oscillating piston
REGISTER	Straight reading, hermetically sealed magnetic drive. Remote reading unit optional.
REGISTRATION	5/8", 3/4", 1": 10 gallons, 1 cubic foot, 0.01 m^3 or 0.1 m^3/sweep hand revolution. 5/8", 3/4", 1": odometer wheels (10,000,000 gallons, 1,000,000 cubic feet or 100,000 m^3)
METER CONNECTIONS②	5/8" (DN 15mm) size: 3/4" (26.44mm) threads 5/8" x 3/4" (DN 15mm x 33mm) size: 1" (33.25) threads 3/4" (DN 20mm) size: 1" (33.25mm) threads 3/4" x 1" (DN 20mm x 42mm) size: 1-1/4" (41.91mm) threads 1" x 1-1/4" (DN 25mm x 48mm) size: 1-1/2" (47.75mm) threads (All threads are straight pipe, external type, conforming to ANSI B1.20.1, or ISO R228, if specified.)
MATERIALS③	Maincase—Bronze Measuring chamber—Rocksyn—standard Bronze—optional Bottom plate—Bronze, cast iron or synthetic polymer Magnets—Alnico Trim—Stainless Steel Casing bolts—Stainless Steel Strainer—Thermoplastic

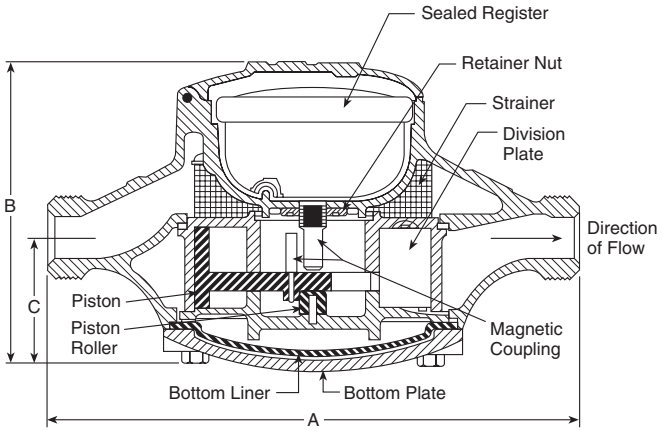
① Maximum rates listed are for intermittent flow only. Maximum continuous flow rates as specified by AWWA are:
5/8" (DN 15mm)—10 gal/min (2.3 m^3h)
3/4" (DN 20mm)—15 gal/min (3.4 m^3h)
1" (DN 25mm)—25 gal/min (5.7 m^3h)

② Unless otherwise noted, 5/8" size and 5/8" x 3/4" characteristics are identical. 5/8" x 3/4" designates 5/8" with 3/4" connection thread. Metric designation is the normal bore x the outside diameter.

③ Synthetic polymer maincase bottom plate available on 5/8" meter only.



5/8" (DN 15mm) Dials Shown



Dimensions and Net Weights

Metric Size	A	B	C	Width	Net Weight①
5/8" (DN 15mm)	7-1/2" (190mm)	4-9/16" (115mm)	2-1/8" (55mm)	4-5/8" (120mm)	5 lb. 12 oz. (2.6 kg)
5/8" x 3/4" (DN 15mm x 33mm)	7-1/2" (190mm)	4-9/16" (115mm)	2-1/8" (55mm)	4-5/8" (120mm)	5 lb. 15 oz. (2.7 kg)
3/4" (DN 20mm)	9" (230mm)	5-1/8" (130mm)	2-9/32" (60mm)	5-1/4" (135mm)	8 lb. (3.6 kg)
3/4" short (DN 20mm)	7-1/2" (190mm)	5-1/8" (130mm)	2-9/32" (60mm)	5-1/4" (135mm)	8 lb. (3.6 kg)
1" (DN 25mm)	10-3/4" (275mm)	5-3/4" (145mm)	2-5/8" (70mm)	6-13/16" (175mm)	12 lb. (5.5 kg)

① With Rocksyn® measuring chamber.

Remote Reading Systems

For use with all sizes of Sensus Water Meters

All Sensus AMR systems work with the same absolute encoder Electronic Communications Registers (ECR), enabling the utility to mix and match or easily move from one system to another without changing registers for each.

The TouchRead® Automated Meter Reading and Billing System—is a multipurpose encoder remote system suitable for indoor and/or outdoor use. The ECR Register uses a wired connection between the meter and an outside remote for inside set meters—or a pitlid mounted module, enabling underground meters to be read automatically without opening the meter box or vault. All wired connections and terminals of the TouchRead PitLid (TR/PL) modules and registers are fully sealed at the factory using a special process to ensure protection from water infiltration. The connection terminals of ECR/WP registers are also factory sealed.

Meters equipped for TouchRead System reading can be read with a visual reading device, stand alone AutoGun, and/or reading gun with an AutoRead HandHeld Device. For more information on TouchRead System equipment refer to bulletins AMR-TR, AMR-401, AMR-403, AMR-312 and EXSUMHH.

PhonRead® AMR—is a reliable telephone based call-in system that does not require batteries for operation. It also does note require equipment to be installed at telephone company facilities. PhonRead Meter Interface Units (MIU) automatically call "in" to the utility office for transferring meter reading data from the meter site to a PC. PhonRead is a transparent AMR system that does not interfere with customers' telephone service. For more information refer to bulletins AMR-PR and AMR-302.

RadioRead® AMR—uses superior Direct Sequence Spread Spectrum modulation to provide reliable, safe and virtually interference free radio-based transmission of reading data from underground or inside-set meters that are equipped with Meter Transceiver Units (MXU). A choice of meter reading options is available. A radio frequency hand-held device (RF-HHD) can be used by a meter reader on foot. The RF-HHD can also be used to collect readings from TouchRead equipped meters, or for manual meter reading entries. A more powerful Vehicle Transceiver Unit (VXU) can be used in any car or truck to read meters while on the move. (A dedicated meter reading vehicle is not required.) For more information refer to bulletins AMR-RR, AMR-301 and AMR-303, and AMR-401.

MultiRead® Port Expanders—can provide the capability to connect multiple ECR equipped meters to a single PhonRead MIU or RadioRead MXU to save the utility time and money for installations such as apartment complexes and shopping centers. Refer to bulletin AMR-305, AMR-306 and AMR-308.

AUTHORIZED SENSUS DISTRIBUTOR

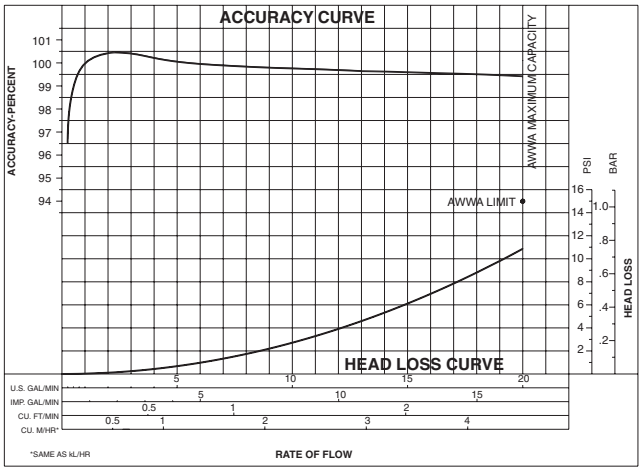
SENSUS METERING SYSTEMS
P.O. Box 487 • 450 N. Gallatin Avenue
Uniontown, PA 15401
1-800-METER-IT • 1-800-638-3748
Fax: Direct to Factory
Local: 724-439-7729 • Toll Free: 1-800-888-2403
www.sensus.com (select "North America Water")
Email: h2oinfo@sensus.com

SENSUS METERING SYSTEMS

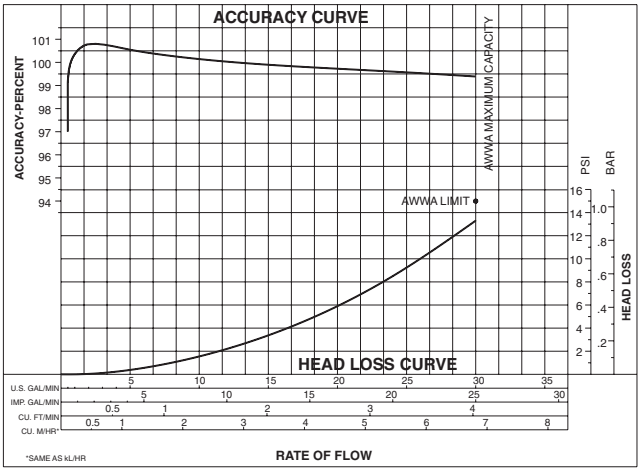
SR® Water Meters

Typical Performance Curves

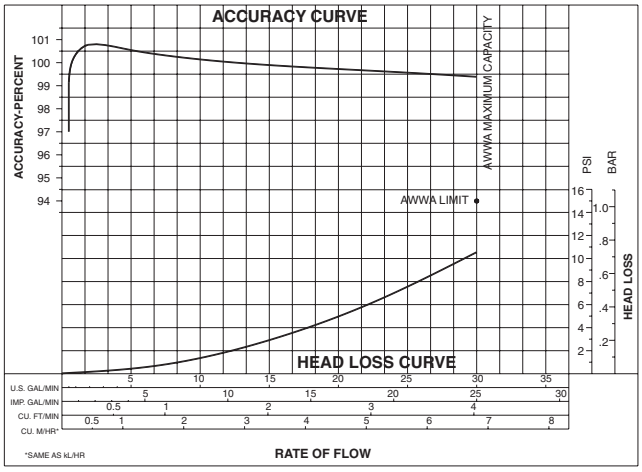
5/8" and 5/8" x 3/4" SR Meter
UA-5619



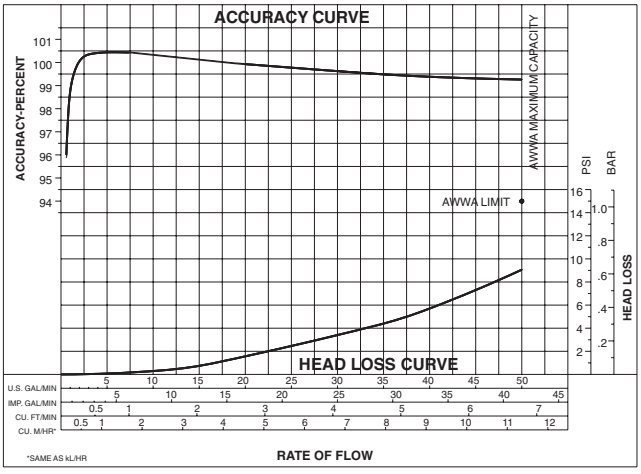
3/4" SR Meter 7-1/2" Laying Length
UA-5831



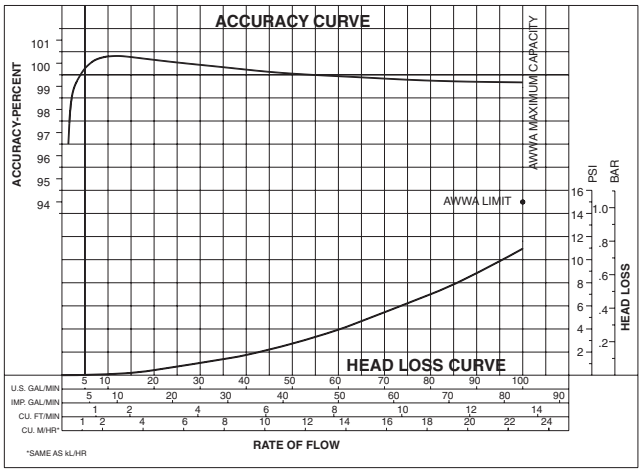
3/4" and 3/4" x 1" SR Meter
UA-5830



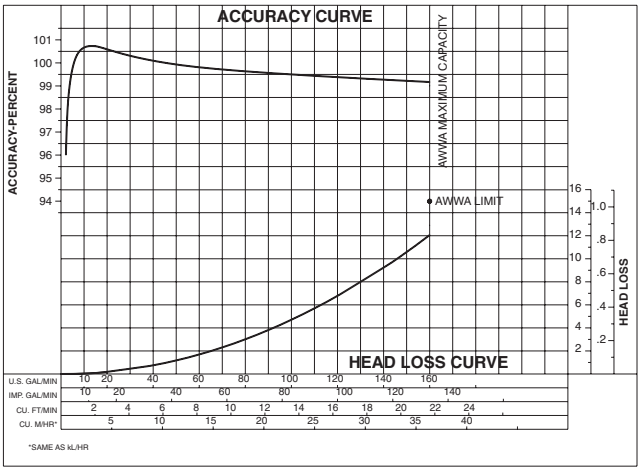
1" and 1" x 1-1/4" SR Meter
UA-5832



1-1/2" SR Meter
UA-5674



2" SR Meter
UA-5673



APPENDICES

HYDRANT FLOW TEST RESULTS WIGINTON FIRE SYSTEMS ..... APPENDIX A

APPENDIX A

HYDRANT FLOW TEST RESULTS

PER WIGINTON FIRE SYSTEMS

From: Nick E. Guerrina <neg@Wiginton.net>
Sent: Thursday, July 9, 2020 1:51 PM
To: Baker, Danny
Cc: Geiger, Marcus
Subject: RE: Winter Springs Marketplace Hydrant Flow Test
Attachments: Hydrant Flow Location results.pdf

Categories: External

Hey Danny see attached as requested. Please keep me updated with the project. I would like the opportunity to try to estimate it. Also please reach out if the architect is looking for a fire protection drawing for the building permit.
Thank you,

Nick E. Guerrina | Contract Sales Representative
Wiginton Fire Systems - Orlando, FL
699 Aero Lane, Sanford, FL 32771

tel: 407-585-3200,292
dir: 407-585-3292
cell: 407-639-7800
neg@wiginton.net
100% EMPLOYEE OWNED | www.wiginton.net

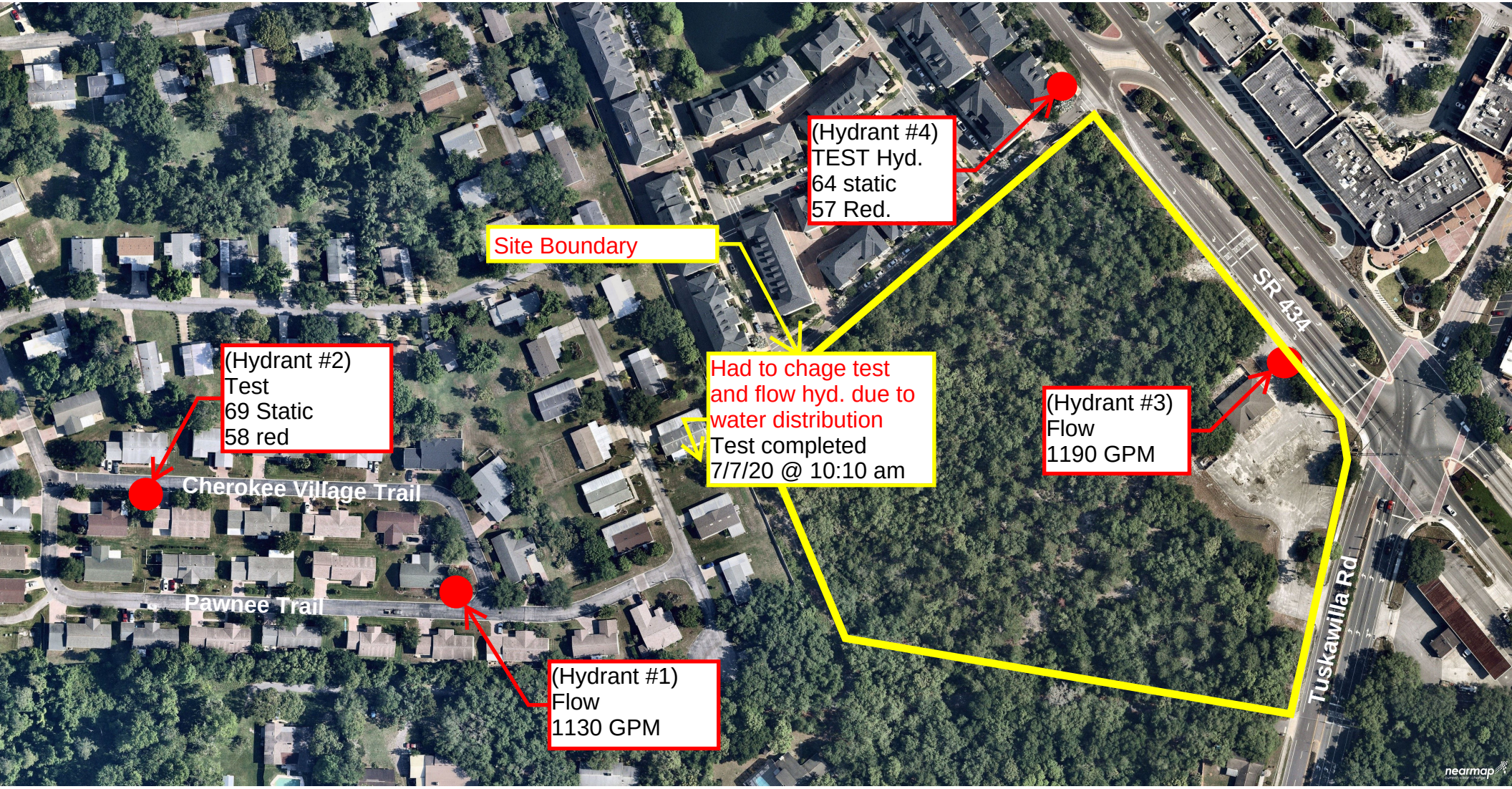
********** NOTICE **********
Have you seen our Customer Portal?
To get registered click the following link
https://customer.wiginton.net

From: Baker, Danny [mailto:Danny.Baker@kimley-horn.com]
Sent: Monday, July 6, 2020 12:21 PM
To: Nick E. Guerrina <neg@Wiginton.net>
Cc: Geiger, Marcus <Marcus.Geiger@kimley-horn.com>
Subject: RE: Winter Springs Marketplace Hydrant Flow Test

Nick,

Yes, 9:00 AM works well for me, thank you. I'll be there tomorrow at 9:00 AM. My cell phone number is 561-354-8543. If you want to give me call tomorrow morning to let me know which hydrants you want to start on or if you want to let me know via email, either works. Thank you.

Danny Baker, E.I.
Kimley-Horn | 189 S. Orange Avenue, Suite 1000, Orlando, FL 32801
Direct: 407 815 3574
Connect with us: Twitter | LinkedIn | Facebook | Instagram | Kimley-Horn.com


(Hydrant #4)
TEST Hyd.
64 static
57 Red.
Site Boundary
SR 434
(Hydrant #2)
Test
69 Static
58 red
Had to chage test
and flow hyd. due to
water distribution
Test completed
7/7/20 @ 10:10 am
(Hydrant #3)
Flow
1190 GPM
Cherokee Village Trail
Pawnee Trail
Tuskawilla Rd
(Hydrant #1)
Flow
1130 GPM
nearmap

August 4, 2020

Ms. Kirsten Davis
Equinox Development
630 S. Maitland Avenue
Suite 100
Maitland, Florida 32751

ECS Project No. 55:3210

SUBJECT: Listed Wildlife Species Survey
± 10.25 - Acre Winter Springs Property
Winter Springs, Seminole County, Florida

Dear Ms. Davis:

As requested, ECS Florida, LLC (ECS) is pleased to present the following Listed Wildlife Species Survey for the ± 10.25 - Acre Winter Springs Property located in Winter Springs, Seminole County, Florida. Work was provided by our sub-consultant, Thomson Environmental Consulting (Thomson). We have attached Thomson's report. Thank you for this opportunity to offer our services. Please call the undersigned with questions or comments at (407) 859-8378.

Respectfully submitted,

ECS FLORIDA, LLC

Ivona Minossora
Environmental Group Manager

James (Cliff) Hendrickson, P.G.
Florida Professional Geologist 2226
Environmental Principal

Attachment: Thomson's Listed Wildlife Species Survey

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

October 22, 2018

Ivona Minossora
ECS Florida, LLC
2815 Directors Row, Suite 500
Orlando, Florida 32809

RE: Listed Wildlife Species Survey
±10.25-Acre Winter Springs Property
Winter Springs, Seminole County, Florida
Thomson Project No. 18-650

Ms. Minossora:

Thomson Environmental Consulting, LLC (Thomson) completed a Listed Wildlife Species Survey of the ±10.25-Acre Winter Springs Property (the property) generally located in the southwest corner of the intersection of State Road 434 and Tuskawilla Road. The field portion of the survey was conducted on October 9, 2018. The purpose of the field visit was to evaluate the subject property for the occurrence and/or potential for occurrence of protected wildlife species (and their habitat). The following report (and referenced exhibits) describes relevant ecological conditions observed on the site during the field investigation and the results of documented literature regarding the presence of protected wildlife species and/or habit on the site and its relevant surroundings.

SITE DESCRIPTION AND LOCATION

The property is generally located in the southwest corner of the intersection of State Road 434 and Tuskawilla Road in Winter Springs, Seminole County, Florida. The property measures ±10.25 acres using the Seminole County Geographic Information System (GIS) coverages, but only ±9.9 acres according to the Seminole County Property Appraiser (SCPA). Per the SCPA, the property comprises 4 legal parcels identified as follows:

- SCPA PID 36-20-30-502-0000-0070 (±2.82 acres)
- SCPA PID 36-20-30-502-0000-0080 (±3.03 acres)
- SCPA PID 26-20-30-5AR-0A00-008F (±0.26 acre)
- SCPA PID 36-20-30-502-0000-0090 (±3.79 acres)

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

Figure 1 is a location map showing the entirety of the property, including internal named streets.

Figure 2 is a true-color rectified aerial (circa 2017) of the property and its immediate surroundings.

Figure 3 is a topographic quadrangle map showing the topographic relief on the property and in the local region surrounding the site.

SOILS

Soils were identified using the Natural Resource Conservation Service's *Soil Survey of Seminole County, Florida*. The following soil units and descriptions were mapped by the soil survey on the property:

Myakka and EauGallie Fine Sands (Map Unit 20) – This soil represented approximately 2.66 acres of the property. The soils in this map unit are nearly level and poorly drained. These soils are on broad plains on the flatwoods. The slopes are dominantly less than 2 percent. During most years, the soils in this map unit have a seasonal high water table within 12 inches of the surface for 1 month to 4 months. The permeability of Myakka soil is rapid in the surface and subsurface layers and substratum and moderate or moderately rapid in the subsoil. The permeability of EauGallie soil is rapid in the surface and subsurface layers, moderate or moderately rapid in the sandy part of the subsoil, and moderately slow in the loamy part of the subsoil.

Paola-St. Lucie Sands, 0 to 5 percent slopes (Map Unit 24) – This soil represented approximately 6.33 acres of the property. The soils in this map unit are nearly level to gently sloping and excessively drained. These soils are on upland ridges. The slopes are 0 to 5 percent. The soils in this map unit have a seasonal high water table at a depth of 80 inches or more.

Tavares-Millhopper Fine Sands, 0 to 5 percent slopes (Map Unit 31) – This soil represented approximately 1.26 acres of the property. The soils in this map unit are nearly level to gently sloping and moderately well drained. These soils are on low ridges and knolls on the uplands. The slopes are nearly smooth to slightly convex. The soils in this map unit have a seasonal high water table at a depth of 36 to 60 inches for 2 to 6 months.

Figure 4 shows the property and soils as mapped by the Soil Survey.

Soils observed during the site visit seemed to generally match those as described in the Soil Survey. No indications of hydric soils were observed.

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

VEGETATIVE COMMUNITIES AND LAND USES

Prior to the field visit, Geographic Information System (GIS) data from the St. Johns River Water Management District (SJRWMD) was reviewed to identify documented vegetative communities and land uses on the property. These site conditions are documented using the Florida Land Use, Cover and Forms Classification System (FLUCCS, Florida Department of Transportation, 1999). FLUCCS classifications for the land covers and uses (as adapted from SJRWMD coverages) on the property are as follows:

Commercial and Services - Abandoned (FLUCFCS code 0140) – This classification represented approximately 1.24 acres of the property. It is the eastern portion of the property that was formerly a Pinch a Penny pool supply store accessible from both Tuskawilla Road and SR 434.

Hardwood-Conifer Mixed (FLUCFCS code 434) – This classification represented approximately 9.01 acres and the majority of the property. This upland, undeveloped area was dominated by slash and sand pine, with a dense subcanopy of xeric oaks in the central portion of the property.

Figure 5 is a FLUCFCS map that depicts the land cover classification described above.

PROTECTED WILDLIFE SPECIES SURVEY

Protected wildlife species are defined as those listed as Threatened, Endangered, or Species of Special Concern by the U.S. Fish and Wildlife Service (USFWS) and/or the Florida Fish and Wildlife Conservation Commission (FWC). The survey consisted of both a search of documented literature and a field reconnaissance.

Documented Literature Search

Prior to the field investigation, documented literature resources were consulted regarding known occurrences of protected wildlife species on or in the vicinity of the project site. These included the FWC's Bald Eagle (*Haliaeetus leucocephalus*) Nest Locator (*https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx*) and Waterbird Colony Locator (*http://atoll.floridamarine.org/waterBirds/*) online locator sites. A query of both databases (from the center of the site extending outward a radius of one mile) revealed no documented occurrences of waterbird colonies within 1 mile of the property. The closest documented bald eagle nest (Nest ID SE087) was documented approximately 2,250 feet east of the property, which is well outside of any applicable buffer zones.

thomson
ENVIRONMENTAL CONSULTING

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

The NRCS Web Soil Survey (*https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx*) was used to identify soils suitable for the burrowing needs of gopher tortoises (*Gopherus polyphemus*, state-Threatened). The areas identified as Paola-St. Lucie Sands and Tavares-Millhopper Complex were rated as "Highly Suited" soils for gopher tortoises, while the area identified as Myakka and EauGallie Fine Sands are rated as "Less Suited".

The property was mapped within the USFWS Consultation Area for the following federally-listed species: Audubon's Crested Caracara (*Polyborus plancus audubonii*, Threatened), Red-Cockaded Woodpecker (*Picoides borealis*, Endangered), Florida Scrub-Jay (*Aphelocoma coerulescens*, Threatened), the Everglades Snail Kite (*Rostrhamus sociabilis plumbeus*, Endangered), and the Florida Wood Stork (*Mycteria americana*, Endangered).

Field Reconnaissance and Observations

A protected wildlife species survey and habitat assessment was conducted over the entire property on October 9, 2018. Protected wildlife species are defined as those listed as Threatened, Endangered, or Species of Special Concern by the U.S. Fish and Wildlife Service (USFWS) and/or the Florida Fish and Wildlife Conservation Commission (FWC).

No indication of bald eagle foraging was observed. No nests or juveniles were observed on the property.

A survey for gopher tortoises and/or occupied habitat was conducted over 100% of the suitable soils on the property by Mr. Joel Thomson of Thomson Environmental Consulting, LLC (an Authorized Agent for surveying by FWC). The results of the survey yielded no potentially-occupied gopher tortoise burrows, and no indication of gopher tortoise presence. Based on the quality of habitat, it is recommended that an additional survey of the property be performed within 90 days of intended construction, per the FWC's guidelines.

The presence of some scrub oaks on the property often represents potential habitat for the Florida Scrub-Jay. The habitat was determined to be too overgrown to represent viable habitat, likely the result of fire exclusion and other factors related to the surrounding development. No indications of Florida Scrub-Jays was observed during the survey.

No other protected wildlife species concerns were observed during the course of the field survey. The numerous species with Consultation Areas covering the property have unique, individualized habitat needs that are not offered on the property due to developed nature of much of the property and the lack of natural habitat.

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

LIMITATIONS OF THIS REPORT

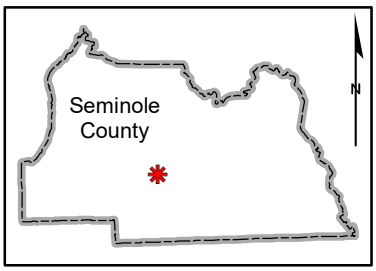
It is important to note that the conclusions of this report are necessarily based on the conditions observed on the day of the field investigation, as well as our scientific judgment of the site's potential to support protected species (based on each species' optimal habitat requirements). Due to this "snapshot" view of the site, the results presented in this report may not accurately reflect changing site conditions and/or wildlife species' temporal and spatial movements.

Thomson appreciates the opportunity to provide these services to you. If there are questions regarding this report, or a need for further information, please contact the undersigned at your convenience.

Respectfully,
Thomson Environmental Consulting, LLC

Joel A. Thomson
President





General Location

0 500 1,000

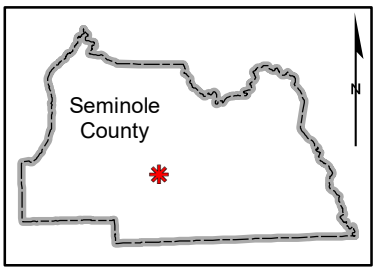
1" = 1,000'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 1
Location Map
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

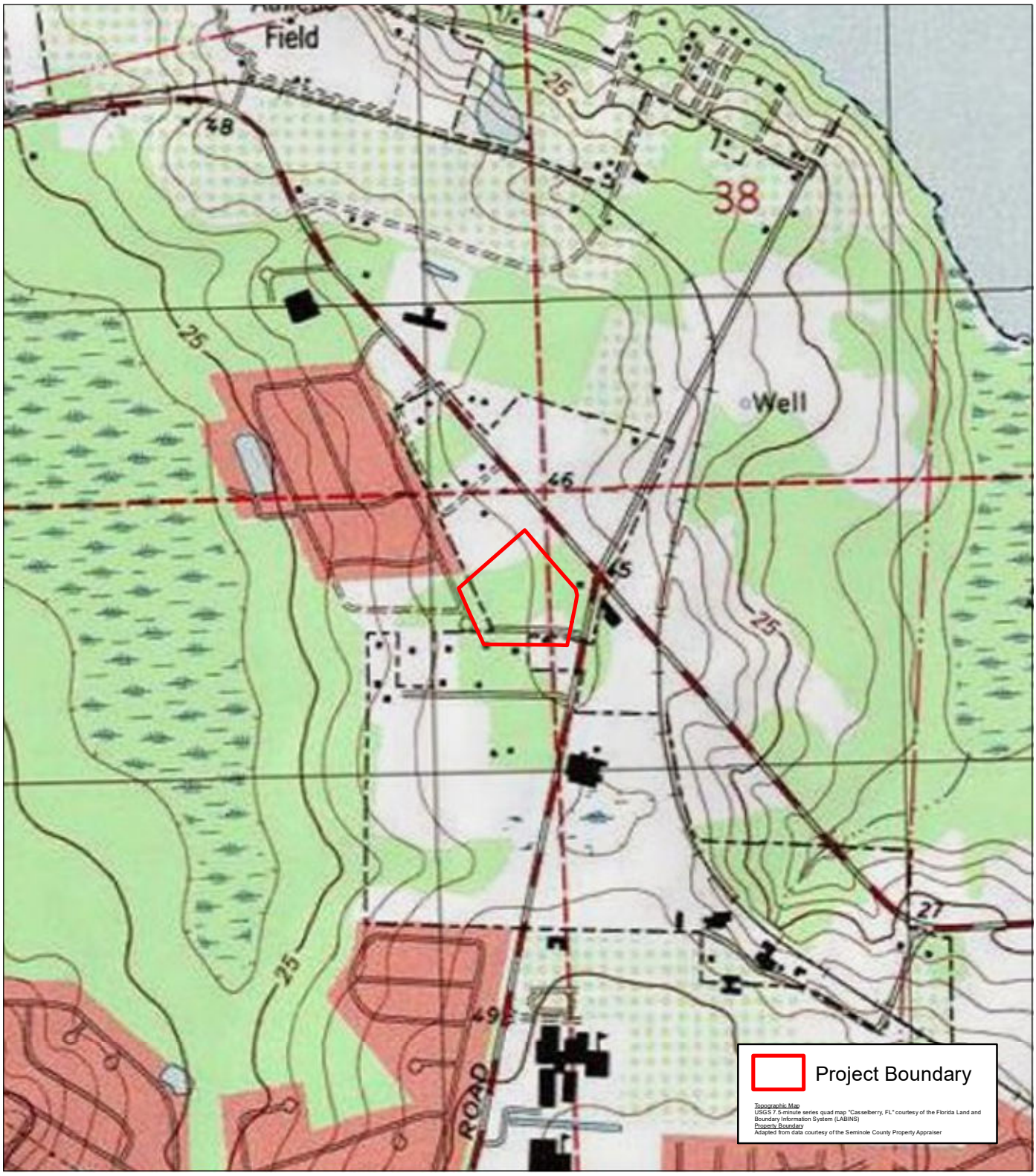
0 75 150

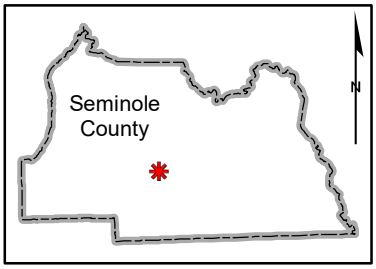
1" = 150'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 2
Aerial Photograph
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

0 500 1,000

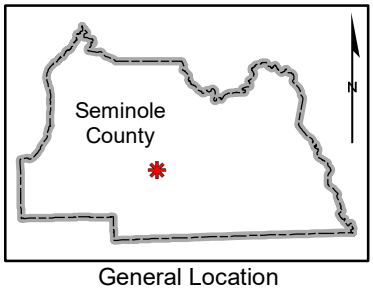
1" = 1,000'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 3
Topographic Map
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

0 75 150

1" = 150'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

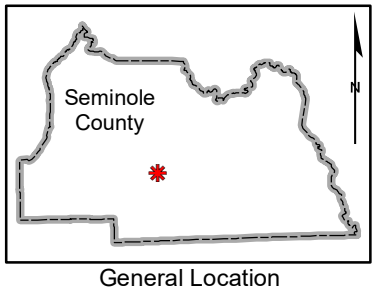
Figure 4
Soils Map

Winter Springs Property
Winter Springs, Seminole County, Florida

Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

0 75 150

1" = 150'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 5
FLUCCS Map
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





ECS Florida, LLC

Preliminary Geotechnical Engineering Report

Tuskawilla Retail Development

170 Tuskawilla Road
Winter Springs, Seminole County, Florida

ECS Project Number 24:6366

November 15, 2018
Revised December 15, 2020

November 15, 2018
Revised December 15, 2020

Equinox Development Properties, Inc.
630 South Maitland Avenue, Suite 100
Maitland, Florida 32751

Attention: Ms. Kirsten Davis

ECS Project No. 24:6366

Reference: Preliminary Geotechnical Engineering Report
Tuskawilla Retail Development
170 Tuskawilla Road
Winter Springs, Seminole County, Florida

Dear Ms. Davis:

ECS Florida, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our Proposal No. 24:12884-GP dated August 17, 2018. This report presents our understanding of the geotechnical aspects of the project, the results of the field exploration and laboratory testing conducted, and the design and construction aspects. **This report has been revised at the request of your group based on the revised scope of the project.**

It has been our pleasure to be of service to Equinox Development Properties, Inc. during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify the assumptions of subsurface conditions made for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Florida, LLC

Mark Wright EIT
Geotechnical Project Manager
mwright1@ecslimited.com

John P. Hicks, P.E.
Branch Manager
FL PE No. 83517
jhicks@ecslimited.com

JOHN P. HICKS LICENSE No. 83517 STATE OF FLORIDA PROFESSIONAL ENGINEER

MW/JPH/das

TABLE OF CONTENTS

EXECUTIVE SUMMARY 3
1.0 INTRODUCTION 5
1.1 General 5
1.2 Scope of Services 5
1.3 Authorization 6
2.0 PROJECT INFORMATION 7
2.1 Project Location 7
2.2 Past Site History/Uses 7
2.3 Current Site Conditions 7
2.4 Proposed Construction 7
3.0 FIELD EXPLORATION 9
3.1 Field Exploration Program 9
3.1.1 Test Borings 9
3.2 Regional/Site Geology 10
3.3 Karst Geology 10
3.4 Soil Survey Mapping 11
3.5 Subsurface Characterization 12
3.6 Groundwater Observations 13
4.0 LABORATORY TESTING PROGRAM 15
4.1 Visual Classification 15
4.2 Index Testing 15
5.0 DESIGN RECOMMENDATIONS 16
5.1 Building Design 16
5.2 Foundations 16
5.3 Stormwater Management System Design Parameters 17
5.4 Pavement Design Considerations 19
6.0 SITE CONSTRUCTION RECOMMENDATIONS 21
6.1 Subgrade Preparation 21
6.1.1 Stripping and Subgrade Preparation 21
6.1.2 Proofrolling 21
6.2 Earthwork Operations 22
6.2.1 Structural Fill Materials 22
6.3 Utility Installations 23
6.4 General Construction Considerations 24
6.5 Construction Observation and Testing 24
7.0 CLOSING 25

APPENDICES

Appendix A – Diagrams

- Site Location Diagram
- Boring Location Diagram

Appendix B – Field Operations

- Reference Notes for Boring Logs
- Boring Logs (B-1 through B-19)
- Cross Section A-A'
- Cross Section B-B'
- Cross Section C-C'

Appendix C – Laboratory Testing

- Laboratory Testing Results Summary

EXECUTIVE SUMMARY

The following paragraphs provide a brief discussion of our findings and recommendations. Please refer to the complete report for more detailed discussion.

ECS Florida, LLC (ECS) has completed the subsurface exploration for the proposed Tuskawilla Retail Development (approximately 9.95 acres in size) located at 170 Tuskawilla Road in Winter Springs, Seminole County, Florida. The project information summarized below is based exclusively on the information made available to us by your group at the time of this report. Our findings, conclusions and recommendations are summarized below.

PROJECT INFORMATION:

- Site Location : 170 Tuskawilla Road in Winter Springs, Seminole County, Florida
- Building Scope: Four (4) one-story retail structures & two (2) out parcel buildings
- Building Type: Concrete Masonry Unit (CMU) and steel framed structures.
- Assumed Loads: Max. Column loads = 80 kips, Max. wall loads = 5 klf
- Earthwork: Estimated fills of up to 3 feet and cuts up to 10 feet (pond area)
- SWM Facility: Two (2) dry ponds, one (1) wet pond and five (5) exfiltration systems

SUBSURFACE CONDITIONS:

- Field Exploration: 19 SPT borings drilled within the subject property limits to the depths ranging between 10 feet and 20 feet below the existing ground surface.
- Site Conditions: Heavily wooded except in the north eastern corner of the property, where there is an existing structure with associated parking area.
- Probable Fill: Not encountered
- Natural Soils: SAND (SP), and SAND WITH SILT (SP-SM)
- Refusal Materials: Not encountered within the depths of borings
- Groundwater: Encountered between 3.5 feet and 5.5 feet below the ground surface at the boring locations, seasonal high water table is anticipated to be between 2.5 feet and 5 feet below the existing grades.

GEOTECHNICAL & CONSTRUCTABILITY CONSIDERATIONS

- **Wet fill soils:** We anticipate soils excavated from the proposed pond area will be used for structural fill across the site for grading purposes. Due to a higher groundwater table, soils anticipated to be used as structural fill are expected to be wet. Wet soils will require a drying period prior to being compacted for structural fill. Due to the granular nature of the material encountered; however, we anticipate that the soils should dry relatively quickly if spread during hot/dry conditions.

- **High groundwater table:** High groundwater was observed across the site and will need to be considered with respect to the dewatering of utility excavations.

- **Existing Structure:** An existing structure was noted within the eastern portion of the site. The existing structure and its associated subsurface foundations and utilities should be removed prior to the placement of structural fill or foundations for the proposed building areas.

PRELIMINARY DESIGN & CONSTRUCTION RECOMMENDATIONS:

- Shallow foundations:

Max. Net Allow. Bearing Pressure	= 3,000 psf
Min. Exterior (Unheated) Embedment	= 18 inches
Min. Interior (Heated) Embedment	= Minimum 24 inches
Slab Subgrade Modulus:	= 100 pci

Based on the information provided to us, it should be noted that the recommendations made in our report are preliminary in nature. Therefore, a final geotechnical exploration report meeting regulatory standards may be necessary in future for final design recommendations. The recommendations made in our report are based on the loading assumptions noted above. A final site development plan has not been provided to us. Once the final site plan is developed along with the proposed grading information, we recommend that our office be contacted to review these items and propose a final geotechnical scope of exploration. Final recommendations regarding the bearing capacity, settlements, and foundation design must be made after completion of a final geotechnical exploration program.

This summary should not be considered apart from the entire text of the report with all the qualifications and considerations mentioned herein. Details of our conclusions and recommendations are discussed in the report text.

1.0 INTRODUCTION

1.1 GENERAL

The purpose of this study was to provide geotechnical information for the design of structure foundations and construction consideration and recommendations for the proposed Tuskawilla Retail Development. This report includes preliminary recommendations regarding the new buildings, pavements, stormwater management area, and associated utilities. This report contains the results of our subsurface explorations and laboratory testing programs, site characterization, engineering analyses, and recommendations for the design and construction of the proposed development. The recommendations developed for this report are based on project information supplied by Equinox Development Properties, Inc.

1.2 SCOPE OF SERVICES

In order to explore the subsurface soil conditions and to determine the depth and character of soils on this site, a total of nineteen (19) soil test borings were performed within the proposed area of the development. A Conceptual Sketch dated August 8, 2018 of the proposed development prepared by Kimley-Horn and Associates, Inc. was provided prior to the field exploration and a revised Conceptual Sketch dated October 30, 2018 was provided **after** the field exploration had been completed. **Additionally, this report has been revised based on an updated Overall Site Plan dated November 3, 2020 prepared by Marcus Gieger with Kimley-Horn**. The Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc. was also provided at the time of writing this report.

Conclusions and recommendations contained in this report are based upon these soil borings, a site reconnaissance, laboratory test results of boring samples, and provided plans. This preliminary report discusses our exploratory and testing procedures, presents our findings and evaluations and includes the following:

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of area and site geologic conditions.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- Copies of our soil test boring logs.
- Preliminary recommendations for site preparation and construction of compacted fills, including an evaluation of on-site soils for use as compacted fills and delineation of potentially unsuitable soils and/or soils exhibiting excessive moisture at the time of sampling.
- Evaluation and recommendations relative to groundwater control.
- Preliminary foundation recommendations for the proposed retail buildings.
- Preliminary recommendations for pavement design.
- Stormwater management design parameters for the ten (10) proposed stormwater management facilities anticipated within the property.

The recommendations contained herein were developed from the data obtained in the soil test borings, which indicate subsurface conditions at these specific locations at the time of exploration. Soil conditions may vary between the borings. If during the course of construction variations appear evident; the Geotechnical Engineer should be informed so that the conditions can be addressed.

1.3 AUTHORIZATION

Our services were provided in accordance with our Proposal No. 24:12884-GP dated August 17, 2018 and as authorized by you on September 22, 2018, and includes the Terms and Conditions of Service outlined with our Proposal/Contract between ECS Florida, LLC and Equinox Development Properties, Inc.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION

The subject site is located to the southwest of the intersection between Tuskawilla Road and State Road 434, more specifically at 170 Tuskawilla Road in Winter Springs, Seminole County, Florida. The subject property (approximately 9.95 acres in size) is pentagonal in shape, generally bounded to the north by State Road 434, to the east by Tuskawilla Road, to the south by a vacant property and to the west by a residential community. A Conceptual Sketch is included below and within Appendix A of this report.



Figure 2.1.1 – Approximate Site Location

2.2 PAST SITE HISTORY/USES

A review of available aerial imagery dated back to 1980 and our knowledge of the site, we understand that the site is primarily heavily wooded with a retail building located within the north eastern corner of the proposed area of development which appears to have been built in either the 1980s or 1990s.

2.3 CURRENT SITE CONDITIONS

Based on our site reconnaissance and review of the topographic data, provided by you from Shannon Surveying Inc., dated October 15, 2018, the site is sloping from the south downward to primarily the northwestern portion of the proposed development with existing ground surface elevations varying approximately between EL. +46 feet-datum and EL. +42.5 feet-datum. A boring location survey was not performed as a part of our scope.

2.4 PROPOSED CONSTRUCTION

Our understanding of the proposed construction is based on information provided by Equinox Development Properties, Inc and the Overall Site Plan dated November 3, 2020 prepared by Marcus Gieger with Kimley-Horn. Based on our understanding of the project, the proposed

construction would likely consist of multiple structures including, four (4) one-story retail buildings (approximately between 4,280 and 19,209 square feet, respectively) two (2) out parcel building (approximately 2,325 and 3,056 square feet). Site features are to include a stormwater , one (1) wet pond, two (2) dry retention pond areas within the southern portion of the site, and the associated paved parking areas with five (5) underground exfiltration systems within the northern portion of the property, driveway lanes, and utilities.

We would anticipate based on current site grading as well surrounding grading for adjacent commercial properties that the proposed structures may be supported on conventional shallow foundations bearing at an assumed elevation of EL. +42 feet-datum on natural soils. We assumed that finished floor elevation of the proposed structures would be approximately at EL. +44 feet-datum. Based on the existing and proposed grades, we expect maximum fills for the structures to be on the order of 3 feet given the current conceptual drawings for the development. We understand structural loads for the retail structures will be up to approximately 80 kips for column loading, and we have assumed continuous wall loading up to about 5 kips per linear foot.

3.0 FIELD EXPLORATION

3.1 FIELD EXPLORATION PROGRAM

The field exploration was planned with the objective of providing an assessment of the site, characterizing the project site in general geotechnical and geological terms and to evaluate subsequent field and laboratory data to assist in the determination of geotechnical recommendations.

3.1.1 Test Borings

Prior to performing the subsurface exploration, underground utilities were located through the Sunshine State One-Call system. The soil test borings were located in the field by an ECS representative utilizing a hand held GPS unit as reference. The Boring Location Diagram in the Appendix A indicates the approximate location of the borings. The soil test borings were completed with the following drilling and sampling equipment:

- ATV drill rig
- Mud Rotary drilling utilizing 3 ¼ inch hollow-stem augers
- Manual hammer
- Conventional split-spoon soil sampler

Representative soil samples were obtained by means of the split-barrel sampling procedure in accordance with ASTM Specification D 1586. In this procedure, a two-inch O.D., split-spoon sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler through the final 12-inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) N-value and is indicated for each sample on the boring logs (attached in Appendix B). The SPT values can be used as a qualitative indication of the in-place relative density of cohesionless soils, and as a relative indication of consistency in cohesive soils. This indication is qualitative, since many factors can significantly affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies.

A field log of the soil encountered at each boring was maintained by the drilling crew. After recovery, each geotechnical sample was removed from the sampler and visually classified by the driller. Representative portions of each sample were then sealed in containers and transported to our laboratory in Orlando, Florida for further visual examination and laboratory testing. After completion of the drilling operations, the boreholes were backfilled with auger cuttings.

Please note that ground surface elevations noted on our boring logs were interpolated from the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc.; however, we recommend that the boring locations are surveyed for elevations to extend the usefulness of the subsurface information obtained.

3.2 REGIONAL/SITE GEOLOGY

Based on the Geologic Map of Florida, Central Florida geologic conditions can generally be described in terms of three basic sedimentary layers. The near-surface layer is primarily composed of sands containing varying amounts of silt and clay fines that are underlain by a layer of clay, clayey sand, locally referred to as the "Hawthorn Group" which is underlain by phosphate, and limestone. The thickness of these strata varies throughout Central Florida. In general, the surficial sands typically extend to depths of 40 feet to 70 feet below the ground surface, while the "Hawthorn Group" ranges from nearly absent in some locations to thicknesses greater than 100 feet. The limestone formation may be several thousand feet thick.

The groundwater hydrogeology of Central Florida can be described in terms of the nature and relationship of the three basic geologic strata. The near surface and upper stratum are fairly permeable and comprise the water table (unconfined) aquifer. The deep limestone formation of the Floridian aquifer is highly permeable due to the presence of large interconnected channels and cavities throughout the rock. The Floridian aquifer is the primary source of drinking water in Central Florida. These two permeable strata are separated by the relatively low permeability clays in the "Hawthorn Group." The amount of groundwater flow between the two aquifer systems is dependent on the thickness and consistency of the "Hawthorn Group" clay confining beds which, as previously stated, varies widely throughout Central Florida. The following Figure 3.2.1 shows the regional geologic map.

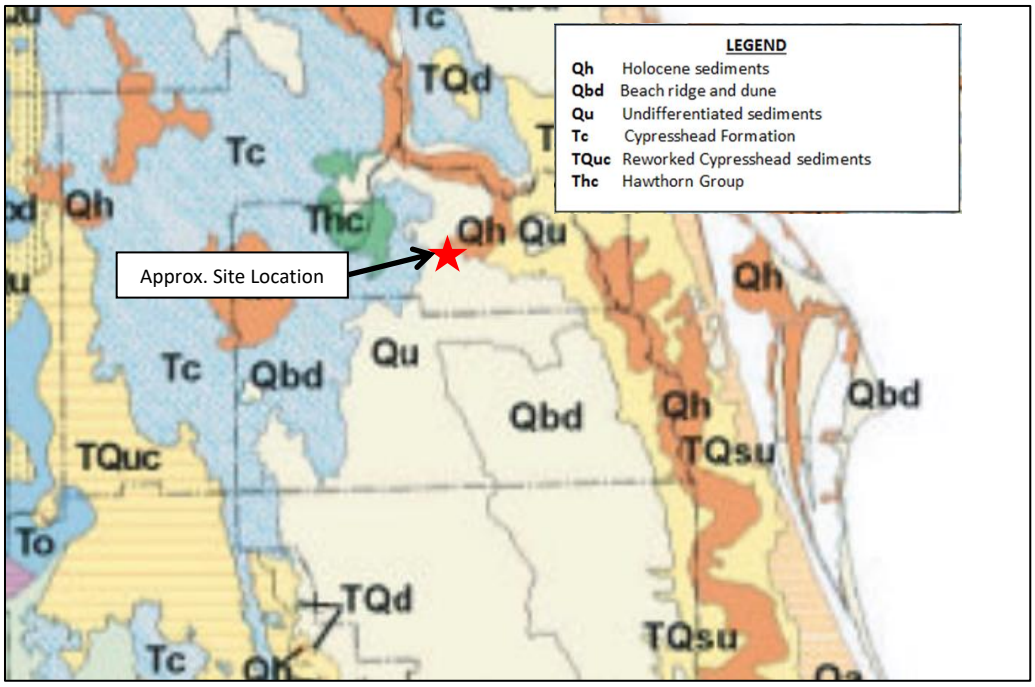


Figure 3.2.1 Regional Geologic Map (Geologic Map of Florida, 2001)

3.3 KARST GEOLOGY

Areas within Central Florida are known to have karst geology. Karst terrain is characterized by voids, soil domes, soil raveling, interrupted drainage, disappearing streams, and topographical

features such as sinkholes and closed depressions. These features are the result of the dissolution of soluble bedrock such as limestone by groundwater and/or the infiltration of surface water.

As water enters fractures, bedding planes, and other bedrock discontinuities within soluble bedrock, it slowly dissolves the rock and enlarges the discontinuities. Over geologic time, this results in the formation of solution channels or underground passages and ravines which may develop into surficial manifestations such as sinkholes and closed depressions. The dissolution of bedrock is generally a very slow process. However, soil may be eroded or raveled into the enlarged bedrock fractures, creating soil domes. Eventually, soil in these features can be lost through groundwater movement, resulting in surface depressions and potential sudden ground subsidence.

The soils derived from and overlying the carbonate bedrock are typically a clayey and silty soil with varying amounts of sand and rock fragments. The bedrock within the general geographic region is characterized by jointed and faulted soluble carbonate lithologies interbedded with non-carbonate lithologies. These carbonate formations are generally moderately to highly solution prone.

The degree of weathering or solutioning is often controlled by lithological variations and structural orientations. Where structural discontinuities intersect or in areas which are highly fractured, solutioning is intensified creating low areas and seams that are typically filled with residual clayey soils. Conversely, more competent, high areas represent slightly- to non-fractured lithologies that are often coarser grained and only slightly solution prone.

The underlying carbonate formations of the project geographic area are susceptible to Karst-related sinkhole development. Contributing characteristics and factors controlling the development include subsurface structural deformation, joint sets, and thick carbonate bedding within the area. Due to the shallow nature of the exploration performed, the borings did not reveal overt signs of soils associated with karst activity or carbonate rocks.

3.4 SOIL SURVEY MAPPING

Based on the Soil Survey for Seminole County, Florida by the US Department of Agriculture (USDA) Soil Conservation Service the predominant predevelopment soil type(s) at the site is identified and a summary of characteristics of this soil series is included below in Table 3.4.1.

Table 3.4.1 Soil Survey

Soil Type	Constituents	Drainage Class	Water Table Depth
20—Myakka and EauGallie	Fine sand	Poorly drained	0.5 to 1.5 feet
24—Paola-St. Lucie sands, 0 to 5 percent slopes	Sand	Excessively drained	-
31—Tavares-Millhopper complex, 0 to 5 percent slopes	Fine sand and sandy loam	Moderately well drained	3.5 to 6 feet

Soil mapping of the site vicinity showing soil numbers (20, 24, and 31) are presented in Figure 3.4.1 below.



Figure 3.4.1 Site Soil Survey

3.5 SUBSURFACE CHARACTERIZATION

The site subsurface conditions were evaluated with 19 SPT borings advanced to the depths ranging between 10 feet and 20 feet below the existing ground surface at the approximate locations shown on the Boring Location Diagram in Appendix A.

The quantity of borings, boring locations, and drilling depths were developed by ECS prior to performing subsurface exploration based on the type and location of the proposed development from the Kimley-Horn Conceptual Sketch dated August 8, 2018.

The subsurface exploration at each boring location indicated generally SAND (SP) and SAND WITH SIL (SP-SM) from existing grade to the maximum termination of the borings (20 feet below existing grade). The soil auger was able to reach the termination depth at each of the borings. SPT N-values ranged from 5 to 19 blows per foot (bpf). The loose soils encountered were primarily observed within the upper 10 feet of the subsurface profiles

The subsurface conditions at each boring are summarized in Table 3.5.1. The subsurface conditions presented in Table 3.5.1 and shown on the Boring Logs should be considered approximate, based on interpretation of the exploration data using normally accepted geotechnical engineering judgments. It should be noted that transitions between different soil strata are typically less distinct than what is shown on the exploration records. Subsurface conditions between the actual boring locations will vary.

Table 3.5.1 Subsurface Stratigraphy

Approximate Depth Range (ft)	Approximate Elev. Range (ft) (1)	Stratum	Description	Ranges of SPT(2) N-values (bpf)
0 – 20(3)	+45.5 to +22.5	I	SAND (SP), SAND WITH SILT (SP-SM)	5 to 19

Notes: (1) Please note elevations at the boring locations were estimated based upon the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc. and should be considered approximate.
(2) Standard Penetration Test.
(3) Maximum Termination Depth.

3.6 GROUNDWATER OBSERVATIONS

Groundwater levels were measured in our borings as noted on the soil boring logs in Appendix B. The groundwater table was measured approximately between 3.5 feet and 5.5 feet below the existing grades at the boring locations within the drilling depths at the time of our exploration. No further groundwater measurements were made subsequent to drilling operations.

Variations in the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors. The groundwater will fluctuate seasonally depending upon local rainfall. The rainy season in Central Florida is normally between June and September. Based upon our site specific field data, our review of the USDA Soils Survey of Seminole County, the topography of the area, the expected regional hydrogeology and our experience in the area, we estimate the seasonal high groundwater levels likely to be encountered approximately between 2.5 feet and 5 feet below existing grades at the boring locations. Please refer to the individual boring logs presented in Appendix B for boring specific groundwater levels.

Variations in the location of the long-term groundwater level may occur as a result of changes in precipitation, evaporation, surface water runoff, and other factors not apparent at the time of this exploration. The summary of groundwater conditions within the boring locations are provided below in Table 3.6.1.

Table 3.6.1 Summary of Groundwater Conditions

Boring ID	Approximate Ground Surface Elevation (ft-datum) *	Encountered Ground Water Table Depth (ft)	Encountered Groundwater Table Elevation (ft-datum)	Estimated Seasonal High Ground Water Table Depth (ft)	Estimated Seasonal High Ground Water Elevation (ft-datum)
B-1	44	4.5	39.5	3.5	40.5
B-2	44	5	39	4	40
B-3	43.5	3.5	40	2.5	41
B-4	44.5	4.5	40	3.5	41
B-5	45	5.5	39.5	4.5	40.5
B-6	45.5	5	40.5	4	41.5
B-7	42.5	4	38.5	3	39.5
B-8	43	4.5	38.5	3.5	39.5
B-9	45	5.5	39.5	5	40
B-10	45.5	5.5	40	5	40.5
B-11	45	5.5	39.5	4.5	40.5
B-12	44	5.5	38.5	4.5	39.5
B-13	44.5	4	40.5	3	41.5
B-14	45	5	40	4	41
B-15	45	5	40	4	41
B-16	45	5	40	4	41
B-17	43.5	4.5	39	3.5	39.5
B-18	44.5	4.5	40	4	40.5
B-19	45	4	41	3.5	41.5

Note: * Elevations at the boring locations were estimated using the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc.

4.0 LABORATORY TESTING PROGRAM

The laboratory testing performed by ECS for this project consisted of selected tests performed on samples obtained during our field exploration operations. The following paragraphs briefly discuss the results of the completed laboratory testing program.

4.1 VISUAL CLASSIFICATION

Each soil sample from the test borings was visually classified on the basis of texture and plasticity in accordance with the Unified Soil Classification System (USCS) and ASTM D 2488 (Description and Identification of Soils-Visual/Manual Procedures). After classification, the various soil types were grouped into the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs are approximate; in situ, the transitions may be gradual.

The soil samples from our current exploration will be retained in our laboratory for a period of two months after the subsurface exploration program is completed, after which they will be discarded unless other instructions are received as to their disposition.

4.2 INDEX TESTING

The index testing performed by ECS for this project consisted of selected tests performed on samples obtained during our field exploration operations. Index property tests were performed on representative soil samples obtained from the test borings in order to aid in classifying soils according to the Unified Soil Classification System (USCS) and to quantify and correlate engineering properties. The index testing program included natural moisture content tests (ASTM D 2216) and percent passing the No. 200 sieve (ASTM D 6913). The results of the index testing results conducted are included in Appendix C of this report.

5.0 PRELIMINARY DESIGN RECOMMENDATIONS

The following sections provide preliminary recommendations for foundation design, pavements and the stormwater management facilities. Loose soils and shallow groundwater condition are likely to be encountered near-surface. The existing building, associated asphalt pavement and utilities within the eastern portion of the property will need to be removed prior to proposed development. Based on our subsurface exploration, the proposed site is feasible given the preliminary recommendations provided within this report. Details associated with the preliminary geotechnical recommendations are provided below.

5.1 BUILDING DESIGN

Based upon information provided at the time this report was prepared, the site is feasible for the proposed development from a geotechnical perspective**.** It is our professional opinion that subsurface conditions are not likely to significantly impact the construction of the proposed development. However, a temporary dewatering program during the installation of the foundations may be necessary based upon the final grades especially during the rainy season given the shallow estimated seasonal high groundwater level.

As previously noted, the site appears to consist of an existing structure within the eastern portion of the property. Uncontrolled fill soils which could contain construction debris and organics from in-place or placed topsoil grubbing operations, while not encountered during this exploration, may be present within the depths of excavation. Special attention should be taken to observe such conditions, if encountered during the foundation excavations. If uncontrolled fill soils are observed, we recommend test pits be performed within the vicinity of the foundation during a final geotechnical exploration in order to access the potential extents and depths of these materials.

All asphalt pavement, structural and site components (foundation, slabs, and utilities) of the existing facility located within the proposed building pad or canopy areas should be removed prior to construction; however, the existing limerock may remain in place if determined to be suitable based upon the design criteria, laboratory testing and satisfactory proofroll testing as determined by the Geotechnical Engineer of Record.

5.2 FOUNDATIONS

We anticipate that the proposed structures for this site can be supported on a shallow foundations after adequate site preparation procedures. Upon successful completion of the recommended site preparation procedure, the anticipated structures would be able to be supported on shallow foundations sized to exert a maximum allowable soil bearing pressure of 3,000 pounds per square foot (psf).

The estimate of maximum allowable bearing pressure is based on assumed column and wall foundation loads of 80 kips and 5 kips per linear foot, respectively bearing at an elevation of approximately EL. +42 feet-datum on natural or controlled, compacted fill soils. If loads are higher than assumed, ECS should be contacted to review the foundation recommendations. Based on the Conceptual Sketch dated October 30, 2018 prepared by Kimley-Horn and existing site grades, we assumed the final finished floor elevation of the proposed structure to be approximately at EL. +44 feet-datum. The estimate of allowable bearing pressure may be refined based on more

precise estimates of loads (provided by the structural engineer) and proposed site grades. The foundations should be designed based on the maximum load which could be imposed by all loading conditions.

All shallow foundations should be embedded at least 18 inches below lowest adjacent grade. Further, we recommend minimum foundation widths of 18 and 24 inches of strip and square footings, respectively, even though the maximum allowable soil bearing pressure may not be developed in all cases.

Post-construction settlements of the structure will be influenced by several interrelated factors, including: (1) strength and compressibility characteristics of the subsurface; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the contractor. Our settlement estimates for the structure are based on the use of the earthwork construction techniques as recommended in Section 6.2 of this report. Any deviation from these recommendations could result in an increase in the estimated post-construction settlements of the structure.

Assuming the site preparation procedure as outlined is followed; we estimate that total post construction settlements of the structure are likely to be 1 inch or less. If the recommended earthwork construction techniques outlined in this report are followed, differential settlements of 0.75 inch or less should be anticipated. The above settlement estimates are based on the assumed maximum structural loads, recommended maximum allowable bearing pressure, and the field data.

5.3 STORMWATER MANAGEMENT SYSTEM DESIGN PARAMETERS

It is our understanding that the proposed development is likely to include a proposed three (3) stormwater dry retention pond areas within the southern portion of the proposed development and seven (7) exfiltration systems within the northern portion of the site. Based on the laboratory test results obtained from the borings performed around the underground exfiltration systems areas (B-2 through B-6, B-8, B-9, B-11, B-12, B-14 and B-16), two (2) dry pond areas (B-1, B-7, and B-13) and wet pond area (B-18 and B-19), the upper stratum is classified predominantly as Fine SAND (SP) and Fine SAND with SILT (SP-SM) to the maximum termination of depth of borings (20 feet below existing grades).

The groundwater table was encountered between approximately 4 feet to 5.5 feet below the existing grades at the boring locations within the drilling depths at the time of our exploration, and therefore the seasonal high groundwater level is estimated to between approximately between 3 feet to 5 feet below existing grades.

Table 5.3.1 outlines the recommended design parameters for the proposed stormwater dry pond area within the southern portion of the property.

Table 5.3.1 Dry Stormwater System Design Subsurface Input Design Parameters

Stormwater System ID	Boring ID	Average Seasonal High Ground Water Table Elevation (ft-datum)*	Average Base of Aquifer Elevation (ft-datum) *	Fillable Porosity	Average Horizontal Saturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kh (ft/day)	Average Vertical Unsaturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kv (ft/day)
SMA-A.1	B-1 & B-7	40.0	34.0	0.25	51**	17**
SMA-A.2	B-13	41.5	35.0	0.25		
SMA-C	B-8, B-11, B-14, B-16	40.5	32.6	0.25	51**	17**
SMA-D	B-9 & B-12	39.8	29.5	0.25	51**	17**
SMA-E	B-6 & B-9	40.8	29.2	0.25	51**	17**
SMA-F	B-3	41	22.5	0.25	51**	17**
SMA-G	B-2, B-3, B-5, B-6 & B-8	40.5	27.9	0.25	55	37
					51**	17**

Notes: : * Elevations at the boring locations were estimated using the available Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc., and therefore these elevations should be considered approximate to the closest half foot.

** Average Horizontal Saturated Hydraulic Conductivity of Mobilized Surficial Aquifer (K_h) and Average Vertical Unsaturated Hydraulic Conductivity of Mobilized Surficial Aquifer (K_v) factored values selected by Kimley Horn for recovery analysis..

Table 5.5.1 Stormwater System Design Parameters

Stormwater System ID	Boring ID	Average Seasonal High Ground Water Table Elevation (ft-datum)*	Average Wet Season Groundwater Table Elevation (ft-datum) *	Average Normal Seasonal Low Ground Water Table Elevation (ft-datum) *	Average Horizontal Saturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kh (ft/day)	Average Vertical Unsaturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kv (ft/day)
SMA-B	B-18 & B-19	41.0	40.5	39.5	51	34

Notes: : * Elevations at the boring locations were estimated using the available Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc., and therefore these elevations should be considered approximate to the closest half foot.

Please note that the hydraulic conductivity values presented in table above do not incorporate any factors of safety, except as otherwise noted. Appropriate factors of safety will have to be applied during design and drawdown analysis. Moreover, please note that parameters presented in the table above are based on assumptions made to ground surface elevations noted on our boring logs are approximately based on the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc. our surface elevations with one-foot contour intervals; therefore, should be considered approximate to the closest half foot. We recommend that boring location survey be performed by a professional surveyor to extend the usefulness of the subsurface information obtained.

ECS can perform a baseflow/groundwater seepage analysis once the stormwater pond configurations have been established. The stormwater pond bottom and side slopes should be stabilized according to applicable Water Management district and local municipality guidelines.

5.4 PAVEMENT DESIGN CONSIDERATIONS

As discussed in the aforementioned Design Considerations Section 5.0, the subsurface conditions are suitable for the proposed pavement design.

General Recommendations: Our scope of services did not include extensive sampling and Limerock Bearing Ratio (LBR) testing of existing subgrade or potential sources of imported fill for the specific purpose of a detailed pavement analysis. Instead, we have assumed pavement-related design parameters that are considered to be typical for the area soil types and roadway type as per the "FDOT Standards & Specifications". The recommended pavement thicknesses presented in this report section are considered typical and minimum for the assumed parameters in the general site area. We understand that budgetary considerations sometimes warrant thinner pavement sections than those presented. However, the client, the owner, and the project designers should be aware that thinner pavement sections may result in increased maintenance costs and lower than anticipated pavement life. We recommend the following pavement section designs included in Table 5.6.1 below.

Table 5.4.1 Pavement Sections

	Asphalt		Concrete	
Component	**Standard**	**Heavy**	**Standard**	**Heavy**
Stabilized Subgrade	12"	12"	12"	12"
Base Course	6"	8"	N/A	N/A
Surface Course	1.5"	2"	5"	6"

All pavement subgrades should be prepared in accordance with the recommendations presented in the section entitled Earthwork Operations.

In areas where Portland cement concrete pavement is planned, the concrete should be placed upon a minimum of 12 inches of compacted, free draining material and compacted to 98 percent of the Modified Proctor maximum dry density (ASTM D1557).

In areas where asphaltic concrete pavements are used, we suggest stabilizing the subgrade materials to a minimum Florida Bearing Value (FBV) of 75 pounds per square inch (psi). As an alternate for the FBV, materials can have a LBR of 40 percent. All stabilized subgrade materials should be compacted to 98 percent of the Modified Proctor (ASTM D-1557) maximum dry density and meet specification requirements for Type B or Type C Stabilized Subgrade by the Florida Department of Transportation (FDOT). The stabilized subgrade may consist of imported material or a blend of on-site soils and imported materials. If a blend is proposed, we recommend that the contractor performs a mix design to find the optimum mix proportions.

Base Course: Based on the groundwater conditions encountered at the subject property, it is our professional opinion that crushed concrete or limerock are likely to be the economical and feasible base course options for this project.

Limerock should follow a minimum LBR of 100 percent and should be mined from an FDOT approved source. Place limerock in maximum six-inch lifts and compact each lift to a minimum density of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557).

Crushed concrete should follow the FDOT specification for material qualifications and placement. Place crushed concrete base in maximum 6-inch lifts and compact to a minimum density of 95 percent of the Modified Proctor (ASTM D-1557) maximum dry density according to their specification. Perform compliance testing for the base course to a depth of one foot at a frequency of one test per 5,000 square feet, or at a minimum of two test locations, whichever is greater.

Effects of Groundwater: One of the most critical influences on the pavement performance in Central Florida is the relationship between the pavement subgrade and the seasonal high groundwater level. Roadways and parking areas that have not considered these effects typically exhibit signs of deterioration due to degradation of the base and the base/surface course bond. Regardless of the type of base selected, we recommend that the seasonal high groundwater (SHGWT) and the bottom of the base course be separated by at least 12 inches for crushed concrete and 18 inches for limerock. Please note that a higher separation criterion between SHGWT and bottom of the base course may be required based on reviewing agency indication.

Landscape Drains and Curbing: If needed, where landscaped sections are located adjacent to parking lots or driveways, we recommend that drains be installed around these landscaped sections to protect the asphalt pavement from excess rainfall and over irrigation. Migration of irrigation water from the landscape areas to the interface between the asphalt and the base usually occurs unless landscape drains are installed. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration. The underdrains or strip drains should be routed to a positive outfall at the pavement area catch basins.

It is recommended that curbing around landscaped sections adjacent to parking lots and driveways be constructed with full-depth curb sections. Using extended curb sections which lie directly on top of the final asphalt level, or eliminating curbing entirely, can allow migration of irrigation water from the landscaped areas to the interface between the asphalt and the base. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration.

6.0 SITE CONSTRUCTION RECOMMENDATIONS

6.1 SUBGRADE PREPARATION

6.1.1 Stripping and Subgrade Preparation

The subgrade preparation should consist of stripping vegetation, rootmat, topsoil, any existing fill materials and any other soft or unsuitable materials from the 10-feet expanded building limit and 5-feet expanded pavement limits. Stripping limits should be extended an additional 1 foot for each foot of fill required at the structure's exterior edge. These activities should include removing soft and/or wet soils or otherwise unsuitable surface materials.

It should be anticipated that existing subgrade materials from the site will be loose and wet. A contingency should be included in the budget for isolated undercutting during proofroll operations. In the building areas, the depth of the soft wet soil, if encountered, should be removed to stable soil and replaced with approved structural fill. If the depth of unsuitable material is identified to be deeper than 3 feet below design subgrade in foundation or pavement areas, then alternative pavement subgrade stabilization may be considered. This could consist of excavating down a maximum of 3 feet below the pavement subgrade elevation, placing geogrid (such as Mirafi BXG-11 or approved equivalent), and then placing granular material over the grid to the design subgrade elevation. The actual depth of the undercut and/or remedial approach will vary depending on the conditions and should be evaluated at the time of construction.

The contractor should have a dewatering plan prepared in order to control high groundwater conditions observed on site. The amount and frequency of precipitation may also affect the groundwater conditions. The contractor should make provisions to keep excavations dry during construction to maintain the integrity of the exposed soils and help reduce the potential for otherwise unnecessary remedial work.

Erosion and sedimentation shall be controlled in accordance with Best Management Practices and current state, local, and NPDES requirements. At the appropriate time, we would be pleased to provide a proposal for construction materials testing and NPDES related services.

6.1.2 Proofrolling

Following the stripping operations and prior to the placement of structural fills or structural elements, the exposed subgrade soils should be observed by a geotechnical engineer or their approved representative. Proofrolling using a loaded dump truck, having an axle weight of at least 10 tons, may be used at this time to aid in identifying localized soft or unsuitable materials that should be removed. Any soft or unsuitable material encountered during proofrolling should be removed to a stable subgrade and replaced with an approved backfill compacted to the criteria given below.

Due to the loose soils encountered within this exploration a representative of the Geotechnical Engineer of Record is recommended to be on-site during the proofroll of the building pad areas to confirm the suitability of the natural soils prior to the placement of structural fill or foundations. The natural soils within the building pad areas should be densified with a 20 ton smooth drum roller that should traverse the pads in a perpendicular (orthogonal) pattern using

the maximum vibratory setting prior to commencing proofroll operations and subsequent structural fill placement.

6.2 EARTHWORK OPERATIONS

6.2.1 Structural Fill Materials

After subgrade preparation and observation has been completed and a stable subgrade exists, fill placement may begin. Structural fill materials should not be placed on soils which have been recently subjected to precipitation. Wet soils should be removed prior to the placement of engineered fill, granular sub-base materials, foundation/slab concrete, or paving materials.

Materials used as structural fill for shallow fill areas should consist of approved material classified as SP, SP-SM, SM, SC or more granular, which are free of debris, particles larger than 3 inches in diameter (4-inches for trench/utility backfill), organic inclusions, cinders, ash, or excess moisture. **It should be noted that the soils observed within the proposed dry pond area would be considered suitable for use as structural fill; however, due to the nature of the high groundwater table there should be consideration with respect to a time allowance for these soils to dry prior to compactive effort being applied. Due to the coarse, granular nature of the soils, we would expect the soils to dry relatively quickly during periods of no precipitation.**

Prior to placement of structural fill, representative bulk samples (about 50 pounds) of on-site and off-site borrow should be submitted to ECS for laboratory testing, which will include natural moisture content, grain-size distribution, and moisture-density relationships for compaction. Import materials should be tested prior to being hauled to the site to determine if they meet project specifications.

The structural fill, consisting of suitable on-site soils or off-site granular borrow material, or a mixture thereof, should be placed in essentially horizontal lifts with a maximum loose thickness of 8 inches and moisture conditioned to within $\pm$3 percentage points of the optimum moisture content. Structural fill should be placed and compacted to a minimum compaction of 95% of the maximum dry density in accordance with the Modified Proctor method (ASTM D1557).

Each lift of compacted engineered fill should be tested by a representative of the geotechnical engineer prior to placement of subsequent lifts. Compaction testing should be performed at the rate of at least 1 test per 2,500 square feet for each lift of fill within the building pad and at the rate of at least 1 test per 5,000 square feet for each lift of fill outside of the building pad, with a minimum of 3 tests per lift of fill within the building footprint. The elevation and location of the tests should be accurately identified at the time of fill placement. Areas which fail to achieve the required degree of compaction should be recompacted and retested until minimum compaction is achieved. Failing test areas may require adjustments in moisture content or other suitable remedial activities in order to achieve the required compaction.

The expanded limits of the proposed construction areas should be well defined, including the limits of the fill zones for buildings, pavements, and slopes, etc., at the time of fill placement. Grade controls should be maintained throughout the filling operations.

Compaction equipment suitable to the soil type being compacted should be used to compact the subgrades and fill materials. Sheepsfoot compaction equipment should be suitable for the fine-

grained soils (Clays and Silts). A vibratory steel drum roller should be used for compaction of coarse-grained soils (Sands) as well as for sealing compacted surfaces. In confined areas such as utility trenches, portable compaction equipment and thin lifts of 3 to 4 inches may be required to achieve specified degrees of compaction.

At the end of each work day, all fill areas should be graded to facilitate drainage of any precipitation and the surface should be sealed by use of a smooth-drum roller to limit infiltration of surface water. During placement and compaction of new fill at the beginning of each workday, the contractor may need to scarify existing subgrades to a depth on the order of 4 inches so that a weak plane will not be formed between the new fill and the existing subgrade soils.

Positive site drainage should be maintained during earthwork operations in an effort to maintain the integrity of the site surface soil. When wet, the site soils may degrade quickly with disturbance from contractor operations and will be extremely difficult to stabilize for fill placement. Consequently, the contractor should be prepared to implement aggressive mechanical or chemical drying, depending upon the actual site conditions. We strongly recommend that mass grading for the project be performed during the drier summer months to help facilitate favorable moisture conditions for the site soils. If water must be added to raise the moisture content of the soil, it should be uniformly applied and thoroughly mixed into the soil. In addition to maintaining proper site drainage for the purpose of maintaining the integrity of the site soils, care must be taken to control the surface water flow due to the inherent risks associated with risk for sinkhole development as previously discussed.

6.3 UTILITY INSTALLATIONS

Utility Subgrades and Excavation: The soils encountered in our exploration are expected to be generally suitable for support of utility pipes to include an underground storage tank (UST). The pipe subgrade, especially where existing fill was encountered, should be observed and probed for stability by the testing agency to evaluate the suitability of the materials encountered. Any loose or unsuitable materials encountered at the utility pipe subgrade elevation should be removed and replaced with suitable compacted structural fill or pipe bedding material. Based upon the type of soils and high groundwater table encountered on site, the contractor will need to consider installing trench boxes during deep utility and UST excavations.

Utility Backfilling: The granular bedding material should be at least 4 inches thick, but not less than that specified by the project drawings and specifications. Fill placed for support of the utilities, as well as backfill over the utilities, should satisfy the requirements for structural fill given in this report. Compacted backfill should be free of topsoil, roots, ice, or any other material designated as unsuitable. The backfill should be moisture conditioned, placed, and compacted in accordance with the recommendations of this report. Where the utility and UST will be located below water, the contractor should be aware of potential buoyancy and tie down the pipes or UST structure. In addition, soil backfill will not be able to be compacted. In this case, backfill can consist of FDOT 57 stone to approximately 1 foot over the water level, a fabric separator placed, followed by compacted fill to design subgrade.

Utility Excavation Dewatering: Groundwater will likely be encountered for UST and utility excavations. Depending on the amount of controlled fill and the depth of the utility, pumping from the excavations may not be enough for the installation of the utility and UST. Well points

would need to be considered if localized dewatering equipment such as sump pumps are unable to control water during the installation of the utilities and UST. It is expected that removal of perched water which seeps into excavations could be accomplished by pumping from sumps excavated in the trench bottom and which are backfilled with FDOT Size No. 57 Stone or open graded bedding material. Should water conditions beyond the capability of sump pumping be encountered, the contractor should submit a Dewatering Plan in accordance with project specifications.

6.4 GENERAL CONSTRUCTION CONSIDERATIONS

Site Drainage and Surface Water Control: Adequate temporary and permanent control of surface water runoff will be required in order to allow site access, grading and construction to proceed. Standing water or ice should be removed from the completed building pad and pavement subgrades as soon as practical after each precipitation event without damaging the subgrade throughout the construction period. This may include the use of temporary under-drains, sump pits and pumps, plowing, or other means. In addition, the building pad and pavement subgrades should be maintained on a regular basis to grade out any ruts or low points where water may accumulate, and to aerate and/or re-compact any areas disturbed by weather or construction activities. The responsibility for this maintenance role should be clearly defined in the contract documents.

Subgrade Protection: Measures should also be taken to limit site disturbance, especially from rubber-tired heavy construction equipment, and to control and remove surface water from development areas, including structural and pavement areas. It would be advisable to designate a haul road and construction staging area to limit the areas of disturbance and to prevent construction traffic from excessively degrading sensitive subgrade soils and existing pavement areas. Haul roads and construction staging areas could be covered with excess depths of aggregate to protect those subgrades. The aggregate can later be removed and used in pavement areas.

Excavation Safety: Cuts or excavations associated with utility excavations may require forming or bracing, slope flattening, or other physical measures to control sloughing and/or prevent slope failures. Contractors should be familiar with applicable OSHA codes to ensure that adequate protection of the excavations and trench walls is provided.

Erosion Control: Install soil erosion and sedimentation control devices, as well as temporary stormwater management facilities, as specified by Site/Civil Engineer. Maintain positive drainage conditions throughout construction, avoiding unnecessary ponding of stormwater in excavations or low areas of the site. Seal-roll exposed soil or subgrade surfaces prior to rain events, and promptly remove any standing water immediately afterwards.

6.5 CONSTRUCTION OBSERVATION AND TESTING

Regardless of the thoroughness of a geotechnical engineering study, there is always a possibility that subsurface conditions between test borings may be different from those encountered at the test boring locations, that conditions are not as anticipated by the designers, or that the demolition or construction process has altered the subsurface conditions. Therefore, geotechnical engineering construction observation should be performed under the supervision of a qualified

Geotechnical Engineer who is familiar with the intent of the recommendations presented in this report. Such observation services are recommended to evaluate whether the conditions anticipated in the design actually exist, or whether the recommendations presented in the report should be modified where necessary.

7.0 CLOSING

The report has been prepared for the exclusive use of Equinox Development Properties Inc., and their design team. ECS has prepared this report of findings, evaluations, and recommendations to guide geotechnical-related design and construction aspects of the project.

The description of the proposed project is based on information provided to ECS by Equinox Development Properties Inc. If any of this information is inaccurate, either due to our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted immediately in order that we can review the report in light of the changes and provide additional or alternate recommendations as may be required to reflect the proposed construction.

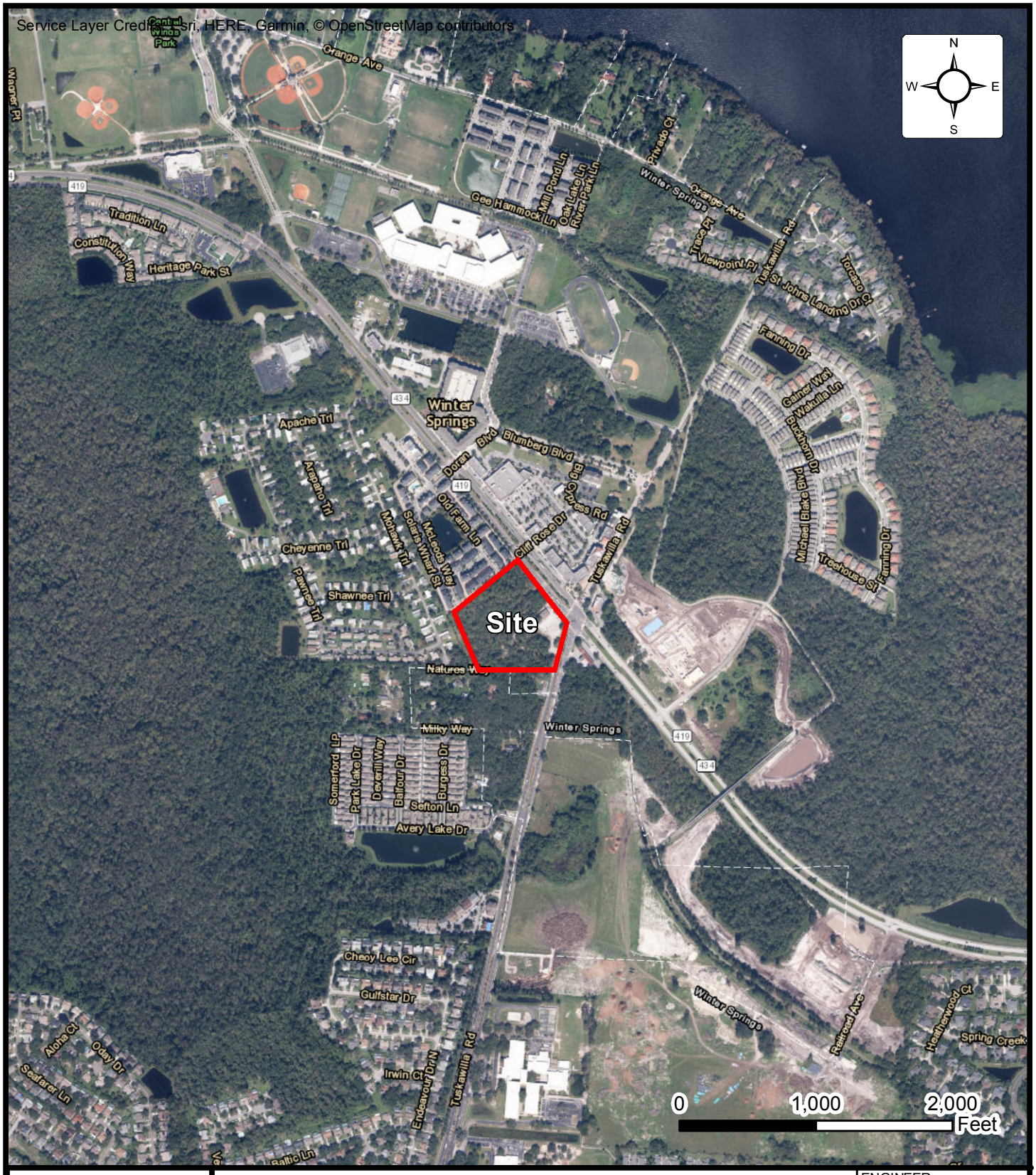
We recommend that ECS be allowed to review the project's plans and specifications pertaining to our work so that we may ascertain consistency of those plans/specifications with the intent of the geotechnical report.

Field observations, monitoring, and quality assurance testing during earthwork and foundation installation are an extension of and integral to the geotechnical design recommendation. We recommend that the owner retain these quality assurance services and that ECS be allowed to continue our involvement throughout these critical phases of construction to provide general consultation as issues arise. ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

The scope of this investigation was limited to the evaluation of the load-carrying capabilities and load stability of the soils and bedrock. Oil, hazardous waste, radioactivity, irritants, pollutants, radon or other dangerous substances and conditions were not the subject of this study. Their presence and/or absence are not implied, inferred or suggested by this report or results of this study.

APPENDIX A – Diagrams

Site Location Diagram
Boring Location Diagram



Site Line Location Diagram
TUSKAWILLA RETAIL DEVELOPMENT

170 TUSKAWILLA ROAD, WINTER SPRINGS, FL

EQUINOX DEVELOPMENT PROPERTIES, INC.

ENGINEER	JPH
SCALE	1 " = 1000'
PROJECT NO.	6366
SHEET	1 OF 1
DATE	11/8/2018



Boring Location Diagram

EQUINOX DEVELOPMENT PROPERTIES, INC.

TUSKAWILLA RETAIL DEVELOPMENT

170 TUSKAWILLA RD, WINTER SPRINGS, FL

ENGINEER	JPH
SCALE	AS NOTED
PROJECT NO.	24:6366
SHEET	1 OF 1
DATE	12/11/2020

APPENDIX B – Field Operations

Reference Notes for Boring Logs
Boring Logs (B-1 through B-19)
Cross Section A-A'
Cross Section B-B'
Cross Section C-C'

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]	
	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
	FILL[3] MAN-PLACED SOILS
	GW **WELL-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GP **POORLY-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GM **SILTY GRAVEL** gravel-sand-silt mixtures
	GC **CLAYEY GRAVEL** gravel-sand-clay mixtures
	SW **WELL-GRADED SAND** gravelly sand, little or no fines
	SP **POORLY-GRADED SAND** gravelly sand, little or no fines
	SM **SILTY SAND** sand-silt mixtures
	SC **CLAYEY SAND** sand-clay mixtures
	ML **SILT** non-plastic to medium plasticity
	MH **ELASTIC SILT** high plasticity
	CL **LEAN CLAY** low to medium plasticity
	CH **FAT CLAY** high plasticity
	OL **ORGANIC SILT or CLAY** non-plastic to low plasticity
	OH **ORGANIC SILT or CLAY** high plasticity
	PT **PEAT** highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION		
DESIGNATION		**PARTICLE SIZES**
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSIVE STRENGTH, Q_P[4]	**SPT[5] (BPF)**	**CONSISTENCY[7] (COHESIVE)**
<0.25	<3	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT[5]	**DENSITY**
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
Dual Symbol *(ex: SW-SM)*	10	10
With	15 - 20	15 - 25
Adjective *(ex: "Silty")*	≥25	≥30

WATER LEVELS[6]		
	WL	Water Level (WS)(WD)
		(WS) While Sampling
		(WD) While Drilling
	SHW	Seasonal High WT
	ACR	After Casing Removal
	SWT	Stabilized Water Table
	DCI	Dry Cave-In
	WCI	Wet Cave-In

[1] Classifications and symbols per ASTM D 2488-09 (Visual-Manual Procedure) unless noted otherwise.

[2] To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

*[3] Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-**FILL**)].*

[4] Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5] Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf).

[6] The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7] Minor deviation from ASTM D 2488-09 Note 16.

[8] Percentages are estimated to the nearest 5% per ASTM D 2488-09.

© 2017 ECS Corporate Services, LLC. All Rights Reserved

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-4	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			3 2 4 4 4 4 3 4 4 5 4 6 5 6 5 7 9 7 8 7 7
	S-2	SS	24	24			40	
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense			
	S-4	SS	24	24				
	S-5	SS	24	24			35	
10								
	S-6	SS	18	18	(SP) SAND, light gray, wet, medium dense		30	7 7 7
15								
	S-7	SS	18	18			25	6 7 9
20					END OF BORING @ 20'			
							20	
25								
							15	
30								

6 7 10 12 15 14 16

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-9	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

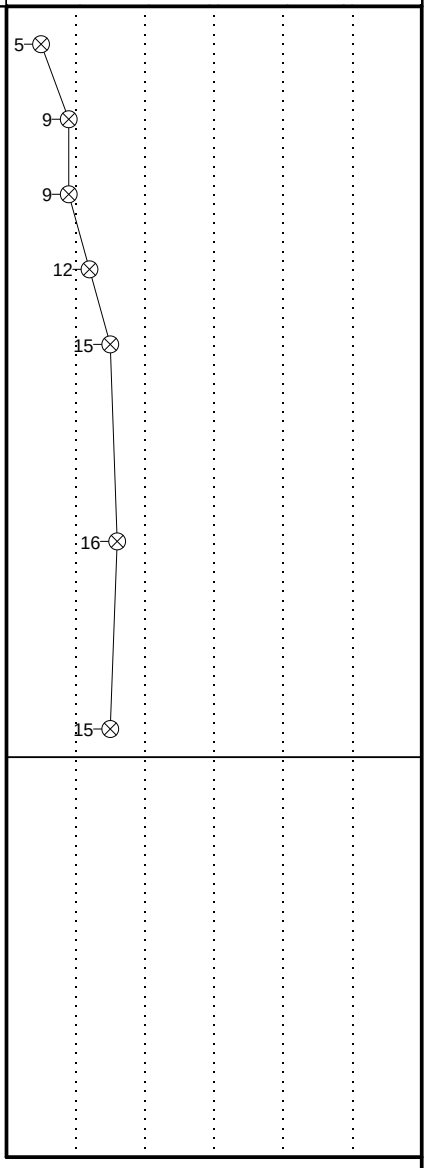
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			2 2 3 5
	S-2	SS	24	24				4 5 4 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense		40	3 5 4 6
	S-4	SS	24	24				6 5 7 7
	S-5	SS	24	24			35	6 8 7 8
10					(SP) SAND, light gray, wet, medium dense			
	S-6	SS	18	18			30	6 7 9
15								
	S-7	SS	18	18			25	8 7 8
20					END OF BORING @ 20'		20	
25							15	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-15	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 43.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			3 5 4 4
	S-2	SS	24	24			40	4 3 4 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense			4 5 5 4
	S-4	SS	24	24				6 7 8 7
	S-5	SS	24	24			35	7 5 7 8
10								9
	S-6	SS	18	18	(SP) SAND, light gray, wet, medium dense		30	6 7 9
15								
	S-7	SS	18	18			25	8 8 10
20					END OF BORING @ 20'			
							20	
25								
							15	
30								

9 9 9 15 15 16 18

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 3.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 2.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-5	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

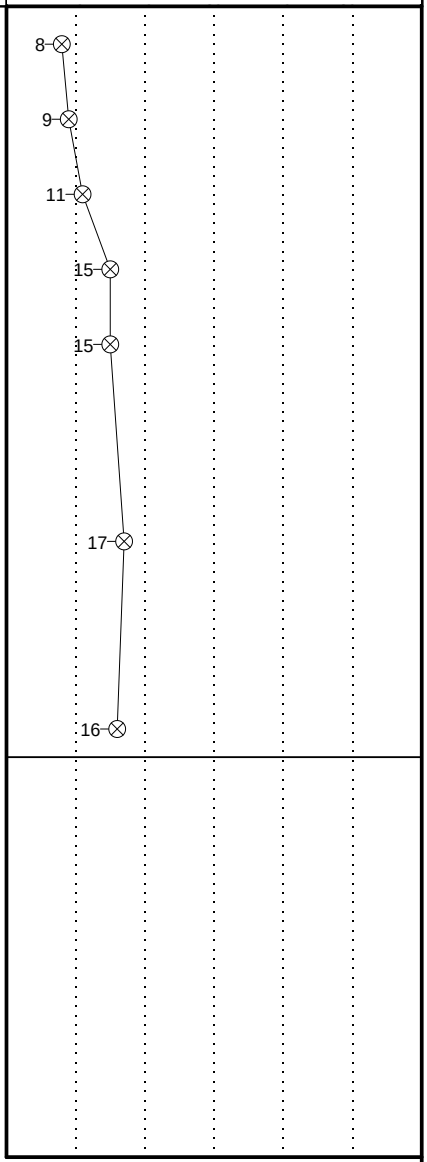
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			4 3 5
	S-2	SS	24	24				4 5 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	4 6 7
	S-4	SS	24	24	(SP) SAND, light gray, wet, medium dense			5 8 7
	S-5	SS	24	24			35	8 7 7
10								8
	S-6	SS	18	18			30	6 7 10
15								
	S-7	SS	18	18			25	6 8 8
20					END OF BORING @ 20'		20	
25							15	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-10	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION

170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Topsoil Thickness [3.00"]		45	3
	S-1	SS	24	24	(SP) SAND, light gray, moist, loose			4 3 3 3
	S-2	SS	24	24				2 4 5 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	4 5 7 8
	S-4	SS	24	24				6 7 6 7
	S-5	SS	24	24	(SP) SAND, light gray, wet, medium dense			8 7 6 8
10							35	
	S-6	SS	18	18				6 7 7
15							30	
	S-7	SS	18	18				5 7 8
20					END OF BORING @ 20'		25	
25							20	
30							15	

7 9 12 13 13 14 15

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-14	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

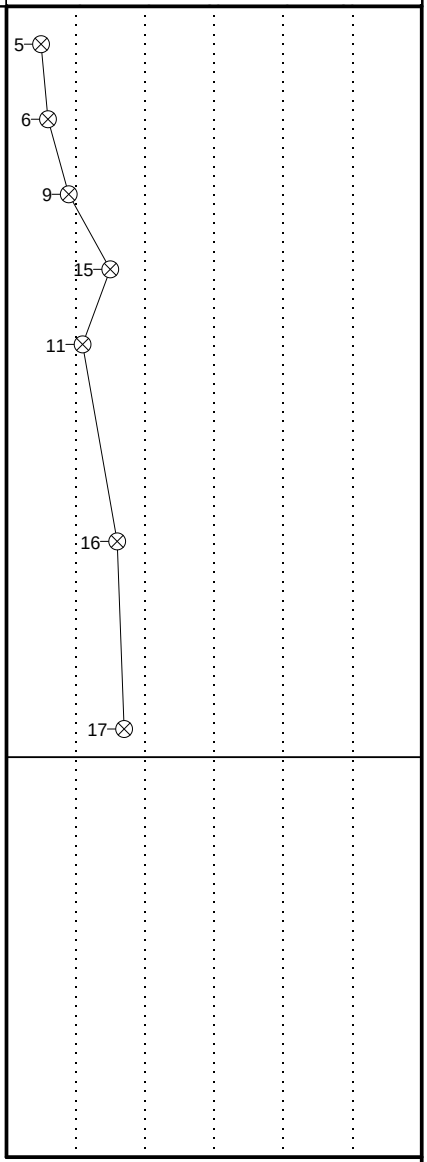
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING ▰ LOSS OF CIRCULATION

SURFACE ELEVATION 45.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	3 2 3
	S-2	SS	24	24				3 4 3
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense		40	3 5 4
	S-4	SS	24	24				4 5 7
	S-5	SS	24	24	(SP) SAND, light gray, wet, medium dense		35	6 7 8 7 6 6 5 8
10								
	S-6	SS	18	18			30	7 7 9
15								
	S-7	SS	18	18			25	6 7 10
20					END OF BORING @ 20'			
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-3	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

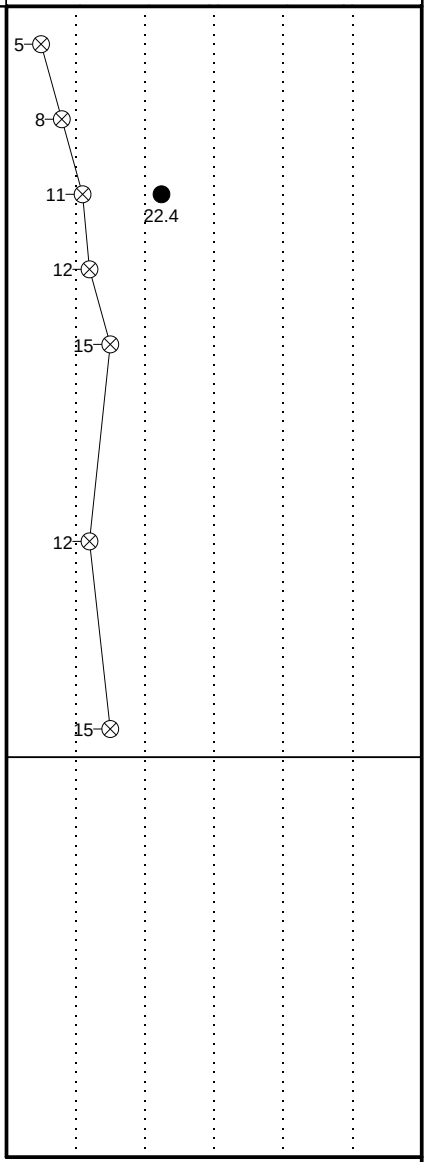
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 42.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			2 3 2 2 2
	S-2	SS	24	24			40	5 4 4 6 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense			6 5 7 6 7
	S-4	SS	24	24			35	5 8 6 8 7
	S-5	SS	24	24				7
10					(SP) SAND, light gray, wet, medium dense		30	
	S-6	SS	18	18				6 5 7
15							25	
	S-7	SS	18	18				5 8 7
20					END OF BORING @ 20'		20	
25							15	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-2	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

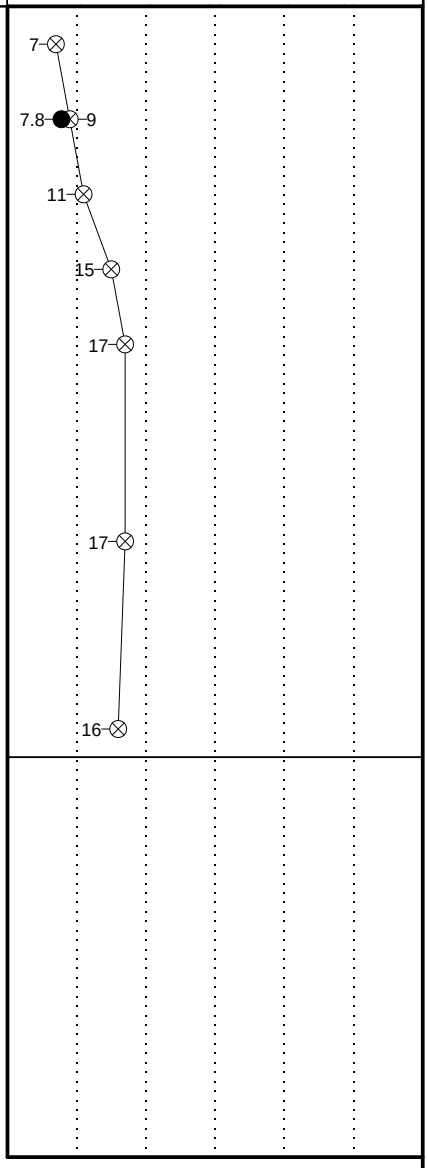
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 43'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Topsoil Thickness [3.00"]			4 3 4 4 4 5 4 5 5 5 4 6 5 7 6 8 7 8 9 9 8 7 5 8 9 7 8 8
	S-1	SS	24	24	(SP) SAND, gray to light gray, moist, loose			
	S-2	SS	24	24			40	
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense			
	S-4	SS	24	24				
	S-5	SS	24	24			35	
10								
					(SP) SAND, light gray, wet, medium dense		30	
	S-6	SS	18	18				
15								
							25	
	S-7	SS	18	18				
20					END OF BORING @ 20'			
							20	
25								
							15	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-19	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0						45	
	S-1	SS	24	24			3 2 3
	S-2	SS	24	24			3 4 3
5	S-3	SS	24	24		40	4 6 5
	S-4	SS	24	24			7 6 8
	S-5	SS	24	24			9 8 9
10						35	9 10 9
	S-6	SS	18	18			6 7 9
15						30	
	S-7	SS	18	18			8 8 8
20						25	
25						20	
30						15	

Topsoil Thickness [3.00"]
(SP) SAND, gray to light gray, moist, loose

(SP-SM) SAND WITH SILT, brown, wet, medium dense

(SP) SAND, gray, wet, medium dense

END OF BORING @ 20'

5 7 11 17 19 16 23.2 16

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-18	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0						45	3 4 5 4 4 4 5 5 5 4
	S-1	SS	24	24			9
	S-2	SS	24	24			10
5	S-3	SS	24	24		40	12
	S-4	SS	24	24			12
	S-5	SS	24	24			9
10						35	5 5 4 5
	S-6	SS	18	18			5 7 10
15						30	17
	S-7	SS	18	18			6 6 7
20						25	13
25						20	
30						15	

Topsoil Thickness [3.00"]
(SP) SAND, light gray, moist, loose

(SP-SM) SAND WITH SILT, brown, wet, medium dense to loose

(SP) SAND, light gray, wet, medium dense

END OF BORING @ 20'

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-12	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

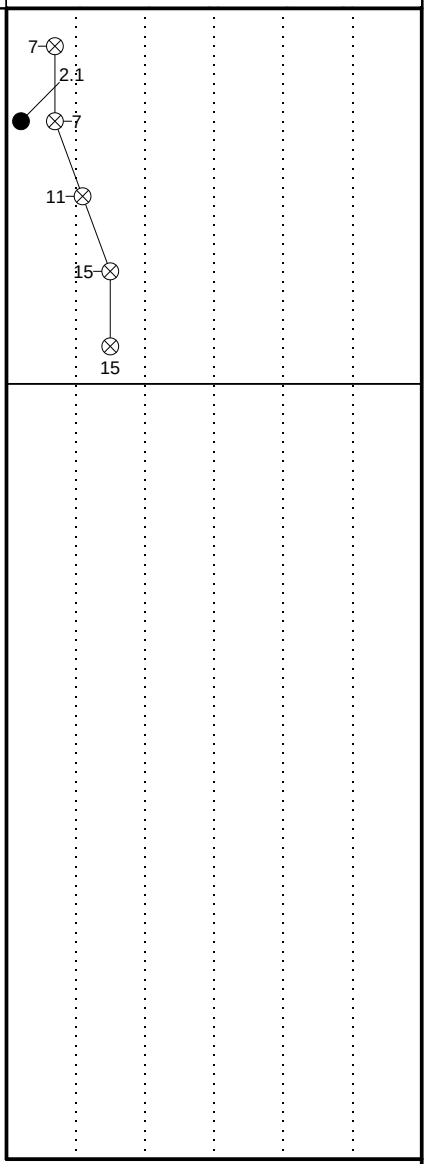
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	4 4 3
	S-2	SS	24	24				5 2 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense		40	3 4 4
	S-4	SS	24	24				6 5 7
	S-5	SS	24	24				6 8 7
10					END OF BORING @ 10'		35	9 6 8 7 10
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-17	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Asphalt Thickness [2.00"] Limerock Thickness [5.00"] (SP) SAND, brown, moist, loose to medium dense		44	4 4 5
	S-2	SS	24	24				5 4 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, moist to wet, loose		40	6 5 6
	S-4	SS	24	24				5 5 5
	S-5	SS	24	24			35	5 7 4
10					END OF BORING @ 10'			4 4 5
15							30	5 4 4
20							25	6
25							20	
30							15	

9 11 10 13.8 8 8

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-6	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION

170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			3 2 4
	S-2	SS	24	24				3 6 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense		40	5 5 6
	S-4	SS	24	24				5 7 8
	S-5	SS	24	24	(SP) SAND, light gray, wet, loose		35	7 6 5
10					END OF BORING @ 10'			4 7
15							30	
20							25	
25							20	
30							15	

6 – 10 – 11 – 15 – 9

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-11	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING ▶ | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	4 3 2
	S-2	SS	24	24				3 4 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	4 3 5
	S-4	SS	24	24	(SP) SAND, light gray, wet, medium dense			7 6 7
	S-5	SS	24	24				6 5 7
10					END OF BORING @ 10'		35	7 6 8
15							30	7 8
20							25	
25							20	
30							15	

5 ⊗ 8 ⊗ 13 ⊗ 12 ⊗ 22.1 ● 15 ⊗

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-8	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION

170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

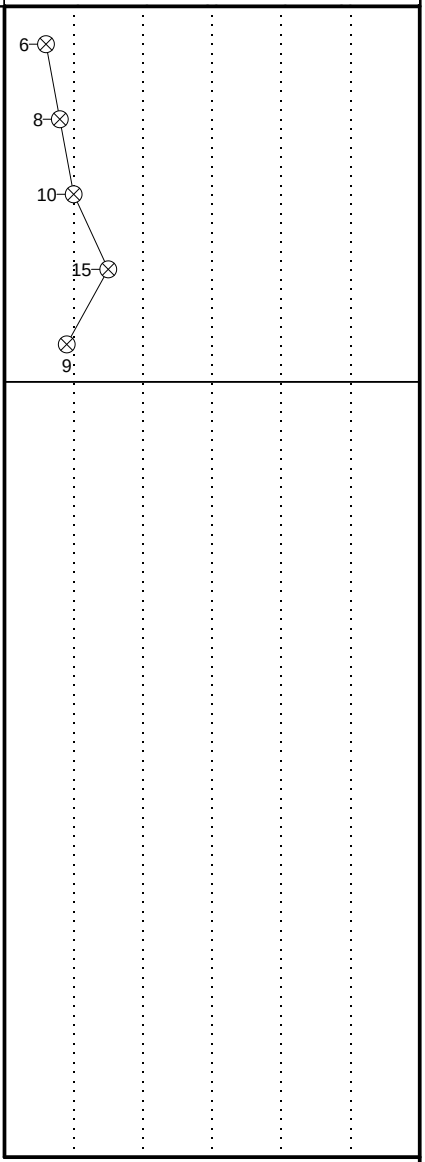
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	4 3 3 3 4
	S-2	SS	24	24				5 5 3 5 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose		40	5 5 5 4 6
	S-4	SS	24	24	(SP) SAND, light gray, wet, medium dense to loose			8 7 7 5 4
	S-5	SS	24	24				5 7
10					END OF BORING @ 10'		35	
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-16	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION

170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

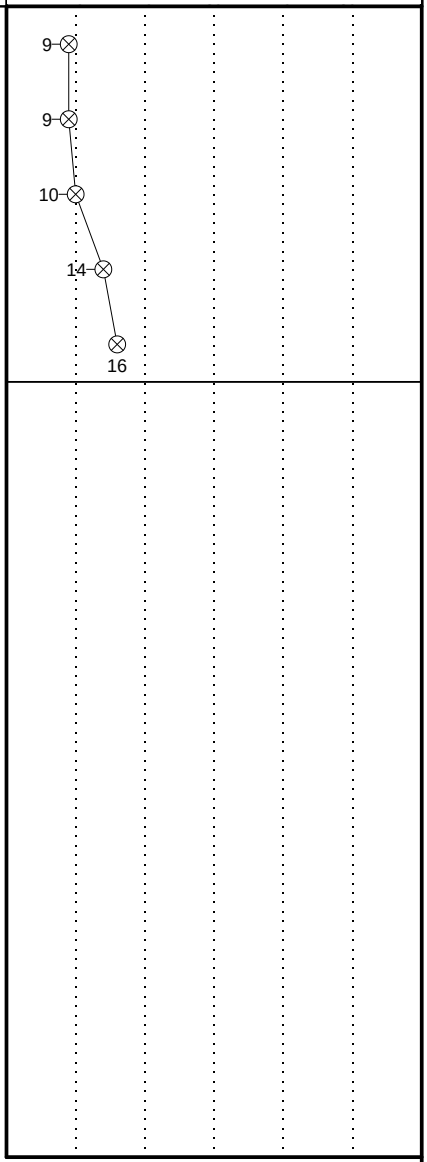
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	2 5 4 3 3 5 4 6 6 5 5 5 6 5 9 7 8 7 9 9
	S-2	SS	24	24				
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense		40	
	S-4	SS	24	24				
	S-5	SS	24	24				
10					END OF BORING @ 10'		35	
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-1	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION

170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING	EASTING	STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 43.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			4 3 3 3 4
	S-2	SS	24	24			40	3 2 4 3 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense			4 5 4 5 7
	S-4	SS	24	24				6 7 6 5 7
	S-5	SS	24	24			35	7
10					END OF BORING @ 10'			
							30	
15								
							25	
20								
							20	
25								
							15	
30								

6 6 9 13 12

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-7	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING ▰ LOSS OF CIRCULATION

SURFACE ELEVATION 44.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			4 5 4 4 4 3 5 4 6 5 7 6 7 4 7 6 7 5 8 7 7
	S-2	SS	24	24				
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	
	S-4	SS	24	24				
	S-5	SS	24	24			35	
10					END OF BORING @ 10'			
15							30	
20							25	
25							20	
30							15	

9 9 13 13 15

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-13	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

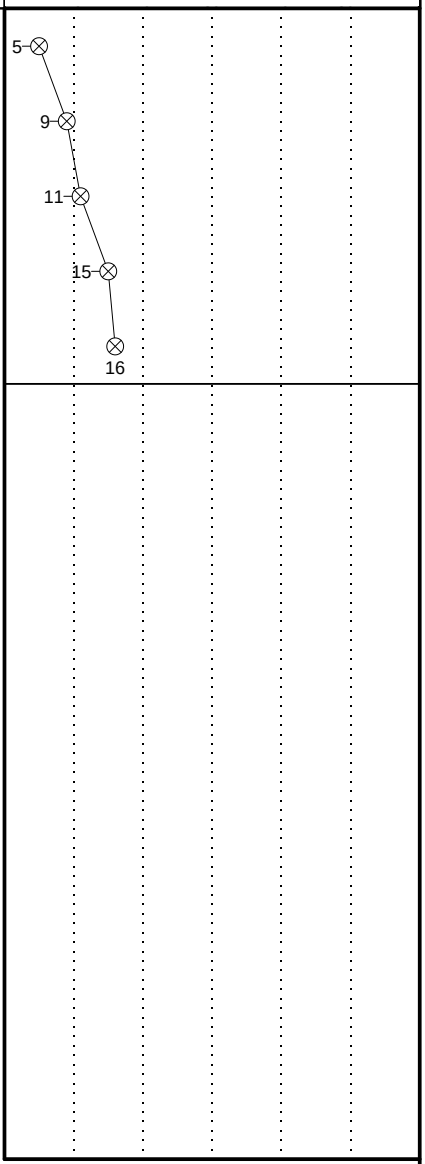
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	3 3 2
	S-2	SS	24	24				4 5 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	5 4 6
	S-4	SS	24	24				5 7 6
	S-5	SS	24	24				8 7 7
10					END OF BORING @ 10'		35	6 9 7 9
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GM - SILTY GRAVEL
GP - POORLY GRADED GRAVEL
GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT
ST - SHELBY TUBE
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND
RC - ROCK CORE
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY
PM - PRESSURE METER
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
- FILL
- POSSIBLE FILL
- PROBABLE FILL

SURFACE MATERIALS

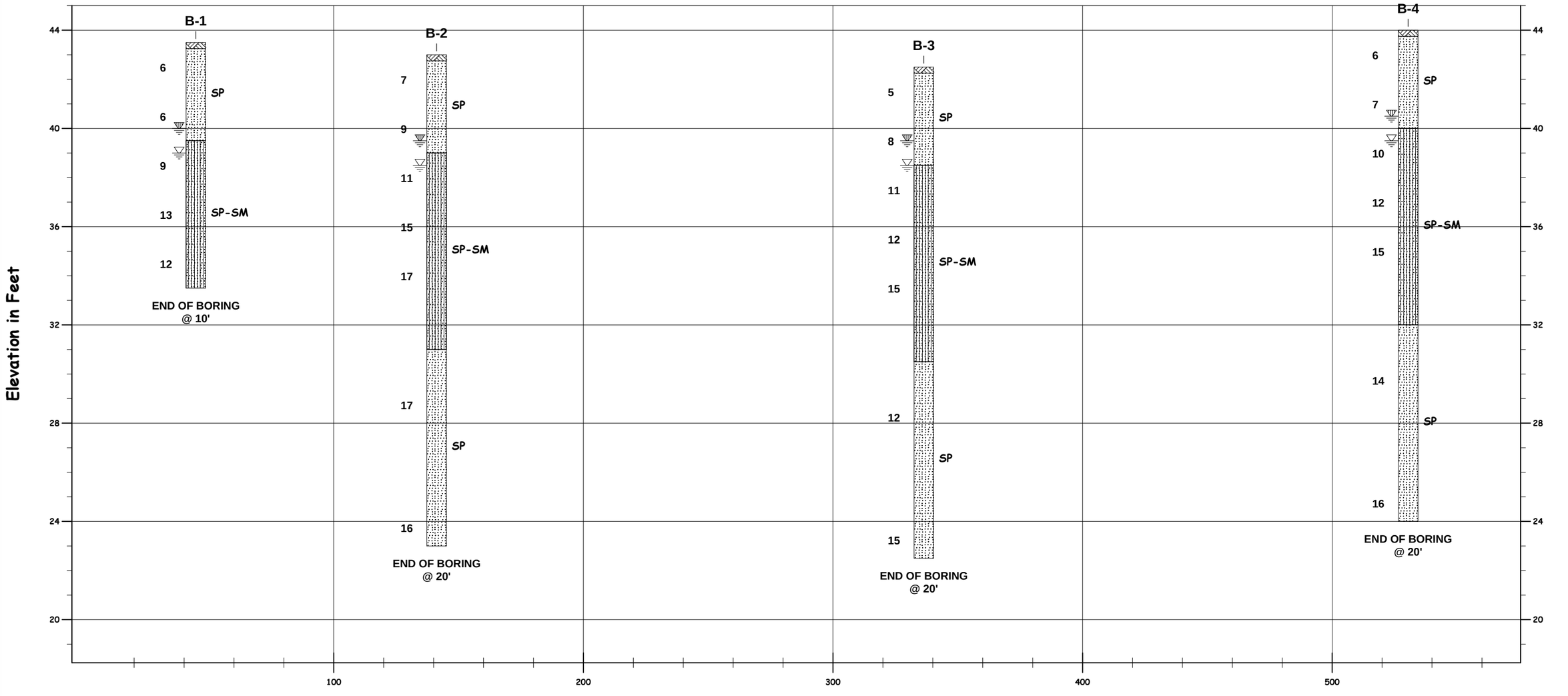
TOPSOIL
ASPHALT
GRAVEL
CONCRETE
VOID

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT% WATER CONTENT% % PASSING #200 SIEVE [88%] LIQUID LIMIT%



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile
Cross Section A-A

Tuskawilla Retail Development GEO
Equinox Development Properties, Inc.
170 Tuskawilla Rd, Winter Springs, Seminole County, FL

PROJECT NO.: 6366 | DATE: 11/14/2018 | VERTICAL SCALE: 1"=4'

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GM - SILTY GRAVEL
GP - POORLY GRADED GRAVEL
GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT
ST - SHELBY TUBE
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND
RC - ROCK CORE
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY
PM - PRESSURE METER
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT
NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.
WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
- FILL
- POSSIBLE FILL
- PROBABLE FILL

SURFACE MATERIALS

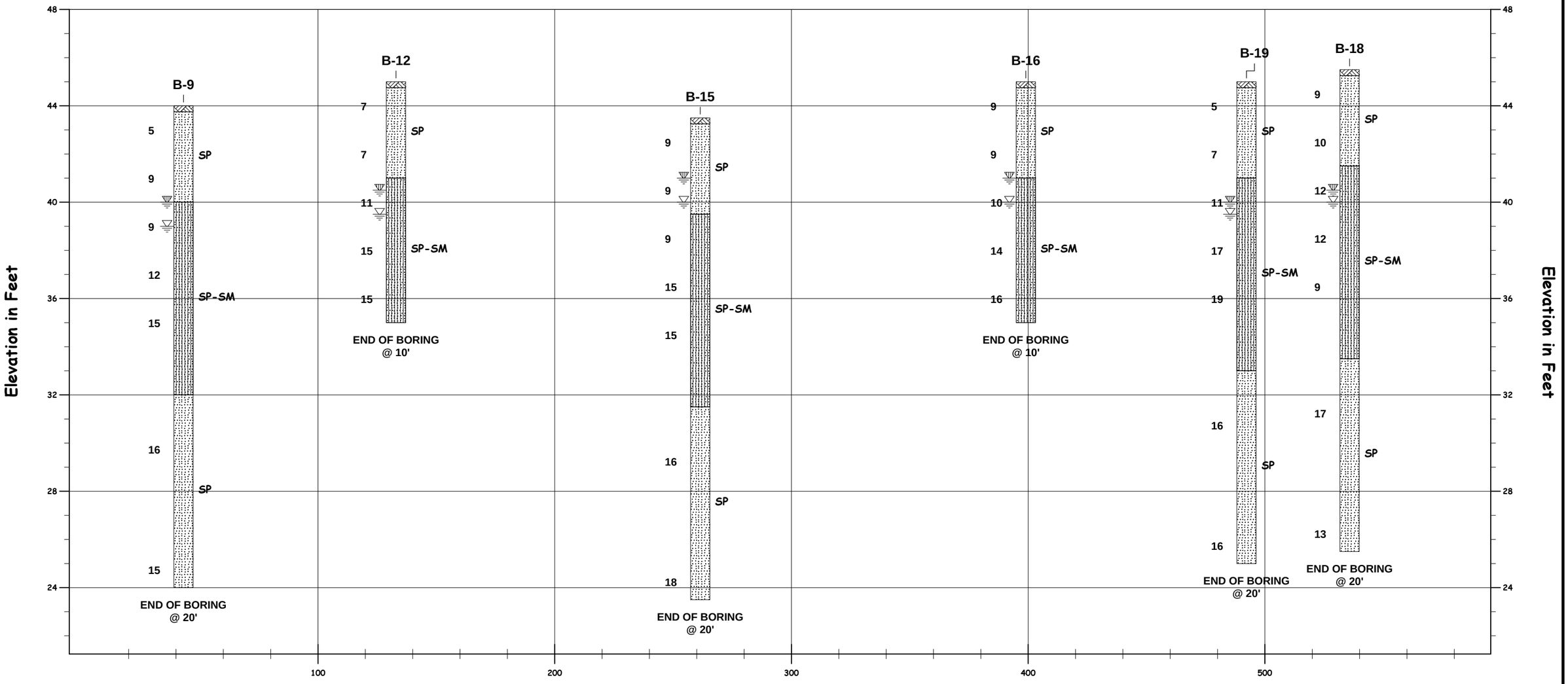
TOPSOIL
CONCRETE
ASPHALT
VOID
GRAVEL

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT% | WATER CONTENT% | % PASSING #200 SIEVE [88%] | LIQUID LIMIT%



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile
Cross Section B-B

Tuskawilla Retail Development GEO
Equinox Development Properties, Inc.
170 Tuskawilla Rd, Winter Springs, Seminole County, FL

PROJECT NO.: 6366 | DATE: 11/14/2018 | VERTICAL SCALE: 1"=4'

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GP - POORLY GRADED GRAVEL
GM - SILTY GRAVEL
GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT
WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
- FILL
- POSSIBLE FILL
- PROBABLE FILL

ST - SHELBY TUBE
RC - ROCK CORE
PM - PRESSURE METER

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

SURFACE MATERIALS

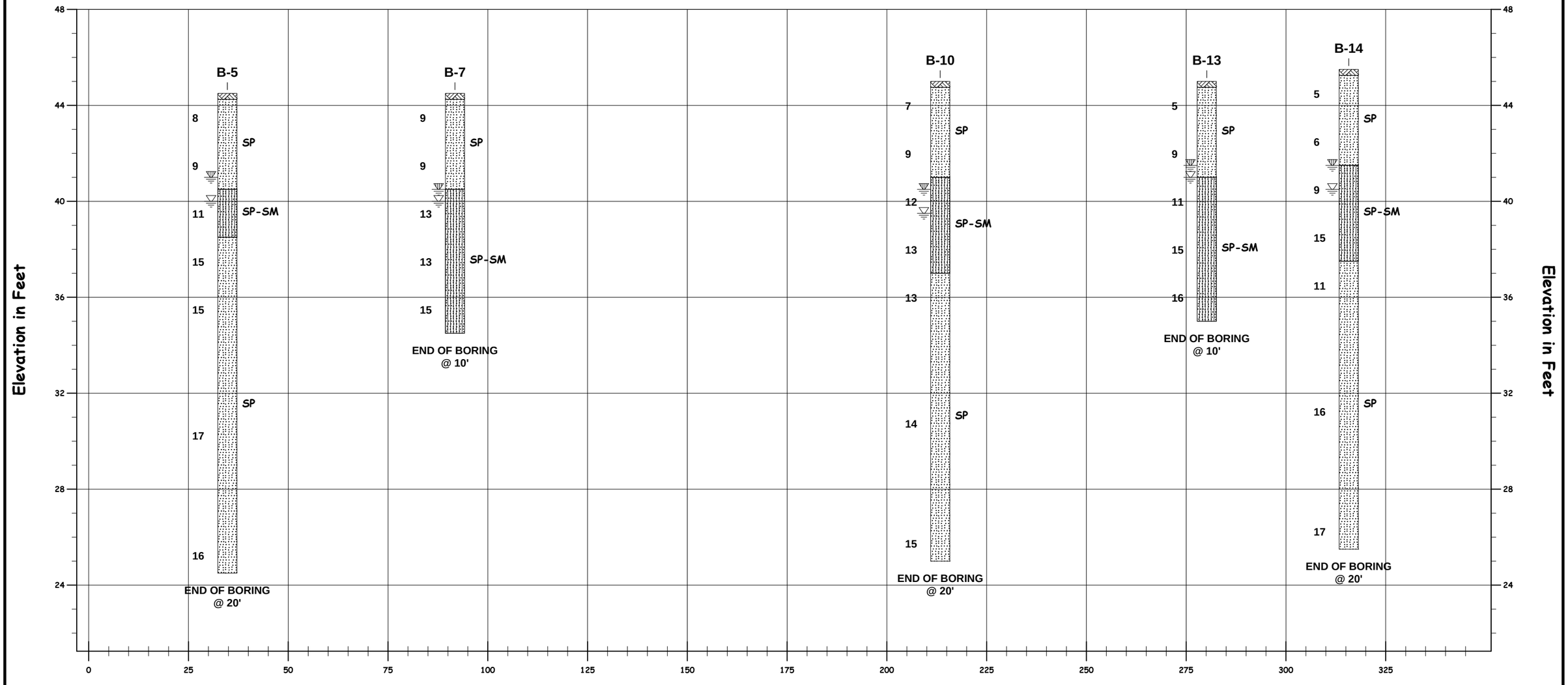
TOPSOIL
ASPHALT
GRAVEL
CONCRETE
VOID

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT% WATER CONTENT% % PASSING #200 SIEVE [88%] LIQUID LIMIT%



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile
Cross Section C-C

Tuskawilla Retail Development GEO
Equinox Development Properties, Inc.
170 Tuskawilla Rd, Winter Springs, Seminole County, FL

PROJECT NO.: 6366 | DATE: 11/14/2018 | VERTICAL SCALE: 1"=4'

APPENDIX C – Laboratory Testing

Laboratory Testing Results Summary

Laboratory Testing Summary

Sample Source	Sample Number	Depth (feet)	MC[1] (%)	Soil Type[2]	Atterberg Limits[3]			Percent Passing No. 200 Sieve[4]	Moisture - Density (Corr.)[5]		CBR Value[6]	Other
					LL	PL	PI		Maximum Density (pcf)	Optimum Moisture (%)		
B-3	S-3	4.00 - 6.00	22.4	SP-SM				5.8				
B-2	S-2	2.00 - 4.00	7.8	SP				2.7				Kh = 55 ft/day Kv = 37 ft/day
B-19	S-6	13.50 - 15.00	23.2	SP				1.7				
B-18	S-4	6.00 - 8.00	23.4	SP-SM				5.1				Kh = 51 ft/day Kv = 34 ft/day
B-12	S-2	2.00 - 4.00	2.1	SP				0.7				
B-17	S-3	4.00 - 6.00	13.8	SP-SM				8.9				
B-11	S-4	6.00 - 8.00	22.1	SP				0.9				

Notes: 1. ASTM D 2216, 2. ASTM D 2487, 3. ASTM D 4318, 4. ASTM D 1140, 5. See test reports for test method, 6. See test reports for test method

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content (ASTM D 2974)

Project No. 24:6366
Project Name: Tuskawilla Retail Development GEO
PM: DAS
PE: JPH
Printed On: Tuesday, November 13, 2018

ECS FLORIDA, LLC
2815 Directors Row, Suite 500
Orlando, FL 32809
Phone: (407) 859-8378
Fax: (407) 859-9599

Wawa Winter Springs

Traffic Impact Analysis

Winter Springs, FL

December 2024

Kimley»Horn

848

Wawa Winter Springs

Traffic Impact Analysis

Winter Springs, FL

Prepared by:

Kimley-Horn and Associates, Inc.



This document has been digitally signed and sealed by Emanuelle D Rodriguez Muñiz, P.E. on the date adjacent to the seal

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

Emanuelle D Rodriguez

Digitally signed by Emanuelle D Rodriguez
DN: CN=Emanuelle D Rodriguez, dnQualifier=A01410C0000019341168451000 2EF49, O=KIMLEY-HORN AND ASSOCIATES INC, C=US
Date: 2024.12.13 14:52:05-05'00'

December 2024

©Kimley-Horn and Associates, Inc. 2024

K:\ORL_Civil\149170026-Winter Springs Wawa\TPTO\02_Documentation\TIA\Wawa Winter Springs TIA_2024.12.11_v2.docx

Table of Contents

1.0 INTRODUCTION 5

1.1 Study Area 5

2.0 EXISTING CONDITIONS ANALYSIS – YEAR 2024 7

2.1 Existing Traffic Counts 7

2.2 Existing Intersection Conditions 7

3.0 BACKGROUND CONDITIONS ANALYSIS – YEAR 2026 9

3.1 Background Traffic 9

3.2 Background Intersection Analysis 9

4.0 DEVELOPMENT TRAFFIC 11

4.1 Trip Generation 11

4.2 Trip Distribution 13

4.3 Trip Assignment 13

5.0 BUILDOUT CONDITIONS ANALYSIS – YEAR 2026 17

5.1 Buildout Traffic 17

5.2 Buildout Intersection Analysis 17

5.3 Turn Lane Analysis 21

6.0 ROADWAY SEGMENT ANALYSIS 22

7.0 CONCLUSION 24

Figures

Figure 1: Project Location Map & Study Area Intersections **6**

Figure 2: Project Trip Distribution **14**

Figure 3: Project Trip Assignment **15**

Figure 4: Intersection Volumes – AM Peak Hour **19**

Figure 5: Intersection Volumes – PM Peak Hour **20**

Tables

Table 1: Existing Intersection Conditions **8**

Table 2: Background Intersection Conditions **10**

Table 3: Trip Generation Summary **12**

Table 4: Buildout Intersection Conditions **18**

Table 5: Roadway Segment Analysis **23**

Appendices

Appendix A: TIA Methodology Statement

Appendix B: Site Plan

Appendix C: Turning Movement Counts

Appendix D: FDOT's Florida Traffic Online (FTO) Data

Appendix E: Turning Movement Volume Worksheets

Appendix F: Synchro Outputs

Appendix G: AADT Historical Trend

Appendix H: ITE Land Use Codes

Appendix I: CFRPMv7 Model Plot

Appendix J: Seminole County Roadway Concurrency Information

1.0 INTRODUCTION

Kimley-Horn has been retained to analyze and document the traffic impacts associated with developing a Wawa convenience store with a gas station in the City of Winter Springs, Florida. The methodology for this Traffic Impact Analysis (TIA) is provided in **Appendix A**.

The project site is currently vacant and will consist of 12 vehicle fueling positions (VFP) and a ±4,736 square foot convenience store within the existing shopping plaza located at the southwest corner of SR 434 & Tuskawilla Road. The existing shopping plaza consists of various land uses, such as a bank, health club, medical office, fast-casual restaurant, discount store, and supermarket. The gas station will utilize the shopping plaza's access points off of SR 434 and Tuskawilla Road, as shown in the site plan in **Appendix B**.

1.1 STUDY AREA

As stated in the methodology, included in **Appendix A**, the study area will include all signalized intersections and major unsignalized intersections within a 1/4-mile radius from the perimeter of the site were evaluated as part of the traffic study, as well as the proposed project driveways:

- SR 434 & Tuskawilla Road
- SR 434 & Roberts Family Lane
- SR 434 & Project Driveway
- Tuskawilla Road & Project Driveway

Per Seminole County traffic study requirements, all roadway segments with projects trips within a 1-mile radius from the perimeter of the site were evaluated as part of the traffic study:

- #296 – SR 434 from Spring Ave to Tuskawilla Rd
- #297 – SR 434 from Tuskawilla Rd to SR 419
- #326 – Tuskawilla Rd from SR 434 to Trotwood Blvd

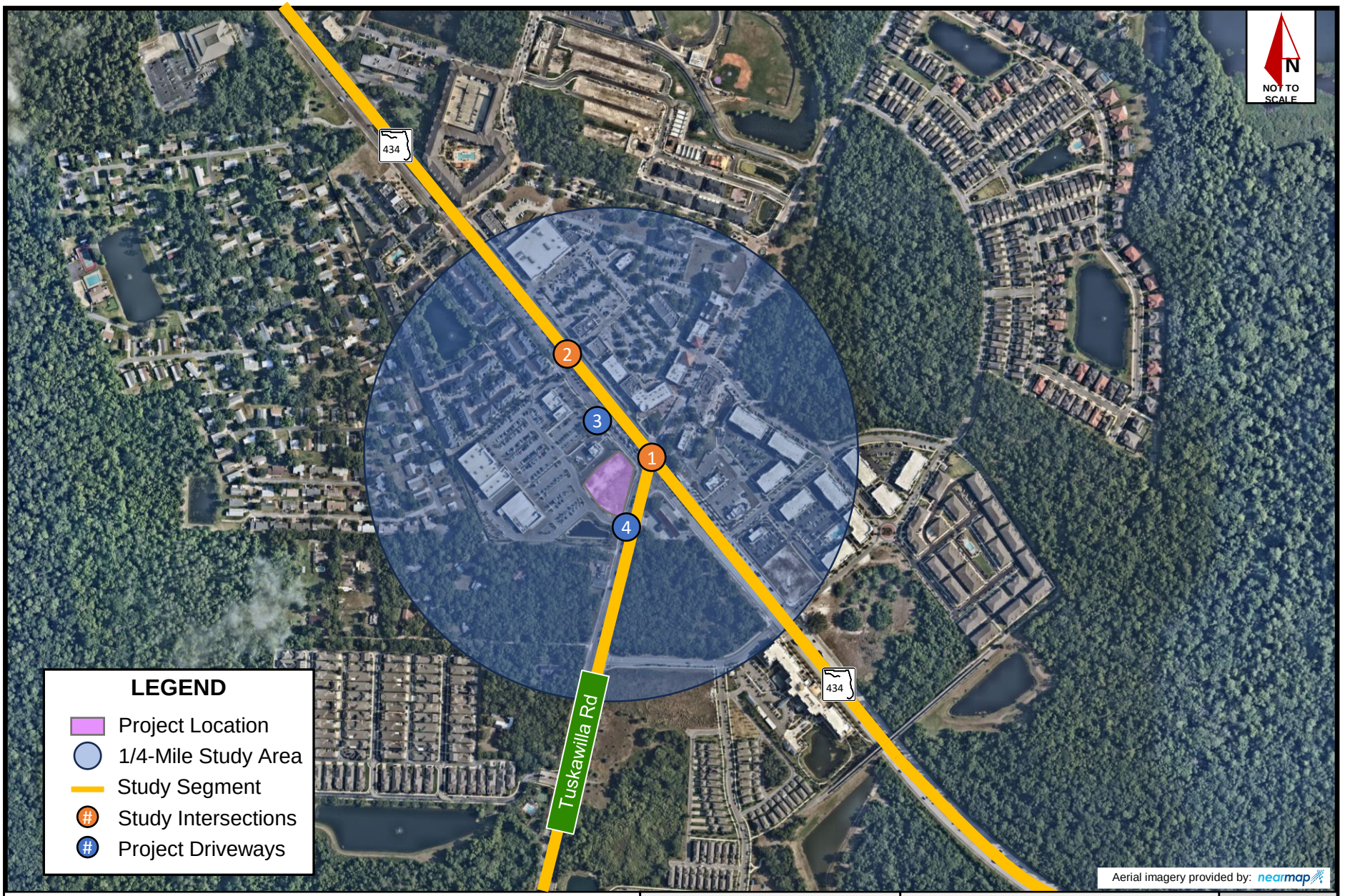


Figure 1: Project Location Map

Winter Springs Wawa | Winter Springs, FL

November 2024

Kimley»Horn

© 2024 Kimley-Horn and Associates, Inc.

1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282

2.0 EXISTING CONDITIONS ANALYSIS – YEAR 2024

2.1 EXISTING TRAFFIC COUNTS

Turning movement counts (TMCs) were collected on Thursday, November 14, 2024, at the study intersections. Data was collected during the AM Peak Period (7:00 AM to 9:00 AM) and PM Peak Period (4:00 PM to 6:00 PM) and is provided in **Appendix C**. The counts were adjusted using the seasonal factor (SF) from FDOT's Florida Traffic Online (FTO) publication. SF data is provided in **Appendix D**. Turning movement volume development worksheets, including adjusted existing (2024) turning movement volumes for all intersections, are provided in **Appendix E.**

2.2 EXISTING INTERSECTION CONDITIONS

Intersection operational analyses were performed for existing (2024) conditions in the AM and PM peak hours using procedures outlined in the *Highway Capacity Manual 7th Edition* with Synchro (v12) software. Intersection level of service (LOS), maximum volume to capacity (v/c) ratios, delay, and queue for existing conditions are provided in **Table 1**. Synchro outputs are provided in **Appendix F**.

As shown in the table below, all of the study area intersection approaches operate with an acceptable overall level of service (LOS) and v/c ratio less than one (1.0), with the exception of the following:

#1 SR 434 Tuskawilla Road

- Northbound Approach – LOS F and V/C > 1.0 (PM)
- Southbound Approach – LOS F (PM)
- Overall LOS F (PM)

Other movements are shown to experience high delays, as depicted in the table.

Table 1: Existing Intersection Conditions

Int. #	Intersection	Control Type	Movement/Approach/Intersection	Existing (2024) AM Peak Hour				Existing (2024) PM Peak Hour			
				LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
1	Tuskawilla & SR 434	Signalized	**EBL**	F	107.9	0.79	3	F	161.0	0.98	11
			EBT	D	44.4	0.64	17	D	44.8	0.74	28
			EBR	B	18.7	0.43	16	C	25.6	0.61	30
			WBL	F	114.9	0.90	10	F	115.2	0.91	15
			WBT	D	39.1	0.65	19	D	43.9	0.76	31
			WBR	D	38.9	0.65	20	D	43.7	0.76	32
			NBL	E	74.4	0.84	14	F	234.8	1.34	38
			NBT	-	0.0	0.00	0	-	0.0	0.00	0
			NBR	E	73.9	0.77	13	F	199.6	1.23	34
			SBL	E	78.0	0.30	2	E	72.4	0.49	8
			SBT	-	0.0	0.00	0	-	0.0	0.00	0
			SBR	F	107.6	0.86	8	F	107.4	0.90	16
			NB	D	39.0	-	-	F	223.5	-	-
			SB	D	49.3	-	-	F	95.1	-	-
			EB	E	74.3	-	-	D	45.6	-	-
			WB	F	99.9	-	-	D	52.4	-	-
			Intersection	**D**	**53.9**	**-**	**-**	**F**	**93.4**	**-**	**-**
2	Roberts Family Ln & SR 434	Unsignalized (TWSC)	**EBL**	C	16.8	0.13	0	C	20.3	0.24	1
			EBT	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-
			WBL	B	13.5	0.13	0	C	19.5	0.29	1
			WBT	-	-	-	-	-	-	-	-
			WBR	-	-	-	-	-	-	-	-
			NBR	B	14.9	0.05	0	C	20.0	0.16	1
			NB	B	14.9	-	-	C	20.0	-	-
			EB	-	0.5	-	-	-	0.8	-	-
			WB	-	0.5	-	-	-	1.0	-	-
			Intersection	**-**	**0.6**	**-**	**-**	**-**	**1.1**	**-**	**-**
3	Tuskawilla Rd & Project Driveway	Unsignalized (TWSC)	**EBR**	B	11.4	0.10	0.3	B	14	0.26	1
			NBT	-	-	-	-	-	-	-	-
			SBT	-	-	-	-	-	-	-	-
			SBR	-	-	-	-	-	-	-	-
			NB	-	0	-	-	-	0	-	-
			SB	-	0	-	-	-	0	-	-
			EB	B	11.42	-	-	B	14.03	-	-
			Intersection	**-**	**0.4**	**-**	**-**	**-**	**0.9**	**-**	**-**
4	SR 434 & Project Driveway	Unsignalized (TWSC)	**EBR**	-	-	-	-	-	-	-	-
			NBT	-	-	-	-	-	-	-	-
			SBT	-	-	-	-	-	-	-	-
			SBR	C	18.7	0.08	0.3	D	26.6	0.31	1.2
			NB	C	18.73	-	-	D	26.61	-	-
			SB	-	0	-	-	-	0	-	-
			EB	-	0	-	-	-	0	-	-
			Intersection	**-**	**0.3**	**-**	**-**	**-**	**1**	**-**	**-**

3.0 BACKGROUND CONDITIONS ANALYSIS – YEAR 2026

3.1 BACKGROUND TRAFFIC

Traffic conditions were evaluated for Year 2026 background conditions without the impact of project trips on the roadway network. Background volumes at study area intersections were derived by applying a 2% annual growth to existing turning movement volumes. The historical annual growth rate was calculated for SR 434 and Tuskawilla Road and it indicated a growth rate less than 2%. Historical trend sheets are included in **Appendix G**.

Background growth and intersection volumes are shown in the intersection turning movement volume development worksheets provided in **Appendix E.**

3.2 BACKGROUND INTERSECTION ANALYSIS

Intersection operational analyses were performed for Year 2024 background conditions in the AM and PM peak hours using procedures outlined in the *Highway Capacity Manual 7th Edition* with Synchro (v11) software. Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the background conditions are provided in **Table 2**. Synchro outputs are provided in **Appendix F**.

As shown in the tables below, the study area intersection movements operate with acceptable overall LOS and v/c ratio less than one (1.0), with the exception of the existing deficiencies and the following background deficiencies:

#1 SR 434 Tuskawilla Road

- Eastbound Left movement – V/C > 1.0 (PM)
- Southbound Approach – LOS F (AM)

Table 2: Background Intersection Conditions

Int. #	Intersection	Control Type	Movement/Approach/Intersection	Background (2026) AM Peak Hour				Background (2026) PM Peak Hour			
				LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
1	Tuskawilla & SR 434	Signalized	**EBL**	F	109.4	0.79	6	F	172.4	1.02	12
			EBT	D	47.6	0.68	25	D	46.7	0.78	29
			EBR	B	19.7	0.45	24	C	26.8	0.63	32
			WBL	F	116.1	0.91	16	F	126.0	0.95	16
			WBT	D	42.2	0.69	29	D	46.5	0.79	33
			WBR	D	42.0	0.69	30	D	46.3	0.80	34
			NBL	E	74.4	0.85	21	F	258.0	1.39	41
			NBT	-	0.0	0.00	0	-	0.0	0.00	0
			NBR	E	73.8	0.77	19	F	217.5	1.27	36
			SBL	E	77.5	0.31	4	E	72.0	0.50	8
			SBT	-	0.0	0.00	0	-	0.0	0.00	0
			SBR	F	109.0	0.87	13	F	109.0	0.91	17
			NB	E	74.2	-	-	F	245.0	-	-
			SB	F	100.8	-	-	F	96.1	-	-
			EB	D	41.5	-	-	D	47.8	-	-
			WB	D	52.1	-	-	E	56.0	-	-
			Intersection	**E**	**55.8**	**-**	**-**	**F**	**100.5**	**-**	**-**
2	Roberts Family Ln & SR 434	Unsignalized (TWSC)	**EBL**	C	17.8	0.14	1	C	22.0	0.26	1
			EBT	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-
			WBL	B	14.0	0.14	1	C	21.1	0.32	1
			WBT	-	-	-	-	-	-	-	-
			WBR	-	-	-	-	-	-	-	-
			NBR	C	15.4	0.06	0	C	21.1	0.18	1
			NB	C	15.4	-	-	C	21.1	-	-
			EB	-	0.5	-	-	-	0.9	-	-
			WB	-	0.5	-	-	-	1.0	-	-
			Intersection	**-**	**0.6**	**-**	**-**	**-**	**1.2**	**-**	**-**
3	Tuskawilla Rd & Project Driveway	Unsignalized (TWSC)	**EBR**	B	11.6	0.10	0.3	B	14.5	0.28	1.1
			NBT	-	-	-	-	-	-	-	-
			SBT	-	-	-	-	-	-	-	-
			SBR	-	-	-	-	-	-	-	-
			NB	-	0	-	-	-	0	-	-
			SB	-	0	-	-	-	0	-	-
			EB	B	11.6	-	-	B	14.5	-	-
			Intersection	**-**	**0.4**	**-**	**-**		**0.9**	**-**	**-**
4	SR 434 & Project Driveway	Unsignalized (TWSC)	**EBR**	-	-	-	-	-	-	-	-
			NBT	-	-	-	-	-	-	-	-
			SBT	-	-	-	-	-	-	-	-
			SBR	C	19.5	0.09	0.3	D	28.9	0.34	1.4
			NB	C	19.5	-	-	D	28.9	-	-
			SB	-	0	-	-	-	0	-	-
			EB	-	0	-	-	-	0	-	-
			Intersection	**-**	**0.3**	**-**	**-**	**-**	**1.1**	**-**	**-**

4.0 DEVELOPMENT TRAFFIC

The proposed development consists of 12 vehicle fueling positions (VFP) and a ±4,736 square foot convenience store within the existing shopping plaza. Buildout of the project is anticipated in 2026. The latest industry standards were referenced to evaluate the new external trips to be generated by the site at buildout. The latest adopted regional travel demand model was used to forecast the distribution of trips throughout the study area.

4.1 TRIP GENERATION

Trip generation rates for the proposed development were calculated using the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. Land Use Code (LUC) 945 – Convenience Store / Gas Station (4-5.5k) was used for the proposed development. Relevant excerpts from the ITE *Trip Generation Manual* are included in **Appendix H**. The project is anticipated to generate 693 daily new external trips, 73 net new external trips during the AM peak hour (37 in, 36 out), and 60 new external trips during the PM peak hour (31 in, 29 out). **Table 3** provides the daily, AM peak hour, and PM peak hour trip generation summary for the proposed development.

Table 3: Trip Generation Summary

	Land Use	LUC[1]	Size	Units	Trip Rate[1]	Daily				
						Total	In[1]		Out[1]	
Daily	Convenience Store/ Gas Station - GFA (4-5.5k)	945	**12**	VFP	257.13	3,086	*50%*	1,543	*50%*	1,543
	Total Generated Trips					**3,086**	**1,543**		**1,543**	
	Internal Capture =	*10.0%*				*310*	*155*		*155*	
	Net External Trips					**2,776**	**1,388**		**1,388**	
	Pass by Trips[3] =	*75.0%*	*of external retail trips*			*2,083*	*1,042*		*1,041*	
	New External Trips					**693**	**346**		**347**	
	Land Use	**LUC[1]**	**Size**	**Units**	**Trip Rate[1]**	**AM Peak Hour**				
						Total	**In[1]**		**Out[1]**	
AM Peak Hour	Convenience Store/ Gas Station - GFA (4-5.5k)	945	**12**	VFP	27.04	324	*50%*	162	*50%*	162
	Total Generated Trips					**324**	**162**		**162**	
	Internal Capture =	*10.0%*				33	16		16	
	Net External Trips					**291**	**146**		**145**	
	Pass by Trips[3] =	*75.0%*	*of external retail trips*			218	109		109	
	New External Trips					**73**	**37**		**36**	
	Land Use	**LUC[1]**	**Size**	**Units**	**Trip Rate[1]**	**PM Peak Hour**				
						Total	**In[1]**		**Out[1]**	
PM Peak Hour	Convenience Store/ Gas Station - GFA (4-5.5k)	945	**12**	VFP	22.76	273	*50%*	137	*50%*	136
	Total Generated Trips					**273**	**137**		**136**	
	Internal Capture =	*10.0%*				27	13		14	
	Net External Trips					**246**	**124**		**122**	
	Pass by Trips[3] =	*76.0%*	*of external retail trips*			186	93		93	
	New External Trips					**60**	**31**		**29**	

Notes: *1. Vehicle trip rates and directional splits per ITE Trip Generation Manual, 11th Edition*

2. A 10% internal capture to account for the +/- 60K SF of shopping plaza.

3. Land Use Code 945 pass-by rates obtained from ITE Trip Generation Manual, 11th Edition Appendices.

4.2 TRIP DISTRIBUTION

Projected traffic demand of project trips on study roadways was derived with the use of the latest adopted regional travel demand model. Land use data for the project was entered into a new traffic analysis zone (TAZ) within the Central Florida Regional Planning Model (CFRPM v7) model set and situated within the existing roadway network. The model was used to assign trips for all trip purposes between allocated origin and destination pairs using project buildout year model data. Trip distribution for the project was extracted from the completed model assignment and reviewed for logic. The resulting model plot showing percent of daily project distribution is provided in **Appendix I**. Daily model project distribution was referenced to manually assign project distribution at study area intersections and driveways in general accordance with model output. **Figure 2** shows the intersection movement project distribution generated by the proposed industrial development within the study area.

4.3 TRIP ASSIGNMENT

Project trip distribution percentages were used to assign anticipated project trips to the study area roadways and intersections. **Figure 3** shows the anticipated AM and PM peak hour project movements at the study area intersections generated by the proposed industrial development and **Figure 4** shows the pass-by trips.

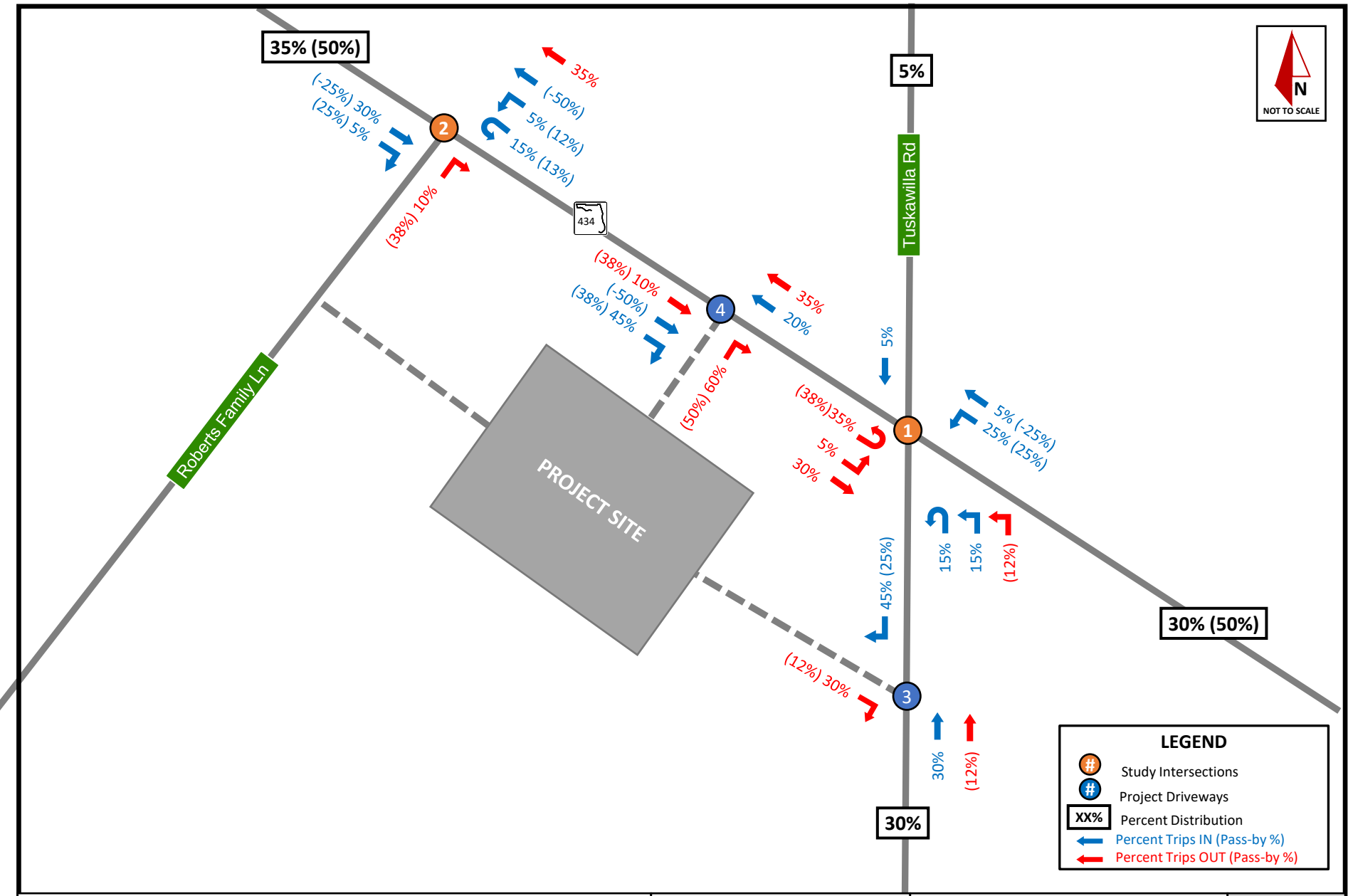


Figure 2: Project Trip Distribution

Winter Springs Wawa | Winter Springs, FL

December 2024

Kimley»Horn

© 2024 Kimley-Horn and Associates, Inc.
1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282

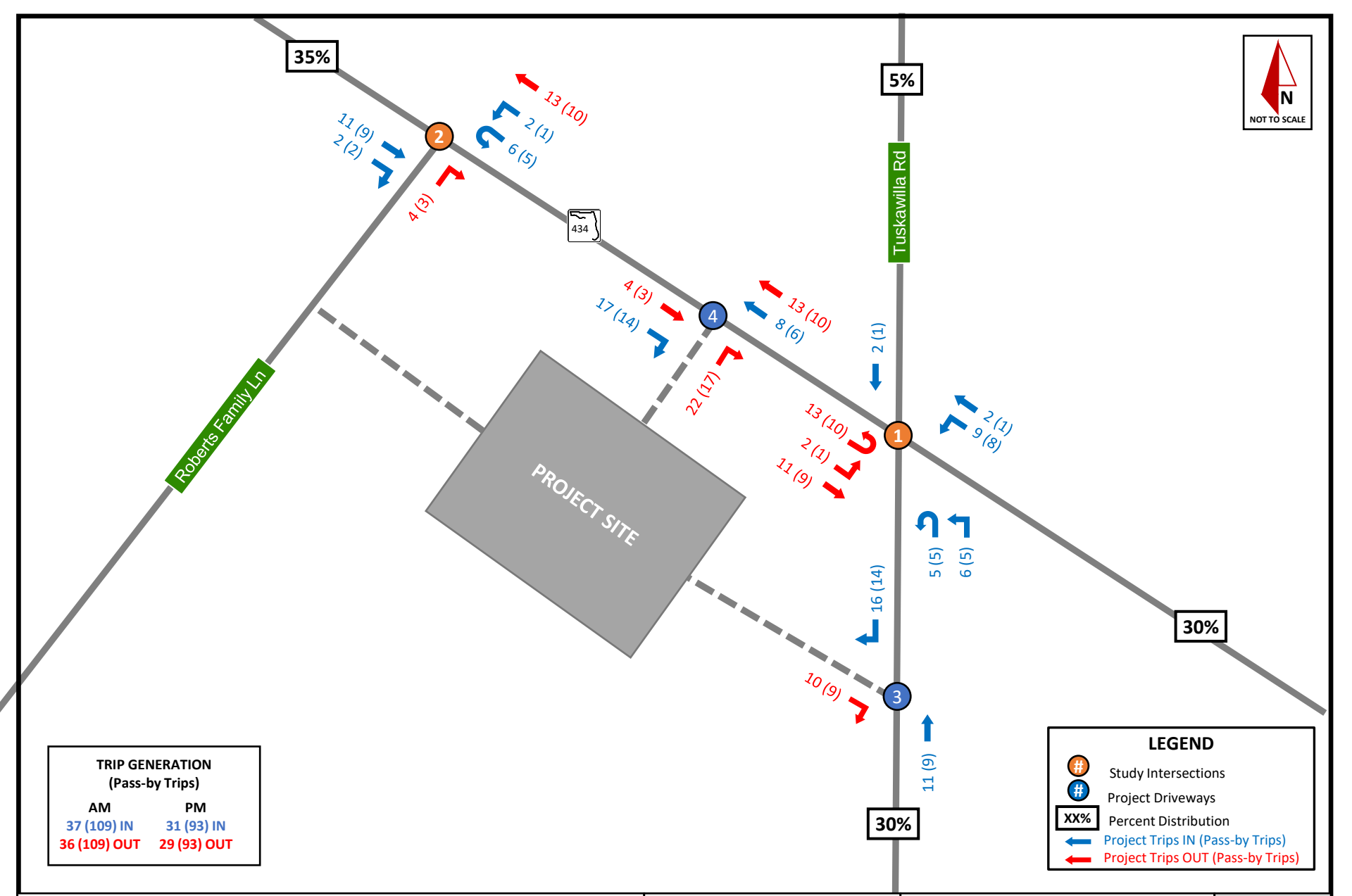


Figure 3: Project Trip Assignment

Winter Springs Wawa | Winter Springs, FL

December 2024

© 2024 Kimley-Horn and Associates, Inc.
1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282

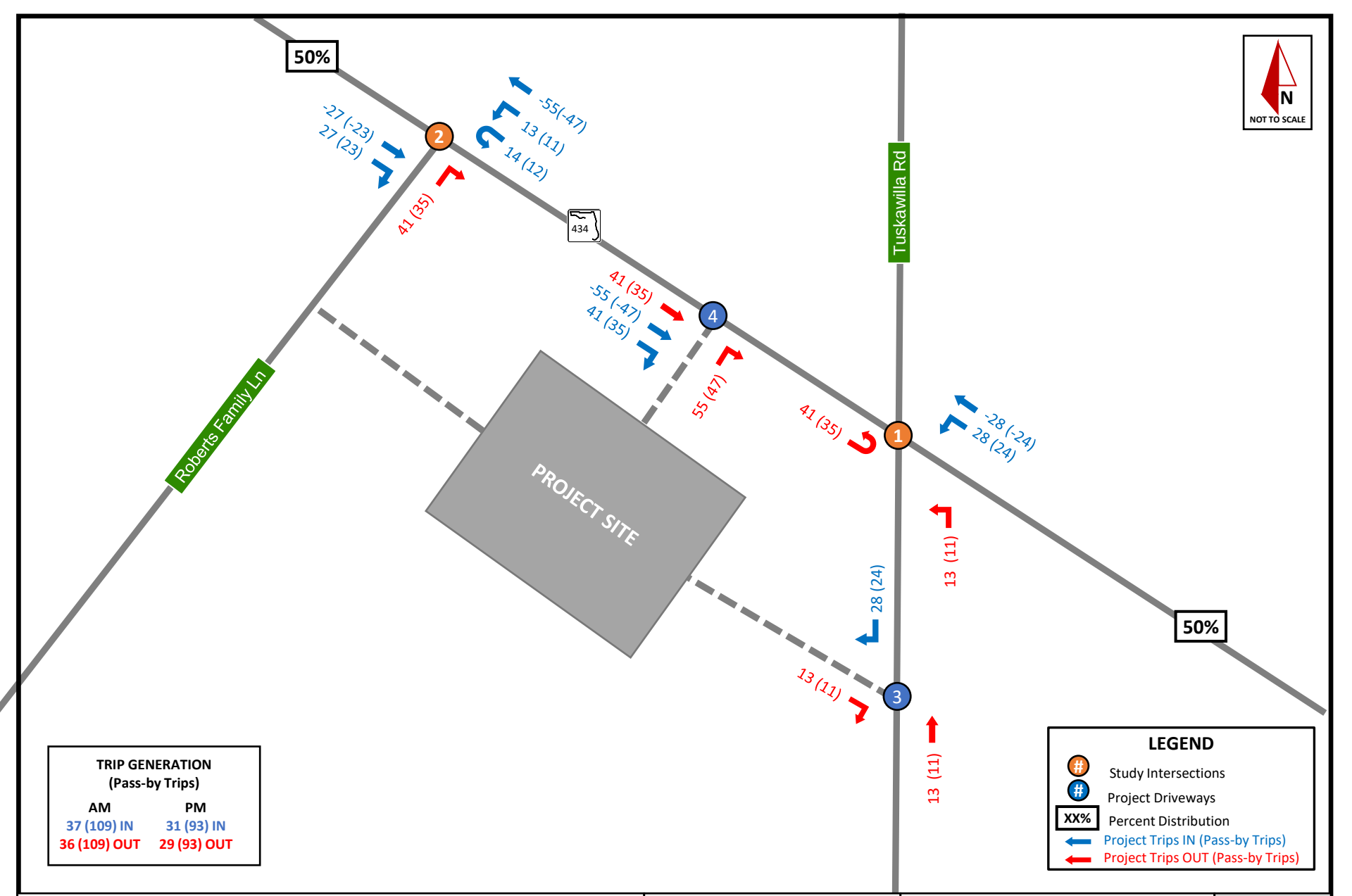


Figure 4: Project Pass-by Trip Assignment

Winter Springs Wawa | Winter Springs, FL

December 2024

Kimley»Horn

© 2024 Kimley-Horn and Associates, Inc.

1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282

5.0 BUILDOUT CONDITIONS ANALYSIS – YEAR 2026

5.1 BUILDOUT TRAFFIC

Future traffic conditions for the proposed development were evaluated for Year 2026 buildout conditions. Buildout volumes were developed by adding anticipated project trips to Year 2026 background volumes. A determination of the impact of project traffic on the study intersections was made. Intersection turning movement volume development worksheets for all intersections are provided in **Appendix E.**

5.2 BUILDOUT INTERSECTION ANALYSIS

Intersection operational analyses were performed for Year 2026 buildout conditions in the AM and PM peak hours using procedures outlined in the *Highway Capacity Manual 7th Edition* with Synchro (v12) software. A summary of intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the buildout conditions are provided in **Table 4**. Synchro outputs are provided in **Appendix F**. **Figures 5 and 6** display total intersection volume counts for the buildout year of 2023 in the AM and PM peak hours, respectively.

As shown in the tables below, all intersection movements are anticipated to operate similarly to background conditions. Traffic signal timing adjustments were implemented to SR 434 & Tuskawilla Road to mitigate project traffic impact. No new deficiencies were identified as a result of project traffic.

Table 4: Buildout Intersection Conditions

Int. #	Intersection	Control Type	Movement/Approach/Intersection	Buildout (2026) AM				Buildout (2026) PM			
				LOS	Delay	V/C	Queue	LOS	Delay	V/C	Queue
1	Tuskawilla & SR 434	Signalized	**EBL**	F	220.3	1.15	14	F	122.5	0.92	14
			EBT	D	50.3	0.72	26	D	51.7	0.82	31
			EBR	C	20.5	0.46	24	C	27.4	0.64	33
			WBL	F	154.9	1.05	21	F	122.6	0.96	18
			WBT	D	45.9	0.71	29	E	55.9	0.85	35
			WBR	D	45.7	0.71	30	E	55.6	0.85	36
			NBL	E	74.5	0.86	22	F	212.4	1.29	38
			NBT	-	0.0	0.00	0	-	0.0	0.00	0
			NBR	E	71.8	0.75	19	F	166.5	1.15	33
			SBL	E	77.3	0.30	4	E	76.1	0.56	8
			SBT	-	0.0	0.00	0	-	0.0	0.00	0
			SBR	F	109.4	0.87	13	F	145.8	1.02	19
			NB	E	73.7	-	-	F	197.9	-	-
			SB	F	101.1	-	-	F	121.5	-	-
			EB	D	54.5	-	-	D	50.0	-	-
			WB	E	63.5	-	-	E	65.2	-	-
			Intersection	**E**	**64.4**	**-**	**-**	**F**	**94.6**	**-**	**-**
2	Roberts Family Ln & SR 434	Unsignalized (TWSC)	**EBL**	C	17.2	0.13	1	C	21.2	0.26	1
			EBT	-	-	-	-	-	-	-	-
			EBR	-	-	-	-	-	-	-	-
			WBL	C	15.1	0.22	1	C	23.8	0.41	2
			WBT	-	-	-	-	-	-	-	-
			WBR	-	-	-	-	-	-	-	-
			NBR	C	17.2	0.19	1	C	24.6	0.32	1
			NB	C	17.2	-	-	C	24.6	-	-
			EB	-	0.5	-	-	-	0.8	-	-
			WB	-	0.8	-	-	-	1.5	-	-
			Intersection	**-**	**1.0**	**-**	**-**	**-**	**1.7**	**-**	**-**
3	Tuskawilla Rd & Project Driveway	Unsignalized (TWSC)	**EBR**	B	12.2	0.15	0.5	C	15.6	0.33	1.4
			NBT	-	-	-	-	-	-	-	-
			SBT	-	-	-	-	-	-	-	-
			SBR	-	-	-	-	-	-	-	-
			NB	-	0	-	-	-	0	-	-
			SB	-	0	-	-	-	0	-	-
			EB	B	12.2	-	-	C	15.6	-	-
			Intersection		**0.6**	**-**	**-**		**1.1**	**-**	**-**
4	SR 434 & Project Driveway	Unsignalized (TWSC)	**EBR**	-	-	-	-	-	-	-	-
			NBT	-	-	-	-	-	-	-	-
			SBT	-	-	-	-	-	-	-	-
			SBR	D	26.4	0.39	1.8	E	45.5	0.64	3.9
			NB	D	26.4	-	-	E	45.5	-	-
			SB	-	0	-	-	-	0	-	-
			EB	-	0	-	-	-	0	-	-
			Intersection	**-**	**1.5**	**-**	**-**	**-**	**3.0**	**-**	**-**



Figure 5: Intersection Volumes – AM Peak Hour

Winter Springs Wawa | Winter Springs, FL

December 2024

Kimley»Horn

© 2024 Kimley-Horn and Associates, Inc.

1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282



Figure 6: Intersection Volumes – PM Peak Hour

Winter Springs Wawa | Winter Springs, FL

December 2024

Kimley»Horn

© 2024 Kimley-Horn and Associates, Inc.
1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282

5.3 TURN LANE ANALYSIS

Per the Seminole County *Public Works Engineering Manual*, section 1.3.1, right turn lanes should be provided on 2-lane roads for developments generating greater than 3,000 daily trips and on 4- or 6-lane roads for developments generating greater than 4,000 daily trips. None of the project driveways are anticipated to exceed the 4,000 average daily trips, and therefore, right turn lanes are not warranted or recommended.

Additionally, most of the impacted turn lanes at the study intersection are built to their maximum extent or with minimal space to extend it further, which will provide an additional two vehicle queues. Therefore, no turn lane extensions are recommended due to limited room for turn lane extension.

6.0 ROADWAY SEGMENT ANALYSIS

A roadway segment analysis was performed for segments located within a one-mile radius of the proposed development to determine existing, background, and buildout conditions. The following roadway segments were analyzed:

- S.R. 434 from S.R. 419 to Tuskawilla Road
- S.R. 434 from Tuskawilla Road to Springs Ave
- Tuskawilla Road from S.R. 434 to Trotwood Boulevard

Existing and vested trip data were referenced from Seminole County's latest Roadway Concurrency Information dated March 27th, 2020, included in **Appendix J.** This data was used to analyze the roadway segments listed above and is summarized in **Table 5**.

As shown in the table, the analysis identifies no existing, background, or buildout capacity deficiencies.

Table 5: Roadway Segment Analysis

					Existing (2024)				Background (2026)					Buildout (2026)					
Roadway Segment	Station # [1]	LOS Std. [2]	Rdwy Link Capacity [1]	Committed Trips [1]	Existing AADT [1]	Existing Deficiency	V/C Ratio	Existing LOS [2]	Annual Growth Rate	Back-ground AADT	Back-ground Deficiency	V/C Ratio	Back-ground LOS [2]	Project Dist. %	Daily Project Trips [3]	Buildout AADT	Buildout Deficiency	V/C Ratio	Buildout LOS [2]
SR 434																			
Spring Ave to Tuskawilla Rd	296	F	48,000	293	28,677	No	0.60	C	2%	29,835	No	0.62	C	30%	208	30,043	No	0.63	C
Tuskawilla Rd to SR 419	297	F	48,000	0	37,812	No	0.79	D	2%	39,340	No	0.82	D	35%	243	39,582	No	0.82	D
Tuskawilla Rd																			
SR 434 to Trotwood Blvd	326	F	42,560	8	22,099	No	0.52	B	2%	22,992	No	0.54	B	30%	208	23,200	No	0.55	B

Notes:
1. From Seminole County Roadway Concurrency Information dated 12/22/2022
2. LOS Volume Thresholds from Seminole County Vision Comprehensive Plan as Amended through March 26, 2024
3. Assigned using the determined daily net external trips of 693 vehicles

7.0 CONCLUSION

This traffic impact analysis was performed to analyze the traffic impacts associated with the development of a 12 VFP Wawa gas station with a 4,736 square foot convenience store within the existing shopping plaza located at the southwest corner of SR 434 & Tuskawilla Road in the City of Winter Springs, Florida. No new access points were proposed as part of this development. The site will have access via the existing connections on Tuskawilla Rod and SR 434.

Based on ITE trip rates, the proposed development is anticipated to generate 693 daily new external trips, 73 net new external trips during the AM peak hour (37 in, 36 out), and 60 new external trips during the PM peak hour (31 in, 29 out).

An operational analysis for existing, background, and buildout conditions was performed at the study area intersections and project driveways. Under existing background and buildout conditions, all intersections operate at an acceptable LOS and with a v/c ratio less than one (1.0), except some movements and approaches at the intersection of SR 434 and Tuskawilla Road. This intersection is mainly built to its maximum extent with limited room for additional capacity improvements. Signal timing adjustments are recommended to maintain pre-project (background) conditions at the intersection. However, some movements will continue to operate with high delays and/or over their capacity.

A roadway segment analysis was performed to assess the impact of the project on the surrounding roadway network capacity. The roadway segments operate at an acceptable LOS and do not exceed capacity in the existing, background, and buildout conditions.

No roadway or intersection deficiencies were identified as a result of project impact.

APPENDIX A
TIA Methodology Statement

Kimley»Horn

MEMORANDUM

To: Terrilyn Rolle
Community Development Director
City of Winter Springs, FL

Arturo J. Perez, MSCE, P.E.
Professional Engineer - Transportation
Seminole County Public Works Department – Engineering Division

From: Emanuelle D Rodriguez Muñiz, P.E., IMSA[1]
Kimley-Horn and Associates, Inc.

Date: November 27, 2024

Subject: Winter Springs Wawa TIA Methodology
Winter Springs, FL

PURPOSE

The following memorandum is a Traffic Impact Analysis (TIA) methodology for the above-referenced project in the City of Winter Springs, FL. The forthcoming TIA will generally conform to the methodology herein and the policies and guidelines as established by Seminole County Public Works Department – Engineering Division (March 2023).

PROJECT DESCRIPTION

The proposed project consists of a 12-vehicle fueling positions (VFP) Wawa gas station with a 4,736-square-foot convenience store within the existing shopping plaza. The site is located on the southwest corner of Tuskawilla Road and SR 434. Access to the site will be available through the existing driveways on SR 434 and Tuskawilla Road, as shown in the conceptual site plan provided in **Attachment A**. **Figure 1** shows the project location, study area, and its access points.

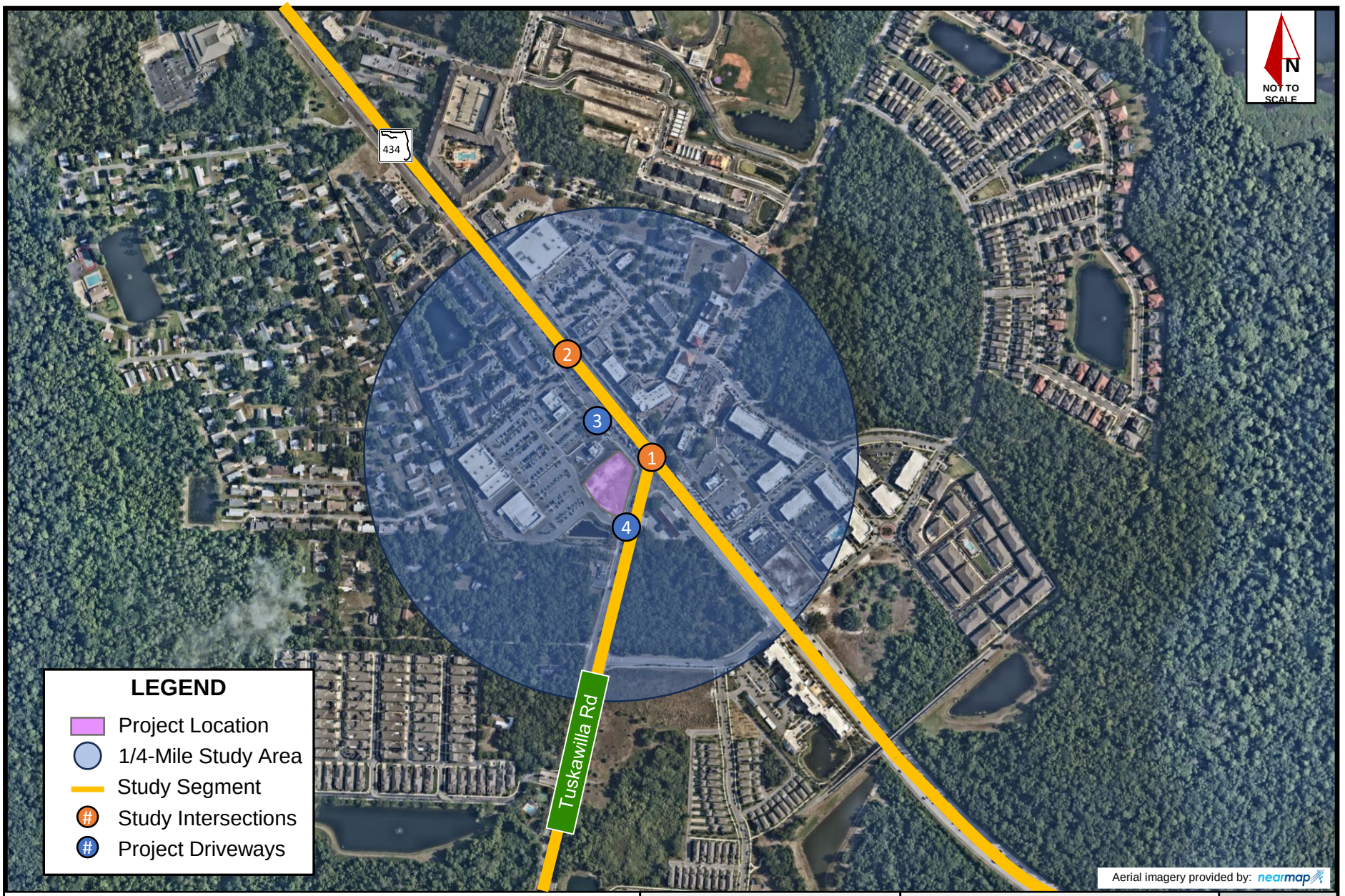


Figure 1: Project Location Map

Winter Springs Wawa | Winter Springs, FL

November 2024

Kimley»Horn

© 2024 Kimley-Horn and Associates, Inc.

1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282

Kimley»Horn

EXISTING CONDITIONS (OPERATIONAL ANALYSIS)

AM (7:00 AM - 9:00 AM) and PM (4:00 PM - 6:00 PM) peak period turning movement counts (TMC) data will be collected at the study area intersections. The data will be adjusted using the respective seasonal factor from FDOT's *Florida Traffic Online* database.

Intersection capacity analyses will be performed for existing AM and PM peak hour conditions using the operational analysis procedures outlined in the *Highway Capacity Manual 7th Edition*. Specifically, Synchro (v12) software will be used to evaluate existing operational conditions at study area intersections and driveways by reporting volume-to-capacity (v/c) ratios, delay, and queue length demands.

TRIP GENERATION

Trip generation for the proposed development was calculated per procedures published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition*. The following land use codes (LUC) were used to estimate the trips generated by the proposed development:

- LUC 945 – Convenience Store/Gas Station (4 - 5.5K)

Given the location of the proposed gas station, surrounded by various commercial restaurant land uses and a drive-in bank within the same site, a 10% internal capture was assumed. The pass-by rates were obtained from the *Trip Generation Manual, 11th Edition* appendices. **Table 1** provides Daily, AM, and PM peak-hour trip generation summaries for the proposed development at buildout. The project is anticipated to generate 693 new daily trips, 73 new AM peak-hour trips (37 inbound and 36 outbound), and 60 new PM peak-hour trips (31 inbound and 29 outbound) at the project driveways.

Kimley»Horn

Table 1: Trip Generation

	Land Use	LUC[1]	Size	Units	Trip Rate[1]	Daily				
						Total	In[1]		Out[1]	
Daily	Convenience Store/ Gas Station - GFA (4-5.5k)	945	**12**	VFP	257.13	3,086	*50%*	1,543	*50%*	1,543
	Total Generated Trips					**3,086**	**1,543**		**1,543**	
	Internal Capture =	*10.0%*				*310*	*155*		*155*	
	Net External Trips					**2,776**	**1,388**		**1,388**	
	Pass by Trips[3] =	*75.0%*	*of external retail trips*			*2,083*	*1,042*		*1,041*	
	New External Trips					**693**	**346**		**347**	
	Land Use	**LUC[1]**	**Size**	**Units**	**Trip Rate[1]**	**AM Peak Hour**				
						Total	**In[1]**		**Out[1]**	
AM Peak Hour	Convenience Store/ Gas Station - GFA (4-5.5k)	945	**12**	VFP	27.04	324	*50%*	162	*50%*	162
	Total Generated Trips					**324**	**162**		**162**	
	Internal Capture =	*10.0%*				33	16		16	
	Net External Trips					**291**	**146**		**145**	
	Pass by Trips[3] =	*75.0%*	*of external retail trips*			218	109		109	
	New External Trips					**73**	**37**		**36**	
	Land Use	**LUC[1]**	**Size**	**Units**	**Trip Rate[1]**	**PM Peak Hour**				
						Total	**In[1]**		**Out[1]**	
PM Peak Hour	Convenience Store/ Gas Station - GFA (4-5.5k)	945	**12**	VFP	22.76	273	*50%*	137	*50%*	136
	Total Generated Trips					**273**	**137**		**136**	
	Internal Capture =	*10.0%*				27	13		14	
	Net External Trips					**246**	**124**		**122**	
	Pass by Trips[3] =	*76.0%*	*of external retail trips*			186	93		93	
	New External Trips					**60**	**31**		**29**	

Notes: *1. Vehicle trip rates and directional splits per ITE Trip Generation Manual, 11th Edition*

2. A 10% internal capture to account for the +/- 57K SF of shopping plaza.

3. Land Use Code 945 pass-by rates obtained from ITE Trip Generation Manual, 11th Edition Appendices.

Kimley»Horn

TRIP DISTRIBUTION AND TRIP ASSIGNMENT

Projected traffic demand of project trips on study roadways was derived with use of the latest adopted regional travel demand model. Land use data for the project was entered into a new traffic analysis zone (TAZ) within the Central Florida Regional Planning Model (CFRPM v7) model set and situated within the existing roadway network to appropriately represent project access. The select zone model distribution for the project was reviewed for logic.

The proposed trip distribution, shown in **Figure 2**, will be used to assign external project traffic to the study area intersections and driveway. The model output plot showing percent of daily trip distribution is provided in **Attachment B**.

STUDY AREA

A roadway segment analysis will be performed for segments within a 1-mile radius of the project site. Forecasted project traffic will be assigned per the project distribution shown in **Attachment B**. Existing and vested trip data will be referenced from Seminole County's most recent roadway concurrency information. The standard Seminole County "K" factor will be used to convert daily committed trip information to peak hour volumes. The "D" factor will be obtained from the turning movement volumes. The following roadway segments are included in the analysis:

- **#296** – SR 434 from Spring Ave to Tuskawilla Rd
- **#297** – SR 434 from Tuskawilla Rd to SR 419
- **#326** – Tuskawilla Rd from SR 434 to Trotwood Blvd

Per Seminole County traffic study requirements, all signalized intersections and major unsignalized intersections within a 1/4-mile radius from the perimeter of the site will be evaluated as part of the traffic study, as well as the proposed project driveways. The following intersections will be analyzed in the TIA:

- SR 434 & Tuskawilla Road
- SR 434 & Roberts Family Lane
- SR 434 & Project Driveway
- Tuskawilla Road & Project Driveway

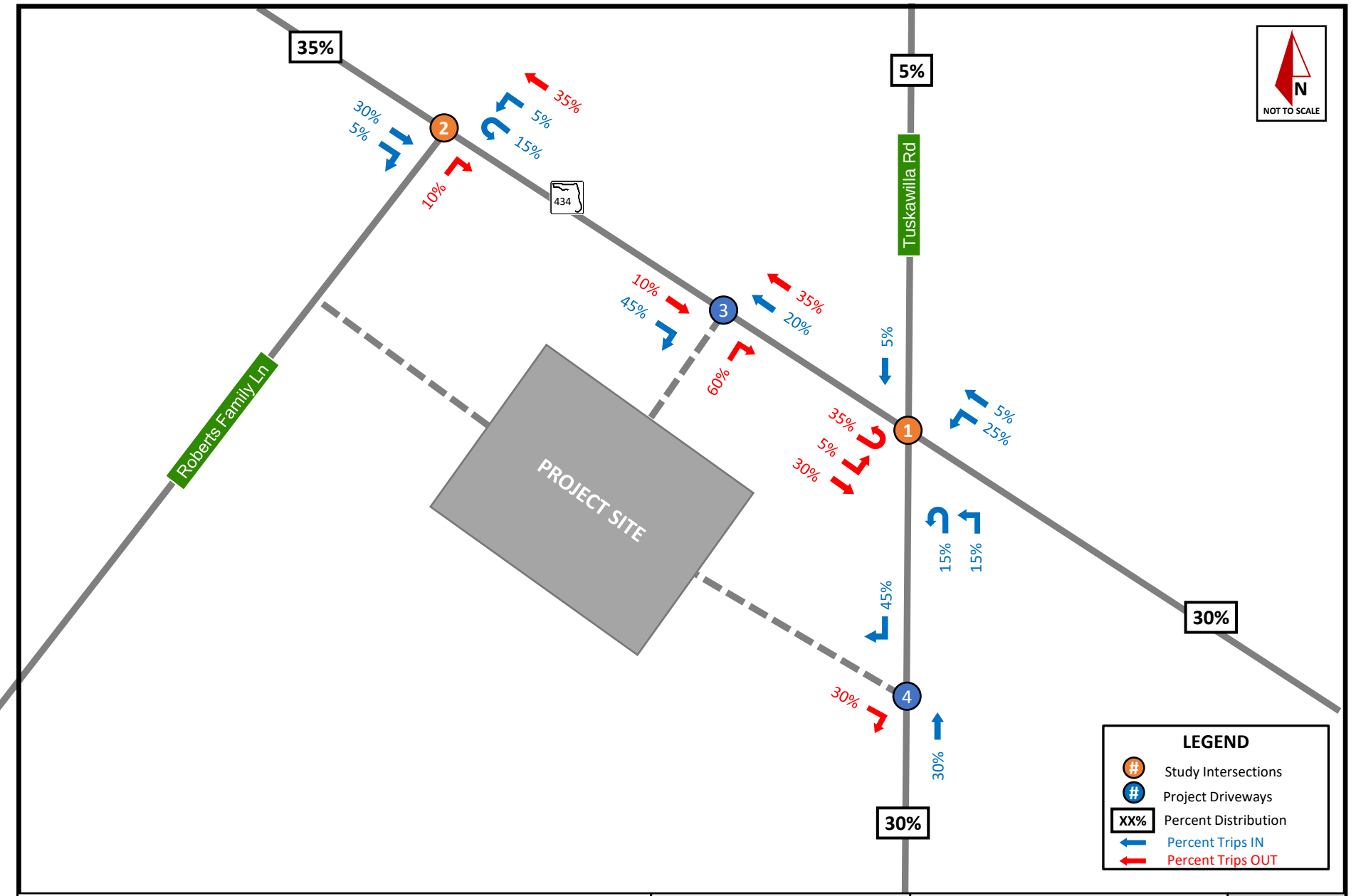


Figure 2: Project Trip Distribution

Winter Springs Wawa | Winter Springs, FL

November 2024

© 2024 Kimley-Horn and Associates, Inc.
Kimley»Horn
1530 Cornerstone Boulevard, Suite 200A,
Daytona Beach, FL 32117
Phone: (386) 271-0282

Kimley»Horn

BACKGROUND & BUILDOUT CONDITIONS (OPERATIONAL ANALYSIS)

Existing volumes will be grown no less than two percent (2%) per year to develop Year 2025 background traffic. Buildout traffic volumes will be determined by combining background (2025) volumes with project traffic volumes. Project trips will be assigned to the roadway network in accordance with the project trip distribution.

Intersection capacity analyses will be performed for background (2025) and buildout (2025) AM and PM peak hour conditions using the operational analysis procedures outlined in the *Highway Capacity Manual 7th Edition*. Specifically, Synchro (v12) software will be used to evaluate background and buildout operational conditions at study area intersections and the project driveway by reporting volume-to-capacity (v/c) ratios, delay, and queue length demands.

SEGMENT ANALYSIS

A daily and PM peak hour roadway segment analysis will be performed for the segments located within a 1-mile radius of the proposed retail development. The analysis will include existing, background, and buildout scenarios. Volumes for the background scenario will be determined by applying a minimum 2% annual growth rate to existing (2024) volumes to obtain future (2026) volumes. Volumes for the buildout scenario will be determined by adding project trips to background volumes. Relevant data will be referenced from Seminole County's *Summary of Roadway Concurrency Information*. The analysis will identify any existing, background or buildout deficiencies along the study area roadway segments.

TURN LANE ANALYSIS

The need for turn lanes at the proposed driveways will be assessed per Seminole County's Transportation Standards in the Public Works Engineering Manual on County facilities and per FDOT and/or NCHRP guidance on non-County facilities.

REPORT

All analysis and findings will be documented in a report to be provided to the City of Winter Springs and Seminole County for review. If necessary, mitigating measures for any operational deficiencies identified due to project traffic impact will be recommended in the TIA.

APPENDIX B
Site Plan

S.R. 434 & TUSCAWILLA RD.

WINTER SPRINGS, FLORIDA

SP-47

PROPOSED SITE LAYOUT

06/2052024 - CONTACT JONATHAN A. MARTIN, P.E. (407) 427-1686

EQUINOX DEVELOPMENT

GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

Kimley»Horn

K:\ORL_Civil\149170016 - Winter Springs Marketplace\CADD\CONCEPT\SP-47.dwg

APPENDIX C
Turning Movement Counts

National Data & Surveying Services

N

N/S Street: **Tuskawilla Rd**

Speed: **25/45 MPH**

Site Code: **24-130385-001**

Date: **11/14/2024**

Weather: **Sunny**

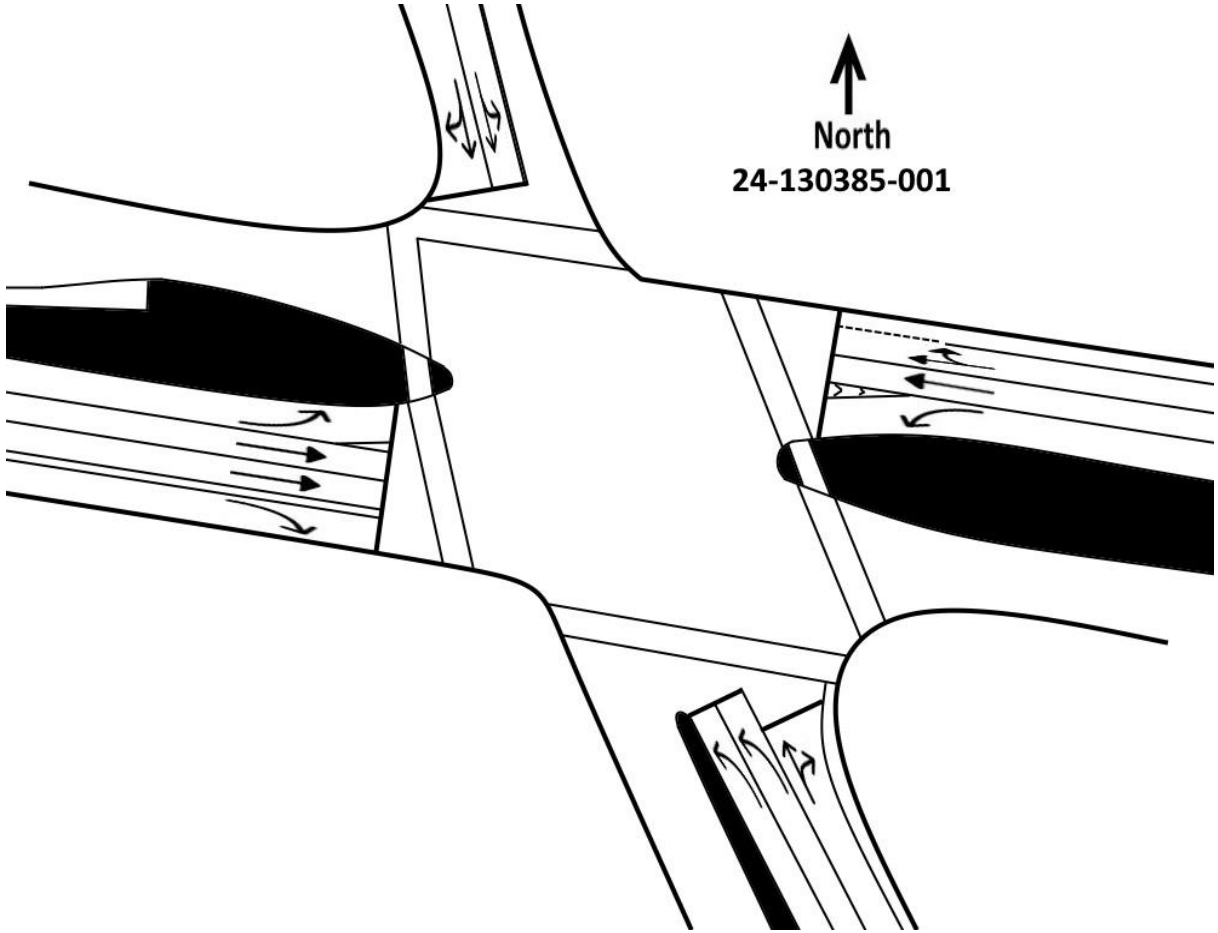
City: **Winter Springs**

County: **Seminole**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**



E/W Street: **SR 436/SR 434/SR419/E Florida 434**

Speed: **45/50 MPH**

National Data & Surveying Services

N

N/S Street: **Roberts Family Ln/Cliff Rose Dr**

Speed: **N/A**

Site Code: **24-130385-002**

Date: **11/14/2024**

Weather: **Sunny**

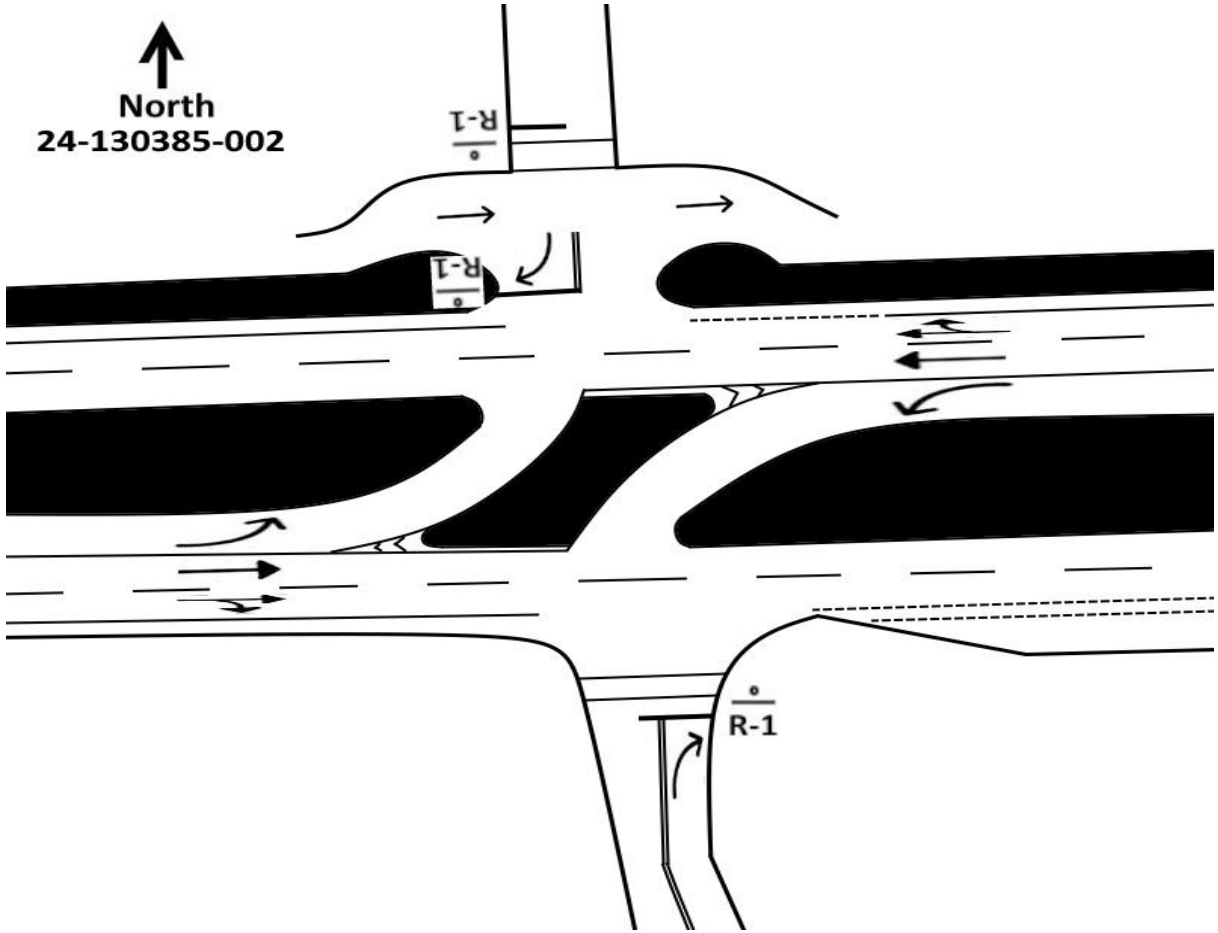
City: **Winter Springs**

County: **Seminole**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **2-Way Stop(NB/SB)**



E/W Street: **SR 436/SR 434/SR419/E Florida 434**

Speed: **45/50 MPH**

National Data & Surveying Services

N

N/S Street: **Tuskawilla Rd**

Speed: **25/45 MPH**

E/W Street: **180 Shopping Center Dwy/Mobil Dwy**

Speed: **N/A**

Site Code: **24-130385-003**

Date: **11/14/2024**

Weather: **Sunny**

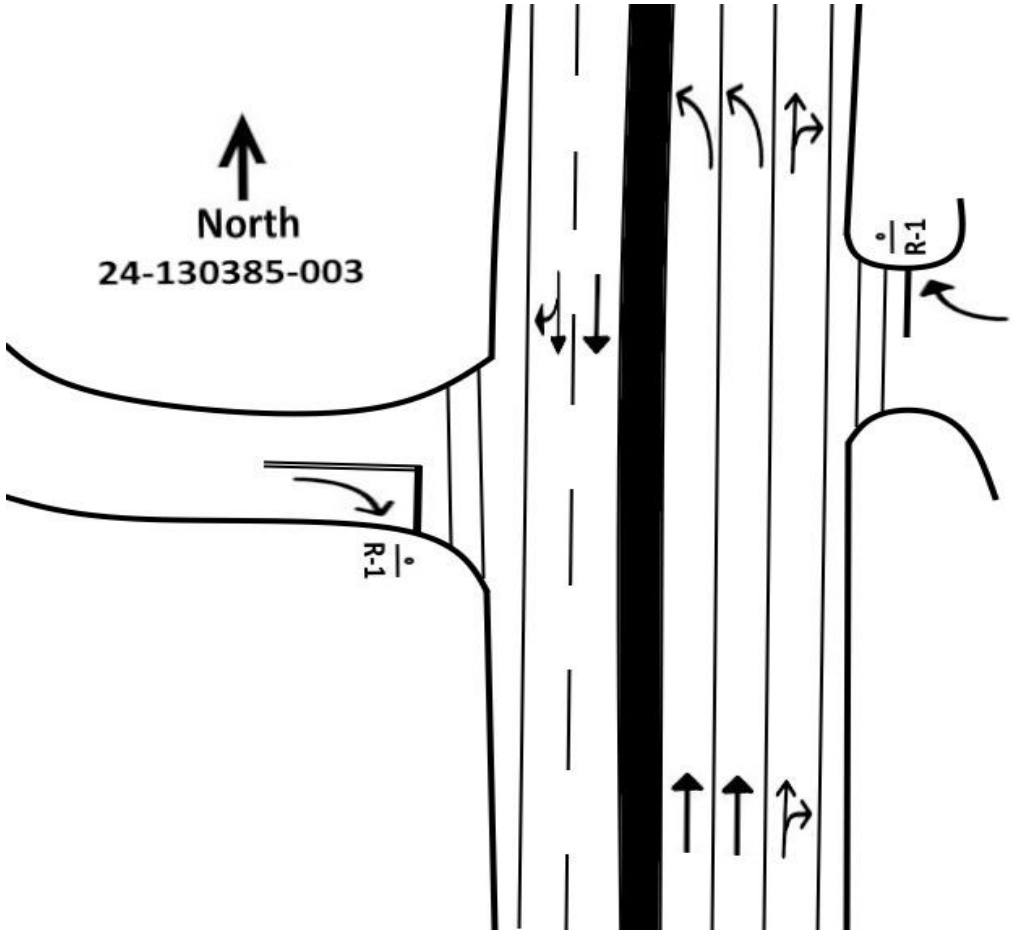
City: **Winter Springs**

County: **Seminole**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **2-Way Stop(EB/WB)**



National Data & Surveying Services

N

N/S Street: **1179 Shopping Center Dwy**

Speed: **N/A**

E/W Street: **SR 436/SR 434/SR419/E Florida 434**

Speed: **45/50 MPH**

Site Code: **24-130385-004**

Date: **11/14/2024**

Weather: **Sunny**

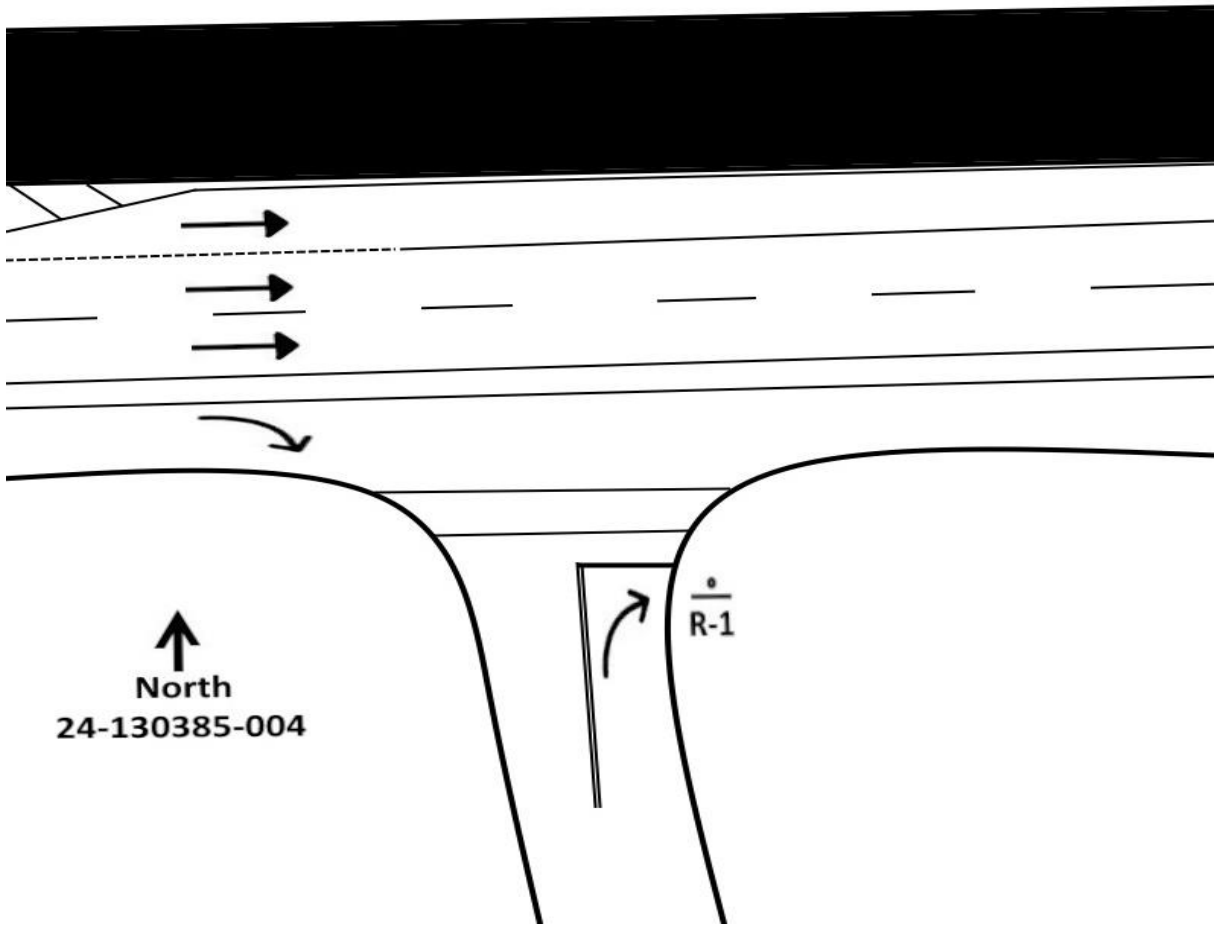
City: **Winter Springs**

County: **Seminole**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **1-Way Stop(NB)**



Prepared by National Data & Surveying Services

Tuskawilla Rd & SR 436 / SR 434 / SR419 / E Florida 434

Peak Hour Turning Movement Count

ID: 24-130385-001
City: Winter Springs

Day: Thursday
Date: 11/14/2024

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 7:00 AM - 09:00 AM
NOON: NONE
PM: 4:00 PM - 06:00 PM

Tuskawilla Rd

SOUTHBOUND

AM	40	88	46	0	151	AM
NOON	0	0	0	0	0	NOON
PM	34	152	100	0	305	PM

EASTBOUND

SR 436/SR 434/SR419/E Florida 434

AM	NOON	PM	
1647	0	1948	⇦
11	0	34	↰ 0
40	0	66	↱ 0
848	0	1051	→ 0
396	0	536	↳ 0

CONTROL

Signalized

TEV	3504 AM	0 NOON	4390 PM
PHF	0.96		0.98

WESTBOUND

SR 436/SR 434/SR419/E Florida 434

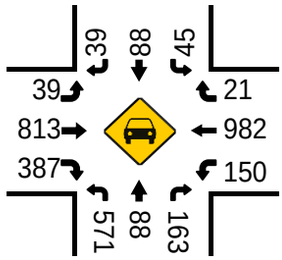
PM	NOON	AM	
35	0	21	0 ↰
1170	0	1019	0 ←
164	0	153	0 ↶
1	0	10	0 ↩
1285	0	1069	⇨

NORTHBOUND

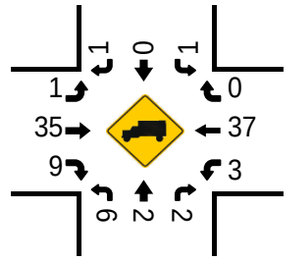
PM	852	0	710	204	133	PM
NOON	0	0	0	0	0	NOON
AM	637	0	577	90	165	AM

Tuskawilla Rd

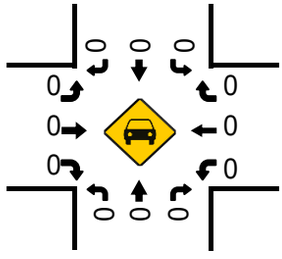
Cars (AM)



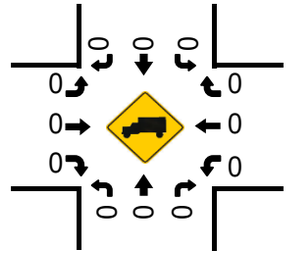
HT (AM)



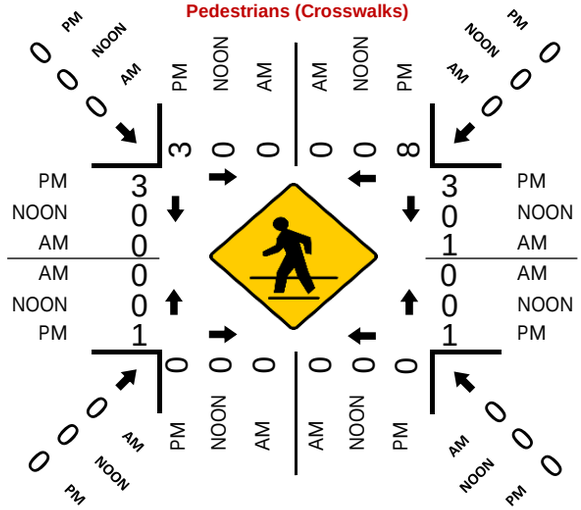
Cars (NOON)



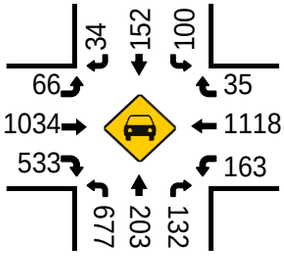
HT (NOON)



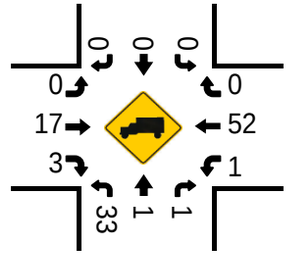
Pedestrians (Crosswalks)



Cars (PM)



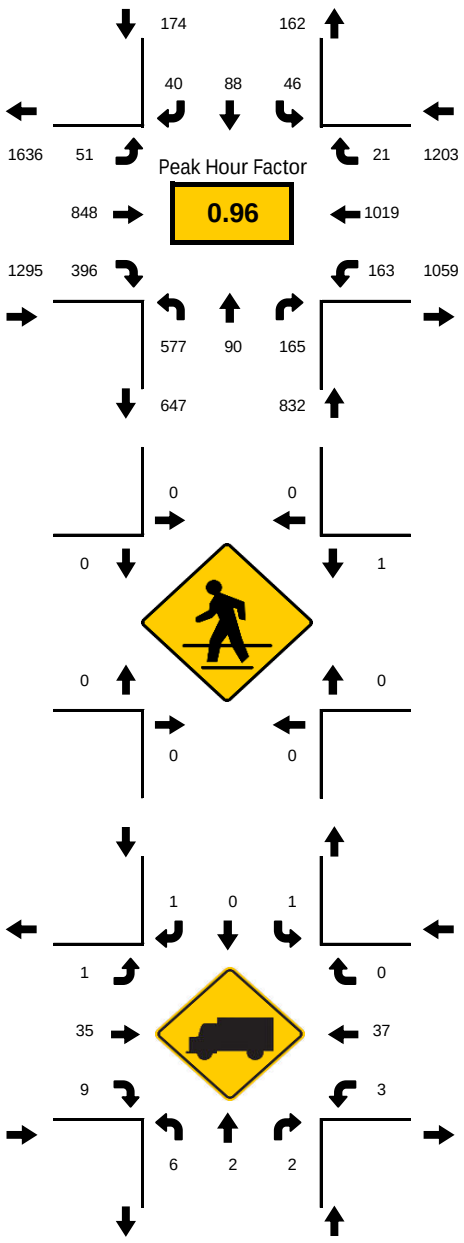
HT (PM)



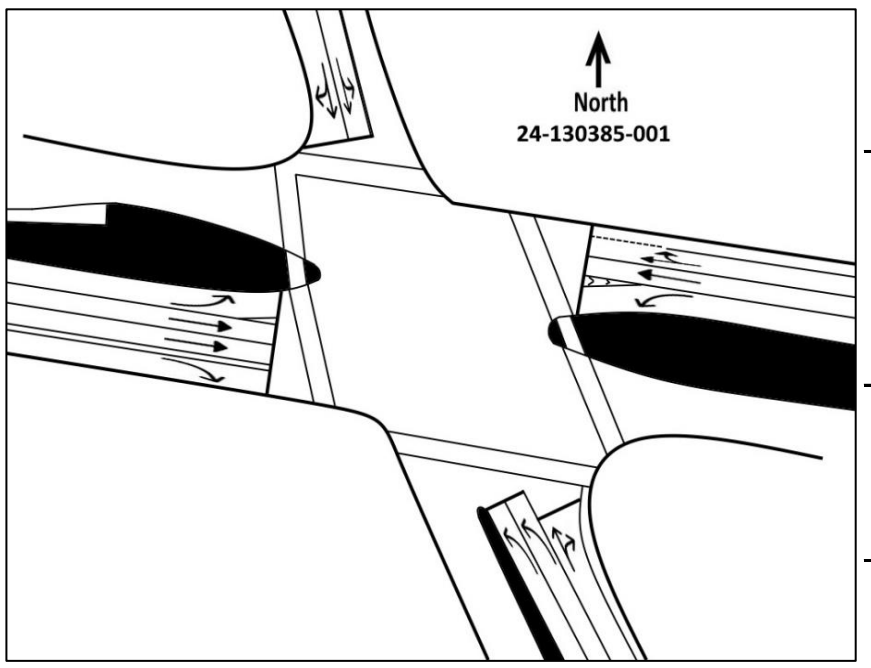
LOCATION: Tuskawilla Rd & SR 436/SR 434/SR419/E Florida 434
CITY/STATE: Winter Springs, FL

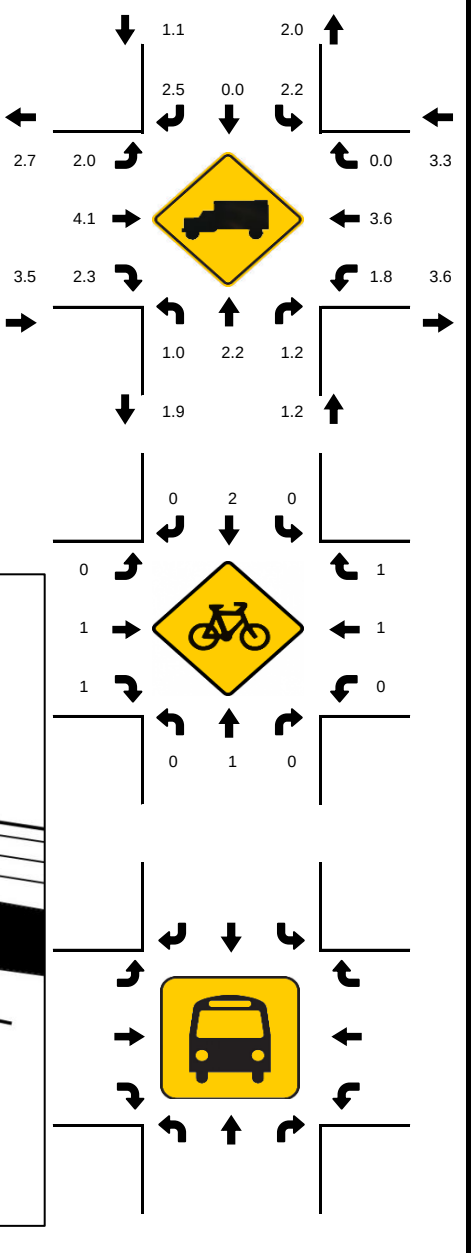
PROJECT ID: 24-130385-001
DATE: Thu, Nov 14, 2024

Peak-Hour: 07:30 AM - 08:30 AM
Peak 15-Minute: 08:15 AM - 08:30 AM



National Data & Surveying Services



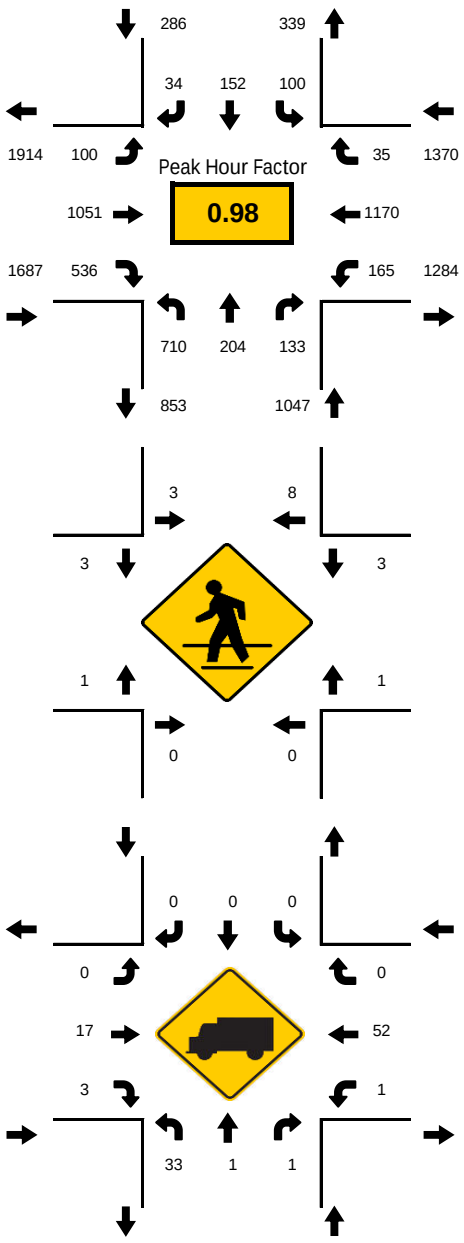


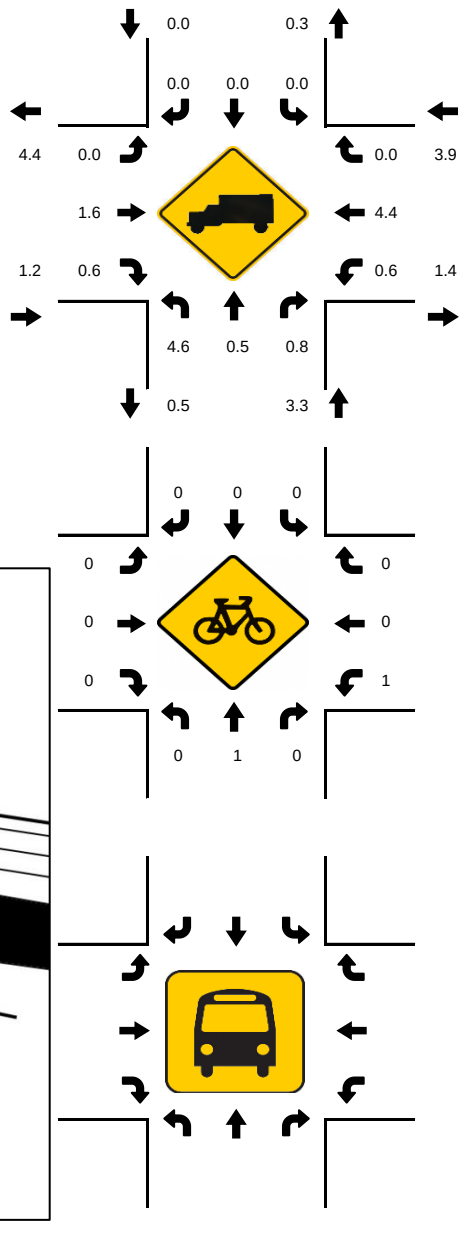
15-Min Count Period Beginning At	Tuskawilla Rd Northbound					Tuskawilla Rd Southbound					R 436/SR 434/SR419/E Florida 43 Eastbound					R 436/SR 434/SR419/E Florida 43 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	137	90	14	0		30	48	6	0		9	178	101	4		29	213	12	1		872	3414
7:15 AM	124	19	7	0		20	32	5	0		6	200	106	1		39	251	10	1		821	3408
7:30 AM	139	23	50	0		13	30	15	0		5	208	94	1		39	240	4	2		863	3504
7:45 AM	171	27	41	0		11	16	9	0		15	175	82	5		32	268	3	3		858	3474
8:00 AM	121	18	38	0		15	22	9	0		6	232	106	3		50	236	8	2		866	3493
8:15 AM	146	22	36	0		7	20	7	0		14	233	114	2		32	275	6	3		917	2627
8:30 AM	122	30	29	0		17	20	4	0		18	201	110	1		53	218	9	1		833	1710
8:45 AM	137	31	29	0		14	41	4	0		11	251	132	2		43	175	5	2		877	877
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	684	108	200	0		60	120	60	0		60	932	456	20		200	1100	32	12		**4044**	
Heavy Trucks	8	4	4	0		4	0	4	0		4	52	16	0		8	44	0	0		**148**	
Pedestrians		0					0					0					4				**4**	
Bicycles	0	4	0	0		0	8	0	0		0	4	4	0		0	4	4	0		**28**	
Buses																						
Stopped Buses																						

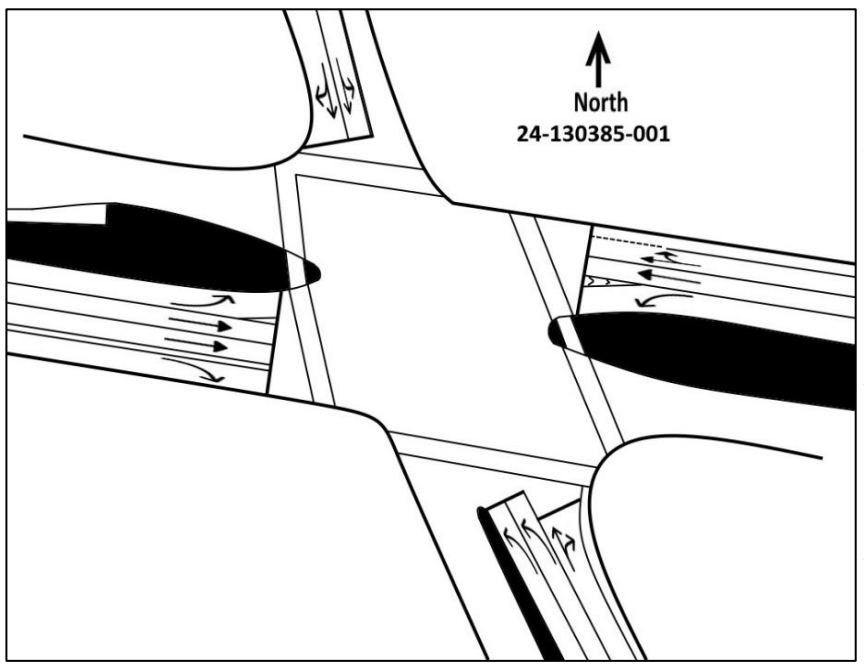
LOCATION: Tuskawilla Rd & SR 436/SR 434/SR419/E Florida 434
CITY/STATE: Winter Springs, FL

PROJECT ID: 24-130385-001
DATE: Thu, Nov 14, 2024

Peak-Hour: 05:00 PM - 06:00 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







15-Min Count Period Beginning At	Tuskawilla Rd Northbound					Tuskawilla Rd Southbound					R 436/SR 434/SR419/E Florida 43 Eastbound					R 436/SR 434/SR419/E Florida 43 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	131	24	27	0		34	48	4	0		7	182	99	14		36	220	3	0		829	3884
4:15 PM	114	19	28	0		16	39	10	0		18	239	128	4		38	326	6	1		986	4135
4:30 PM	147	50	25	0		17	31	11	0		12	215	124	10		38	324	4	3		1011	4271
4:45 PM	156	52	16	0		30	51	7	0		15	222	123	16		47	318	4	1		1058	4359
5:00 PM	160	53	23	0		31	32	9	0		12	258	130	3		49	313	6	1		1080	4390
5:15 PM	201	50	43	0		25	41	11	0		17	263	123	12		34	290	12	0		1122	3310
5:30 PM	181	44	35	0		22	44	6	0		20	257	132	12		43	296	7	0		1099	2188
5:45 PM	168	57	32	0		22	35	8	0		17	273	151	7		38	271	10	0		1089	1089
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**						
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Total**	
All Vehicles	804	228	172	0		124	176	44	0		80	1092	604	48		196	1252	48	4		**4872**	
Heavy Trucks	52	4	4	0		0	0	0	0		0	28	4	0		4	64	0	0		**160**	
Pedestrians		0					32					16					4				**52**	
Bicycles	0	4	0	0		0	0	0	0		0	0	0	0		4	0	0	0		**8**	
Buses																						
Stopped Buses																						

Prepared by National Data & Surveying Services

Roberts Family Ln / Cliff Rose Dr & SR 436 / SR 434 / SR419 / E Florida 434

Peak Hour Turning Movement Count

ID: 24-130385-002
City: Winter Springs

Day: Thursday
Date: 11/14/2024

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 7:00 AM - 09:00 AM
NOON: NONE
PM: 4:00 PM - 06:00 PM

Roberts Family Ln/Cliff Rose Dr

SOUTHBOUND

AM	10	0	0	0	56	AM
NOON	0	0	0	0	0	NOON
PM	43	0	0	0	133	PM

EASTBOUND — SR 436/SR 434/SR419/E Florida 434

AM	NOON	PM	
1607	0	1814	⇦
5	0	4	↶ 0
36	0	66	↱ 0
1263	0	1673	→ 0
9	0	34	↴ 0
AM	NOON	PM	

CONTROL

2-Way Stop(NB/SB)

TEV	3008 AM	0 NOON	3795 PM
PHF	0.94		0.99

WESTBOUND — SR 436/SR 434/SR419/E Florida 434

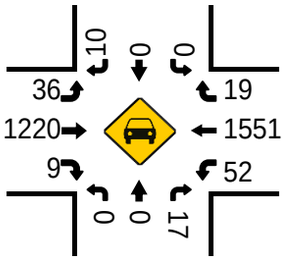
PM	NOON	AM	
67	0	20	↰ 0
1767	0	1592	← 0
81	0	52	↰ 0
15	0	4	↶ 0
1733	0	1284	⇨
PM	NOON	AM	

PM	115	0	0	0	45	PM
NOON	0	0	0	0	0	NOON
AM	61	0	0	0	17	AM

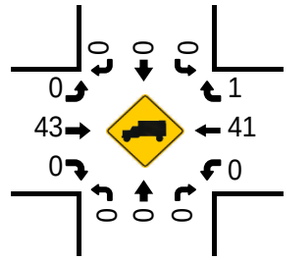
NORTHBOUND

Roberts Family Ln/Cliff Rose Dr

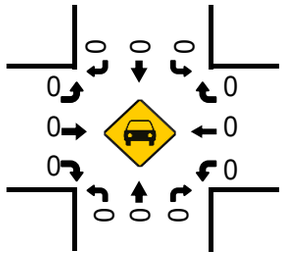
Cars (AM)



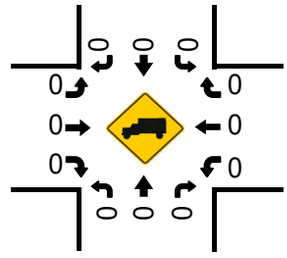
HT (AM)



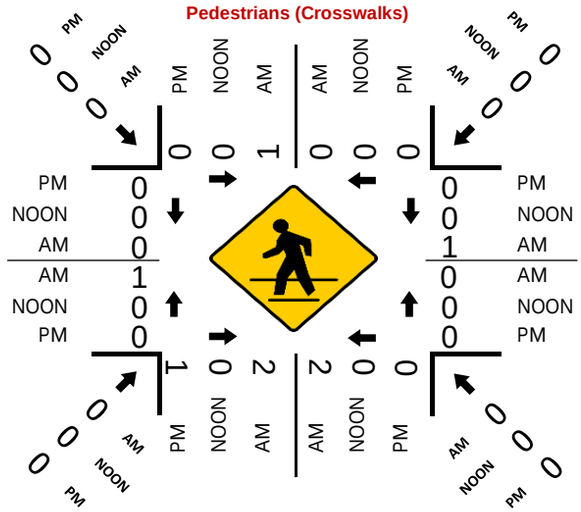
Cars (NOON)



HT (NOON)



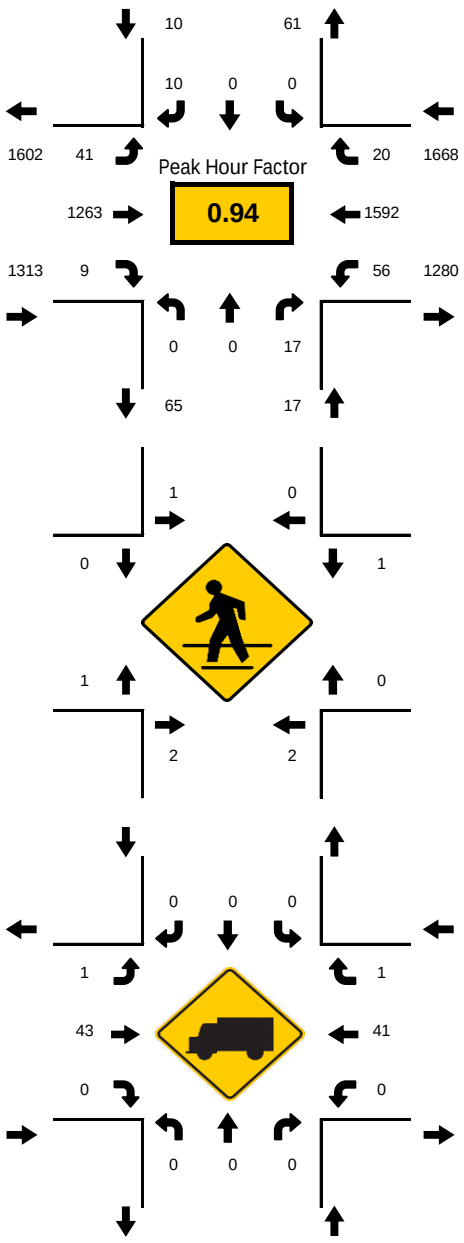
Pedestrians (Crosswalks)

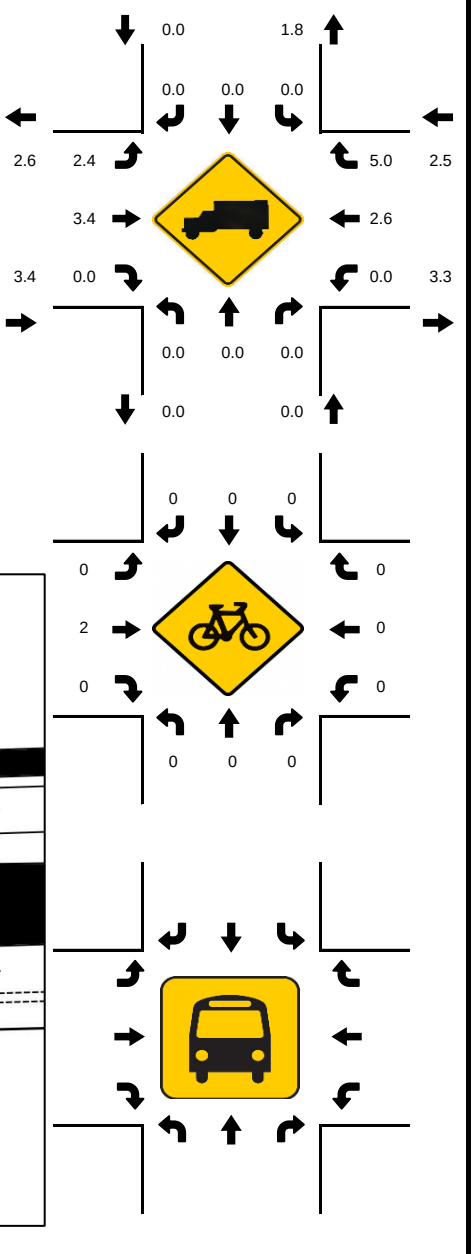

PM
NOON
AM
0
0
0
0
0
1
0
0
0
PM
0
NOON
0
AM
0
AM
1
NOON
0
PM
0
0
0
1
0
0
2
0
2
0
0
0
0
0
1
0
0
0
0
0
0
0
0
0
0
0

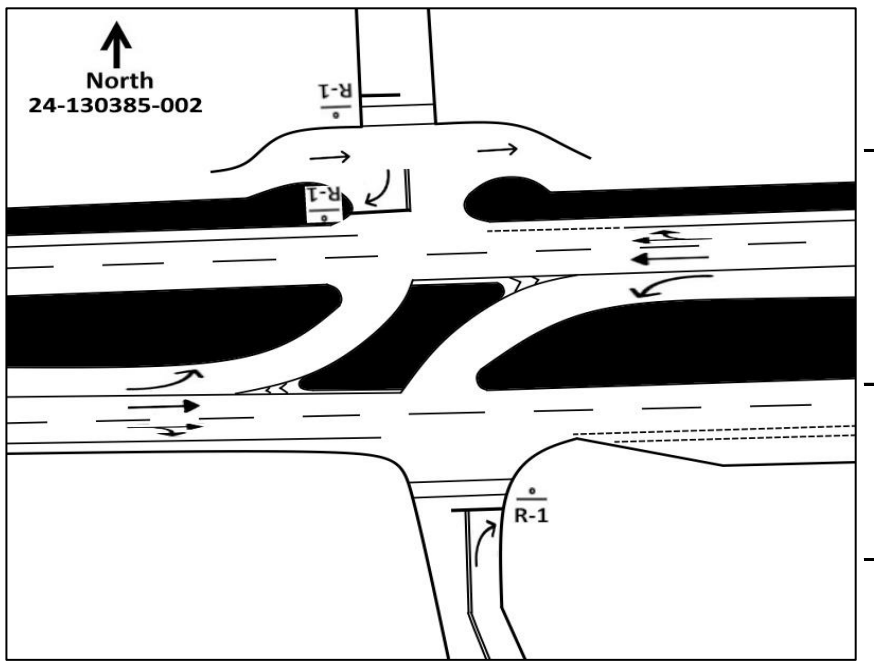
LOCATION: Roberts Family Ln/Cliff Rose Dr & SR 436/SR 434/SR419/E Florida 434
CITY/STATE: Winter Springs, FL

PROJECT ID: 24-130385-002
DATE: Thu, Nov 14, 2024

Peak-Hour: 07:30 AM - 08:30 AM
Peak 15-Minute: 08:15 AM - 08:30 AM





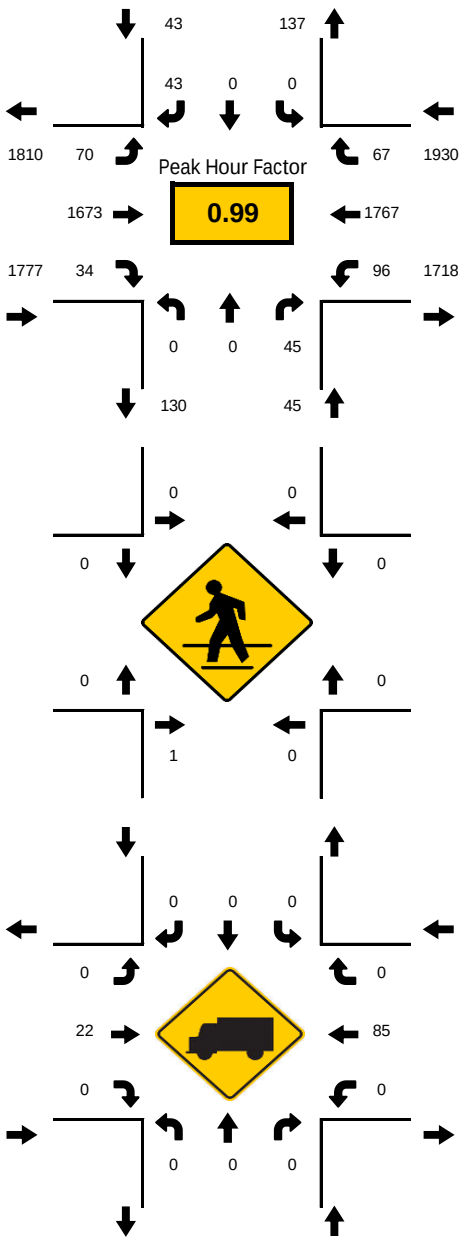


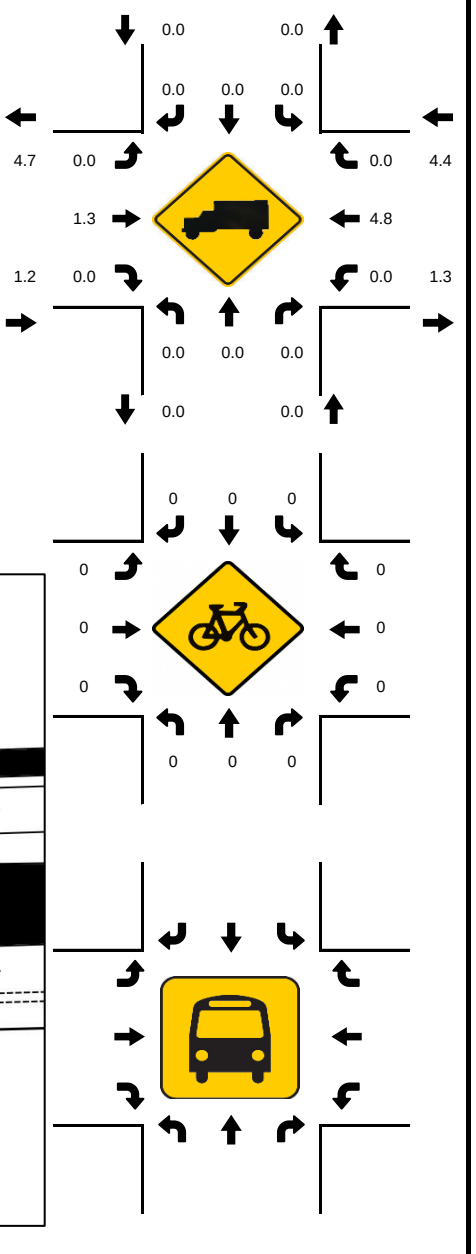
15-Min Count Period Beginning At	Roberts Family Ln/Cliff Rose Dr Northbound					Roberts Family Ln/Cliff Rose Dr Southbound					R 436/SR 434/SR419/E Florida 43 Eastbound					R 436/SR 434/SR419/E Florida 43 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	0	0	10	0		0	0	1	0		7	271	4	1		11	359	7	0		671	2868
7:15 AM	0	0	2	0		0	0	0	0		8	318	3	1		7	361	5	3		708	2917
7:30 AM	0	0	4	0		0	0	2	0		5	295	2	1		21	402	3	1		736	3008
7:45 AM	0	0	6	0		0	0	3	0		7	272	3	2		12	435	11	2		753	2970
8:00 AM	0	0	4	0		0	0	1	0		18	340	3	1		11	338	4	0		720	2931
8:15 AM	0	0	3	0		0	0	4	0		6	356	1	1		8	417	2	1		799	2211
8:30 AM	0	0	0	0		0	0	3	0		5	356	3	1		11	309	7	3		698	1412
8:45 AM	0	0	2	0		0	0	3	0		10	382	4	0		23	281	9	0		714	714
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	0	0	24	0		0	0	16	0		72	1424	12	8		84	1740	44	8		**3432**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	68	0	4		0	44	4	0		**116**	
Pedestrians		12					4					4					4				**24**	
Bicycles	0	0	0	0		0	0	0	0		0	8	0	0		0	0	0	0		**8**	
Buses																						
Stopped Buses																						

LOCATION: Roberts Family Ln/Cliff Rose Dr & SR 436/SR 434/SR419/E Florida 434
CITY/STATE: Winter Springs, FL

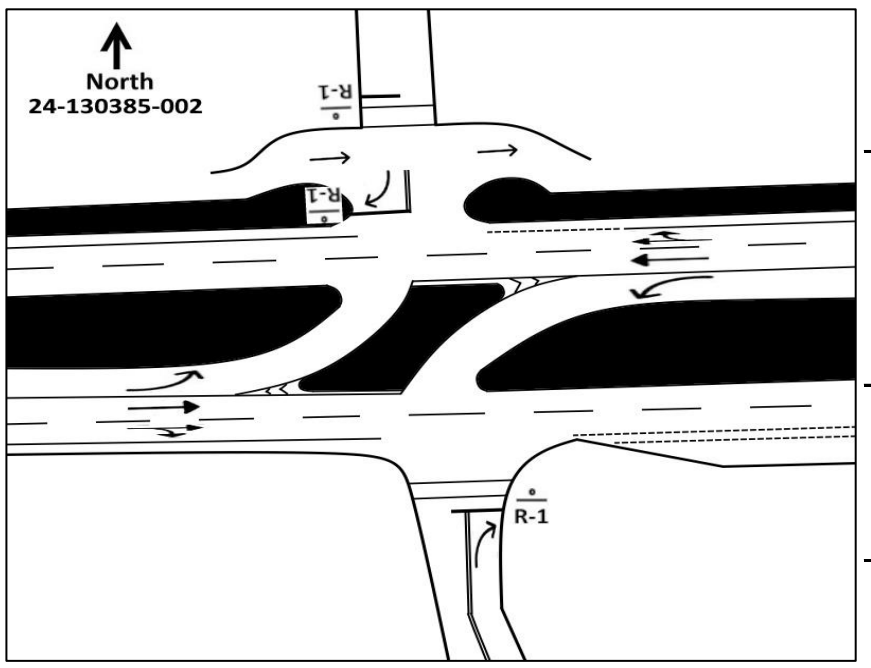
PROJECT ID: 24-130385-002
DATE: Thu, Nov 14, 2024

Peak-Hour: 05:00 PM - 06:00 PM
Peak 15-Minute: 05:15 PM - 05:30 PM





National Data & Surveying Services



15-Min Count Period Beginning At	Roberts Family Ln/Cliff Rose Dr Northbound					Roberts Family Ln/Cliff Rose Dr Southbound					R 436/SR 434/SR419/E Florida 43 Eastbound					R 436/SR 434/SR419/E Florida 43 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	0	12	0		0	0	14	0		15	291	6	2		16	326	20	1		703	3365
4:15 PM	0	0	3	0		0	0	10	0		22	376	7	0		12	434	10	4		878	3616
4:30 PM	0	0	9	0		0	0	15	0		15	361	9	3		18	456	10	4		900	3702
4:45 PM	0	0	13	0		0	0	6	0		20	341	2	1		20	459	18	4		884	3757
5:00 PM	0	0	8	0		0	0	11	0		15	426	7	1		20	451	14	1		954	3795
5:15 PM	0	0	13	0		0	0	12	0		15	416	8	0		19	465	11	5		964	2841
5:30 PM	0	0	11	0		0	0	13	0		14	407	10	1		17	455	22	5		955	1877
5:45 PM	0	0	13	0		0	0	7	0		22	424	9	2		25	396	20	4		922	922
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	0	0	52	0		0	0	52	0		88	1704	40	8		100	1860	88	20		**4012**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	36	0	0		0	112	0	0		**148**	
Pedestrians		4					0					0					0				**4**	
Bicycles	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		**0**	
Buses																						
Stopped Buses																						

Prepared by National Data & Surveying Services

Tuskawilla Rd & 180 Shopping Center Dwy / Mobil Dwy

Peak Hour Turning Movement Count

ID: 24-130385-003
City: Winter Springs

Day: Thursday
Date: 11/14/2024

PEAK HOURS
AM: 07:00 AM - 08:00 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS
AM: 7:00 AM - 09:00 AM
NOON: NONE
PM: 4:00 PM - 06:00 PM

Tuskawilla Rd

SOUTHBOUND

AM	15	643	0	0	867	AM
NOON	0	0	0	0	0	NOON
PM	61	784	0	0	1046	PM

EASTBOUND

AM	NOON	PM	
15	0	61	
0	0	0	0
0	0	0	0
0	0	0	0
53	0	124	0
AM	NOON	PM	

WESTBOUND

PM	NOON	AM	
2	0	9	0
0	0	0	0
0	0	0	0
0	0	0	0
22	0	16	
PM	NOON	AM	

CONTROL
2-Way Stop(EB/WB)

TEV	1594	0	2037
	AM	NOON	PM
PHF	0.90		0.98

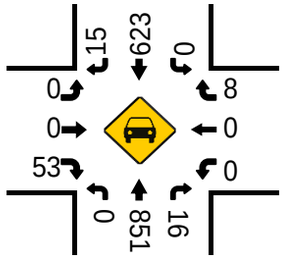
PM	908	0	0	1044	22	PM
NOON	0	0	0	0	0	NOON
AM	696	0	0	858	16	AM

NORTHBOUND

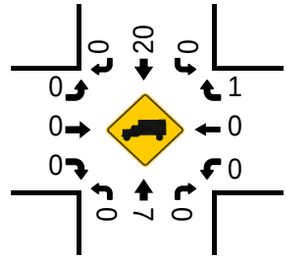
Tuskawilla Rd

180 Shopping Center Dwy/Mobil Dwy (EASTBOUND side)
180 Shopping Center Dwy/Mobil Dwy (WESTBOUND side)

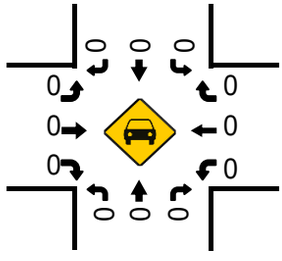
Cars (AM)



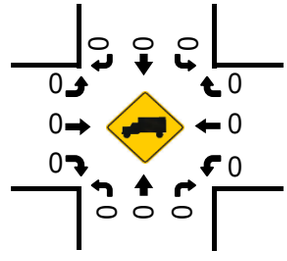
HT (AM)



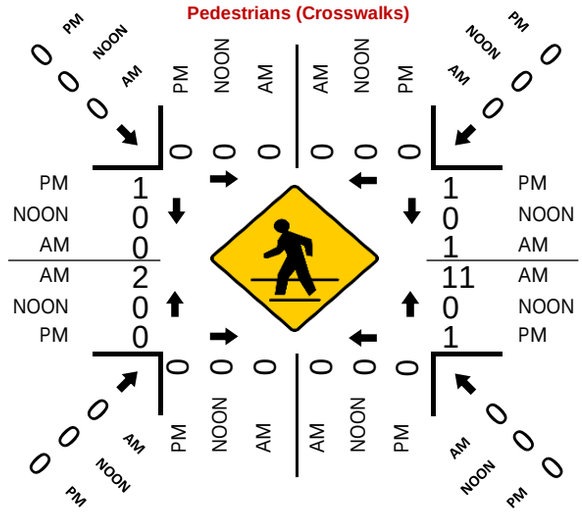
Cars (NOON)



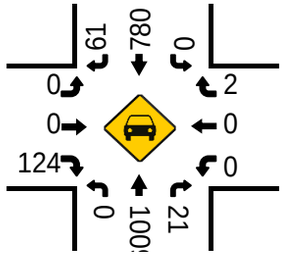
HT (NOON)



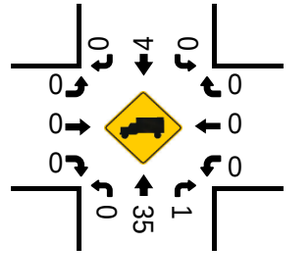
Pedestrians (Crosswalks)



Cars (PM)



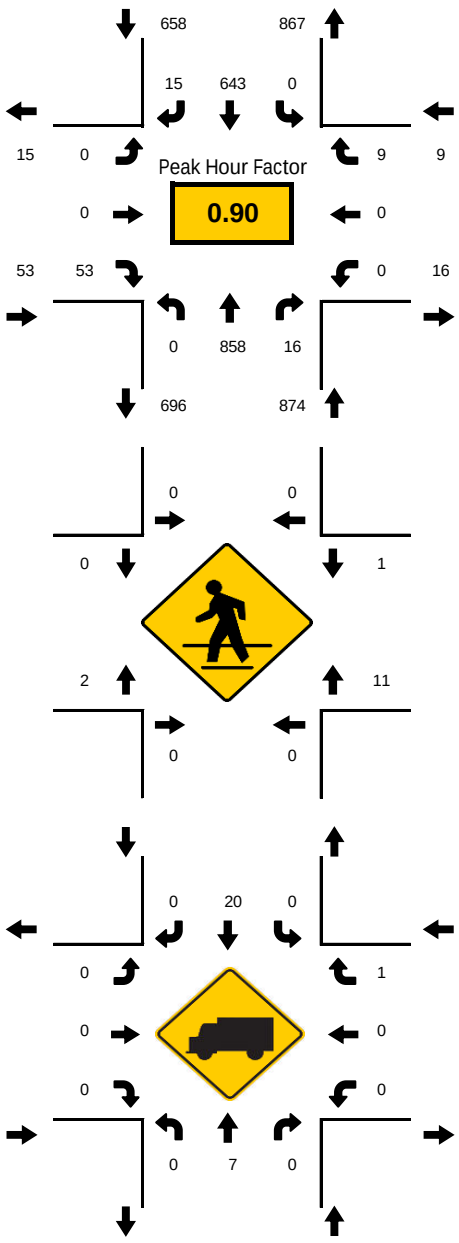
HT (PM)

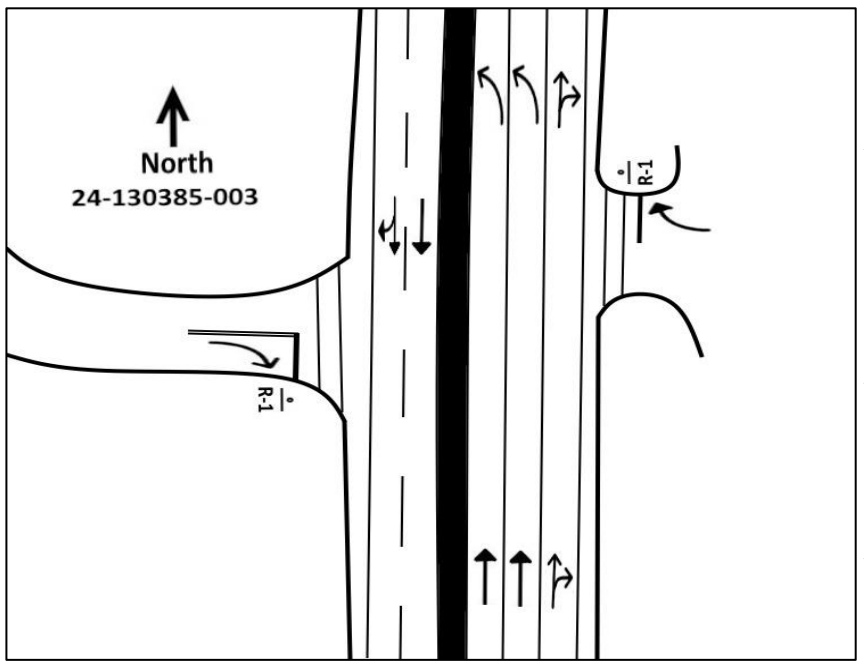


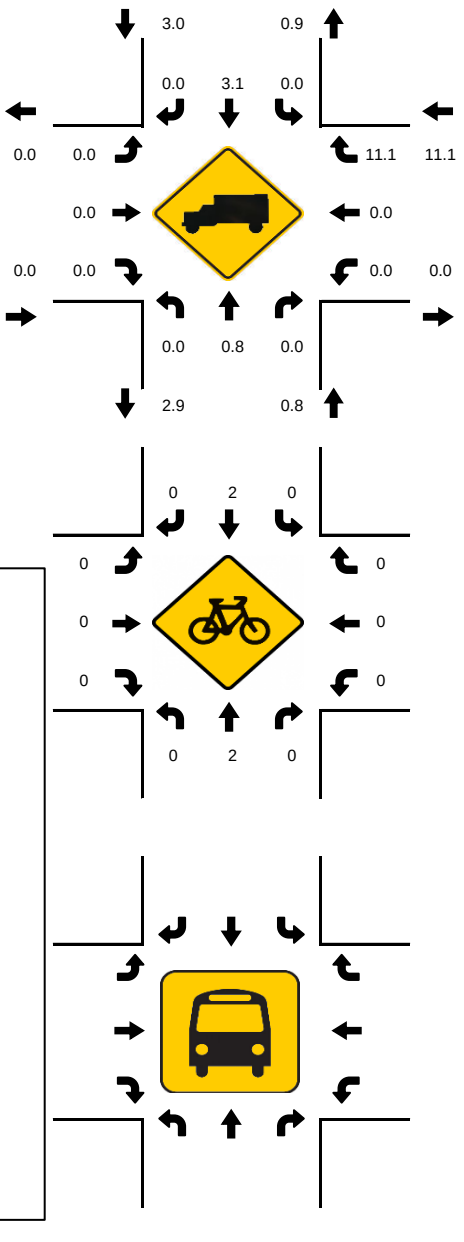
LOCATION: Tuskawilla Rd & 180 Shopping Center Dwy/Mobil Dwy
CITY/STATE: Winter Springs, FL

PROJECT ID: 24-130385-003
DATE: Thu, Nov 14, 2024

Peak-Hour: 07:00 AM - 08:00 AM
Peak 15-Minute: 07:00 AM - 07:15 AM





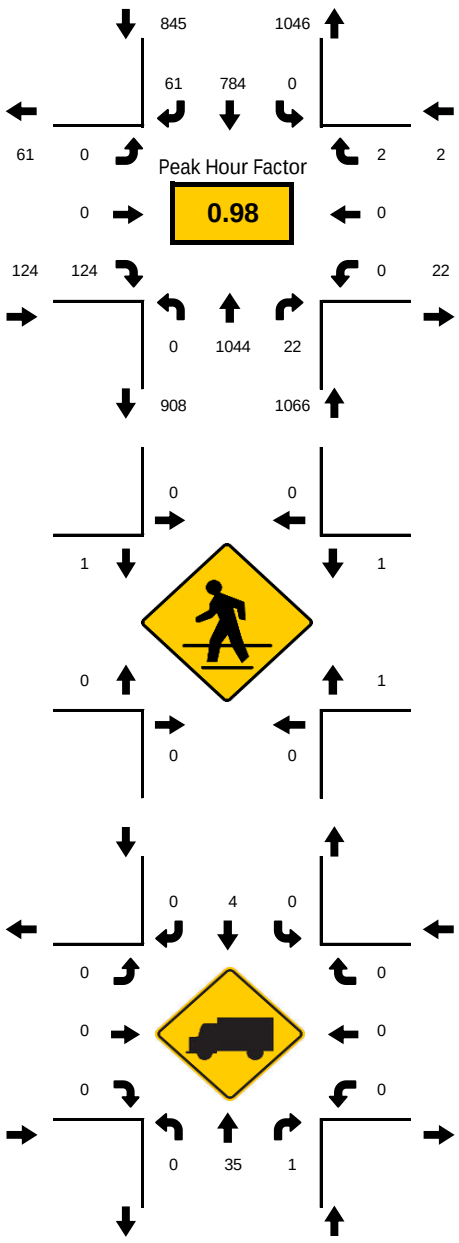


15-Min Count Period Beginning At	Tuskawilla Rd Northbound					Tuskawilla Rd Southbound					0 Shopping Center Dwy/Mobil D Eastbound					0 Shopping Center Dwy/Mobil D Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	0	242	2	0		0	185	3	0		0	0	11	0		0	0	1	0		444	1594
7:15 AM	0	156	4	0		0	174	3	0		0	0	15	0		0	0	1	0		353	1519
7:30 AM	0	233	8	0		0	157	5	0		0	0	13	0		0	0	3	0		419	1549
7:45 AM	0	227	2	0		0	127	4	0		0	0	14	0		0	0	4	0		378	1484
8:00 AM	0	176	3	0		0	170	8	0		0	0	10	0		0	0	2	0		369	1511
8:15 AM	0	207	1	0		0	163	3	0		0	0	6	0		0	0	3	0		383	1142
8:30 AM	0	160	1	0		0	178	5	0		0	0	9	0		0	0	1	0		354	759
8:45 AM	0	188	3	0		0	191	9	0		0	0	12	0		0	0	2	0		405	405
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	968	32	0		0	740	20	0		0	0	60	0		0	0	16	0		**1836**	
Heavy Trucks	0	12	0	0		0	28	0	0		0	0	0	0		0	0	4	0		**44**	
Pedestrians		0					0					8					44				**52**	
Bicycles	0	8	0	0		0	4	0	0		0	0	0	0		0	0	0	0		**12**	
Buses																						
Stopped Buses																						

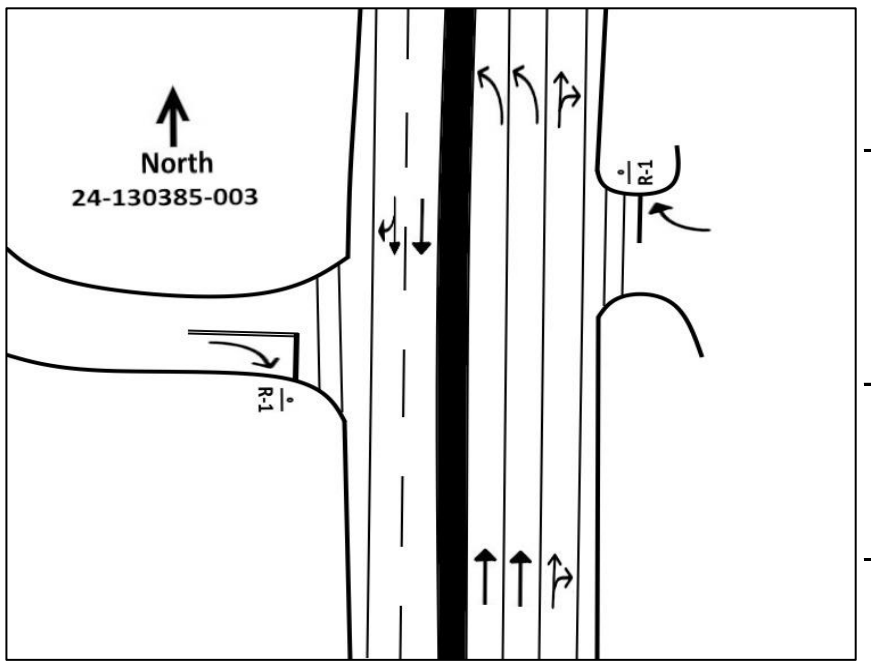
LOCATION: Tuskawilla Rd & 180 Shopping Center Dwy/Mobil Dwy
CITY/STATE: Winter Springs, FL

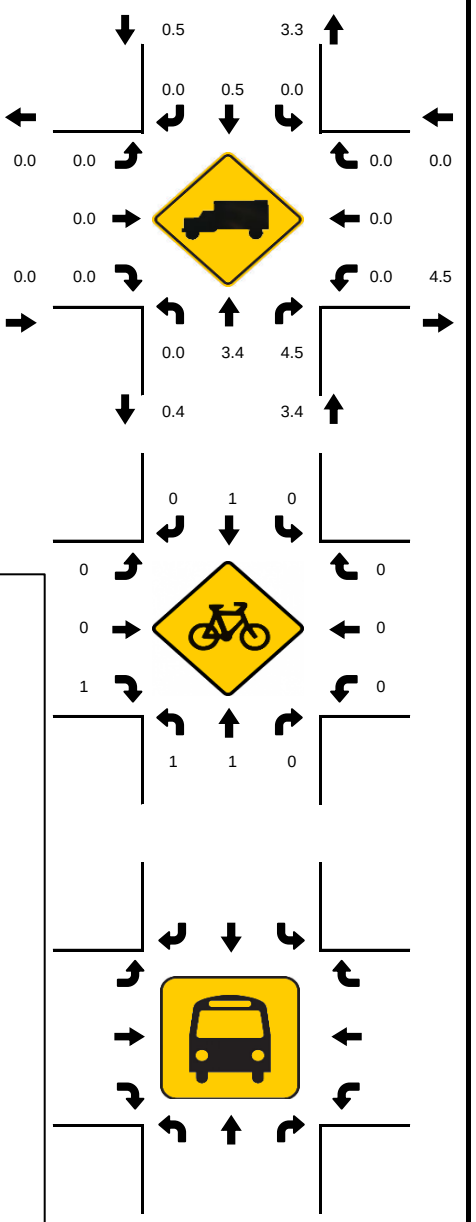
PROJECT ID: 24-130385-003
DATE: Thu, Nov 14, 2024

Peak-Hour: 05:00 PM - 06:00 PM
Peak 15-Minute: 05:30 PM - 05:45 PM



National Data & Surveying Services





15-Min Count Period Beginning At	Tuskawilla Rd Northbound					Tuskawilla Rd Southbound					0 Shopping Center Dwy/Mobil D Eastbound					0 Shopping Center Dwy/Mobil D Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	174	4	0		0	174	8	0		0	0	25	0		0	0	2	0		387	1727
4:15 PM	0	164	5	0		0	197	9	0		0	0	33	0		0	0	0	0		408	1826
4:30 PM	0	220	6	0		0	184	9	0		0	0	27	0		0	0	2	0		448	1934
4:45 PM	0	222	5	0		0	206	14	0		0	0	37	0		0	0	0	0		484	2007
5:00 PM	0	240	5	0		0	199	13	0		0	0	28	0		0	0	1	0		486	2037
5:15 PM	0	290	2	0		0	188	10	0		0	0	26	0		0	0	0	0		516	1551
5:30 PM	0	260	10	0		0	198	19	0		0	0	34	0		0	0	0	0		521	1035
5:45 PM	0	254	5	0		0	199	19	0		0	0	36	0		0	0	1	0		514	514
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	1160	40	0		0	796	76	0		0	0	144	0		0	0	4	0		**2220**	
Heavy Trucks	0	60	4	0		0	8	0	0		0	0	0	0		0	0	0	0		**72**	
Pedestrians		0					0					4					4				**8**	
Bicycles	4	4	0	0		0	4	0	0		0	0	4	0		0	0	0	0		**16**	
Buses																						
Stopped Buses																						

Prepared by National Data & Surveying Services

1179 Shopping Center Dwy & SR 436 / SR 434 / SR419 / E Florida 434

Peak Hour Turning Movement Count

ID: 24-130385-004
City: Winter Springs

Day: Thursday
Date: 11/14/2024

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND — 1179 Shopping Center Dwy

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND — SR 436/SR 434/SR419/E Florida 434

AM	NOON	PM	
0	0	0	⇦
0	0	0	↶ 0
0	0	0	↱ 0
1415	0	1624	→ 0
24	0	101	↷ 0
AM	NOON	PM	

WESTBOUND — SR 436/SR 434/SR419/E Florida 434

PM	NOON	AM	
0	0	0	0 ↰
0	0	0	0 ←
0	0	0	0 ↙
0	0	0	0 ↳
			⇨
1689	0	1435	
PM	NOON	AM	

CONTROL

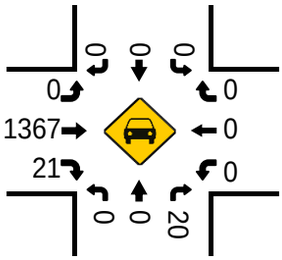
1-Way Stop(NB)

	AM	NOON	PM
TEV	1459	0	1790
PHF	0.92		0.96

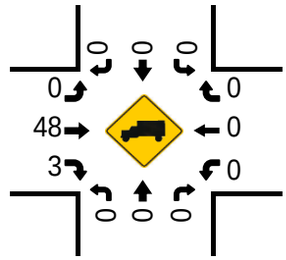
NORTHBOUND — 1179 Shopping Center Dwy

PM	101	0	0	0	65	PM
NOON	0	0	0	0	0	NOON
AM	24	0	0	0	20	AM

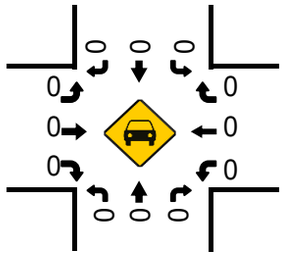
Cars (AM)



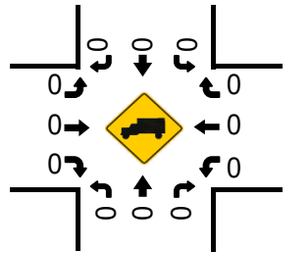
HT (AM)



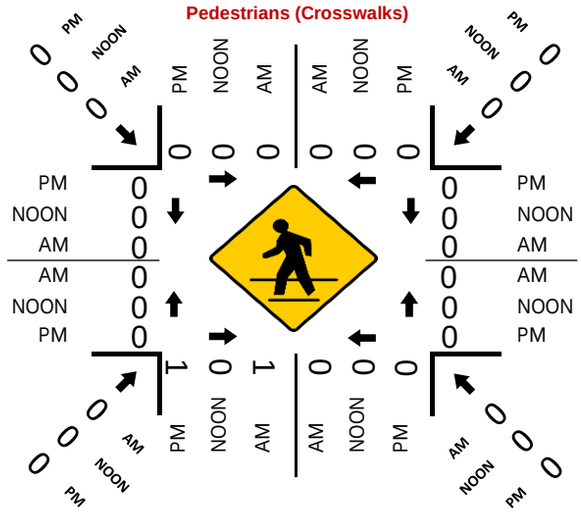
Cars (NOON)



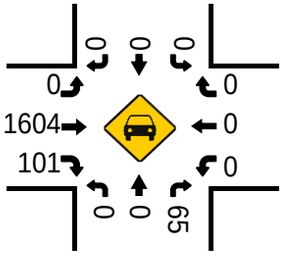
HT (NOON)



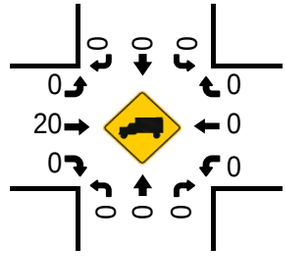
Pedestrians (Crosswalks)



Cars (PM)



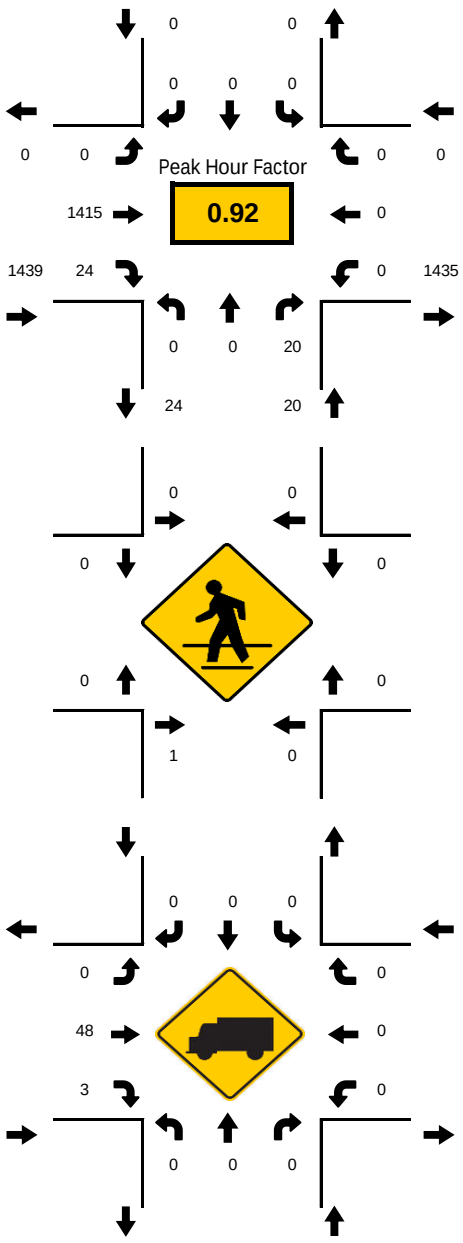
HT (PM)



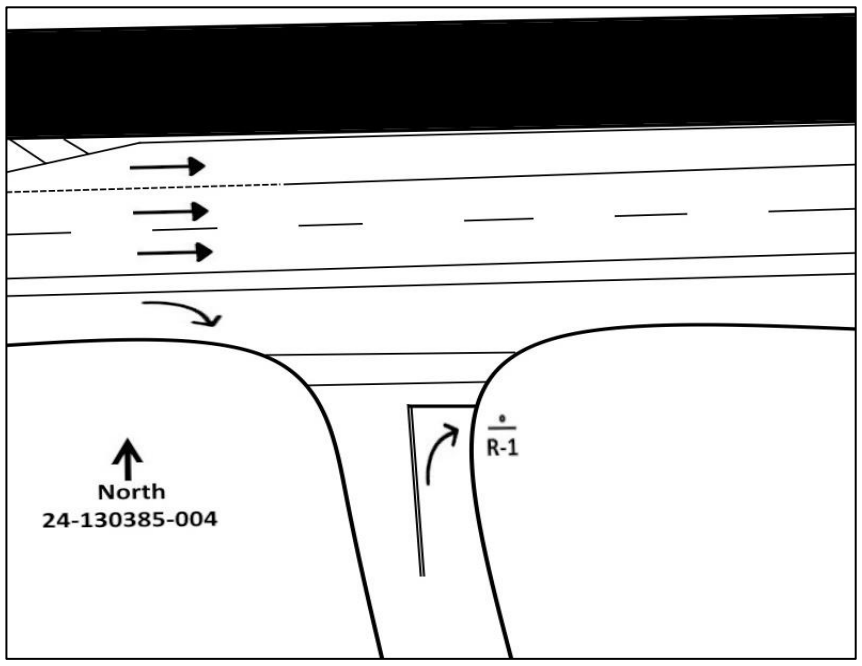
LOCATION: 1179 Shopping Center Dwy & SR 436/SR 434/SR419/E Florida 434
CITY/STATE: Winter Springs, FL

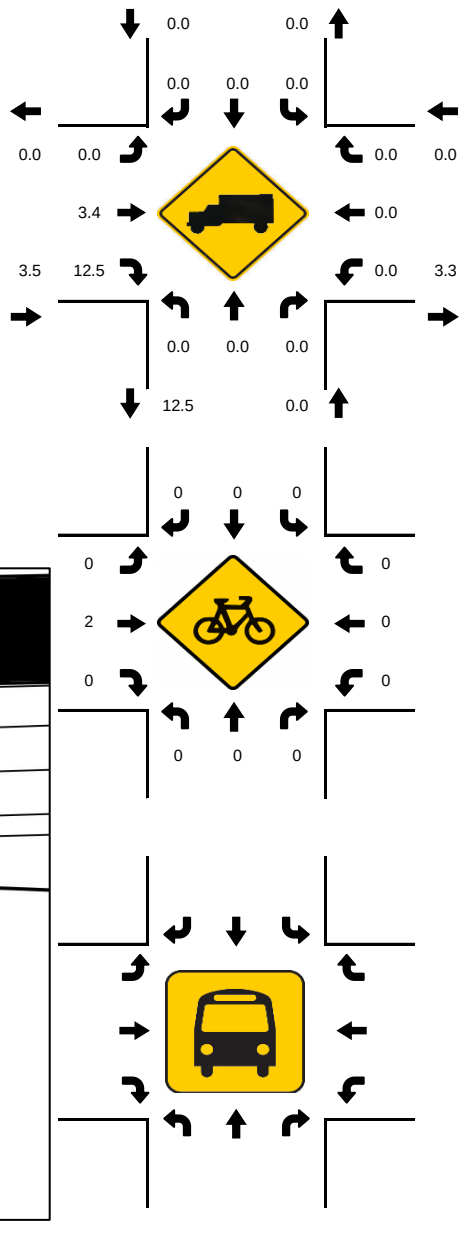
PROJECT ID: 24-130385-004
DATE: Thu, Nov 14, 2024

Peak-Hour: 08:00 AM - 09:00 AM
Peak 15-Minute: 08:45 AM - 09:00 AM



National Data & Surveying Services



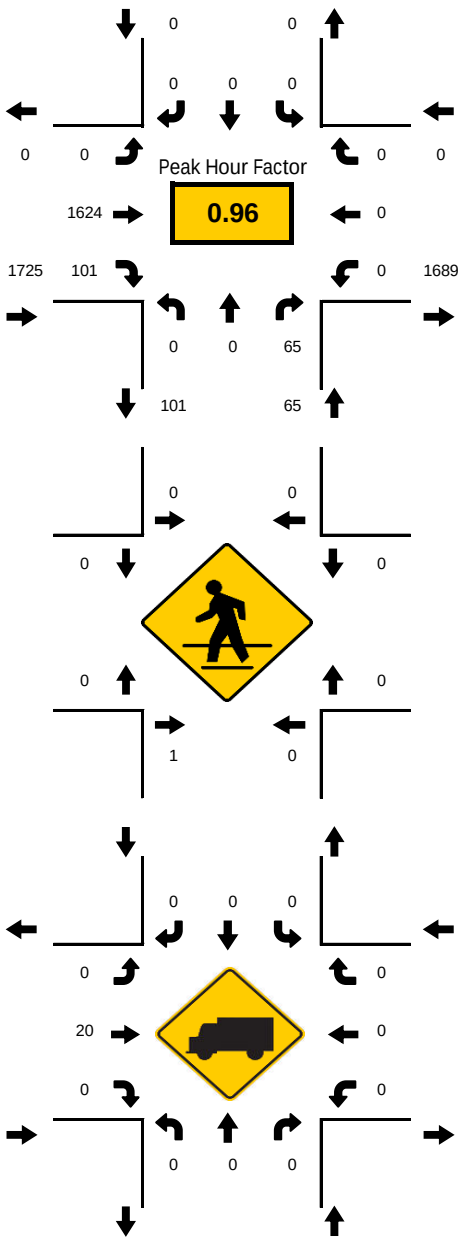


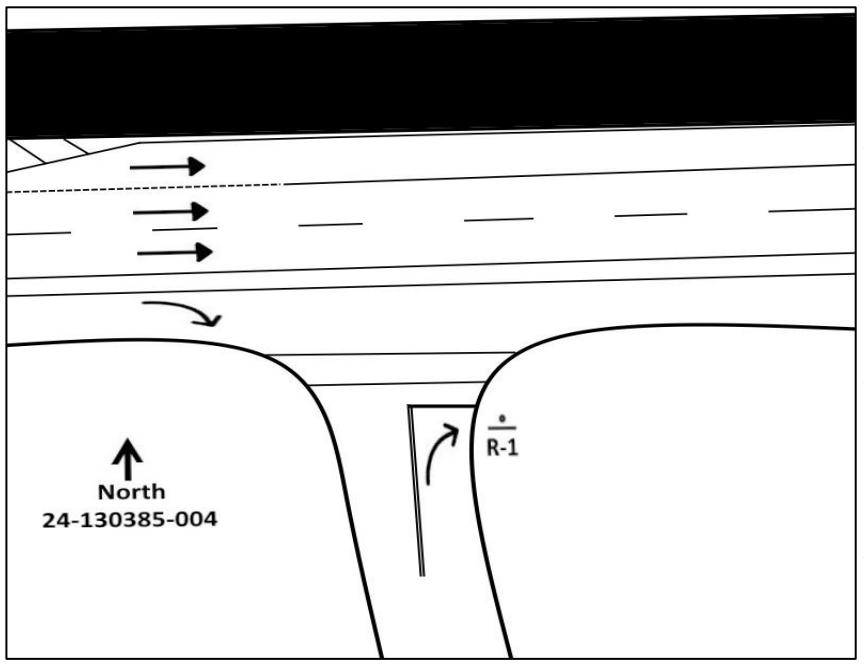
15-Min Count Period Beginning At	1179 Shopping Center Dwy Northbound					1179 Shopping Center Dwy Southbound					R 436/SR 434/SR419/E Florida 43 Eastbound					R 436/SR 434/SR419/E Florida 43 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	0	0	6	0		0	0	0	0		0	278	6	0		0	0	0	0		290	1202
7:15 AM	0	0	3	0		0	0	0	0		0	310	3	0		0	0	0	0		316	1262
7:30 AM	0	0	5	0		0	0	0	0		0	303	3	0		0	0	0	0		311	1311
7:45 AM	0	0	3	0		0	0	0	0		0	276	6	0		0	0	0	0		285	1349
8:00 AM	0	0	4	0		0	0	0	0		0	343	3	0		0	0	0	0		350	1459
8:15 AM	0	0	5	0		0	0	0	0		0	356	4	0		0	0	0	0		365	1109
8:30 AM	0	0	4	0		0	0	0	0		0	334	11	0		0	0	0	0		349	744
8:45 AM	0	0	7	0		0	0	0	0		0	382	6	0		0	0	0	0		395	395
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	0	0	28	0		0	0	0	0		0	1528	44	0		0	0	0	0		**1600**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	68	12	0		0	0	0	0		**80**	
Pedestrians		4					0					0					0				**4**	
Bicycles	0	0	0	0		0	0	0	0		0	4	0	0		0	0	0	0		**4**	
Buses																						
Stopped Buses																						

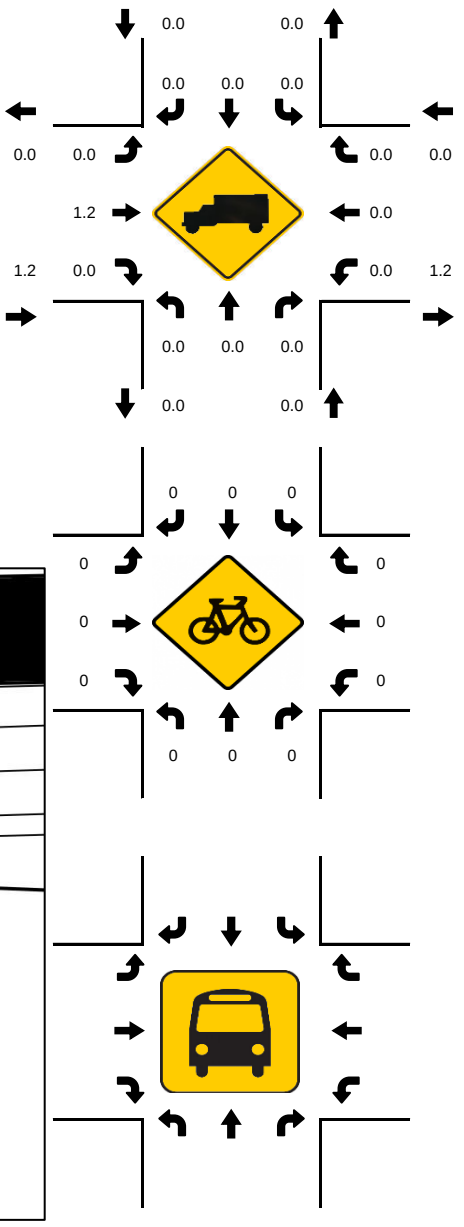
LOCATION: 1179 Shopping Center Dwy & SR 436/SR 434/SR419/E Florida 434
CITY/STATE: Winter Springs, FL

PROJECT ID: 24-130385-004
DATE: Thu, Nov 14, 2024

Peak-Hour: 05:00 PM - 06:00 PM
Peak 15-Minute: 05:45 PM - 06:00 PM







15-Min Count Period Beginning At	1179 Shopping Center Dwy Northbound					1179 Shopping Center Dwy Southbound					R 436/SR 434/SR419/E Florida 43 Eastbound					R 436/SR 434/SR419/E Florida 43 Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	0	18	0		0	0	0	0		0	300	13	0		0	0	0	0		331	1502
4:15 PM	0	0	13	0		0	0	0	0		0	362	22	0		0	0	0	0		397	1613
4:30 PM	0	0	14	0		0	0	0	0		0	351	24	0		0	0	0	0		389	1666
4:45 PM	0	0	27	0		0	0	0	0		0	342	16	0		0	0	0	0		385	1710
5:00 PM	0	0	11	0		0	0	0	0		0	409	22	0		0	0	0	0		442	1790
5:15 PM	0	0	12	0		0	0	0	0		0	407	31	0		0	0	0	0		450	1348
5:30 PM	0	0	20	0		0	0	0	0		0	386	27	0		0	0	0	0		433	898
5:45 PM	0	0	22	0		0	0	0	0		0	422	21	0		0	0	0	0		465	465
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	0	0	88	0		0	0	0	0		0	1688	124	0		0	0	0	0		**1900**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	28	0	0		0	0	0	0		**28**	
Pedestrians		4					0					0					0				**4**	
Bicycles	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		**0**	
Buses																						
Stopped Buses																						

APPENDIX D
FDOT's Florida Traffic Online (FTO) Data

2023 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7700 SEMINOLE COUNTYWIDE

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2023 - 01/07/2023	1.05	1.08
2	01/08/2023 - 01/14/2023	1.04	1.07
3	01/15/2023 - 01/21/2023	1.02	1.05
4	01/22/2023 - 01/28/2023	1.01	1.04
5	01/29/2023 - 02/04/2023	0.99	1.02
6	02/05/2023 - 02/11/2023	0.98	1.01
* 7	02/12/2023 - 02/18/2023	0.96	0.99
* 8	02/19/2023 - 02/25/2023	0.96	0.99
* 9	02/26/2023 - 03/04/2023	0.96	0.99
*10	03/05/2023 - 03/11/2023	0.95	0.98
*11	03/12/2023 - 03/18/2023	0.95	0.98
*12	03/19/2023 - 03/25/2023	0.96	0.99
*13	03/26/2023 - 04/01/2023	0.97	1.00
*14	04/02/2023 - 04/08/2023	0.97	1.00
*15	04/09/2023 - 04/15/2023	0.98	1.01
*16	04/16/2023 - 04/22/2023	0.98	1.01
*17	04/23/2023 - 04/29/2023	0.98	1.01
*18	04/30/2023 - 05/06/2023	0.97	1.00
*19	05/07/2023 - 05/13/2023	0.97	1.00
20	05/14/2023 - 05/20/2023	0.97	1.00
21	05/21/2023 - 05/27/2023	0.98	1.01
22	05/28/2023 - 06/03/2023	0.99	1.02
23	06/04/2023 - 06/10/2023	1.00	1.03
24	06/11/2023 - 06/17/2023	1.01	1.04
25	06/18/2023 - 06/24/2023	1.01	1.04
26	06/25/2023 - 07/01/2023	1.02	1.05
27	07/02/2023 - 07/08/2023	1.02	1.05
28	07/09/2023 - 07/15/2023	1.02	1.05
29	07/16/2023 - 07/22/2023	1.02	1.05
30	07/23/2023 - 07/29/2023	1.03	1.06
31	07/30/2023 - 08/05/2023	1.03	1.06
32	08/06/2023 - 08/12/2023	1.04	1.07
33	08/13/2023 - 08/19/2023	1.04	1.07
34	08/20/2023 - 08/26/2023	1.04	1.07
35	08/27/2023 - 09/02/2023	1.04	1.07
36	09/03/2023 - 09/09/2023	1.03	1.06
37	09/10/2023 - 09/16/2023	1.03	1.06
38	09/17/2023 - 09/23/2023	1.02	1.05
39	09/24/2023 - 09/30/2023	1.01	1.04
40	10/01/2023 - 10/07/2023	1.01	1.04
41	10/08/2023 - 10/14/2023	1.00	1.03
42	10/15/2023 - 10/21/2023	0.99	1.02
43	10/22/2023 - 10/28/2023	1.00	1.03
44	10/29/2023 - 11/04/2023	1.01	1.04
45	11/05/2023 - 11/11/2023	1.02	1.05
46	11/12/2023 - 11/18/2023	1.03	1.06
47	11/19/2023 - 11/25/2023	1.04	1.07
48	11/26/2023 - 12/02/2023	1.04	1.07
49	12/03/2023 - 12/09/2023	1.05	1.08
50	12/10/2023 - 12/16/2023	1.05	1.08
51	12/17/2023 - 12/23/2023	1.04	1.07
52	12/24/2023 - 12/30/2023	1.03	1.06
53	12/31/2023 - 12/31/2023	1.02	1.05

* PEAK SEASON

APPENDIX E
Turning Movement Volume Worksheets

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	1		*Existing Year:*	2024	*TMC Year:* 2024
Major Street:	SR 434	E/W	*Opening Year:*	2026	
Minor Street:	Tuskawilla Rd	N/S	*Design Year:*		
			Seasonal Factor:	1.03	
			Buildout Year Growth Rate:	2.00%	
PHF:	0.96		*Design Year Growth Rate:*		

AM Peak Hour Trips: IN = 37 OUT = 36
AM Peak Hour Pass-by Trips: IN = 109 OUT = 109

Weekday AM Peak Hour	Tuskawilla Rd								SR 434							
	Northbound				Southbound				Eastbound				Westbound			
7:30 AM - 8:30 AM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	577	90	165	0	46	88	40	11	40	848	396	10	153	1,019	21
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	1%	2%	1%	0%	2%	0%	3%	0%	3%	4%	2%	0%	2%	4%	0%
Peak Hour Factor	0.00	0.84	0.83	0.83	0.00	0.77	0.73	0.67	0.55	0.67	0.91	0.87	0.83	0.77	0.93	0.66
Existing (2024)	**0**	**594**	**93**	**170**	**0**	**47**	**91**	**41**	**11**	**41**	**873**	**408**	**10**	**158**	**1,050**	**22**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**618**	**97**	**177**	**0**	**49**	**95**	**43**	**11**	**43**	**908**	**424**	**10**	**164**	**1,092**	**23**
Project Assignment																
Ingress	15%	15%					5%							25%	5%	
Egress									35%	5%	30%					
Project Trips	5	6	0	0	0	0	2	0	13	2	11	0	0	9	2	0
Pass-By Trips?		Yes							Yes					Yes	Yes	
Project Assignment																
Ingress														25%	-25%	
Egress		12%							38%							
Pass-By Trips	0	13	0	0	0	0	0	0	41	0	0	0	0	28	-28	0
Buildout (2026)	**5**	**637**	**97**	**177**	**0**	**49**	**97**	**43**	**65**	**45**	**919**	**424**	**10**	**201**	**1,066**	**23**

PM Peak Hour Trips: IN = 31 OUT = 29
PM Peak Hour Pass-by Trips: IN = 93 OUT = 93

PHF: 0.98

Weekday PM Peak Hour	Tuskawilla Rd								SR 434							
	Northbound				Southbound				Eastbound				Westbound			
5:00 PM - 6:00 PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	710	204	133	0	100	152	34	34	66	1,051	536	1	164	1,170	35
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	5%	0%	1%	0%	0%	0%	0%	0%	0%	2%	1%	0%	1%	4%	0%
Peak Hour Factor	0.00	0.88	0.89	0.77	0.00	0.81	0.86	0.77	0.71	0.83	0.96	0.89	0.25	0.84	0.93	0.73
Existing (2024)	**0**	**731**	**210**	**137**	**0**	**103**	**157**	**35**	**35**	**68**	**1,083**	**552**	**1**	**169**	**1,205**	**36**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**760**	**218**	**142**	**0**	**107**	**163**	**36**	**36**	**71**	**1,126**	**574**	**1**	**176**	**1,253**	**37**
Project Assignment																
Ingress	15%	15%					5%							25%	5%	
Egress									35%	5%	30%					
Project Trips	5	5	0	0	0	0	1	0	10	1	9	0	0	8	1	0
Pass-By Trips?		Yes							Yes					Yes	Yes	
Project Assignment																
Ingress														25%	-25%	
Egress		12%							38%							
Pass-By Trips	0	11	0	0	0	0	0	0	35	0	0	0	0	24	-24	0
Buildout (2026)	**5**	**776**	**218**	**142**	**0**	**107**	**164**	**36**	**81**	**72**	**1,135**	**574**	**1**	**208**	**1,230**	**37**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	2	*Existing Year:*	2024	*TMC Year:*	2024
Major Street:	SR 434 E/W	*Opening Year:*	2026		
Minor Street:	Roberts Family Ln N/S	*Design Year:*			
		Seasonal Factor:	1.03		
		Buildout Year Growth Rate:	2.00%	*AM Peak Hour Trips:*	IN = 37 OUT = 36
PHF:	0.94	*Design Year Growth Rate:*		*AM Peak Hour Pass-by Trips:*	IN = 109 OUT = 109

Weekday AM Peak Hour	Roberts Family Ln								SR 434							
	Northbound				Southbound				Eastbound				Westbound			
7:30 AM - 8:30 AM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	0	17	0	0	0	10	5	36	1,263	9	4	52	1,592	20
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	3%	0%
Peak Hour Factor	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.63	0.63	0.50	0.89	0.75	0.50	0.62	0.91	0.45
Existing (2024)	**0**	**0**	**0**	**18**	**0**	**0**	**0**	**10**	**5**	**37**	**1,301**	**9**	**4**	**54**	**1,640**	**21**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**10**	**5**	**38**	**1,353**	**9**	**4**	**56**	**1,706**	**22**
Project Assignment																
Ingress											30%	5%	15%	5%		
Egress				10%											35%	
Project Trips	0	0	0	4	0	0	0	0	0	0	11	2	6	2	13	0
Pass-By Trips?				Yes							Yes	Yes	Yes	Yes	Yes	
Project Assignment																
Ingress											-25%	25%	13%	12%	-50%	
Egress				38%												
Pass-By Trips	0	0	0	41	0	0	0	0	0	0	-27	27	14	13	-55	0
Buildout (2026)	**0**	**0**	**0**	**64**	**0**	**0**	**0**	**10**	**5**	**38**	**1,337**	**38**	**24**	**71**	**1,664**	**22**

PHF:	0.99	*PM Peak Hour Trips:*	IN = 31 OUT = 29		
		PM Peak Hour Pass-by Trips:	IN = 93 OUT = 93		

Weekday PM Peak Hour	Roberts Family Ln								SR 434							
	Northbound				Southbound				Eastbound				Westbound			
5:00 PM - 6:00 PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	0	45	0	0	0	4	4	66	1,673	34	15	81	1,767	67
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Peak Hour Factor	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.33	0.50	0.75	0.98	0.85	0.75	0.81	0.95	0.76
Existing (2024)	**0**	**0**	**0**	**46**	**0**	**0**	**0**	**4**	**4**	**68**	**1,723**	**35**	**15**	**83**	**1,820**	**69**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**0**	**0**	**48**	**0**	**0**	**0**	**4**	**4**	**71**	**1,792**	**36**	**16**	**86**	**1,893**	**72**
Project Assignment																
Ingress											30%	5%	15%	5%		
Egress				10%											35%	
Project Trips	0	0	0	3	0	0	0	0	0	0	9	2	5	1	10	0
Pass-By Trips?				Yes							Yes	Yes	Yes	Yes	Yes	
Project Assignment																
Ingress											-25%	25%	13%	12%	-50%	
Egress				38%												
Pass-By Trips	0	0	0	35	0	0	0	0	0	0	-23	23	12	11	-47	0
Buildout (2026)	**0**	**0**	**0**	**86**	**0**	**0**	**0**	**4**	**4**	**71**	**1,778**	**61**	**33**	**98**	**1,856**	**72**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	3		*Existing Year:*	2024	*TMC Year:* 2024
Major Street:	Tuskawilla Rd	E/W	*Opening Year:*	2026	
Minor Street:	Project Driveway	N/S	*Design Year:*		
			Seasonal Factor:	1.03	
			Buildout Year Growth Rate:	2.00%	*AM Peak Hour Trips:* IN = 37 OUT = 36
PHF:	0.90		*Design Year Growth Rate:*		*AM Peak Hour Pass-by Trips:* IN = 109 OUT = 109

Weekday AM Peak Hour	Project Driveway								Tuskawilla Rd							
	Northbound				Southbound				Eastbound				Westbound			
7:00 Am - 8:00 AM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	858	16	0	0	643	15	0	0	0	53	0	0	0	9
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	0%	1%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	11%
Peak Hour Factor	0.00	0.00	0.89	0.50	0.00	0.00	0.87	0.75	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.56
Existing (2024)	**0**	**0**	**884**	**16**	**0**	**0**	**662**	**15**	**0**	**0**	**0**	**55**	**0**	**0**	**0**	**9**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**0**	**919**	**17**	**0**	**0**	**688**	**16**	**0**	**0**	**0**	**57**	**0**	**0**	**0**	**9**
Project Assignment																
Ingress			30%					45%								
Egress												30%				
Project Trips	0	0	11	0	0	0	0	16	0	0	0	10	0	0	0	0
Pass-By Trips?			Yes					Yes				Yes				
Project Assignment																
Ingress								25%								
Egress			12%									12%				
Pass-By Trips	0	0	13	0	0	0	0	28	0	0	0	13	0	0	0	0
Buildout (2026)	**0**	**0**	**943**	**17**	**0**	**0**	**688**	**60**	**0**	**0**	**0**	**80**	**0**	**0**	**0**	**9**

					PM Peak Hour Trips: IN = 31 OUT = 29
PHF:	0.98				*PM Peak Hour Pass-by Trips:* IN = 93 OUT = 93

Weekday PM Peak Hour	Project Driveway								Tuskawilla Rd							
	Northbound				Southbound				Eastbound				Westbound			
5:00 PM - 6:00 PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	1,044	22	0	0	784	61	0	0	0	124	0	0	0	2
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	0%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.00	0.00	0.90	0.55	0.00	0.00	0.98	0.80	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.50
Existing (2024)	**0**	**0**	**1,075**	**23**	**0**	**0**	**808**	**63**	**0**	**0**	**0**	**128**	**0**	**0**	**0**	**2**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**0**	**1,118**	**24**	**0**	**0**	**840**	**66**	**0**	**0**	**0**	**133**	**0**	**0**	**0**	**2**
Project Assignment																
Ingress			30%					45%								
Egress												30%				
Project Trips	0	0	9	0	0	0	0	14	0	0	0	9	0	0	0	0
Pass-By Trips?			Yes					Yes				Yes				
Project Assignment																
Ingress								25%								
Egress			12%									12%				
Pass-By Trips	0	0	11	0	0	0	0	24	0	0	0	11	0	0	0	0
Buildout (2026)	**0**	**0**	**1,138**	**24**	**0**	**0**	**840**	**104**	**0**	**0**	**0**	**153**	**0**	**0**	**0**	**2**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	4		*Existing Year:*	2024	*TMC Year:* 2024
Major Street:	SR 434	E/W	*Opening Year:*	2026	
Minor Street:	Project Driveway	N/S	*Design Year:*		
			Seasonal Factor:	1.03	
			Buildout Year Growth Rate:	2.00%	
PHF:	0.92		*Design Year Growth Rate:*		

AM Peak Hour Trips: IN = 37 OUT = 36
AM Peak Hour Pass-by Trips: IN = 109 OUT = 109

Weekday AM Peak Hour	Project Driveway								SR 434							
	Northbound				Southbound				Eastbound				Westbound			
8:00 Am - 9:00 AM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	0	20	0	0	0	0	0	0	1,415	24	0	0	0	0
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	13%	0%	0%	0%	0%
Peak Hour Factor	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.55	0.00	0.00	0.00	0.00
Existing (2024)	**0**	**0**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**1,457**	**25**	**0**	**0**	**0**	**0**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**1,515**	**26**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress												45%			20%	
Egress				60%							10%				35%	
Project Trips	0	0	0	22	0	0	0	0	0	0	4	17	0	0	21	0
Pass-By Trips?				Yes							Yes	Yes				
Project Assignment																
Ingress											-50%	38%				
Egress				50%							38%					
Pass-By Trips	0	0	0	55	0	0	0	0	0	0	-13	41	0	0	0	0
Buildout (2026)	**0**	**0**	**0**	**99**	**0**	**0**	**0**	**0**	**0**	**0**	**1,506**	**84**	**0**	**0**	**21**	**0**

PHF:	0.96		*PM Peak Hour Trips:*	IN = 31	OUT = 29
			PM Peak Hour Pass-by Trips:	IN = 93	OUT = 93

Weekday PM Peak Hour	Project Driveway								SR 434							
	Northbound				Southbound				Eastbound				Westbound			
5:00 PM - 6:00 PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	0	65	0	0	0	0	0	0	1,624	101	0	0	0	0
Seasonal Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.81	0.00	0.00	0.00	0.00
Existing (2024)	**0**	**0**	**0**	**67**	**0**	**0**	**0**	**0**	**0**	**0**	**1,673**	**104**	**0**	**0**	**0**	**0**
Growth Factor (Linear)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Background (2026)	**0**	**0**	**0**	**70**	**0**	**0**	**0**	**0**	**0**	**0**	**1,740**	**108**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress												45%			20%	
Egress				60%							10%				35%	
Project Trips	0	0	0	17	0	0	0	0	0	0	3	14	0	0	16	0
Pass-By Trips?				Yes							Yes	Yes				
Project Assignment																
Ingress											-50%	38%				
Egress				50%							38%					
Pass-By Trips	0	0	0	47	0	0	0	0	0	0	-11	35	0	0	0	0
Buildout (2026)	**0**	**0**	**0**	**134**	**0**	**0**	**0**	**0**	**0**	**0**	**1,732**	**157**	**0**	**0**	**16**	**0**

APPENDIX F
Synchro Outputs

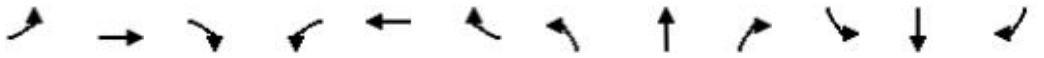
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	52	873	408	168	1050	594	93	47	91
Future Volume (vph)	52	873	408	168	1050	594	93	47	91
Turn Type	Prot	NA	pt+ov	Prot	NA	Split	NA	Split	NA
Protected Phases	5	2	2 8	1	6	8	8	4	4
Permitted Phases									
Detector Phase	5	2	2 8	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	15.0		6.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.8	22.8		13.8	22.8	14.9	14.9	13.3	13.3
Total Split (s)	18.0	66.0		29.0	77.0	57.0	57.0	28.0	28.0
Total Split (%)	10.0%	36.7%		16.1%	42.8%	31.7%	31.7%	15.6%	15.6%
Yellow Time (s)	4.9	4.9		4.9	4.9	4.8	4.8	3.4	3.4
All-Red Time (s)	2.9	2.9		2.9	2.9	4.1	4.1	3.9	3.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	7.8		7.8	7.8	8.9	8.9	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				
Recall Mode	None	C-Min		None	C-Min	None	None	None	None

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Tuskawilla Rd & SR 434





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	873	408	168	1050	22	594	93	170	47	91	41
Future Volume (veh/h)	52	873	408	168	1050	22	594	93	170	47	91	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1856
Adj Flow Rate, veh/h	54	909	425	175	1094	23	619	97	177	49	95	43
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	5	2	2	4	2	2	2	2	2	2	3
Cap, veh/h	68	1427	989	194	1686	35	735	126	230	161	110	50
Arrive On Green	0.04	0.41	0.41	0.11	0.48	0.48	0.21	0.21	0.21	0.09	0.09	0.09
Sat Flow, veh/h	1767	3469	1585	1781	3503	74	3456	593	1082	1781	1219	552
Grp Volume(v), veh/h	54	909	425	175	546	571	619	0	274	49	0	138
Grp Sat Flow(s),veh/h/ln	1767	1735	1585	1781	1749	1827	1728	0	1676	1781	0	1771
Q Serve(g_s), s	5.5	37.6	24.8	17.5	42.4	42.4	30.9	0.0	27.7	4.6	0.0	13.8
Cycle Q Clear(g_c), s	5.5	37.6	24.8	17.5	42.4	42.4	30.9	0.0	27.7	4.6	0.0	13.8
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.65	1.00		0.31
Lane Grp Cap(c), veh/h	68	1427	989	194	842	880	735	0	357	161	0	160
V/C Ratio(X)	0.79	0.64	0.43	0.90	0.65	0.65	0.84	0.00	0.77	0.30	0.00	0.86
Avail Cap(c_a), veh/h	100	1427	989	210	842	880	923	0	448	205	0	204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	85.8	42.3	17.4	79.3	35.2	35.2	67.9	0.0	66.7	76.5	0.0	80.7
Incr Delay (d2), s/veh	22.2	2.2	1.4	35.6	3.9	3.7	6.5	0.0	7.3	1.5	0.0	26.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	16.8	15.8	10.0	19.2	20.0	14.4	0.0	12.7	2.2	0.0	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	107.9	44.4	18.7	114.9	39.1	38.9	74.4	0.0	73.9	78.0	0.0	107.6
LnGrp LOS	F	D	B	F	D	D	E		E	E		F
Approach Vol, veh/h		1388			1292			893			187	
Approach Delay, s/veh		39.0			49.3			74.3			99.9	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.4	81.9		23.6	14.8	94.4		47.2				
Change Period (Y+Rc), s	7.8	7.8		7.3	7.8	7.8		8.9				
Max Green Setting (Gmax), s	21.2	58.2		20.7	10.2	69.2		48.1				
Max Q Clear Time (g_c+I1), s	19.5	39.6		15.8	7.5	44.4		32.9				
Green Ext Time (p_c), s	0.1	10.6		0.5	0.0	11.6		5.4				

Intersection Summary		
HCM 7th Control Delay, s/veh		53.9
HCM 7th LOS		D

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	1301	9	58	1640	21	0	0	18	0	0	10
Future Vol, veh/h	42	1301	9	58	1640	21	0	0	18	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	345	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	45	1384	10	62	1745	22	0	0	19	0	0	11

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1767	0	0	1394	0	0	-	-	697
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	349	-	-	487	-	-	0	0	384
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	349	-	-	487	-	-	-	0	384
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0.52	0.45	14.88
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	384	349	-	-	487	-	-
HCM Lane V/C Ratio	0.05	0.128	-	-	0.127	-	-
HCM Control Delay (s/veh)	14.9	16.8	-	-	13.5	-	-
HCM Lane LOS	B	C	-	-	B	-	-
HCM 95th %tile Q(veh)	0.2	0.4	-	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	55	0	884	662	15
Future Vol, veh/h	0	55	0	884	662	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	3	2
Mvmt Flow	0	61	0	982	736	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	376	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	621	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	621	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.42	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	621	-	-
HCM Lane V/C Ratio	-	0.098	-	-
HCM Control Delay (s/veh)	-	11.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑				↱			
Traffic Vol, veh/h	0	1457	25	0	0	0	0	0	21	0	0	0
Future Vol, veh/h	0	1457	25	0	0	0	0	0	21	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	3	13	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1584	27	0	0	0	0	0	23	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	-	-	0	-	-	792
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	285
Stage 1	0	-	-	0	-	0	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	285
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	18.73
HCM LOS			C

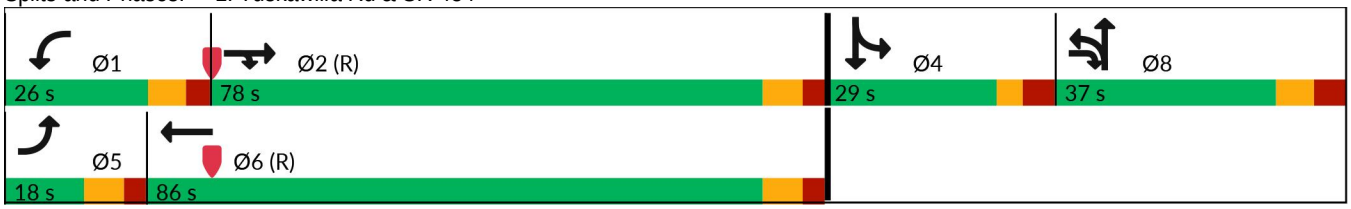
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	285	-	-	-
HCM Lane V/C Ratio	0.08	-	-	-
HCM Control Delay (s/veh)	18.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

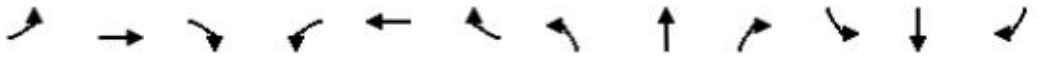
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	103	1083	552	170	1205	731	210	103	157
Future Volume (vph)	103	1083	552	170	1205	731	210	103	157
Turn Type	Prot	NA	pt+ov	Prot	NA	Split	NA	Split	NA
Protected Phases	5	2	2 8	1	6	8	8	4	4
Permitted Phases									
Detector Phase	5	2	2 8	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	15.0		6.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.8	22.8		13.8	22.8	14.9	14.9	13.3	13.3
Total Split (s)	18.0	78.0		26.0	86.0	37.0	37.0	29.0	29.0
Total Split (%)	10.6%	45.9%		15.3%	50.6%	21.8%	21.8%	17.1%	17.1%
Yellow Time (s)	4.9	4.9		4.9	4.9	4.8	4.8	3.4	3.4
All-Red Time (s)	2.9	2.9		2.9	2.9	4.1	4.1	3.9	3.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	7.8		7.8	7.8	8.9	8.9	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				
Recall Mode	None	C-Min		None	C-Min	None	None	None	None

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

Splits and Phases: 1: Tuskawilla Rd & SR 434





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	1083	552	170	1205	36	731	210	137	103	157	35
Future Volume (veh/h)	103	1083	552	170	1205	36	731	210	137	103	157	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1841	1870	1826	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	1105	563	173	1230	37	746	214	140	105	160	36
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	4	2	5	2	2	2	2	2
Cap, veh/h	107	1494	928	191	1620	49	558	174	114	214	178	40
Arrive On Green	0.06	0.42	0.42	0.11	0.47	0.47	0.17	0.17	0.17	0.12	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3466	104	3374	1056	691	1781	1478	333
Grp Volume(v), veh/h	105	1105	563	173	620	647	746	0	354	105	0	196
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1749	1822	1687	0	1746	1781	0	1811
Q Serve(g_s), s	10.0	44.5	38.8	16.3	49.8	49.8	28.1	0.0	28.1	9.4	0.0	18.2
Cycle Q Clear(g_c), s	10.0	44.5	38.8	16.3	49.8	49.8	28.1	0.0	28.1	9.4	0.0	18.2
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.40	1.00		0.18
Lane Grp Cap(c), veh/h	107	1494	928	191	817	851	558	0	289	214	0	218
V/C Ratio(X)	0.98	0.74	0.61	0.91	0.76	0.76	1.34	0.00	1.23	0.49	0.00	0.90
Avail Cap(c_a), veh/h	107	1494	928	191	817	851	558	0	289	227	0	231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	79.8	41.5	22.6	75.1	37.4	37.4	70.9	0.0	71.0	69.9	0.0	73.8
Incr Delay (d2), s/veh	81.2	3.3	2.9	40.2	6.5	6.3	163.9	0.0	128.7	2.5	0.0	33.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	20.3	22.1	9.7	22.9	23.8	24.9	0.0	22.9	4.5	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	161.0	44.8	25.6	115.2	43.9	43.7	234.8	0.0	199.6	72.4	0.0	107.4
LnGrp LOS	F	D	C	F	D	D	F		F	E		F
Approach Vol, veh/h		1773			1440			1100			301	
Approach Delay, s/veh		45.6			52.4			223.5			95.1	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	79.2		27.8	18.0	87.2		37.0				
Change Period (Y+Rc), s	7.8	7.8		7.3	7.8	7.8		8.9				
Max Green Setting (Gmax), s	18.2	70.2		21.7	10.2	78.2		28.1				
Max Q Clear Time (g_c+I1), s	18.3	46.5		20.2	12.0	51.8		30.1				
Green Ext Time (p_c), s	0.0	15.4		0.3	0.0	14.0		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	93.4
HCM 7th LOS	F

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	1723	35	98	1820	69	0	0	46	0	0	4
Future Vol, veh/h	72	1723	35	98	1820	69	0	0	46	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	345	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	73	1740	35	99	1838	70	0	0	46	0	0	4

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1908	0	0	1776	0	0	-	-	888
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	307	-	-	346	-	-	0	0	287
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	307	-	-	346	-	-	-	0	287
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0.8	0.96	19.96
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	287	307	-	-	346	-	-
HCM Lane V/C Ratio	0.162	0.237	-	-	0.286	-	-
HCM Control Delay (s/veh)	20	20.3	-	-	19.5	-	-
HCM Lane LOS	C	C	-	-	C	-	-
HCM 95th %tile Q(veh)	0.6	0.9	-	-	1.2	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	128	0	1075	808	63
Future Vol, veh/h	0	128	0	1075	808	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	139	0	1168	878	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	473	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	537	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	537	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	14.03	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	537	-	-
HCM Lane V/C Ratio	-	0.259	-	-
HCM Control Delay (s/veh)	-	14	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑				↱			
Traffic Vol, veh/h	0	1673	104	0	0	0	0	0	67	0	0	0
Future Vol, veh/h	0	1673	104	0	0	0	0	0	67	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1818	113	0	0	0	0	0	73	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	-	-	0	-	-	909
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	238
Stage 1	0	-	-	0	-	0	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	238
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	26.61
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	238	-	-	-
HCM Lane V/C Ratio	0.306	-	-	-
HCM Control Delay (s/veh)	26.6	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	1.2	-	-	-

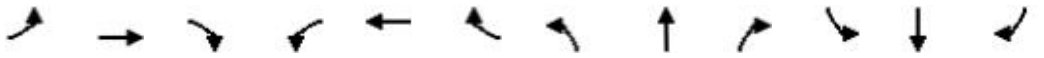
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	54	908	424	174	1092	618	97	49	95
Future Volume (vph)	54	908	424	174	1092	618	97	49	95
Turn Type	Prot	NA	pt+ov	Prot	NA	Split	NA	Split	NA
Protected Phases	5	2	2 8	1	6	8	8	4	4
Permitted Phases									
Detector Phase	5	2	2 8	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	15.0		6.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.8	22.8		13.8	22.8	14.9	14.9	13.3	13.3
Total Split (s)	18.0	66.0		29.0	77.0	57.0	57.0	28.0	28.0
Total Split (%)	10.0%	36.7%		16.1%	42.8%	31.7%	31.7%	15.6%	15.6%
Yellow Time (s)	4.9	4.9		4.9	4.9	4.8	4.8	3.4	3.4
All-Red Time (s)	2.9	2.9		2.9	2.9	4.1	4.1	3.9	3.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	7.8		7.8	7.8	8.9	8.9	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				
Recall Mode	None	C-Min		None	C-Min	None	None	None	None

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 1: Tuskawilla Rd & SR 434





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	908	424	174	1092	23	618	97	177	49	95	43
Future Volume (veh/h)	54	908	424	174	1092	23	618	97	177	49	95	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1856
Adj Flow Rate, veh/h	56	946	442	181	1138	24	644	101	184	51	99	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	5	2	2	4	2	2	2	2	2	2	3
Cap, veh/h	71	1381	979	199	1646	35	759	130	238	167	114	52
Arrive On Green	0.04	0.40	0.40	0.11	0.47	0.47	0.22	0.22	0.22	0.09	0.09	0.09
Sat Flow, veh/h	1767	3469	1585	1781	3502	74	3456	594	1082	1781	1217	553
Grp Volume(v), veh/h	56	946	442	181	568	594	644	0	285	51	0	144
Grp Sat Flow(s),veh/h/ln	1767	1735	1585	1781	1749	1827	1728	0	1676	1781	0	1771
Q Serve(g_s), s	5.7	40.6	26.6	18.1	45.9	45.9	32.2	0.0	28.8	4.8	0.0	14.4
Cycle Q Clear(g_c), s	5.7	40.6	26.6	18.1	45.9	45.9	32.2	0.0	28.8	4.8	0.0	14.4
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.65	1.00		0.31
Lane Grp Cap(c), veh/h	71	1381	979	199	822	859	759	0	368	167	0	166
V/C Ratio(X)	0.79	0.68	0.45	0.91	0.69	0.69	0.85	0.00	0.77	0.31	0.00	0.87
Avail Cap(c_a), veh/h	100	1381	979	210	822	859	923	0	448	205	0	204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	85.7	44.8	18.2	79.0	37.5	37.5	67.4	0.0	66.0	76.1	0.0	80.5
Incr Delay (d2), s/veh	23.8	2.8	1.5	37.0	4.7	4.6	7.0	0.0	7.8	1.5	0.0	28.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	18.2	17.1	10.4	21.0	21.9	15.0	0.0	13.2	2.3	0.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	109.4	47.6	19.7	116.1	42.2	42.0	74.4	0.0	73.8	77.5	0.0	109.0
LnGrp LOS	F	D	B	F	D	D	E		E	E		F
Approach Vol, veh/h		1444			1343			929			195	
Approach Delay, s/veh		41.5			52.1			74.2			100.8	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.9	79.5		24.2	15.0	92.4		48.4				
Change Period (Y+Rc), s	7.8	7.8		7.3	7.8	7.8		8.9				
Max Green Setting (Gmax), s	21.2	58.2		20.7	10.2	69.2		48.1				
Max Q Clear Time (g_c+I1), s	20.1	42.6		16.4	7.7	47.9		34.2				
Green Ext Time (p_c), s	0.1	9.8		0.4	0.0	11.1		5.4				

Intersection Summary		
HCM 7th Control Delay, s/veh		55.8
HCM 7th LOS		E

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	1353	9	60	1706	22	0	0	19	0	0	10
Future Vol, veh/h	43	1353	9	60	1706	22	0	0	19	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	345	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	46	1439	10	64	1815	23	0	0	20	0	0	11

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1838	0	0	1449	0	0	-	-	724
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	327	-	-	463	-	-	0	0	368
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	327	-	-	463	-	-	-	0	368
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0.54	0.47	15.36
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	368	327	-	-	463	-	-
HCM Lane V/C Ratio	0.055	0.14	-	-	0.138	-	-
HCM Control Delay (s/veh)	15.4	17.8	-	-	14	-	-
HCM Lane LOS	C	C	-	-	B	-	-
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	57	0	919	688	16
Future Vol, veh/h	0	57	0	919	688	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	3	2
Mvmt Flow	0	63	0	1021	764	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	391	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	608	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	608	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.61	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	608	-	-
HCM Lane V/C Ratio	-	0.104	-	-
HCM Control Delay (s/veh)	-	11.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑				↱			
Traffic Vol, veh/h	0	1515	26	0	0	0	0	0	22	0	0	0
Future Vol, veh/h	0	1515	26	0	0	0	0	0	22	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	3	13	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1647	28	0	0	0	0	0	24	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	-	-	0	-	-	823
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	272
Stage 1	0	-	-	0	-	0	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	272
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	19.53
HCM LOS			C

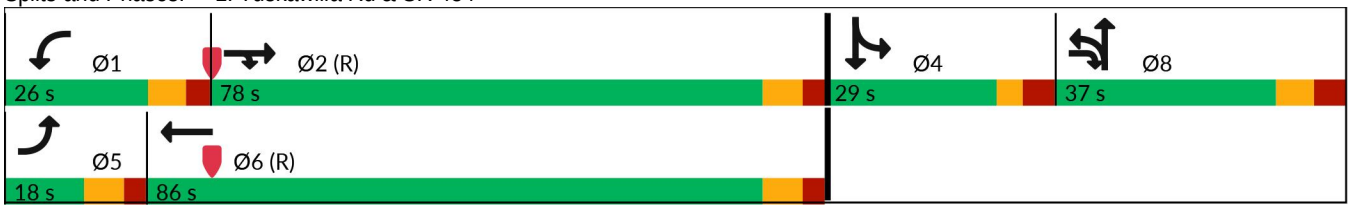
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	272	-	-	-
HCM Lane V/C Ratio	0.088	-	-	-
HCM Control Delay (s/veh)	19.5	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	1126	574	177	1253	760	218	107	163
Future Volume (vph)	107	1126	574	177	1253	760	218	107	163
Turn Type	Prot	NA	pt+ov	Prot	NA	Split	NA	Split	NA
Protected Phases	5	2	2 8	1	6	8	8	4	4
Permitted Phases									
Detector Phase	5	2	2 8	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	15.0		6.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.8	22.8		13.8	22.8	14.9	14.9	13.3	13.3
Total Split (s)	18.0	78.0		26.0	86.0	37.0	37.0	29.0	29.0
Total Split (%)	10.6%	45.9%		15.3%	50.6%	21.8%	21.8%	17.1%	17.1%
Yellow Time (s)	4.9	4.9		4.9	4.9	4.8	4.8	3.4	3.4
All-Red Time (s)	2.9	2.9		2.9	2.9	4.1	4.1	3.9	3.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	7.8		7.8	7.8	8.9	8.9	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				
Recall Mode	None	C-Min		None	C-Min	None	None	None	None

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Tuskawilla Rd & SR 434



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	1126	574	177	1253	37	760	218	142	107	163	36
Future Volume (veh/h)	107	1126	574	177	1253	37	760	218	142	107	163	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1841	1870	1826	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	1149	586	181	1279	38	776	222	145	109	166	37
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	4	2	5	2	2	2	2	2
Cap, veh/h	107	1482	923	191	1610	48	558	175	114	220	183	41
Arrive On Green	0.06	0.42	0.42	0.11	0.46	0.46	0.17	0.17	0.17	0.12	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3468	103	3374	1056	690	1781	1481	330
Grp Volume(v), veh/h	109	1149	586	181	645	672	776	0	367	109	0	203
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1749	1822	1687	0	1746	1781	0	1811
Q Serve(g_s), s	10.2	47.3	41.6	17.2	53.2	53.3	28.1	0.0	28.1	9.7	0.0	18.8
Cycle Q Clear(g_c), s	10.2	47.3	41.6	17.2	53.2	53.3	28.1	0.0	28.1	9.7	0.0	18.8
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.40	1.00		0.18
Lane Grp Cap(c), veh/h	107	1482	923	191	812	846	558	0	289	220	0	224
V/C Ratio(X)	1.02	0.78	0.63	0.95	0.79	0.80	1.39	0.00	1.27	0.50	0.00	0.91
Avail Cap(c_a), veh/h	107	1482	923	191	812	846	558	0	289	227	0	231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	79.9	42.7	23.5	75.4	38.7	38.7	70.9	0.0	71.0	69.6	0.0	73.5
Incr Delay (d2), s/veh	92.5	4.0	3.3	50.5	7.9	7.6	187.0	0.0	146.5	2.4	0.0	35.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	21.7	23.8	10.6	24.7	25.7	26.7	0.0	24.4	4.6	0.0	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	172.4	46.7	26.8	126.0	46.5	46.3	258.0	0.0	217.5	72.0	0.0	109.0
LnGrp LOS	F	D	C	F	D	D	F		F	E		F
Approach Vol, veh/h		1844			1498			1143			312	
Approach Delay, s/veh		47.8			56.0			245.0			96.1	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.0	78.7		28.3	18.0	86.7		37.0				
Change Period (Y+Rc), s	7.8	7.8		7.3	7.8	7.8		8.9				
Max Green Setting (Gmax), s	18.2	70.2		21.7	10.2	78.2		28.1				
Max Q Clear Time (g_c+I1), s	19.2	49.3		20.8	12.2	55.3		30.1				
Green Ext Time (p_c), s	0.0	14.6		0.2	0.0	13.4		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh		100.5
HCM 7th LOS		F

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	1792	36	102	1893	72	0	0	48	0	0	4
Future Vol, veh/h	75	1792	36	102	1893	72	0	0	48	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	345	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	76	1810	36	103	1912	73	0	0	48	0	0	4

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1985	0	0	1846	0	0	-	-	923
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	287	-	-	325	-	-	0	0	272
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	287	-	-	325	-	-	-	0	272
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0.87	1.04	21.11
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	272	287	-	-	325	-	-
HCM Lane V/C Ratio	0.178	0.264	-	-	0.317	-	-
HCM Control Delay (s/veh)	21.1	22	-	-	21.1	-	-
HCM Lane LOS	C	C	-	-	C	-	-
HCM 95th %tile Q(veh)	0.6	1	-	-	1.3	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	133	0	1118	840	66
Future Vol, veh/h	0	133	0	1118	840	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	145	0	1215	913	72

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	492	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	522	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	522	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	14.51	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	522	-	-
HCM Lane V/C Ratio	-	0.277	-	-
HCM Control Delay (s/veh)	-	14.5	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	1.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑				↱			
Traffic Vol, veh/h	0	1740	108	0	0	0	0	0	70	0	0	0
Future Vol, veh/h	0	1740	108	0	0	0	0	0	70	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1891	117	0	0	0	0	0	76	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	-	-	0	-	-	946
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	225
Stage 1	0	-	-	0	-	0	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	225
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	28.89
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	225	-	-	-
HCM Lane V/C Ratio	0.337	-	-	-
HCM Control Delay (s/veh)	28.9	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	1.4	-	-	-

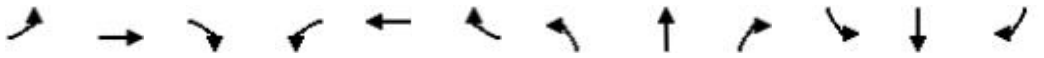
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	110	919	424	211	1066	642	97	49	97
Future Volume (vph)	110	919	424	211	1066	642	97	49	97
Turn Type	Prot	NA	pt+ov	Prot	NA	Split	NA	Split	NA
Protected Phases	5	2	2 8	1	6	8	8	4	4
Permitted Phases									
Detector Phase	5	2	2 8	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	15.0		6.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.8	22.8		13.8	22.8	14.9	14.9	13.3	13.3
Total Split (s)	18.0	66.0		29.0	77.0	57.0	57.0	28.0	28.0
Total Split (%)	10.0%	36.7%		16.1%	42.8%	31.7%	31.7%	15.6%	15.6%
Yellow Time (s)	4.9	4.9		4.9	4.9	4.8	4.8	3.4	3.4
All-Red Time (s)	2.9	2.9		2.9	2.9	4.1	4.1	3.9	3.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	7.8		7.8	7.8	8.9	8.9	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				
Recall Mode	None	C-Min		None	C-Min	None	None	None	None

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 1: Tuskawilla Rd & SR 434





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	919	424	211	1066	23	642	97	177	49	97	43
Future Volume (veh/h)	110	919	424	211	1066	23	642	97	177	49	97	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1856
Adj Flow Rate, veh/h	115	957	442	220	1110	24	669	101	184	51	101	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	5	2	2	4	2	2	2	2	2	2	3
Cap, veh/h	100	1336	968	210	1561	34	780	134	244	169	116	52
Arrive On Green	0.06	0.38	0.38	0.12	0.45	0.45	0.23	0.23	0.23	0.09	0.09	0.09
Sat Flow, veh/h	1767	3469	1585	1781	3500	76	3456	594	1082	1781	1226	546
Grp Volume(v), veh/h	115	957	442	220	555	579	669	0	285	51	0	146
Grp Sat Flow(s),veh/h/ln	1767	1735	1585	1781	1749	1827	1728	0	1676	1781	0	1772
Q Serve(g_s), s	10.2	42.2	27.1	21.2	46.3	46.3	33.5	0.0	28.6	4.8	0.0	14.6
Cycle Q Clear(g_c), s	10.2	42.2	27.1	21.2	46.3	46.3	33.5	0.0	28.6	4.8	0.0	14.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.65	1.00		0.31
Lane Grp Cap(c), veh/h	100	1336	968	210	780	815	780	0	378	169	0	168
V/C Ratio(X)	1.15	0.72	0.46	1.05	0.71	0.71	0.86	0.00	0.75	0.30	0.00	0.87
Avail Cap(c_a), veh/h	100	1336	968	210	780	815	923	0	448	205	0	204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	84.9	47.0	18.9	79.4	40.4	40.4	66.9	0.0	65.0	75.9	0.0	80.4
Incr Delay (d2), s/veh	135.4	3.3	1.6	75.5	5.4	5.2	7.7	0.0	6.8	1.4	0.0	29.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	19.0	17.5	14.2	21.3	22.3	15.7	0.0	13.0	2.3	0.0	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	220.3	50.3	20.5	154.9	45.9	45.7	74.5	0.0	71.8	77.3	0.0	109.4
LnGrp LOS	F	D	C	F	D	D	E		E	E		F
Approach Vol, veh/h		1514			1354			954			197	
Approach Delay, s/veh		54.5			63.5			73.7			101.1	
Approach LOS		D			E			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.0	77.1		24.4	18.0	88.1		49.5				
Change Period (Y+Rc), s	7.8	7.8		7.3	7.8	7.8		8.9				
Max Green Setting (Gmax), s	21.2	58.2		20.7	10.2	69.2		48.1				
Max Q Clear Time (g_c+I1), s	23.2	44.2		16.6	12.2	48.3		35.5				
Green Ext Time (p_c), s	0.0	9.1		0.4	0.0	10.7		5.2				

Intersection Summary	
HCM 7th Control Delay, s/veh	64.4
HCM 7th LOS	E

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	1337	38	95	1664	22	0	0	64	0	0	10
Future Vol, veh/h	43	1337	38	95	1664	22	0	0	64	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	345	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	3	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	46	1422	40	101	1770	23	0	0	68	0	0	11

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1794	0	0	1463	0	0	-	-	731
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	341	-	-	458	-	-	0	0	364
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	341	-	-	458	-	-	-	0	364
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0.52	0.8	17.15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	364	341	-	-	458	-	-
HCM Lane V/C Ratio	0.187	0.134	-	-	0.221	-	-
HCM Control Delay (s/veh)	17.2	17.2	-	-	15.1	-	-
HCM Lane LOS	C	C	-	-	C	-	-
HCM 95th %tile Q(veh)	0.7	0.5	-	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	80	0	943	688	60
Future Vol, veh/h	0	80	0	943	688	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	3	2
Mvmt Flow	0	89	0	1048	764	67

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	416	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	586	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	586	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.24	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	586	-	-
HCM Lane V/C Ratio	-	0.152	-	-
HCM Control Delay (s/veh)	-	12.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑				↱			
Traffic Vol, veh/h	0	1506	84	0	21	0	0	0	99	0	0	0
Future Vol, veh/h	0	1506	84	0	21	0	0	0	99	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	3	13	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1637	91	0	23	0	0	0	108	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	-	-	0	-	-	818
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	274
Stage 1	0	-	-	0	-	0	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	274
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	26.42
HCM LOS			D

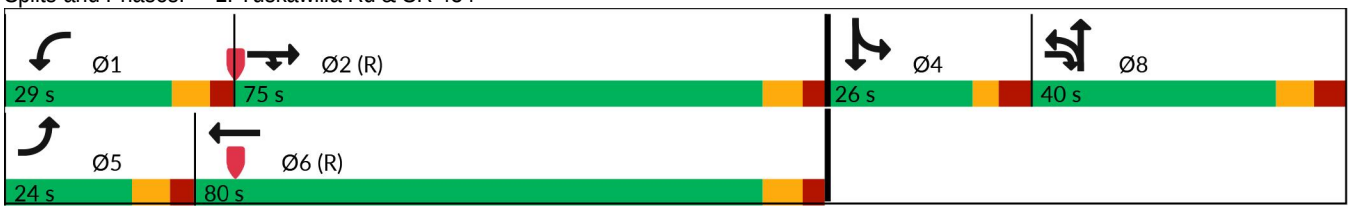
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	274	-	-	-
HCM Lane V/C Ratio	0.393	-	-	-
HCM Control Delay (s/veh)	26.4	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	1.8	-	-	-

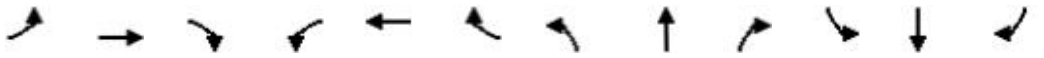
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	153	1135	574	209	1230	781	218	107	164
Future Volume (vph)	153	1135	574	209	1230	781	218	107	164
Turn Type	Prot	NA	pt+ov	Prot	NA	Split	NA	Split	NA
Protected Phases	5	2	2 8	1	6	8	8	4	4
Permitted Phases									
Detector Phase	5	2	2 8	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	6.0	15.0		6.0	15.0	6.0	6.0	6.0	6.0
Minimum Split (s)	13.8	22.8		13.8	22.8	14.9	14.9	13.3	13.3
Total Split (s)	24.0	75.0		29.0	80.0	40.0	40.0	26.0	26.0
Total Split (%)	14.1%	44.1%		17.1%	47.1%	23.5%	23.5%	15.3%	15.3%
Yellow Time (s)	4.9	4.9		4.9	4.9	4.8	4.8	3.4	3.4
All-Red Time (s)	2.9	2.9		2.9	2.9	4.1	4.1	3.9	3.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.8	7.8		7.8	7.8	8.9	8.9	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				
Recall Mode	None	C-Min		None	C-Min	None	None	None	None

Intersection Summary

Cycle Length: 170
Actuated Cycle Length: 170
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Description: signal timing improvements

Splits and Phases: 1: Tuskawilla Rd & SR 434





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1135	574	209	1230	37	781	218	142	107	164	36
Future Volume (veh/h)	153	1135	574	209	1230	37	781	218	142	107	164	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1841	1870	1826	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	156	1158	586	213	1255	38	797	222	145	109	167	37
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	4	2	5	2	2	2	2	2
Cap, veh/h	170	1405	917	222	1472	45	617	193	126	196	163	36
Arrive On Green	0.10	0.40	0.40	0.12	0.42	0.42	0.18	0.18	0.18	0.11	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3466	105	3374	1056	690	1781	1483	329
Grp Volume(v), veh/h	156	1158	586	213	633	660	797	0	367	109	0	204
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1749	1822	1687	0	1746	1781	0	1811
Q Serve(g_s), s	14.8	49.7	42.1	20.2	55.5	55.6	31.1	0.0	31.1	9.9	0.0	18.7
Cycle Q Clear(g_c), s	14.8	49.7	42.1	20.2	55.5	55.6	31.1	0.0	31.1	9.9	0.0	18.7
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.40	1.00		0.18
Lane Grp Cap(c), veh/h	170	1405	917	222	743	774	617	0	319	196	0	199
V/C Ratio(X)	0.92	0.82	0.64	0.96	0.85	0.85	1.29	0.00	1.15	0.56	0.00	1.02
Avail Cap(c_a), veh/h	170	1405	917	222	743	774	617	0	319	196	0	199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	76.2	46.1	24.0	74.0	44.1	44.1	69.4	0.0	69.5	71.7	0.0	75.7
Incr Delay (d2), s/veh	46.3	5.6	3.4	48.7	11.9	11.5	143.0	0.0	97.0	4.3	0.0	70.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	23.1	24.7	12.3	26.5	27.6	25.7	0.0	22.6	4.8	0.0	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	122.5	51.7	27.4	122.6	55.9	55.6	212.4	0.0	166.5	76.1	0.0	145.8
LnGrp LOS	F	D	C	F	E	E	F		F	E		F
Approach Vol, veh/h		1900			1506			1164			313	
Approach Delay, s/veh		50.0			65.2			197.9			121.5	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.0	75.0		26.0	24.0	80.0		40.0				
Change Period (Y+Rc), s	7.8	7.8		7.3	7.8	7.8		8.9				
Max Green Setting (Gmax), s	21.2	67.2		18.7	16.2	72.2		31.1				
Max Q Clear Time (g_c+I1), s	22.2	51.7		20.7	16.8	57.6		33.1				
Green Ext Time (p_c), s	0.0	11.7		0.0	0.0	9.6		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			94.6									
HCM 7th LOS			F									

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	1778	61	131	1856	72	0	0	86	0	0	4
Future Vol, veh/h	75	1778	61	131	1856	72	0	0	86	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	345	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	76	1796	62	132	1875	73	0	0	87	0	0	4

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	1947	0	0	1858	0	0	-	-	929
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	297	-	-	322	-	-	0	0	269
Stage 1	-	-	-	-	-	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	297	-	-	322	-	-	-	0	269
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0.83	1.51	24.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	269	297	-	-	322	-	-
HCM Lane V/C Ratio	0.322	0.255	-	-	0.411	-	-
HCM Control Delay (s/veh)	24.6	21.2	-	-	23.8	-	-
HCM Lane LOS	C	C	-	-	C	-	-
HCM 95th %tile Q(veh)	1.3	1	-	-	1.9	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	153	0	1138	840	104
Future Vol, veh/h	0	153	0	1138	840	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	166	0	1237	913	113

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	513	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	506	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	506	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.55	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	506	-	-
HCM Lane V/C Ratio	-	0.329	-	-
HCM Control Delay (s/veh)	-	15.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	1.4	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1732	157	0	16	0	0	0	134	0	0	0
Future Vol, veh/h	0	1732	157	0	16	0	0	0	134	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	150	50	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1883	171	0	17	0	0	0	146	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	-	0	0	-	-	0	-	-	941
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	0	227
Stage 1	0	-	-	0	-	0	0	0	-
Stage 2	0	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	0	227
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	45.51
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	227	-	-	-
HCM Lane V/C Ratio	0.642	-	-	-
HCM Control Delay (s/veh)	45.5	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	3.9	-	-	-

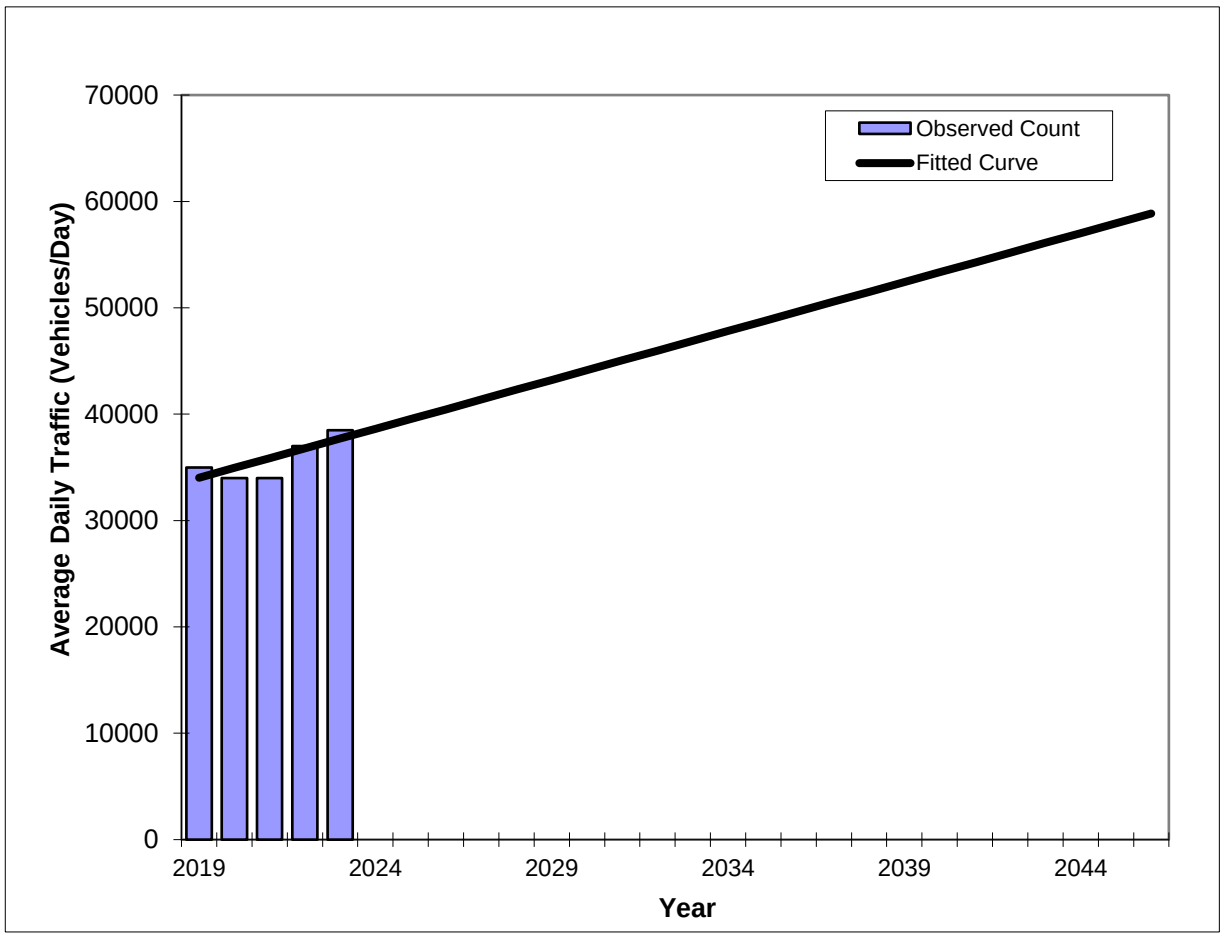
APPENDIX G
AADT Historical Trend

Traffic Trends - V2023

-- ON SR-434, 0.464 MI. E OF SR-419 (UCLP) NW

FM #	
Location	**1**

County:	Seminole (77)
Station #:	771002
Roadway:	



Annual Trend Increase:	920
Trend R-squared:	74.96%
Trend Annual Historic Growth Rate:	2.70%
Trend Growth Rate (2023 to Design Year)	2.44%
Printed:	12/5/2024

Linear Growth Option

	Traffic (ADT/AADT)	
Year	**Count***	**Trend**
2019	35,000	34,020
2020	34,000	34,940
2021	34,000	35,860
2022	37,000	36,780
2023	38,500	37,700
2026 Opening Year Trend		
2026	N/A	40,460
2036 Interim Year Trend		
2036	N/A	49,660
2046 Design Year Trend		
2046	N/A	58,860
FSUTMS Forecasts/Trends		

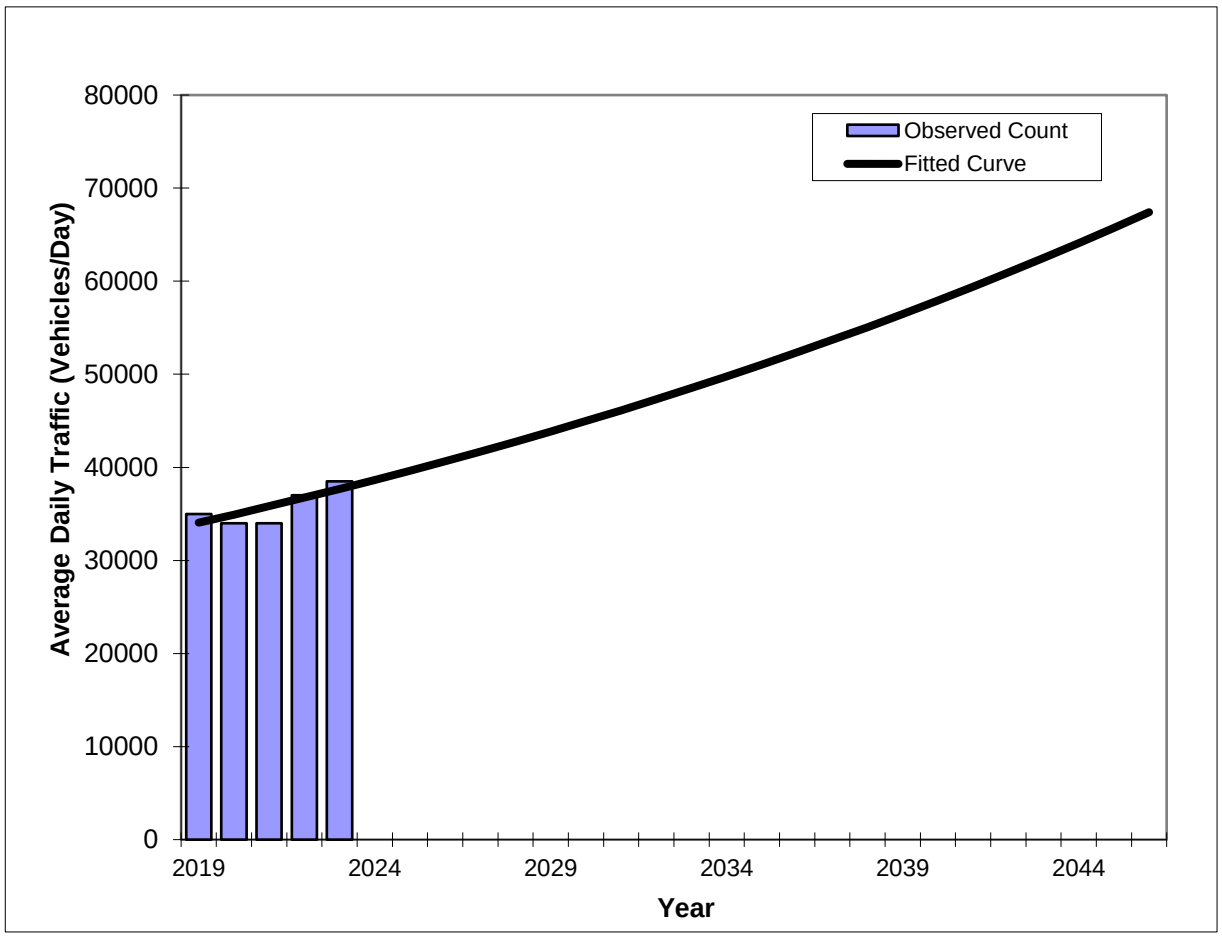
***Axle-Adjusted**

Traffic Trends - V2023

-- ON SR-434, 0.464 MI. E OF SR-419 (UCLP) NW

FM #	
Location	**1**

County:	Seminole (77)
Station #:	771002
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2019	35,000	34,060
2020	34,000	34,930
2021	34,000	35,830
2022	37,000	36,750
2023	38,500	37,690
2026 Opening Year Trend		
2026	N/A	40,660
2036 Interim Year Trend		
2036	N/A	52,350
2046 Design Year Trend		
2046	N/A	67,410
FSUTMS Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	75.07%
Compounded Annual Historic Growth Rate:	2.56%
Compounded Growth Rate (2023 to Design Year)	2.56%
Printed:	12/5/2024

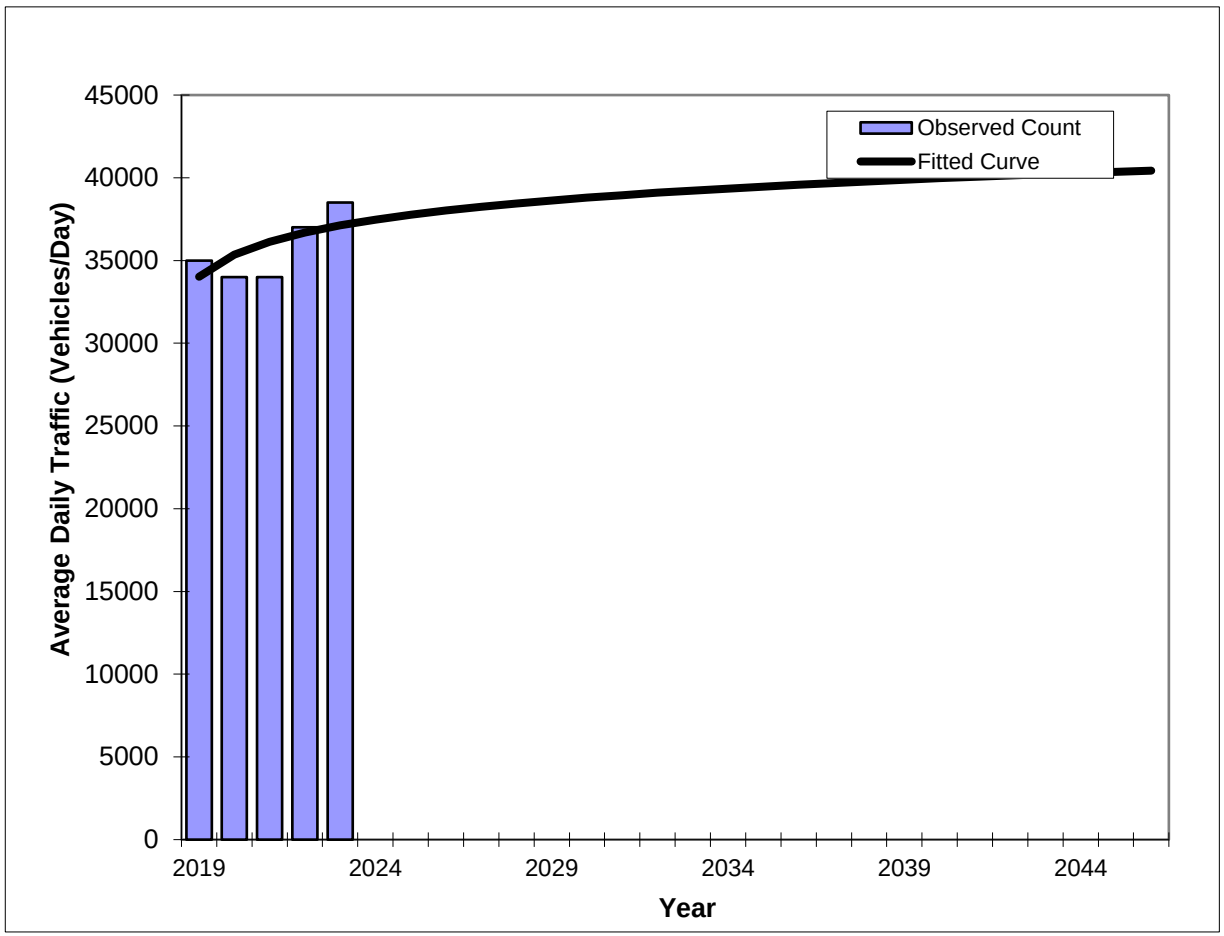
Exponential Growth Option

Traffic Trends - V2023

-- ON SR-434, 0.464 MI. E OF SR-419 (UCLP) NW

FM #	
Location	**1**

County:	Seminole (77)
Station #:	771002
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2019	35,000	34,020
2020	34,000	35,350
2021	34,000	36,130
2022	37,000	36,690
2023	38,500	37,120
2026 Opening Year Trend		
2026	N/A	38,020
2036 Interim Year Trend		
2036	N/A	39,580
2046 Design Year Trend		
2046	N/A	40,430
FSUTMS Forecasts/Trends		

Trend R-squared:	53.02%
Compounded Annual Historic Growth Rate:	2.20%
Compounded Growth Rate (2023 to Design Year)	0.37%
Printed:	12/5/2024

Decaying Exponential Growth Option

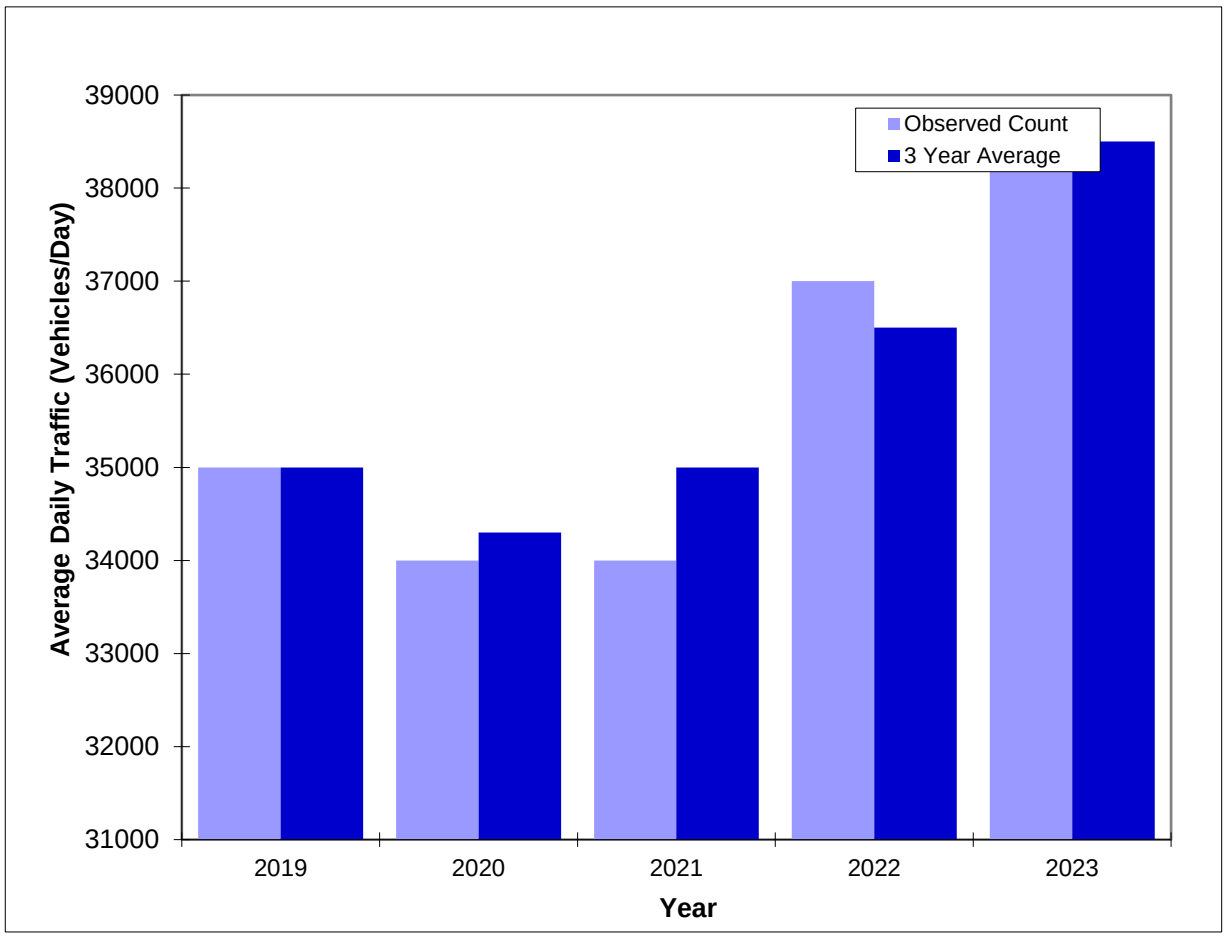
***Axle-Adjusted**

Traffic Trends - V2023

-- ON SR-434, 0.464 MI. E OF SR-419 (UCLP) NW

FM #	
Location	**1**

County:	Seminole (77)
Station #:	771002
Roadway:	



Year	Traffic (ADT/AADT) Count*	3 Yr Avg
2019	35,000	35,000
2020	34,000	34,300
2021	34,000	35,000
2022	37,000	36,500
2023	38,500	38,500

Actual AADT vs 3 Year Average

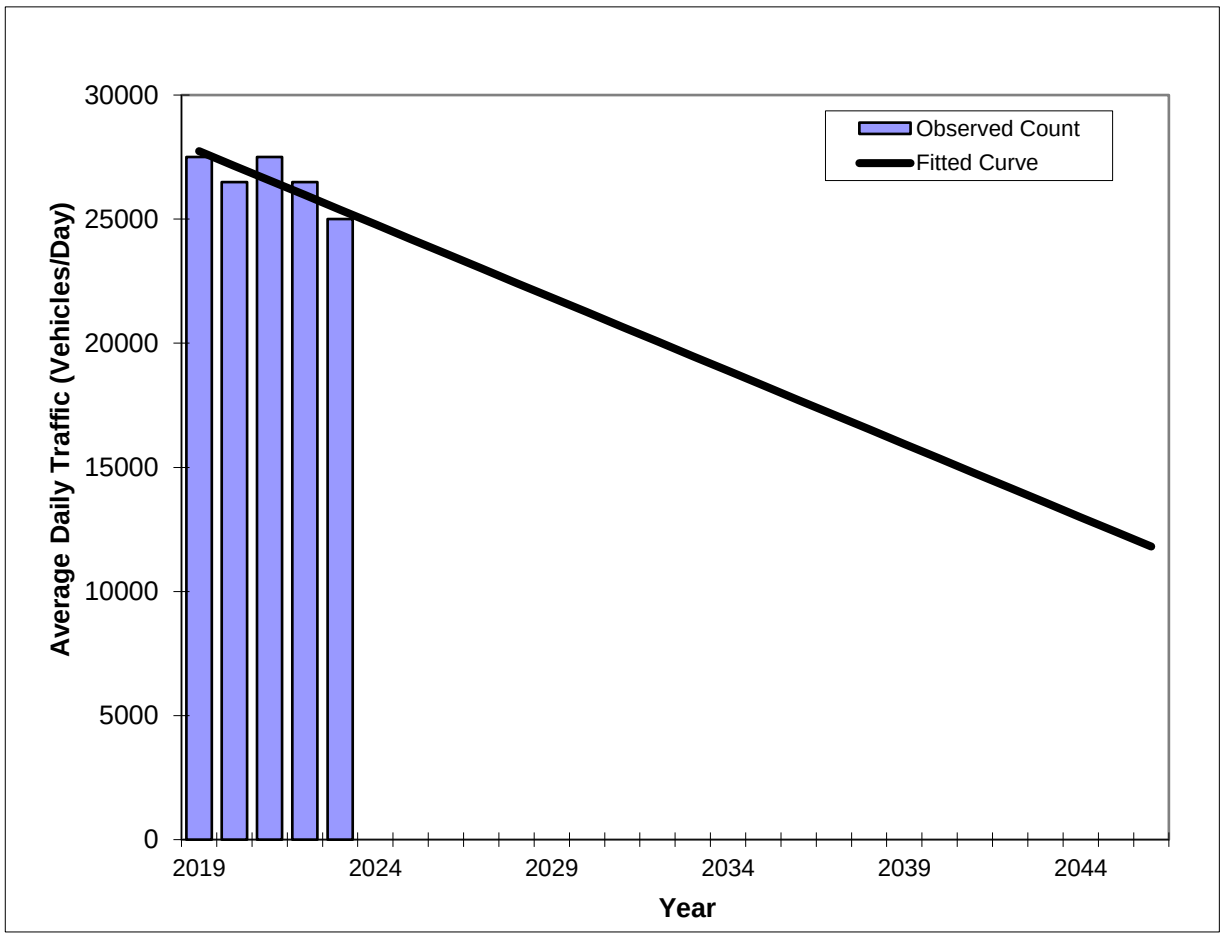
***Axle-Adjusted**

Traffic Trends - V2023

-- ON SR-434, 0.618 MI. E OF TUSKAWILA RD (UVL)

FM #	
Location	**1**

County:	Seminole (77)
Station #:	770278
Roadway:	



Annual Trend Decrease:	590
Trend R-squared:	90.37%
Trend Annual Historic Growth Rate:	-2.13%
Trend Growth Rate (2023 to Design Year)	-2.32%
Printed:	12/5/2024

Linear Growth Option

	Traffic (ADT/AADT)	
Year	**Count***	**Trend**
2019	27,500	27,740
2020	26,500	27,150
2021	27,500	26,560
2022	26,500	25,970
2023	25,000	25,380
2026 Opening Year Trend		
2026	N/A	23,610
2036 Interim Year Trend		
2036	N/A	17,710
2046 Design Year Trend		
2046	N/A	11,810
FSUTMS Forecasts/Trends		

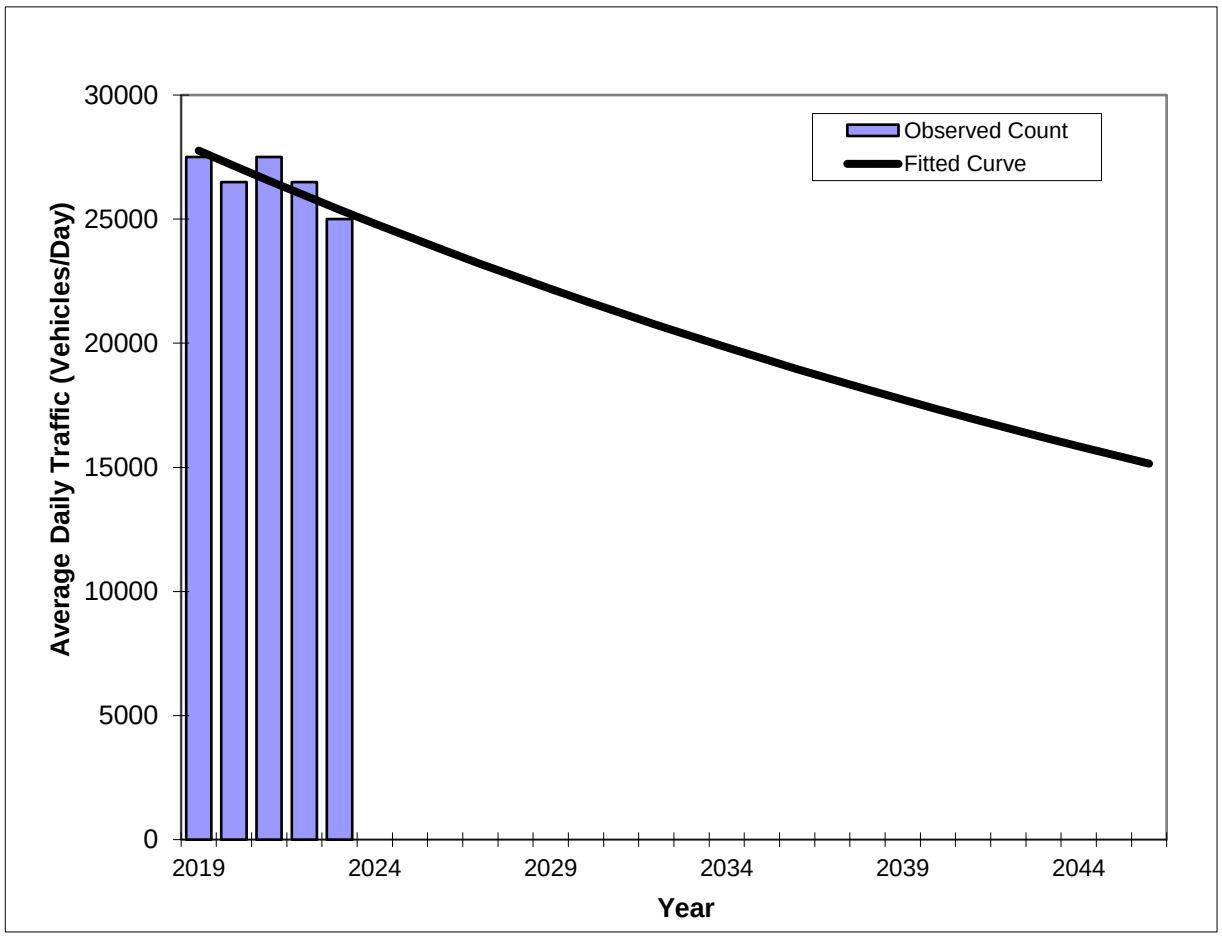
***Axle-Adjusted**

Traffic Trends - V2023

-- ON SR-434, 0.618 MI. E OF TUSKAWILA RD (UVL)

FM #	
Location	**1**

County:	Seminole (77)
Station #:	770278
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2019	27,500	27,760
2020	26,500	27,150
2021	27,500	26,550
2022	26,500	25,960
2023	25,000	25,380
2026 Opening Year Trend		
2026	N/A	23,730
2036 Interim Year Trend		
2036	N/A	18,960
2046 Design Year Trend		
2046	N/A	15,150
FSUTMS Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	89.55%
Compounded Annual Historic Growth Rate:	-2.22%
Compounded Growth Rate (2023 to Design Year)	-2.22%
Printed:	12/5/2024

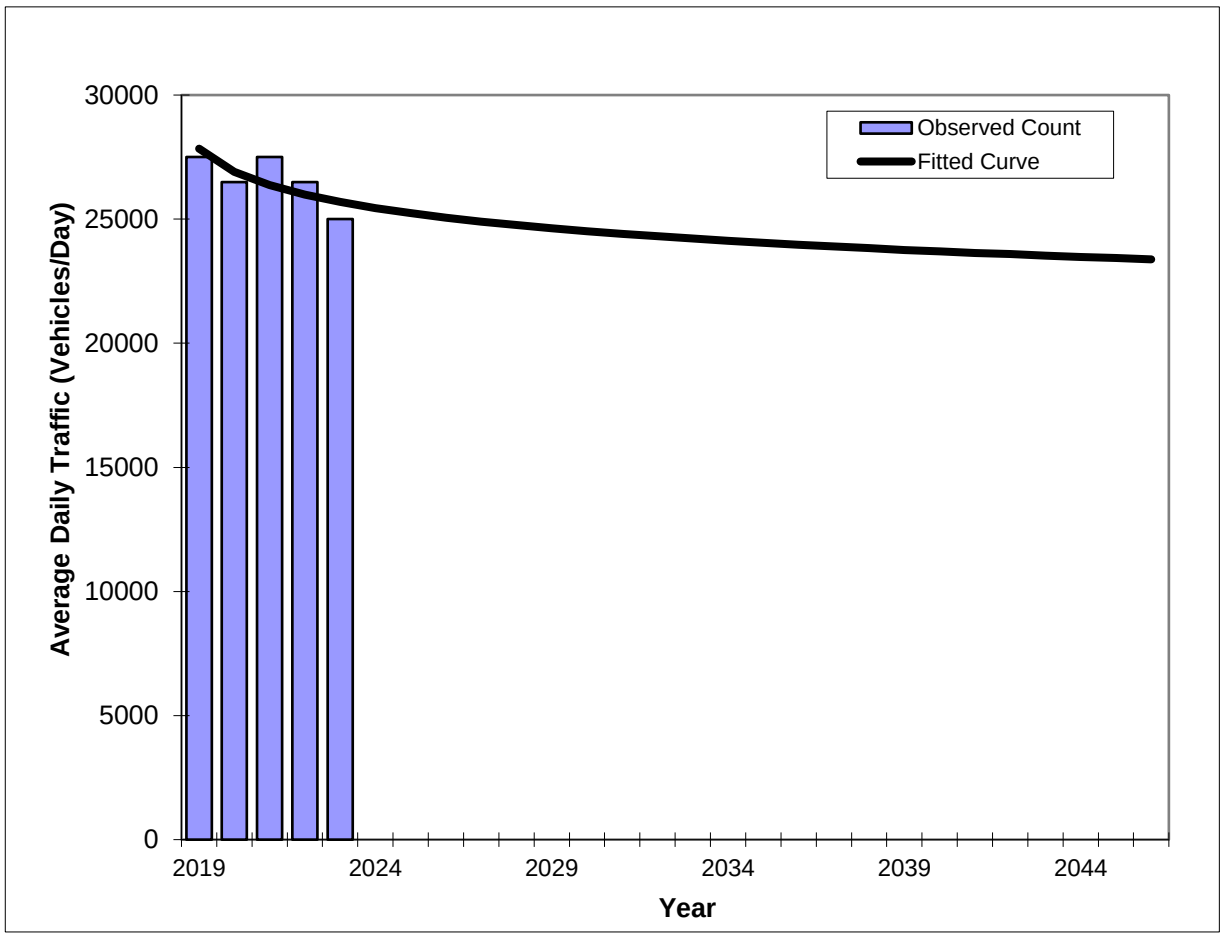
Exponential Growth Option

Traffic Trends - V2023

-- ON SR-434, 0.618 MI. E OF TUSKAWILA RD (UVL)

FM #	
Location	**1**

County:	Seminole (77)
Station #:	770278
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2019	27,500	27,840
2020	26,500	26,910
2021	27,500	26,370
2022	26,500	25,990
2023	25,000	25,690
2026 Opening Year Trend		
2026	N/A	25,060
2036 Interim Year Trend		
2036	N/A	23,970
2046 Design Year Trend		
2046	N/A	23,380
FSUTMS Forecasts/Trends		

Trend R-squared:	75.24%
Compounded Annual Historic Growth Rate:	-1.99%
Compounded Growth Rate (2023 to Design Year)	-0.41%
Printed:	12/5/2024

Decaying Exponential Growth Option

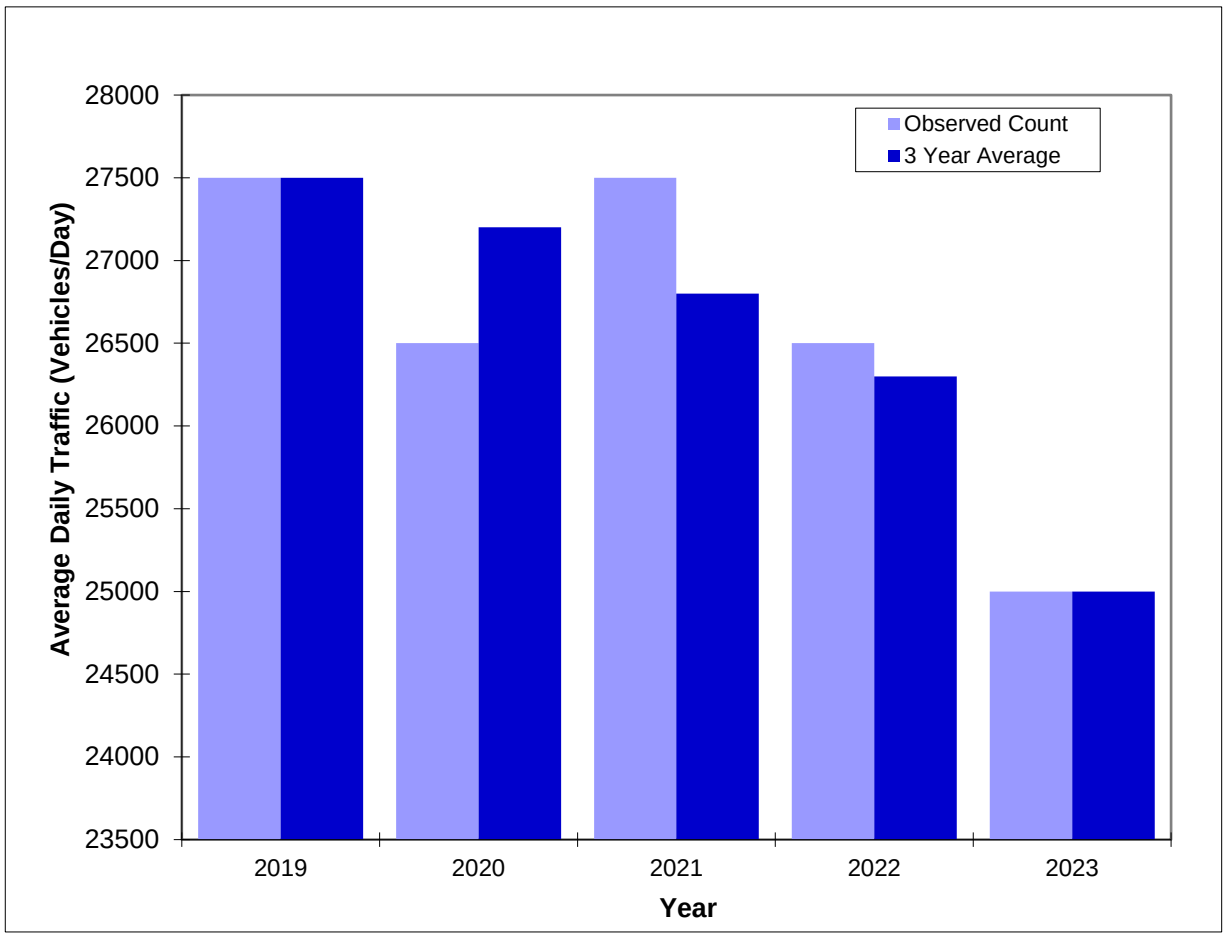
***Axle-Adjusted**

Traffic Trends - V2023

-- ON SR-434, 0.618 MI. E OF TUSKAWILA RD (UVL)

FM #	
Location	**1**

County:	Seminole (77)
Station #:	770278
Roadway:	



Year	Traffic (ADT/AADT) Count*	3 Yr Avg
2019	27,500	27,500
2020	26,500	27,200
2021	27,500	26,800
2022	26,500	26,300
2023	25,000	25,000

Actual AADT vs 3 Year Average

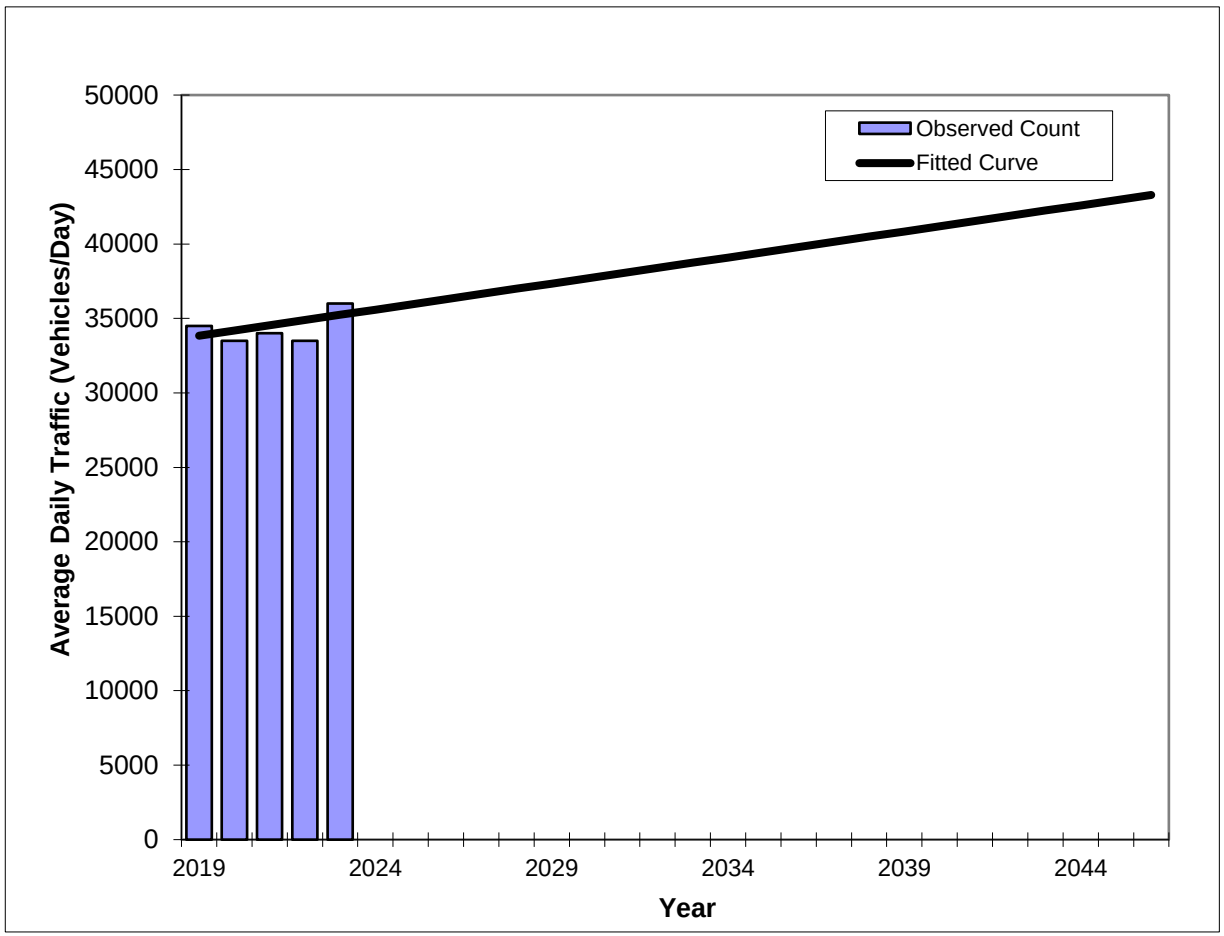
***Axle-Adjusted**

Traffic Trends - V2023

-- TUSKAWILLA RD, N OF SR-426/ALOMA AVE - OFF SYSTEM

FM #	
Location	**1**

County:	Seminole (77)
Station #:	778065
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2019	34,500	33,840
2020	33,500	34,190
2021	34,000	34,540
2022	33,500	34,890
2023	36,000	35,240
2026 Opening Year Trend		
2026	N/A	36,290
2036 Interim Year Trend		
2036	N/A	39,790
2046 Design Year Trend		
2046	N/A	43,290
FSUTMS Forecasts/Trends		

Annual Trend Increase:	350
Trend R-squared:	39.11%
Trend Annual Historic Growth Rate:	1.03%
Trend Growth Rate (2023 to Design Year)	0.99%
Printed:	12/5/2024

Linear Growth Option

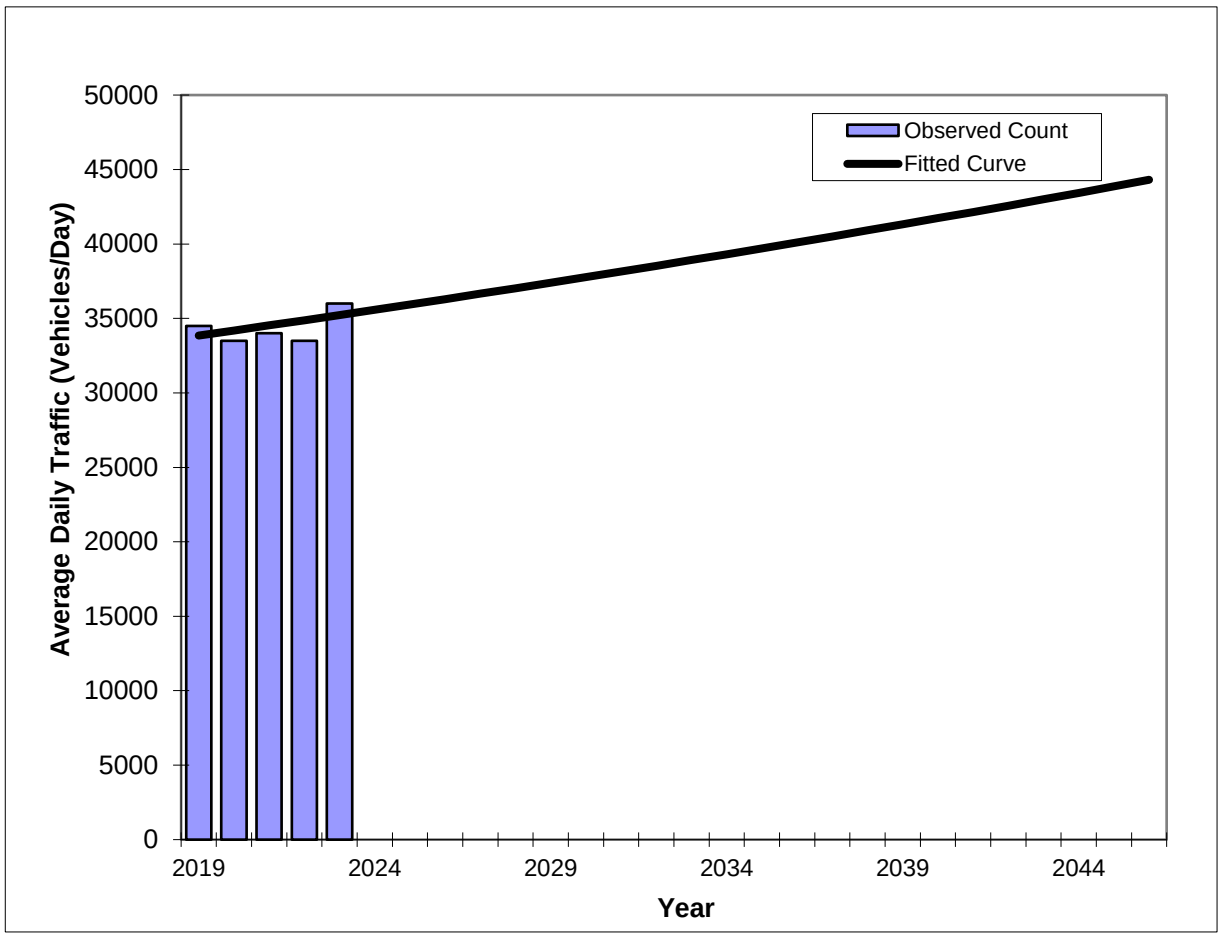
***Axle-Adjusted**

Traffic Trends - V2023

-- TUSKAWILLA RD, N OF SR-426/ALOMA AVE - OFF SYSTEM

FM #	
Location	**1**

County:	Seminole (77)
Station #:	778065
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2019	34,500	33,850
2020	33,500	34,190
2021	34,000	34,530
2022	33,500	34,880
2023	36,000	35,230
2026 Opening Year Trend		
2026	N/A	36,300
2036 Interim Year Trend		
2036	N/A	40,100
2046 Design Year Trend		
2046	N/A	44,310
FSUTMS Forecasts/Trends		

Trend R-squared:	38.68%
Compounded Annual Historic Growth Rate:	1.00%
Compounded Growth Rate (2023 to Design Year)	1.00%
Printed:	12/5/2024

Exponential Growth Option

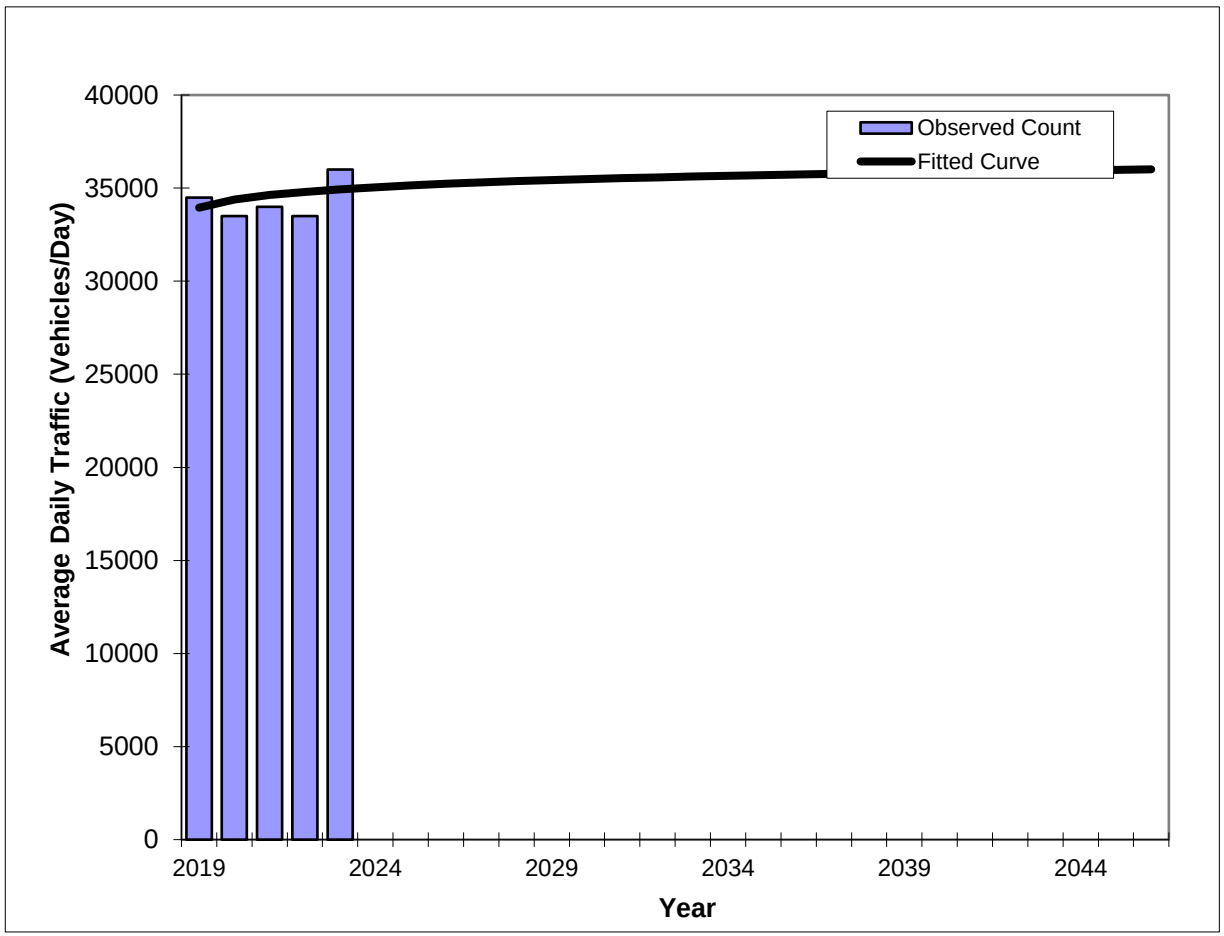
***Axle-Adjusted**

Traffic Trends - V2023

-- TUSKAWILLA RD, N OF SR-426/ALOMA AVE - OFF SYSTEM

FM #	
Location	**1**

County:	Seminole (77)
Station #:	778065
Roadway:	



Year	Traffic (ADT/AADT) Count*	Trend
2019	34,500	33,950
2020	33,500	34,380
2021	34,000	34,630
2022	33,500	34,800
2023	36,000	34,940
2026 Opening Year Trend		
2026	N/A	35,230
2036 Interim Year Trend		
2036	N/A	35,730
2046 Design Year Trend		
2046	N/A	36,010
FSUTMS Forecasts/Trends		

Trend R-squared:	19.65%
Compounded Annual Historic Growth Rate:	0.72%
Compounded Growth Rate (2023 to Design Year)	0.13%
Printed:	12/5/2024

Decaying Exponential Growth Option

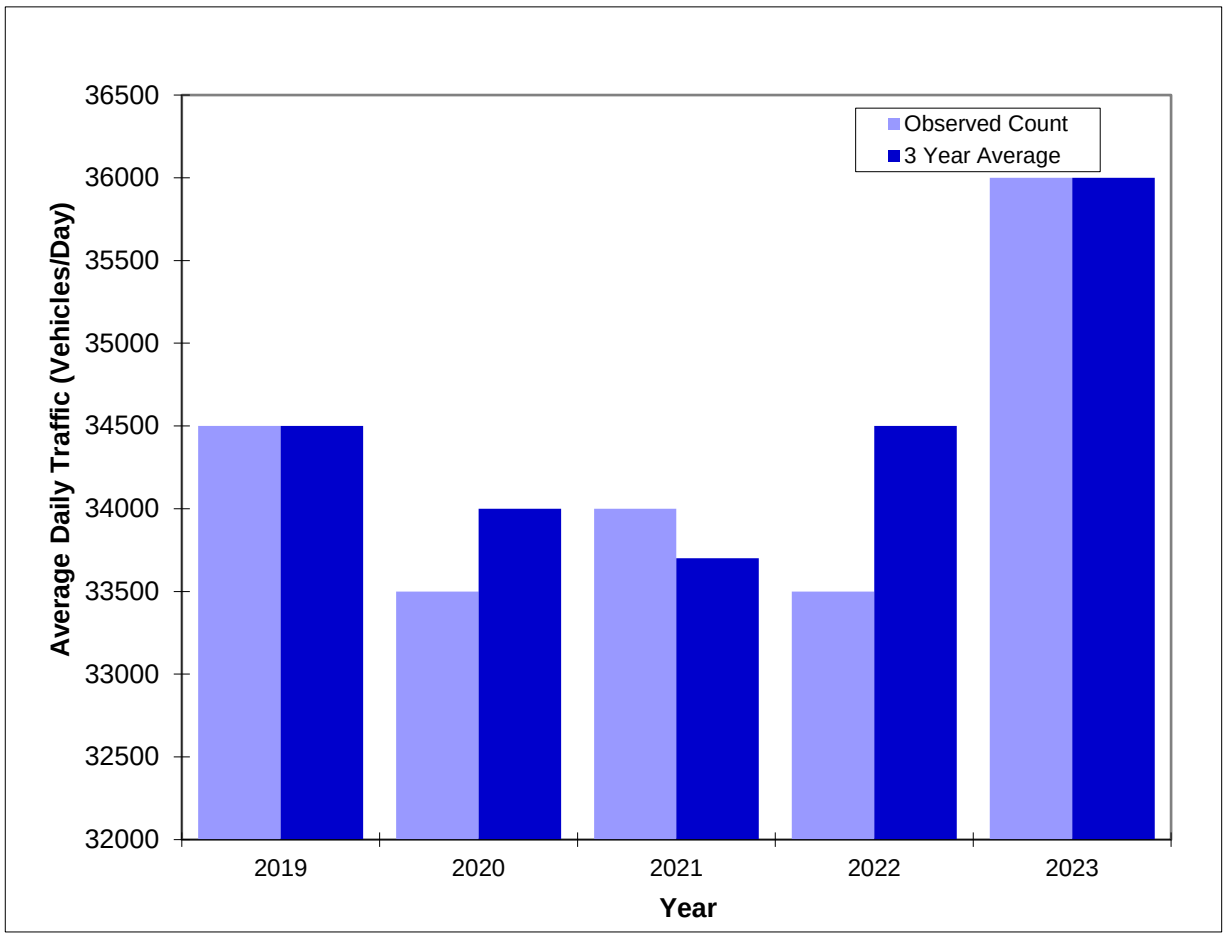
***Axle-Adjusted**

Traffic Trends - V2023

-- TUSKAWILLA RD, N OF SR-426/ALOMA AVE - OFF SYSTEM

FM #	
Location	**1**

County:	Seminole (77)
Station #:	778065
Roadway:	



Year	Traffic (ADT/AADT) Count*	3 Yr Avg
2019	34,500	34,500
2020	33,500	34,000
2021	34,000	33,700
2022	33,500	34,500
2023	36,000	36,000

Actual AADT vs 3 Year Average

***Axle-Adjusted**

Historical Trends Analysis

FDOT Site	Location	Years of Historical AADT	Historic Trend Analysis		
			Type	R Square	Annual Growth Rate
#778065	TUSKAWILLA RD, N OF SR-426/ALOMA AVE - OF	2019 to 2023	Linear	**39.11%**	**1.03%**
			Exponential	38.68%	1.00%
			Decaying Exponential	19.65%	0.72%
#770278	ON SR-434, 0.618 MI. E OF TUSKAWILA RD (UVL	2019 to 2023	Linear	**90.37%**	**-2.13%**
			Exponential	89.55%	-2.22%
			Decaying Exponential	75.24%	-1.99%
#771002	ON SR-434, 0.464 MI. E OF SR-419 (UCLP) NW	2019 to 2023	Linear	74.96%	2.70%
			Exponential	**75.07%**	**2.56%**
			Decaying Exponential	53.02%	2.20%

APPENDIX H
ITE Land Use Code

Land Use: 945
Convenience Store/Gas Station

Description

A convenience store/gas station is a facility with a co-located convenience store and gas station. The convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel.

A convenience store/gas station is typically located along a major thoroughfare to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) are common at these facilities.

The convenience store product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine. Coffee and pre-made sandwiches are also commonly sold at a convenience store. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

The sites in this land use include both self-pump and attendant-pumped fueling positions and both pre-pay and post-pay operations.

Convenience store (Land Use 851), gasoline/service station (Land Use 944), and truck stop (Land Use 950) are related uses.

Land Use Subcategory

Multiple subcategories were added to this land use to allow for multi-variable evaluation of sites with single-variable data plots. All study sites are assigned to one of three subcategories, based on the number of vehicle fueling positions (VFP) at the site: between 2 and 8 VFP, between 9 and 15 VFP, and between 16 and 24 VFP. For each VFP range subcategory, data plots are presented with GFA as the independent variable for all time periods and trip types for which data are available. The use of both GFA and VFP (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of *Trip Generation Manual*.

Further, the study sites were also assigned to one of three other subcategories, based on the gross floor area (GFA) of the convenience store at the site: between 2,000 and 4,000 square feet, between 4,000 and 5,500 square feet, and between 5,500 and 10,000 square feet. For each GFA subcategory range, data plots are presented with VFP as the independent variable for all time periods and trip types for which data are available. The use of both VFP and GFA (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of *Trip Generation Manual*.

When analyzing the convenience store/gas station land use with each combination of GFA and VFP values as described above, the two sets of data plots will produce two estimates of site-generated trips. Both values can be considered when determining a site trip generation estimate.

Data plots are also provided for three additional independent variables: AM peak hour traffic on adjacent street, PM peak hour traffic on adjacent street, and employees. These independent variables are intended to be analyzed as single independent variables and do not have sub-categories associated with them. Within the data plots and within the ITETripGen web app, these plots are found under the land use subcategory "none."

Additional Data

ITE recognizes there are existing convenience store/gas station sites throughout North America that are larger than the sites presented in the data plots. However, the ITE database does not include any site with more than 24 VFP or any site with gross floor area greater than 10,000 square feet. Submission of trip generation data for larger sites is encouraged.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arkansas, California, Connecticut, Delaware, Florida, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Washington, and Wisconsin.

Source Numbers

221, 245, 274, 288, 300, 340, 350, 351, 352, 355, 359, 385, 440, 617, 718, 810, 813, 844, 850, 853, 864, 865, 867, 869, 882, 883, 888, 904, 926, 927, 936, 938, 954, 960, 962, 977, 1004, 1024, 1025, 1027, 1052

Convenience Store/Gas Station - GFA (4-5.5k) (945)

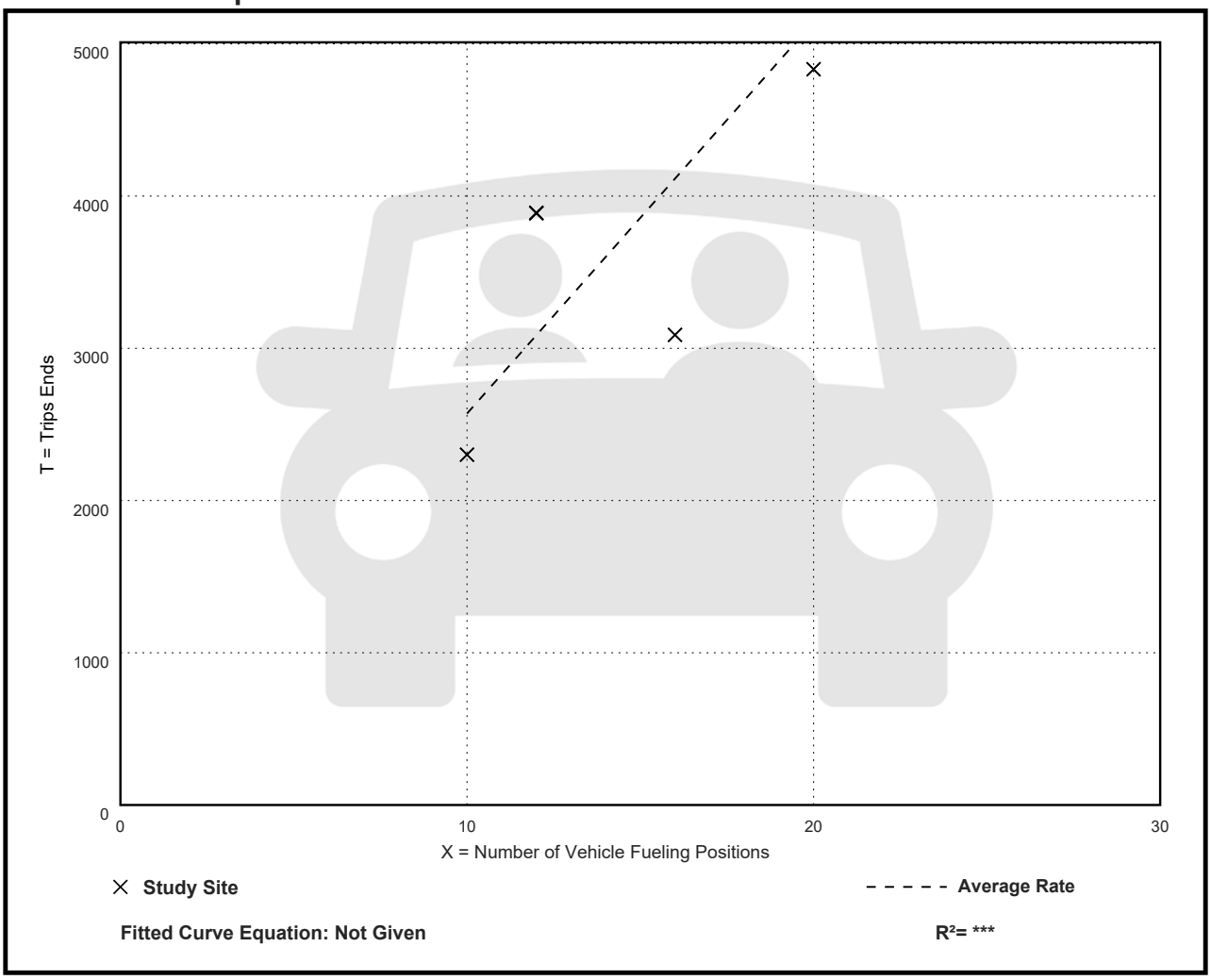
Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
257.13	193.00 - 324.17	57.53

Data Plot and Equation



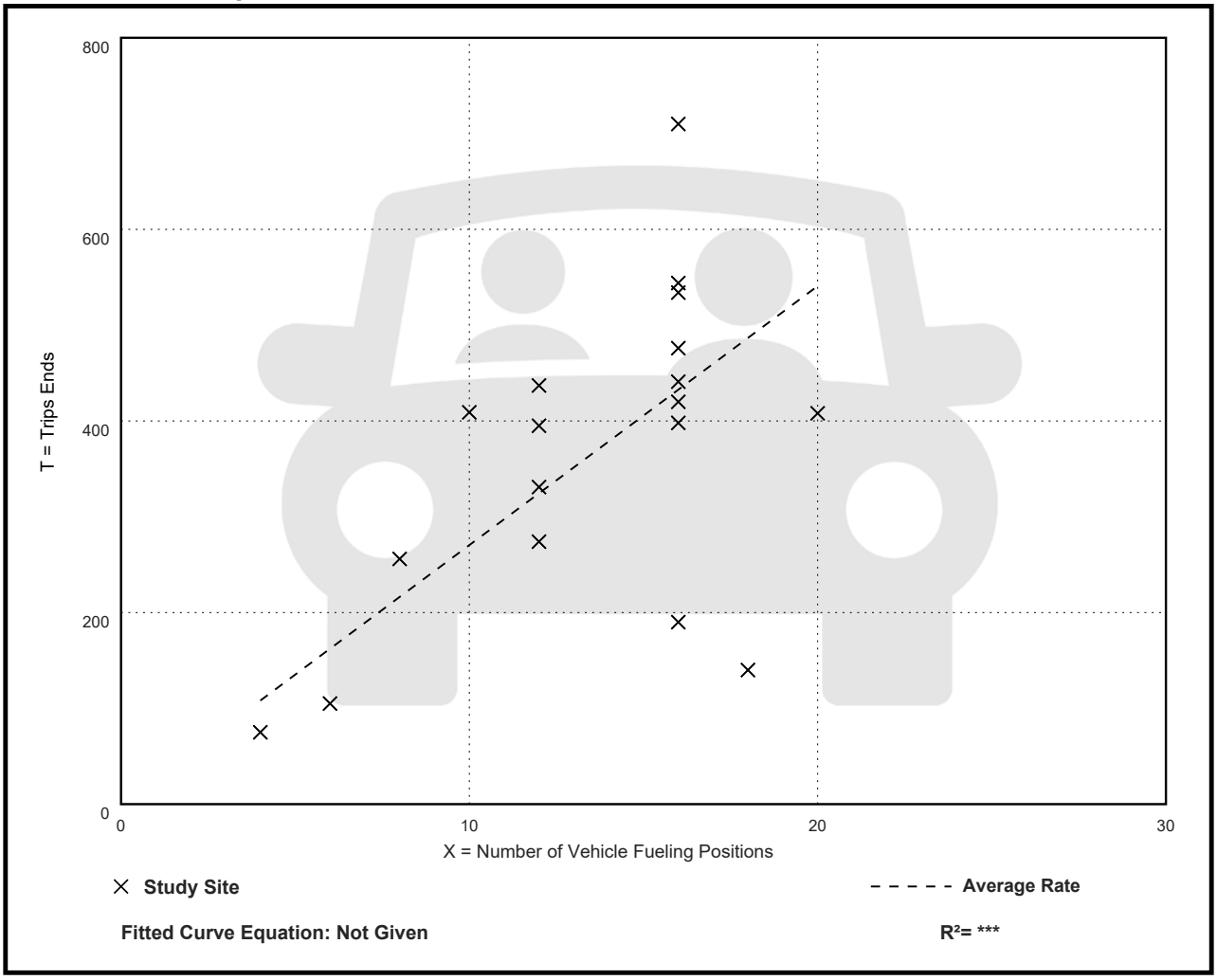
Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. Num. of Vehicle Fueling Positions: 13
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
27.04	7.78 - 44.38	9.88

Data Plot and Equation



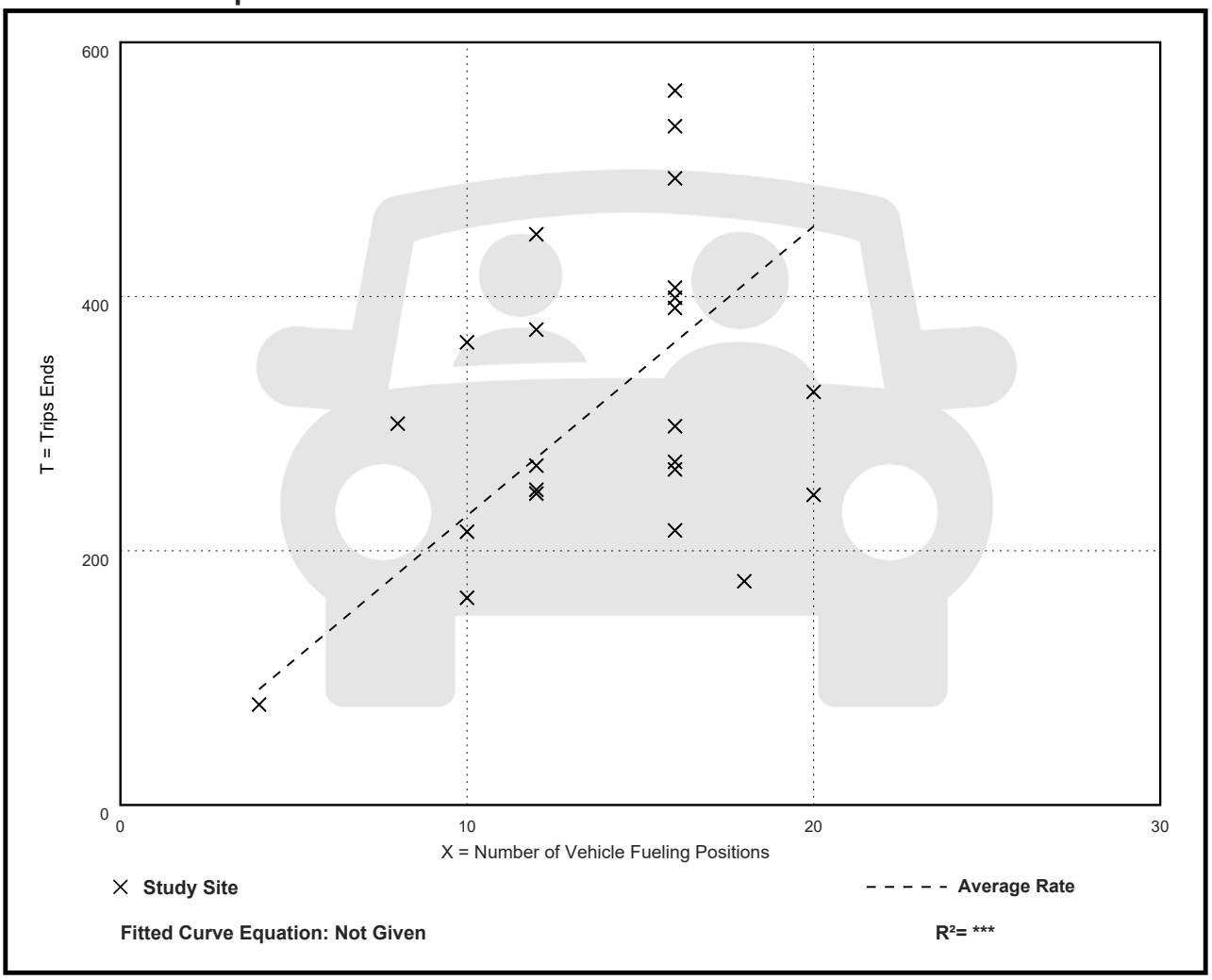
Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 23
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

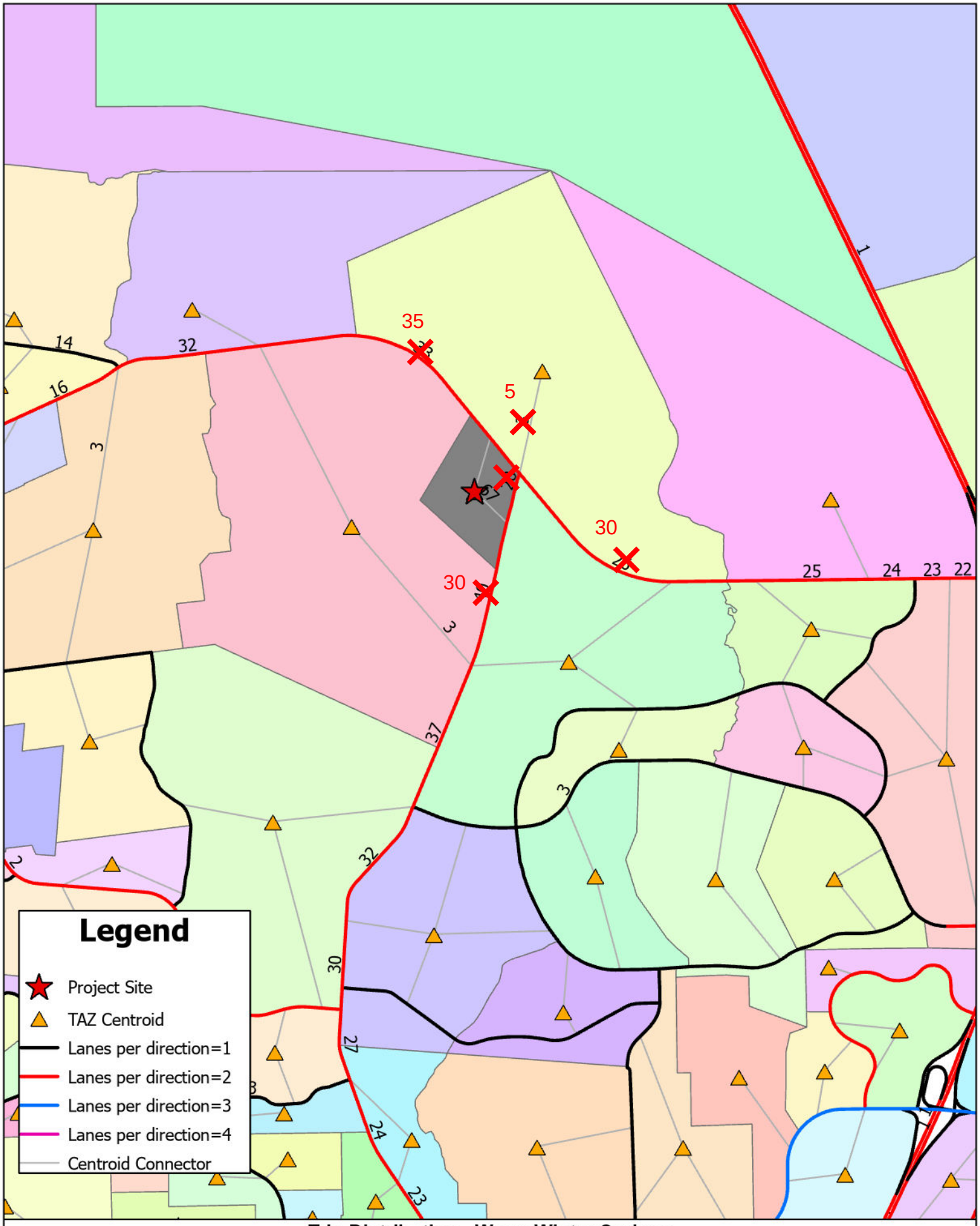
Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
22.76	9.78 - 37.50	8.49

Data Plot and Equation



APPENDIX I
CFRPMv7 Model Plot



Trip Distribution - Wawa Winter Springs
CFRPMv7 - 2025 - November 2024

APPENDIX J

Seminole County Roadway Concurrency Information

Summary of Roadway Concurrency Information

Traffic Counter ID	Roadway Name	From	To	
			Net Available Capacity	-1617
294	SR 434	DeLeon St	E-W Expressway	
			Current Traffic Count	23955
			Roadway Link Capacity	18270
			Committed Trips	293
			Net Available Capacity	-5978
295	SR 434	E-W Expressway	Springs Ave	
			Current Traffic Count	27563
			Roadway Link Capacity	48000
			Committed Trips	0
			Net Available Capacity	20437
296	SR 434	Springs Ave	Tuskawilla Rd	
			Current Traffic Count	27610
			Roadway Link Capacity	48000
			Committed Trips	293
			Net Available Capacity	20097

This information has been provided by Tony Nelson, P.E. at Seminole County Engineering and is current information as of the above referenced date.

Summary of Roadway Concurrency Information

Traffic Counter ID	Roadway Name	From	To	
297	SR 434	Tuskawilla Rd	SR 419	
			Current Traffic Count	36344
			Roadway Link Capacity	48000
			Committed Trips	0
			Net Available Capacity	11656
298	SR 434	SR 419	Belle Ave	
			Current Traffic Count	24671
			Roadway Link Capacity	48000
			Committed Trips	0
			Net Available Capacity	23329
299	SR 434	Belle Ave	US 17-92	
			Current Traffic Count	33165
			Roadway Link Capacity	48000
			Committed Trips	0
			Net Available Capacity	14835
300	SR 434	US 17-92	CR 427	
			Current Traffic Count	23146

This information has been provided by Tony Nelson, P.E. at Seminole County Engineering and is current information as of the above referenced date.

Summary of Roadway Concurrency Information

Traffic Counter ID	Roadway Name	From	To	
				Net Available Capacity 15958
325	TRIPLET LAKE	US 17-92	N. Triplet Lake Dr	Current Traffic Count 2483 Roadway Link Capacity 19360 Committed Trips 0 Net Available Capacity 16877
326	TUSKAWILLA RD	SR 434	Trotwood Blvd	Current Traffic Count 21241 Roadway Link Capacity 42560 Committed Trips 0 Net Available Capacity 21319
327	TUSKAWILLA RD	Trotwood Blvd	Winter Springs Blvd	Current Traffic Count 20748 Roadway Link Capacity 42560 Committed Trips 8 Net Available Capacity 21804

This information has been provided by Tony Nelson, P.E. at Seminole County Engineering and is current information as of the above referenced date.

PUBLIC HEARINGS AGENDA ITEM 402

PLANNING AND ZONING BOARD/LOCAL PLANNING AGENCY AGENDA | AUGUST 7, 2025 REGULAR MEETING

TITLE

Winter Springs Marketplace Additional Parking – Site/Final Engineering and Development Agreement.

SUMMARY

The development site consists of undeveloped land that is currently part of the Winter Springs Marketplace development. The applicant is proposing to modify the existing parking area and stormwater pond by proposing 10 additional parking spaces for the adjacent Wawa development. The existing site was permitted under the Winter Springs Marketplace (2021-00002152). This site plan was submitted simultaneously with the Wawa at Winter Springs Marketplace Site Plan (FEDP-2025-0016).

FUNDING SOURCE

RECOMMENDATION

Staff recommends that the Planning & Zoning Board recommend approval of the Site/Final Engineering and Development Agreement, subject to the following conditions of approval:

1. Execution of the Development Agreement.
2. Construction on the site shall not begin until the stormwater permit from St. Johns River Water Management District is approved.
3. All grass on the Property shall be Bahia grass. No St. Augustine grass or grass types with low drought tolerance shall be permitted.

PUBLIC HEARINGS AGENDA ITEM

PLANNING & ZONING BOARD
THURSDAY, AUGUST 7, 2025
REGULAR MEETING

TITLE

Winter Springs Marketplace Additional Parking – Site/Final Engineering and Development Agreement.

SUMMARY

The Community Development Department requests that the Planning & Zoning Board hold a Public Hearing to consider Site/Final Engineering and Development Agreement regarding the applicant's request to add parking and make changes to Robert Family Lane in the Town Center District, T5 Transect.

General Information			
Applicant	Tuskawilla Property Investors, LLC		
Property Owner(s)	WINTER SPRINGS NET, LLC		
Location	180 Tuskawilla Rd		
Tract Size	1.22 Acres		
Parcel ID Number	36-20-30-502-0000-0090		
Zoning Designation	Town Center District, T-5 Transect		
FLUM Designation	Town Center District		
Adjacent Land Use	North: State Road 419/434 East: Tuskawilla Rd		South: Winter Springs Marketplace West: Winter Springs Marketplace
Height	Not applicable		
Setbacks	Front: 25 ft, minimum, 50 ft. maximum	Rear: 15 ft. minimum	Side: 5 ft. minimum, 100 ft. maximum
Development Standards	Lot Coverage 100%		
Development Permits	Not applicable		
Development Agreement	Pending		

Code Enforcement	Not applicable
City Liens	Not applicable

Background Data:

The development site consists of undeveloped land that is currently part of the Winter Springs Marketplace development. The applicant is proposing to modify the existing parking area and stormwater pond by proposing 10 additional parking spaces for the adjacent Wawa development. The existing site was permitted under the Winter Springs Marketplace (2021-00002152). This site plan was submitted simultaneously with the Wawa at Winter Springs Marketplace Site Plan (FEDP-2025-0016).

Public Notices:

Notices were mailed to all owners of real property adjacent to and within approximately five-hundred (500) feet of the subject property and all Homeowner's Associations on file with the City of Winter on July 29, 2025.

A Community Workshop was held on June 30, 2025 at 7:00 PM at The Foundry Church. There were no objections raised at the Community Workshop regarding the proposed development. Please see (Figure "1") Community Workshop Flyer and (Figure "2") Community Workshop Attendance.

Analysis of Final Engineering Plans (Sec. 20-33.1) Criteria:
The criteria for Final Engineering Plans are provided and analyzed below:

(a) Site and final engineering plans and the subdivision of land shall also be subject to the technical requirements set forth in Chapter 9 of the City Code. It is the intent of this section to apply to applications for site and final engineering plans and to any subdivision of land requiring a plat, if applicable, and does not include review and approval of a lot split application.

Please see the discussion below regarding technical requirements of Chapter 9. The Final Engineering Plans have been reviewed by the City's contract engineer, who concluded that the Plans satisfy the technical requirements. provided the conditions of approval set forth below are met.

(b) Except in situations involving one (1) single-family home, the Planning and Zoning Board shall be required to review all site and final engineering plan and subdivision of land applications and make a written recommendation to the city commission. Such recommendation shall include the reasons for the board's recommendation and show the board has considered the applicable criteria set forth in this section.

(c) Upon receipt of the planning and zoning board's recommendation, the city commission shall make a final decision on the application. If the city commission determines that the planning and zoning board has not made a recommendation on an application within a reasonable period of time, the city commission may, at its discretion, consider an application without the planning and zoning board's recommendation.

Except in situations involving one (1) single-family home, all site and final engineering plan and subdivision recommendations and final decisions shall be based on whether the site and final engineering plan and subdivision of land complies with all the technical requirements set forth in chapter 9 of the City Code and the following criteria to the extent applicable:

(1) Whether the applicant has demonstrated the site and final engineering plan and subdivision of land, including its proposed density, height, scale and intensity, hours of operation, building and lighting design, setbacks, buffers, noise, refuse, odor, particulates, smoke, fumes and other emissions, parking and traffic-generating characteristics, number of persons anticipated using, residing or working under the plan, and other off-site impacts, is compatible and harmonious with adjacent land uses, and will not adversely impact land use activities in the immediate vicinity.

Analysis: Subject to the Conditions of Approval, Staff finds that the proposed Development is compatible and harmonious with adjacent land uses and will not adversely impact land use activities in the immediate vicinity.

(2) Whether the applicant has demonstrated the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale and intensity of the site and final engineering plan requested. The site shall be of sufficient size to accommodate design amenities such as screening, buffers, landscaping, open space, off-street parking, safe and convenient automobile, bicycle, and pedestrian mobility at the site, and other similar site plan improvements needed to mitigate against potential adverse impacts of the proposed use.

Analysis: Staff finds that the Applicant has demonstrated that the size and shape of the site, the proposed access and internal circulation, and the design enhancements to be adequate to accommodate the proposed density, scale, and intensity of the site and final engineering plan requested for the reasons described above.

(3) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values.

Analysis: Staff finds that the proposed site and final engineering plan and subdivision of land will not have an adverse impact on the local economy, including governmental fiscal impact, employment, and property values.

(4) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on the natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards.

Analysis: Staff finds that the proposed site and final engineering plan will not have an adverse impact on the natural environment, including air, water, and noise pollution, vegetation and wildlife, open space, noxious and desirable vegetation, and flood hazards. The project is located outside of the special flood hazard area. Adequate stormwater detention will be provided for the project both on-site and through the stormwater system for the Winter Springs Marketplace development, of which this development is a part. Please see Figure "3", Site Plan. An Environmental Site Assessment was provided for the site that dates from 2020. As the property has since been developed, additional studies have not been conducted. Please see Figure "5", Environmental Report.

(5) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on historic, scenic, and cultural resources, including views and vistas, and loss or degradation of cultural and historic resources.

Analysis: The proposed site and final engineering plan will have no impact on historical resources. No additional scenic or cultural resources. Including scenic views or vistas, will be impacted by this site and final engineering plan.

(6) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on public services, including water, sewer, stormwater and surface water management, police, fire, parks and recreation, streets, public transportation, marina and waterways, and bicycle and pedestrian facilities.

Analysis: City Staff have reviewed this project from a planning and engineering perspective. Staff did not find any adverse impact on any of the public services listed above.

(7) Whether the site and final engineering plan and subdivision of land, and related traffic report and plan provided by the applicant, details safe and efficient means of ingress and egress into and out of the neighborhood and adequately addresses the impact of projected traffic on the immediate neighborhood, traffic circulation pattern for the neighborhood, and traffic flow through immediate intersections and arterials.

Analysis: Transportation questions were not considered with this site plan as they were not relevant to the addition of the ten parking spaces and changes to the stormwater pond.

(8) Whether the proposed site and final engineering plan and subdivision of land will have an adverse impact on housing and social conditions, including variety of housing unit types and prices, and neighborhood quality.

Analysis: As a commercial project, the proposed site and final engineering plan will not have an adverse impact on the variety of housing unit types and prices. As for neighborhood quality, subject to the Conditions of Approval, the proposed site and final engineering plan development will not have an adverse impact on neighborhood quality. See Exhibit "3", Winter Springs Marketplace Final Engineering and Development Plan.

(9) Whether the proposed site and final engineering plan and subdivision of land avoids significant adverse odor, emission, noise, glare, and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other site elements.

Analysis: Staff finds that proposed site and final engineering plan avoids significant adverse odor, emissions, noise, glare and vibration impacts on adjacent and surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other site elements.

(10) Whether the applicant has provided an acceptable security plan for the proposed establishment to be located on the site and final engineering plan and subdivision of land that addresses the safety and security needs of the establishment and its users and employees and minimizes impacts on the neighborhood, if applicable.

Analysis: A security plan is not applicable to the addition of parking spaces and changes to a stormwater pond.

(11) Whether the applicant has provided on the site and final engineering plan and subdivision of land an acceptable plan for the mass delivery of merchandise for new large footprint buildings (greater than twenty thousand (20,000) square feet) including the hours of operation for delivery trucks to come into and exit the property and surrounding neighborhood, if applicable.

Analysis: Not applicable. The project does not involve a large footprint building.

(12) Whether the applicant has demonstrated that the site and final engineering plan and subdivision of land have been designed to incorporate mitigative techniques and plans needed to prevent adverse impacts addressed in the criteria stated herein or to adjacent and surrounding uses and properties.

Analysis: Staff finds that subject to the Conditions of Approval, the site and final engineering plans have been designed to incorporate mitigative techniques and plans needed to prevent the adverse impacts mentioned in the criteria on adjacent and surrounding uses and properties.

(13) If the proposed conditional use is a residential use, whether the elementary, middle and high schools (K—12) that will be initially assigned to the residential project by the school district at the time the city commission considers final

approval of the conditional use have both sufficient capacity, are in close proximity to the project so as to make each of the assigned schools accessible and convenient (e.g., walking distance, travel time, private and public transportation, and quality of route environment) to the majority of the school population that will be drawn from the project, and promote and support the integration of future residents of the project into the existing city of Winter Springs community in a sustainable manner.

Analysis: Not applicable. This is not a residential development.

(14) Whether the applicant has agreed to execute a binding development agreement required by city to incorporate the terms and conditions of approval deemed necessary by the city commission including, but not limited to, any mitigative techniques and plans required by City Code.

Analysis: The applicant has agreed to and is working on a binding development agreement with the City addressing terms and conditions deemed necessary by the City Commission.

Water and Sewer:
Not applicable for this project as water and sewer are not required.

Stormwater:
The applicant included a Drainage and Grading plan as part of the Final Engineering/Site Plan (Figure "3"). Staff have reviewed and approved the information necessary from this development. However, the applicant will also need to receive approval from the St Johns River Water Management District and this approval is included as part of the Conditions of Approval.

Transportation:
Not applicable for this project. A Traffic Impact Analysis was included with FEDP-2025-0016 for Wawa.

Parking:
The Town Center does not have minimum required parking standards, however, the applicant provided documentation (Figure "4") that it would provide an additional ten ("10") parking spaces to meet the needs of the Marketplace.

Reports:
The Final Engineering submittal is required to include the following reports or updates of previously prepared reports for the same property.

Reports	
August 4, 2020	Environmental Report (Figure "5")
December 15, 2020	Geotechnical Report (Figure "6")
December 6, 2024	Parking Analysis (Figure "4")

Procedural History:	
May 6, 2025	Pre-Application Meeting
June 30, 2025	Community Workshop
August 7, 2025	Planning & Zoning Board | Recommendation on Site/Final Engineering Plan and Development Agreement.
August 25, 2025	City Commission | Hearing on Final Engineering Site/Final Engineering Plan and Development Agreement.

Applicable Law, Public Policy, and Events:

Florida Statutes 163.2511-163.3246: Growth Policy; County and Municipal Planning; Land Development Regulation (Provides that land development regulations for municipal planning be consistent with the Comprehensive Plan).

Home Rule Powers

Code of Ordinances City of Winter Springs.

Section 20-1. Definitions.

Fiscal Impact:

A Fiscal Impact Statement was not required for this part of the development.

Development Agreement:

The Applicant is currently working with the City Attorney on the Development Agreement for the project. The Development Agreement shall be executed prior to any work on the project covered within this document.

STAFF RECOMMENDATION

Staff recommends that the Planning & Zoning Board recommend approval of the Site/Final Engineering and Development Agreement, subject to the following conditions of approval:

1. Execution of the Development Agreement.
2. Construction on the site shall not begin until the stormwater permit from St. Johns River Water Management District is approved.
3. All grass on the Property shall be Bahia grass. No St. Augustine grass or grass types with low drought tolerance shall be permitted.

Attachments:

Figure “1” – Community Workshop Flyer
Figure “2” – Community Workshop Attendance Sheet
Figure “3” – Site Plan
Figure “4“ – Parking Study
Figure “5 “ – Environmental Report
Figure “6” – Geotechnical Report
Figure “7” – Development Agreement
Figure “8” – Site Plan Application
Figure “9” – Development Agreement Application

COMMUNITY WORKSHOP

Date: June 30, 2025 @ 6:00 P.M.

Location: The Foundry Church – Classroom 5
1491 E. State Road 434, Winter Springs, FL 32708

Community Workshop to consider Final Engineering Site Plans, Aesthetic Review and Conditional Use in order to construct a 4,736 sq. ft. gas station/convenience store in the Winter Springs Marketplace within the Town Center District on the subject site.



Project: Wawa gas station/convenient store

Location: SW corner of Tuskawilla Road and E. State Road 434
Parcel ID: 36-20-30-502-0000-0090
Acreage: ± 1.22-acre project
Zoning: Town Center District (T5)
Future Land Use: Town Center (TC)
Applicant/Presenter: Ryan Stahl, Scott Kearney, Kimley-Horn Associates

COMMUNITY WORKSHOP SIGN-IN SHEET

PROJECT NAME: Wawa gas station/convenient store

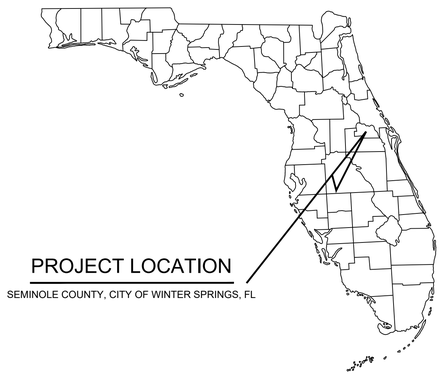
MEETING LOCATION & DATE: The Foundry Church (Classroom #5) – June 30, 2025

NAME	MAILING ADDRESS (STREET, CITY, ZIP)	E-MAIL ADDRESS
1. LOUIS ATTI	119 MCLEODS WAY WINTER SPRINGS 32708	ACCESSIBLE@MSN.COM
2. Gina + Jeff Shafer	Winter Springs Villiage	
3. Mark Caruso	1054 chokecherry Dr	mcaruso@winterspringsfl.org
4. Daina Todd	630 S. Maitland Ave, ste 100 Maitland 32751	Daina@equinox-development.com
5. Kristin Banks	630 S Maitland Ave, Ste 100 Maitland FL	kristin@equinox-development.com
6. Cory Sitler	6876 Morwick Lane, Ste 350, Orlando, FL 32827	cory.sitler@kimley-horn.com
7. Stephen Donahoe	1233 Natures Way Winter Springs FL 32708	steve@donahoe.com
8. LINDA FREESLIRN	1604 COUGAR CT 32708	
9. Krystal Kearney	609 Timberwilde Ct.	
10. Lalon Grago	1212 Deer Run Dr., Winter Springs, FL 32708	Lgrago@aol.com
11. Maureen Landgraf	443 Tradition Ln. WSpr.	
12. Victoria Bruce	city Hall	Vbruce@winterspringsfl.org
13. Leah Wegman	Brookshire	
14. Jennifer Garnett	City of Winter Springs	jgarnett@winterspringsfl.org
15.		
16.		
17.		
18.		
19.		
20.		

CIVIL SITE CONSTRUCTION PLANS
FOR
WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

PARCEL #01-21-30-5VK-0C00-0000
JULY 2025

CITY OF WINTER SPRINGS, FL





AERIAL PHOTOGRAPH
N.T.S.

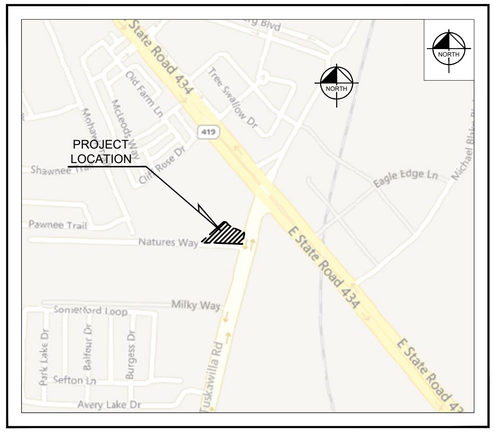
LEGAL DESCRIPTION

PARCEL 1:
LOT 7, JOE E. JOHNSTON'S SURVEY, RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, AND ALSO BEING THAT PART OF THE UNPLATTED PART OF BLOCK B OF D. R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 186 FEET NORTH 38 DEGREES 45 MINUTES WEST OF THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK B LYING SOUTHWEST OF THE SANFORD-OVIEDO ROAD AND RUNNING NORTH 38 DEGREES 45 MINUTES WEST, 200 FEET ALONG THE WESTERLY LINE OF THE SANFORD-OVIEDO; THENCE SOUTH 51 DEGREES 15 MINUTES WEST 650.30 FEET; THENCE SOUTH 22 DEGREES 15 MINUTES EAST 208.8 FEET; THENCE NORTH 51 DEGREES 15 MINUTES EAST 710.14 FEET TO THE POINT OF BEGINNING;
LESS AND EXCEPT THAT PART TAKEN FOR ROAD RIGHT OF WAY BY THE ORDER OF TAKING RECORDED IN OFFICIAL RECORDS BOOK 2803, PAGE 1023, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

PARCEL 2:
THAT PART OF THE UNPLATTED PART OF BLOCK B OF D. R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 186 FEET NORTH 38 DEGREES 45 MINUTES WEST OF THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK B LYING SOUTHWEST OF THE SANFORD-OVIEDO HIGHWAY AND RUNNING NORTH 38 DEGREES 45 MINUTES WEST 200 FEET ALONG THE WESTERLY LINE OF THE SANFORD-OVIEDO HIGHWAY; THENCE SOUTH 51 DEGREES 15 MINUTES WEST 710.14 FEET; THENCE SOUTH 22 DEGREES 15 MINUTES EAST 208 FEET; THENCE NORTH 51 DEGREES 15 MINUTES EAST 770 FEET TO THE POINT OF BEGINNING;
LESS AND EXCEPT THAT PART TAKEN FOR ROAD RIGHT OF WAY BY THE ORDER OF TAKING RECORDED IN OFFICIAL RECORDS BOOK 2831, PAGE 1024, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

PARCEL 3:
THAT PART OF THE UNPLATTED PART OF BLOCK B OF D. R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, OF THE PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS: BEGINNING AT THE MOST EASTERLY CORNER OF THAT PART OF SAID BLOCK B LYING SOUTHWESTERLY OF THE SANFORD-OVIEDO HIGHWAY AND RUNNING NORTH 38 DEGREES 43 MINUTES 16 SECONDS WEST 186.0 FEET ALONG THE WESTERLY LINE OF THE RIGHT OF WAY OF THE SANFORD-OVIEDO HIGHWAY; THENCE SOUTH 51 DEGREES 15 MINUTES WEST 770.0 FEET; THENCE SOUTH 22 DEGREES 15 MINUTES EAST, 13.5 FEET TO THE SOUTHWEST CORNER OF THE UNPLATTED PART OF BLOCK B; THENCE EAST ALONG THE NORTH LINE OF TUSKAWILLA, A DISTANCE OF 497.0 FEET; THENCE NORTH 30 DEGREES EAST 420.0 FEET TO THE POINT OF BEGINNING; ALSO DESCRIBED AS LOT 9, ACCORDING TO JOE E. JOHNSTON'S SURVEY AS RECORDED IN DEED BOOK 147, PAGE 221, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.
TOGETHER WITH THE WEST HALF OF THE VACATED STREET ADJACENT ON THE EAST AS SET FORTH IN RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 2972, PAGE 373, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA;
LESS AND EXCEPT ROAD RIGHTS OF WAY AS SET FORTH IN ORDER OF TAKING RECORDED IN OFFICIAL RECORDS BOOK 2831, PAGE 1024, AND WARRANTY DEED TO SEMINOLE COUNTY, FLORIDA, RECORDED IN OFFICIAL RECORDS BOOK 8377, PAGE 27, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.

PARCEL 4:
THAT PART OF LOT 8 BLOCK A, D. R. MITCHELL'S SURVEY OF THE LEVY GRANT, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 5, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA, LYING WESTERLY FROM THE WESTERLY FIFTY FEET FROM THE CENTER LINE OF TUSKAWILLA ROAD; TOGETHER WITH THE EAST HALF OF THE VACATED STREET ADJACENT ON THE WEST AS SET FORTH IN RESOLUTION RECORDED IN OFFICIAL RECORDS BOOK 2972, PAGE 373, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA;
LESS AND EXCEPT ROAD RIGHTS OF WAY AS SET FORTH IN WARRANTY DEED TO COUNTY OF SEMINOLE RECORDED IN OFFICIAL RECORDS BOOK 1571, PAGE 707; ORDER OF TAKING RECORDED IN OFFICIAL RECORDS BOOK 2831, PAGE 1024; AND WARRANTY DEED TO SEMINOLE COUNTY, FLORIDA, RECORDED IN OFFICIAL RECORDS BOOK 8377, PAGE 27, PUBLIC RECORDS OF SEMINOLE COUNTY, FLORIDA.



SECTION 09, TOWNSHIP 22S, RANGE 26E
LOCATION MAP
N.T.S.

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C0.0	COVER SHEET
C1.0	GENERAL NOTES
C1.1	GENERAL NOTES
C2.0	EROSION CONTROL DETAILS
C2.1	SWPPP NOTES
C3.0	OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN
C3.1	EXISTING CONDITIONS AND DEMOLITION PLAN
C3.2	EXISTING CONDITIONS AND DEMOLITION PLAN
C4.0	OVERALL SITE PLAN
C4.1	SITE PLAN
C4.2	SITE PLAN
C5.0	OVERALL PAVING GRADING & DRAINAGE
C5.1	PAVING GRADING & DRAINAGE PLAN
C5.2	PAVING GRADING & DRAINAGE PLAN
C6.0	CONSTRUCTION DETAILS
L1.00	LANDSCAPE PLAN
L1.51	LANDSCAPE SPECIFICATIONS
L1.50	LANDSCAPE DETAILS

PROJECT TEAM

OWNER/DEVELOPER
TUSCAWILLA PROPERTY INVESTORS LLC.
630 S. MAITLAND AVE., SUITE 100
MAITLAND, FL 32751
CONTACT: RYAN STAHL
PHONE: (407) 628-0077
EMAIL: Rstahl@equinox-development.com

ENGINEER
KIMLEY HORN AND ASSOCIATES, INC.
200 S. ORANGE AVE., SUITE 600
ORLANDO, FL 32801
CONTACT: CORY SITLER, P.E.
PHONE: (407) 427-1612
EMAIL: cory.sitler@kimley-horn.com

LANDSCAPE ARCHITECT
KIMLEY HORN AND ASSOCIATES, INC.
200 S. ORANGE AVE., SUITE 600
ORLANDO, FL 32801
CONTACT: SCOTT MINGONET, PLA, AICP
PHONE: (407) 898-1511
EMAIL: scott.mingonet@kimley-horn.com

SURVEYOR
IRELAND & ASSOCIATES SURVEYING, INC
800 CURRENCY CIRCLE, SUITE 1020
LAKE MARY, FL 32746
CONTACT: PATRICK IRELAND, P.L.S.
PHONE: (407) 678-3366
EMAIL: shannosurv@aol.com

PREPARED BY
Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO FL 32827
Phone: (407) 898-1511
WWW.KIMLEY-HORN.COM CA 00000696

CORY N. SITLER LICENSE No. 89984 STATE OF FLORIDA PROFESSIONAL ENGINEER

CORY SITLER FL P.E. # 89984

WINTER SPRINGS MARKETPLACE-
ADDITIONAL PARKING
K-H PROJECT# 149170026 07/18/2025

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS #1	07/18/25	MMB

Drawing name: K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C0.0 COVER SHEET.dwg COVER SHEET Jul 18, 2025 8:49am by: MaryBusby
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:GENERAL NOTES July 18, 2025 08:49:45am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C1.0 GENERAL NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

GENERAL

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, SUCH AS DEWATERING PERMITS, RIGHT OF WAY PERMIT(S), EXCAVATION/FILL PERMIT(S), FIRE PROTECTION PERMIT(S), OR UNDERGROUND UTILITY PERMIT(S), PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL INSPECTION CRITERIA OF APPLICABLE AGENCIES, SCHEDULING OF INSPECTIONS, AND OBTAINING REQUIRED INSPECTIONS FROM AGENCY.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE EXISTING UTILITY INFORMATION SHOWN IS BASED ON THE TOPOGRAPHIC SURVEY PROVIDED BY IRELAND & ASSOCIATES AND SURVEYING, INC. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES, AFFECTING THIS AREA PRIOR TO CONSTRUCTION WORK. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OF THE SURVEY. SHOULD A DISCREPANCY ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPRECIABLY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL HALT CONSTRUCTION AND NOTIFY THE OWNER, ENGINEER, AND APPLICABLE GOVERNING AGENCY IMMEDIATELY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING (HORIZONTALLY AND VERTICALLY) ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND FOR NOTIFYING THE VARIOUS UTILITY COMPANIES (DURING STANDARD BUSINESS HOURS) TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION, TEMPORARY DISTRIBUTION SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED. THE CONTRACTOR SHALL COOPERATE WITH UTILITY COMPANY (DURING STANDARD BUSINESS HOURS) DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.
4. ALL DISTURBED AREAS (ON-SITE AND/OR OFF-SITE) NOT DESIGNED OR NOTED TO BE LANDSCAPED OR SODDED, SHALL BE MULCHED AND SEEDED.
5. THE CONTRACTOR SHALL NOT EXCAVATE, REMOVE, OR OTHERWISE DISTURB ANY MATERIAL, STRUCTURE, OR PART OF A STRUCTURE WHICH IS LOCATED OUTSIDE THE LINES, GRADES, OR GRADING SECTIONS ESTABLISHED FOR THIS PROJECT, EXCEPT WHERE SUCH EXCAVATION OR REMOVAL IS PROVIDED FOR IN THE CONTRACT, PLANS, OR SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUB-CONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.
6. ALL WORK AND MATERIALS FURNISHED SHALL BE IN CONFORMITY WITH THE LINES, GRADES, GRADING SECTIONS, CROSS SECTIONS, DIMENSIONS, MATERIAL REQUIREMENTS, AND TESTING REQUIREMENTS THAT ARE SPECIFIED IN THE CONTRACT PLANS OR SPECIFICATIONS.
7. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION, AS APPLICABLE AT THE TIME ALL PERMITS HAVE BEEN OBTAINED.
8. ALL UNDERGROUND UTILITIES MUST BE IN-PLACE, TESTED AND INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.
9. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO REPRODUCTIVE DISTORTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.
10. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE OWNER'S ENGINEER FOR REVIEW.

    SHOP DRAWINGS OF ALL DRAINAGE STRUCTURES, MATERIALS, AND COMPONENTS TO BE INSTALLED WITHIN CITY OF WINTER SPRINGS PUBLIC RIGHTS-OF-WAY, SHALL BE SUBMITTED TO THE CITY OF WINTER SPRINGS FOR REVIEW AND APPROVAL. UPON ENGINEER OR RECORD'S COMPLETION OF REVIEW AND APPROVAL OF SHOP DRAWINGS FOR WORK WITHIN THE CITY OF WINTER SPRINGS'S JURISDICTION THE ENGINEER OF RECORD SHALL COORDINATE SHOP DRAWING SUBMITTALS TO THE CITY OF WINTER SPRINGS FOR THEIR REVIEW AND APPROVAL.
11. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.
12. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
13. THE CONTRACTOR SHALL COMPLY WITH THE LEGAL LOAD RESTRICTIONS IN HAULING OF MATERIALS IN PUBLIC ROADS BEYOND THE LIMITS OF WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR THE DAMAGE WHICH MAY RESULT FROM THE MOVING OF MATERIAL AND EQUIPMENT.
14. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA.
15. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
16. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARD PLANS FOR ROAD CONSTRUCTION" (ED. 2025-26) FOR DETAILS AND SPECIFICATIONS OF ALL CURB AND GUTTERS CALLED FOR IN THESE PLANS WITHIN PUBLIC RIGHTS OF WAY.
17. WHERE ASPHALT PAVING MEETS CONCRETE PAVING SUCH AS AT CONCRETE CURBING, THE ASPHALT SHOULD BE FINISHED ¼" TO ½" ABOVE THE CONCRETE SURFACE TO ALLOW FOR FURTHER TRAFFIC COMPACTION OF THE ASPHALT.
18. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND/OR PAVEMENT TESTING WITH THE GEOTECHNICAL ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE GEOTECHNICAL SOILS REPORT. UPON COMPLETION OF WORK, THE GEOTECHNICAL ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
19. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN OUT MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
20. ALL CONCRETE SIDEWALKS SHALL BE CONSTRUCTED PER FDOT DESIGN INDEX (ED. 2025/2026) #522-001.
21. SITEWORK SHALL COMPLY WITH 2025 FLORIDA BUILDING CODE AND FLORIDA ACCESSIBILITY CODE.
22. ANY EXISTING WELLS (I.E. ARTESIAN, IRRIGATION, DRINKING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED AND SHALL COPY THE CITY OF WINTER SPRINGS ON ANY WELL ABANDONMENT PERMITS.
23. . ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE.

TREES AND VEGETATION

1. THE CONTRACTOR IS TO MINIMIZE THE REMOVAL OF VEGETATION TO THE GREATEST EXTENT PRACTICAL. NO TREES SHALL BE REMOVED OR DAMAGED WITHOUT OWNER'S APPROVAL. TREES IN CLOSE PROXIMITY TO CONSTRUCTION SHALL BE PROTECTED BY ORANGE FENCING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS AND RETENTION AND DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
3. REFER TO LANDSCAPE PLANS FOR DETAILS REGARDING TREE REMOVAL AND TREE PRESERVATION.

STORM DRAINAGE SYSTEM

1. THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS" (ED. 2025/2026) IS REFERRED TO FOR THE STRUCTURAL DESIGN OF DRAINAGE STRUCTURES SPECIFIED IN THESE PLANS, AS REFERENCED BY STANDARD INDEX. ALL SPECIALTY DRAINAGE STRUCTURES REQUIRE SEPARATE STRUCTURAL DESIGN, WHICH IS NOT INCLUDED IN THESE PLANS. STATION OFFSETS ARE TO THE CENTERLINE OF THE STRUCTURE TOP (I.E. DITCH BOTTOM INLET OR CURB INLET TOP), AS OPPOSED TO THE STRUCTURE BASE.
2. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
3. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END SECTIONS. LENGTHS OF PIPE SHOWN WHICH TERMINATE WITH MITERED END OR FLARED END SECTIONS ARE MEASURED TO THE DOWNSTREAM INVERT OF THE MITERED END OR FLARED END SECTION.
4. ALL DRAINAGE STRUCTURE GRATES AND COVERS, EITHER EXISTING OR PROPOSED SHALL BE TRAFFIC RATED FOR H-20 LOADINGS.
5. CONSTRUCTION OF THE STORM WATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.
6. STORM WATER PIPES, STRUCTURES, MINIMUM COVER, AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH F.D.O.T. AND THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS.
7. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER AS TO ADEQUATELY REMOVE SILT PRIOR TO RUNOFF FROM THE SITE.
8. ALL DRAINAGE PIPES SHALL BE FILTER FABRIC WRAPPED PER FDOT STANDARD DESIGN INDEX (ED. 2025/2026) #430-001.
9. THE CONTRACTOR SHALL MAINTAIN AND PROTECT THE STORMWATER COLLECTION SYSTEM (INLETS, PIPES) FROM EXCESSIVE MUD, SILT, DIRT, DEBRIS, TRASH, ETC. UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE INSPECTED BY THE OWNER'S ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL CLEAN AND FLUSH STORM PIPES AND INLETS OF ALL EXCESSIVE SILT, DEBRIS, ETC. THE CITY OF WINTER SPRINGS SHALL BE NOTIFIED OF THE FINAL INSPECTION OF THE STORMWATER SYSTEM SHOULD A REPRESENTATIVE WANT TO ATTEND.

SAFETY

1. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT". THE CONTRACTOR SHALL INSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATIONS.
2. DURING THE CONSTRUCTION AND/OR MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS/HER PERSONNEL. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED IN THE DESIGN, APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND CONSTRUCTION PERSONNEL FROM HAZARDS WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL PROVIDE FOR THE SAFETY AND CONTROL OF LOCAL TRAFFIC DURING CONSTRUCTION. ADDITIONAL INFORMATION MAY BE REQUIRED IF LANE CLOSURE DURATIONS ARE LONGER THAN DAYTIME OPERATIONS.

DEMOLITION

1. CONTRACTOR SHALL SUBMIT DEMOLITION SCHEDULE TO OWNER PRIOR TO PROCEEDING WITH DEMOLITION ACTIVITIES.
2. EXTENT OF SITE CLEARING IS SHOWN ON DRAWINGS.
3. CONTRACTOR SHALL CONDUCT SITE DEMOLITION OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
4. CONTRACTOR SHALL PROVIDE PROTECTION NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS INDICATED ON PLAN "EXISTING TO REMAIN".
5. CONTRACTOR SHALL RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
6. CONTRACTOR SHALL REMOVE WASTE MATERIALS AND UNSUITABLE AND EXCESS TOPSOIL FROM PROPERTY AND DISPOSE OF OFF-SITE IN A LEGAL MANNER.
7. CONTRACTOR SHALL DEMOLISH AND COMPLETELY REMOVE FROM SITE MATERIAL INDICATED ON PLAN OR NOTES "TO BE REMOVED".
8. CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY THE DEMOLITION OPERATION.

DEWATERING NOTES

1. DURING THE EXCAVATION OF THE STORMWATER FACILITIES, AND IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL CONSTRUCT A SEDIMENT BASIN TO PROVIDE A DISCHARGE POINT FOR DEWATERING. THE SEDIMENT BASIN CAN BE IN THE PROPOSED EXCAVATION AREA OF A POND OR IT CAN BE A BERMED AREA ABOVE GROUND. ALL DEWATERING MUST BE HELD IN THE SEDIMENT AREA UNTIL THE WATER IS CLEAN SUCH THAT THERE WOULD BE NO TURBID DISCHARGE. AFTER THE WATER IN THE SEDIMENT BASIN IS CLEAN, THE WATER MAY BE RELEASED INTO THE ON-SITE POND PROVIDED THERE IS NO ADVERSE IMPACT TO THE EXISTING WATER QUALITY.
2. UNDER NO CIRCUMSTANCES WILL THE DISCHARGE FROM THE ON-SITE DEWATERING BE DIRECTLY DISCHARGED OFFSITE.
3. IF CONTRACTOR ENCOUNTERS SILTY/CLAY SAND, WHICH CAUSES THE WATER TO BECOME TURBID, HE/SHE SHALL TREAT THE SEDIMENT BASIN WITH CHEMICAL ADDITIVE SUCH AS ALUM IN ORDER TO PROMOTE THE COAGULATION OF THE PARTICLES WHICH ALLOW THE TO SETTLE AND THE WATER TO BECOME LESS TURBID. IF TURBID WATER ENCOUNTERED DURING EXCAVATION OF THE PONDS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY TO DETERMINE THE COURSE OF ACTION THAT IS APPROPRIATE TO ELIMINATE THE TURBIDITY AND ALLOW DISCHARGE THAT MEETS WATER QUALITY STANDARDS.
4. THE CONTRACTOR SHALL SEQUENCE THE EXCAVATION OF THE STORMWATER PONDS SUCH THAT A SEDIMENT BASIN WILL BE AVAILABLE AT ALL TIMES. THE SEDIMENT BASIN CAN BE RELOCATED AS NECESSARY SUBJECT TO THE WATER WITHIN THE SEDIMENT BASIN BEING NON-TURBID AND ACCEPTABLE FOR DISCHARGE OFF-SITE.

EARTHWORK / GRADING / DEMUCKING PROCEDURES

1. A GEOTECHNICAL ENGINEERING INVESTIGATION REPORT HAS BEEN PREPARED, OF WHICH COPIES ARE AVAILABLE THROUGH THE OWNER OR THEIR SOIL TESTING COMPANY. A GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO PROVIDE ON-SITE INSPECTIONS DURING EXCAVATION/FILL OPERATIONS AND TESTING OF THE COMPACTED FILL SO THAT PROPER DOCUMENTATION OF THE REQUIRED COMPACTING CRITERIA CAN BE PROVIDED. THE CITY OF WINTER SPRINGS SHALL BE COPIED ON ALL INSPECTION REPORTS.
2. CONTRACTOR TO FOLLOW THE GUIDANCE OF THE REFERENCED GEOTECHNICAL ENGINEERING INVESTIGATION REPORT OR INDICATE WHETHER ON-SITE GEOTECHNICAL ENGINEER SHALL DETERMINE DEPTH OF DEMUCKING AND/OR REMOVAL OF UNSUITABLE FILL.
3. ALL EXISTING DEBRIS (ABOVE OR BELOW GROUND), CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS IN A LEGAL MANNER.
4. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.
5. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE OWNER OR THEIR SOILS TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
7. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
8. THE CONTRACTOR SHALL INSURE THAT PROPER SOIL DENSITIES ARE ACHIEVED FOR PLACEMENT OF ALL HEADWALL/ENDWALL FOOTINGS, RETAINING WALL FOOTINGS, AND IN GENERAL, ANY FOOTING SUPPORT DESCRIBED ON THESE PLANS. IT WILL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT SUFFICIENT SOILS TESTING HAS BEEN PERFORMED PRIOR TO FINAL INSTALLATION OF IMPROVEMENTS.
9. ANY UNSUITABLE ORGANIC SOIL SHALL BE EXCAVATED TO A MINIMUM MARGIN OF 6 FEET BEYOND ITS PERIPHERY EXCAVATED TO EXPOSE THE UNDERLYING NON-ORGANIC FINE SAND.
10. IF DETERMINED NECESSARY, DEWATERING DURING EXCAVATING/BACKFILLING OPERATIONS MAY BE ACCOMPLISHED BY DITCHING AND THE USE OF SUMP PUMPS AND/OR OTHER METHODS (WELL POINTS), AS NECESSARY. CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS FOR DEWATERING ACTIVITIES THAT MAY BE REQUIRED.
11. UPON APPROVAL OF THE GEOTECHNICAL ENGINEER, THE EXCAVATED AREAS MAY BE BACKFILLED WITH CLEAN FINE SAND FREE OF UNSUITABLE OR DELETERIOUS MATERIAL. HOWEVER, THE FILL SHOULD NOT BE PLACED IN MORE THAN 6 INCHES OF STANDING WATER. ONCE THE FILL IS AT LEAST 2 FEET ABOVE THE DEWATERED LEVEL, BACKFILLING MAY PROCEED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
12. SEDIMENT CONTROL MEASURES SHOULD BE EMPLOYED DURING THE CONSTRUCTION PROCESS TO KEEP THE POND FROM RECEIVING SIGNIFICANT AMOUNTS OF STORMWATER RUNOFF FROM THE SURROUNDING CONSTRUCTION SITE. THIS RUNOFF IS LIKELY TO CONTAIN SUSPENDED FINE-GRAINED SOIL PARTICLES THAT CAN IMPEDE THE INFILTRATION CAPACITY OF THE PONDS IF ALLOWED TO SETTLE OUT ON THE POND BOTTOMS. IF DEWATERING EFFLUENT OR STORMWATER RUNOFF FROM THE ACTIVE CONSTRUCTION SITE IS DISCHARGED TO THE POND, CONTRACTOR SHALL SCRAPE AND REMOVE FINE-GRAINED SEDIMENTS THAT HAVE ACCUMULATED ON THE POND BOTTOM, AND REPLACE WITH SUITABLE SOIL TO THE PLAN SPECIFIED GRADE ELEVATIONS. REQUIRED DEPTH OF SCRAPE AND REMOVAL SHALL BE DETERMINED BY GEOTECHNICAL ENGINEER.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	NMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 535-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED LANDSCAPE ARCHITECT CORY SITTLER LC26000551 STATE OF FLORIDA PROFESSIONAL ENGINEER CORY SITTLER 82904 STATE OF FLORIDA PROFESSIONAL ENGINEER DATE

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

GENERAL NOTES

WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING
CITY OF WINTER SPRINGS FL

SHEET NUMBER
C1.0

Plotted By: Busby, Mary Sheet Set: WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout: GENERAL NOTES (2) July 18, 2025 08:49:51am K:\ORL_Civil\149170026-Winter Springs Wawa\CAD\CONST\PlanSheets- Add Parking\C1.0 GENERAL NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

F.D.O.T. RIGHT-OF-WAY WORK GENERAL NOTES

1. EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
2. SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT PORTIONS OF SOME DRAINAGE STRUCTURES EXTEND INTO THE STABILIZED PORTION OF THE ROADBED AND EXTREME CAUTION WILL BE NECESSARY IN STABILIZATION OPERATIONS AT THESE LOCATIONS.
3. ALL DRAINAGE PIPES SHALL BE STEEL REINFORCED CONCRETE PIPE, CLASS III, UNLESS OTHERWISE NOTED.
4. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE ENGINEER SHOULD NOTIFY THE DISTRICT LOCATION SURVEYOR, WITHOUT DELAY, BY TELEPHONE.
5. EXISTING DRIVEWAYS WITHIN THE LIMITS OF THIS PROJECT ARE TO BE REPLACED AT THE SAME LOCATION AND WIDTH, UNLESS OTHERWISE SHOWN ON PLANS.
6. THE CONTRACTOR SHALL REMOVE ANY ORGANIC AND PLASTIC MATERIAL ENCOUNTERED IN THE FIELD IN ACCORDANCE WITH FDOT 2023/2024 STANDARD PLANS INDEX 120-002. COST OF REMOVAL OF ORGANIC AND PLASTIC MATERIAL AND BACKFILL OF SUITABLE MATERIAL IN ACCORDANCE WITH FDOT 2023/2024 STANDARD PLANS INDEX 120-001 SHALL BE INCLUDED IN THE COST OF REGULAR EXCAVATION.
7. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.
8. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
9. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.
10. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND SURVEYS BUT IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND PROTECT EXISTING UTILITY FACILITIES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WITH UTILITY OWNERS.
11. ALL MAINTENANCE OF TRAFFIC (MOT) ITEMS REQUIRED IN ACCORDANCE WITH FDOT 2023/2024 STANDARD PLANS INDEX '102-' SERIES INDICES SHALL BE FURNISHED, INSTALLED, AND MAINTAINED TO PROPERLY MAINTAIN TRAFFIC AND ADDRESS DROP OFF CRITERIA IN THE WORK ZONE.
12. NO LANES CLOSED BETWEEN THE HOURS OF 6:00 AM TO 8:00 PM.
13. THE EXISTING POSTED SPEED LIMIT ON SR-434 WILL REMAIN DURING ALL PHASES OF CONSTRUCTION.
14. ANY EXISTING OR PROPOSED SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED BY THE CONTRACTOR PER INDEX 600 AND WHEN THE CONFLICT NO LONGER EXISTS THE SIGNS SHALL BE RESTORED TO THEIR ORIGINAL POSITION. COST SHALL BE INCLUDED IN MAINTENANCE OF TRAFFIC.
15. IF ONLY FDOT 2023/2024 STANDARD PLANS INDEX (SUCH AS #'S. 102-600, 102-611, 102-612, 102-613, 102-616, 102-660, ETC.) WILL BE USED, THEN THE CONTRACTOR WILL NOT BE REQUIRED TO PROVIDE SIGNED AND SEALED MAINTENANCE OF TRAFFIC (M.O.T.) PLANS. IF THE CONTRACTOR REQUIRES M.O.T. PLANS OTHER THAN THE 2023/2024 STANDARD PLANS INDICES, THEN THE CONTRACTOR WILL HAVE TO SUBMIT SIGNED AND SEALED PLANS TO FDOT FOR REVIEW AND APPROVAL.
16. MAINTENANCE OF TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT 2023/2024 STANDARD PLANS INDEX, 2023 FDOT DESIGN MANUAL (FDM), THE STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION (ED. 2019) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (ED. 2009 AND 2012 SUPPLEMENT) AS A MINIMUM.
17. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF TRANSPORTATION A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO CLOSING ANY LANES OR BEGINNING ANY CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY.
18. TEST RESULTS OF ANY TESTS TAKEN FOR OR DURING CONSTRUCTION OF THE PERMITTED WORK SHALL BE PROVIDED TO THE FDOT UPON REQUEST.
19. IF THE DEPARTMENT DETERMINES THAT AS-BUILT CONDITIONS VARY SIGNIFICANTLY FROM APPROVED PLANS, THE PERMITTEE OR THE PERMITTEE'S CONTRACTOR SHALL PROVIDE AS-BUILT PLANS, ALONG WITH A RECORD DRAWINGS REPORT BY PERMITTEE'S PROFESSIONAL ENGINEER, FORM 850-040-19, WITHIN 30 DAYS OF COMPLETING CONSTRUCTION.
20. ALL DISTURBED AREAS WITHIN FDOT RIGHT-OF-WAY MUST BE SODDED ONLY WITH COMMON BERMUDA SOD.
21. CONTRACTORS CERTIFICATE OF LIABILITY INSURANCE MUST BE ISSUED PRIOR TO STARTING CONSTRUCTION IN FDOT RIGHT-OF-WAY.
22. MAINTENANCE OF TRAFFIC:
    a. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN PREPARED UNDER THE DIRECTION OF, AND SIGNED AND SEALED BY, A LICENSED FLORIDA PROFESSIONAL ENGINEER WHO IS EXPERIENCED IN PREPARING TRAFFIC CONTROL PLANS AND WHO IS CERTIFIED PER FDOT PROCEDURE, TOPIC NO. 625-010-010.
    b. FOR WORK WITHIN FDOT RIGHT-OF-WAY, THE FDOT REQUIRES DOCUMENTATION FOR SUCCESSFUL COMPLETION OF AN APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE FOR THE AGENCY, UTILITY, OR CONTRACTOR EMPLOYEE(S) DESIGNING, INSTALLING, AND/OR MAINTAINING THE APPROVED MAINTENANCE OF TRAFFIC PLAN IN ACCORDANCE WITH DEPARTMENT PROCEDURE, TOPIC NO. 625-010-010.
    c. ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR THE FOLLOWING FACILITIES SHALL BE DESIGNED AND INSTALLED TO MEET THE EXISTING POSTED SPEEDS AS STATED FOR ALL TRAFFIC CONTROL PHASES: SR-434 – 50 MPH
23. ALL WORK PERFORMED WITHIN FDOT RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH FDOT 2020 STANDARD PLANS INDEX, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (ED. 2019) ND THE UTILITY ACCOMMODATION MANUAL (ED. 2017).
24. IT WILL BE THE RESPONSIBILITY OF THE PERMITTEE TO REPAIR ANY DAMAGE TO FDOT FACILITIES CAUSED BY CONSTRUCTION OF THE PROJECT.
25. ALL SIDEWALK CLOSURES SHALL ABIDE TO THE STANDARD PROCEDURES PER FDOT 2023/2024 RD PLANS INDEX 102-660.
26. ALL CONCRETE SIDEWALKS SHALL BE CONSTRUCTED PER FDOT 2023/2024 STANDARD PLANS INDEX 522-001 & 522-002.
27. ALL ROADWAY SIGNAGE AND/OR SIGNAGE COLUMS/POSTS LOCATED WITHIN RIGHT-OF-WAY IMPACTED BY PROPOSED IMPROVEMENTS SHALL BE ADJUSTED AND/OR RE-INSTALLED IN ACCORDANCE WITH 2023/2024 STANDARD PLANS INDEX AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (ED. 2019).
28. A COPY OF THE FDOT PERMIT FOR WORK WITHIN THE SR 434 ROW SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS.

PAVING, GRADING AND DRAINAGE

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS, ETC.) IS TO BE EXCAVATED AND REPLACED WITH SUITABLE/COMPACTED SOILS, AS DIRECTED BY THE GEOTECHNICAL ENGINEER OF RECORD OR THE OWNERS ENGINEERS. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER. EXCAVATED AREAS ARE TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS AND PER THE GEOTECHNICAL REPORT. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOILS TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS.
4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED.
5. IT MAY BE NECESSARY TO FIELD ADJUST PAVEMENT ELEVATIONS TO PRESERVE THE ROOT SYSTEMS OF TREES SHOWN TO BE SAVED. CONTRACTOR TO COORDINATE WITH OWNER'S ENGINEER PRIOR TO ANY ELEVATION CHANGES.
6. CONTRACTOR SHALL TRIM, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.
7. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE 2023/2024 EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURB AND GUTTERS CALLED FOR IN THESE PLANS.
8. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER FOR APPROVAL.
9. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION JOINT MATERIAL WITH SEALER AT ABUTMENT OF CONCRETE AND OTHER MATERIALS (STRUCTURES, OTHER POURED)
10. ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH F.D.O.T. STANDARD INDEX #711-001.
11. THE CONTRACTOR WILL STABILIZE BY SEED AND MULCH, SOD, OR OTHER APPROVED MATERIALS ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER. CONTRACTOR TO COORDINATE WITH OWNER REGARDING TYPE OF MATERIAL, LANDSCAPING AND IRRIGATION REQUIREMENTS.
12. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.
13. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATION AT PROPERTY LINES.
14. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A REGISTERED LAND SURVEYOR AT CONTRACTORS EXPENSE.
15. FINAL GRADES SHOWN INCLUDE SOD HEIGHT. ALL AREAS SHALL BE GRADED TO DRAIN AWAY FROM THE BUILDINGS.
16. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND JURISDICTIONAL PERMITTING AGENCIES.
17. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN-OUTS, MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.

PAVING/GRADING TESTING AND INSPECTION

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE SOILS REPORT. UPON COMPLETION OF WORK THE SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.
2. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS AND GEOTECHNICAL REPORT, THE VARIOUS AGENCIES AND PERMIT CONDITIONS. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THESE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.
3. A COPY OF ALL TESTING REPORTS SHALL BE FURNISHED TO THE CITY OF WINTER SPRINGS.

CONTRACTOR'S AS-BUILT

1. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION, CERTIFIED BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA. AT A MINIMUM, THIS "AS-BUILT" INFORMATION SHALL INCLUDE: TOP OF PIPE/INVERT ELEVATIONS AND HORIZONTAL LOCATIONS OF ALL WATER, SANITARY SEWER, AND RECLAIM WATER UTILITIES INSTALLED (AS APPLICABLE); PAVEMENT GRADE BREAK LOCATIONS AND SUFFICIENT ELEVATIONS OF FINISHED GRADE SURFACES WHICH ALLOW THE ENGINEER TO DETERMINE COMPLIANCE WITH THE PROPOSED DESIGN; TOP, GRATE, & INVERT ELEVATIONS OF THE STORMWATER COLLECTION SYSTEM, INCLUDING THE POND GRADES (TOP, BANK, BOTTOM), POND CONTROL STRUCTURE, & SWALES; ANY IMPROVEMENTS WITHIN FDOT OR COUNTY RIGHT-OF-WAYS.
2. THE DIGITAL "AS-BUILT" FILE, PROVIDED IN AUTOCAD FORMAT, SHALL ALSO BE PROVIDED IN THE FLORIDA STATE PLANE COORDINATE SYSTEM. NO ENGINEER'S CERTIFICATIONS OF COMPLETION OR REQUESTS FOR FINAL ACCEPTANCE WILL BE SUBMITTED UNTIL THIS INFORMATION HAS BEEN RECEIVED AND APPROVED BY THE OWNER'S ENGINEER.
3. SURVEYOR AS-BUILT SHALL CONTAIN COMPLETED ASSET TABLE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS UTILITY STANDARDS AND SPECIFICATIONS.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	NMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED LANDSCAPE ARCHITECTURAL CONSULTANT, CORY W. MILLER, LICENSE NUMBER 6667666, STATE OF FLORIDA, REGISTERED LANDSCAPE ARCHITECT, DATE

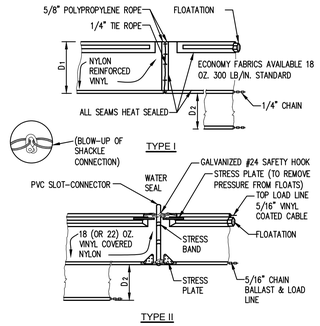
KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

GENERAL NOTES

WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

CITY OF WINTER SPRINGS FL

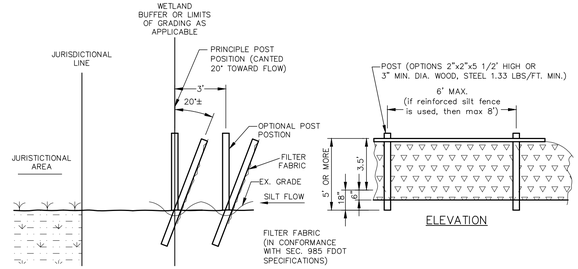
SHEET NUMBER C1.1



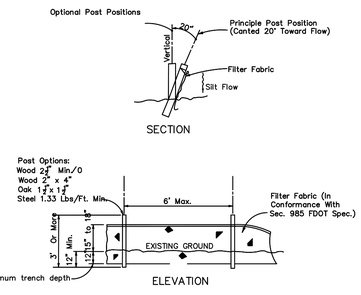
D1 = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D2 = 5' STD. (ADDITIONAL PANEL FOR DEPTHS 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTE:
COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

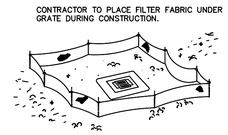
FLOATING TURBIDITY BARRIERS
NTS



DOUBLE SILT FENCE
NTS

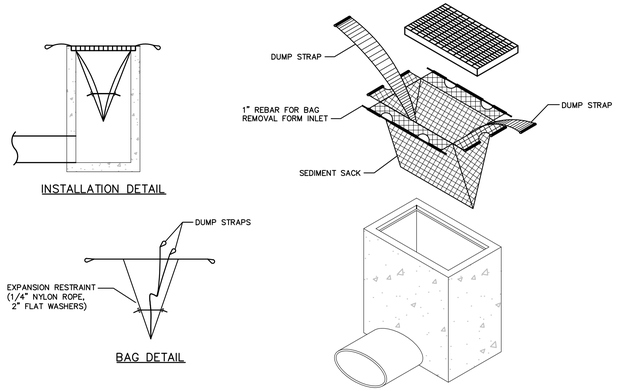


TYPE III SILT FENCE
NTS

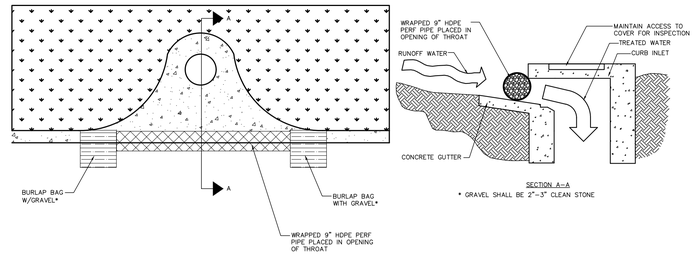


Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

SILT FENCE APPLICATIONS
NTS

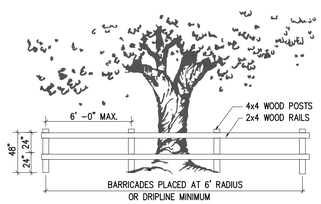


STANDARD INLET SEDIMENT CONTROL DEVICE
NTS



SOCK DRAIN INLET SEDIMENT FILTER
NTS

NOTE: THE PERFORATED PIPE MUST EXTEND AT LEAST 1' BEYOND THE CURB OPENING ON EACH SIDE AND BE ANCHORED WITH GRAVEL BAGS, OR SIMILAR, ON EACH END. A SPACER MUST BE PROVIDED FOR BETWEEN THE INLET OPENING AND THE PIPE TO ALLOW FOR OVERFLOW, PREVENT FLOODING AND TO PREVENT THE PIPE FROM FALLING INTO THE INLET.



TREE PROTECTION DETAIL
NTS

1. ORANGE CONSTRUCTION FENCING CAN BE USED IN LIEU OF WOOD FENCE PER ENGINEER'S REVIEW AND APPROVAL.
2. NO STOCKPILING OF MATERIAL, TRASH OR DEBRIS SHALL BE PERMITTED WITHIN THE BARRIER. CONTRACTOR SHALL ADJUST AND MAINTAIN BARRIER LIMITS AS NECESSARY TO ACCOMMODATE ADJACENT CONSTRUCTION AS DIRECTED BY OWNER. REMOVE PROTECTION AFTER OWNER'S FINAL ACCEPTANCE OF THE PROJECT.

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	NMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

LICENSED LANDSCAPE ARCHITECT CORY N. STELLEN * 0001703 * STATE OF FLORIDA * REGISTERED LANDSCAPE ARCHITECT * PROFESSIONAL ENGINEER
DATE:

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

EROSION CONTROL DETAILS

WINTER SPRINGS MARKETPLACE-ADDITIONAL PARKING
CITY OF WINTER SPRINGS FL

SHEET NUMBER
C2.0

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:EROSION CONTROL DETAILS July 18, 2025 08:50:00am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C2.0 SWPPP NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION

PROJECT NAME AND LOCATION
WINTER SPRINGS MARKETPLACE
TAX PARCEL: 36-20-30-502-0000-0090
CITY OF WINTER SPRINGS, FL

*SEE COVER SHEET FOR LOCATION MAP

DEVELOPER NAME AND ADDRESS

TUSCAWILLA PROPERTY INVESTORS, LLC
630 SOUTH MAITLAND AVE., SUITE 100
MAITLAND, FL 32751
CONTACT: RYAN STAHL
PHONE: (407) 628-0277
EMAIL: RSTAHL@EQUINOX-DEVELOPMENT.COM

PROJECT DESCRIPTION

THIS PROJECT IS TO DEVELOP ADDITIONAL PARKING WITHIN THE WINTER SPRINGS MARKETPLACE COMMERCIAL PROPERTY. THIS SITE IS LOCATED AT SOUTHWEST CORNER OF INTERSECTION OF TUSKAWILLA RD AND SR-434 IN WINTER SPRINGS, SEMINOLE COUNTY, FL.

PROJECT AREA: 0.12 ACRES
CONTRIBUTING DRAINAGE AREA: 1.22 ACRES

CONTROL STRUCTURE :

CS-A

LONGITUDE : 81°15'47.71"W LATITUDE: 28°41'44.80"N

CS-B

LONGITUDE : 81°15'49.48"W LATITUDE: 28°41'44.89"N

CS-C

LONGITUDE : 81°15'51.87"W LATITUDE: 28°41'44.90"N

ULTIMATE RECEIVING WATERS: LAKE JESSUP via MASTER SYSTEM

ACTIVITIES THAT REQUIRE EROSION CONTROL

SITE CLEARING AND GRUBBING; PROVIDING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; EXCAVATION FOR THE RETENTION POND; SITE GRADING; INSTALLATION OF STORM WATER, SANITARY SEWER, AND WATER STRUCTURES; CURB, ROADWAYS, AND PARKING FACILITIES.

*SEE PLANS FOR THE LOCATION OF TEMPORARY SEDIMENT BARRIERS AND OTHER EROSION CONTROL METHODS.

SOIL PARAMETERS

SOIL TYPES:

SERIES NAME	HYDROLOGIC GROUP
MYAKKA AND EAUGALLIE FINE SANDS	A/D
PAOLA–ST. LUCIE SANDS, 0 TO 5 PERCENT SLOPES	A
TAVARES–MILLHOPPER FINE SANDS, 0 TO 5 PERCENT SLOPES	A

SEQUENCE OF MAJOR ACTIVITIES

THE ORDER OF CONSTRUCTION IS AS FOLLOWS:

1. PROVIDE STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND OTHER EROSION CONTROL METHODS
3. CLEAR AND GRUB FOR SEDIMENT BASIN AND EARTH DIKE
4. CONSTRUCT EARTH DIKE AND SEDIMENT BASIN
5. FINISH CLEARING AND GRUBBING
6. REMOVE AND STORE TOPSOIL
7. PROVIDE INITIAL GRADING AS REQUIRED
8. STABILIZE ALL DISTURBED AREAS AS SOON AS POSSIBLE
9. INSTALL UTILITIES, STORM SEWER, CURB AND GUTTER
10. INSTALL BASE TO ROAD AND PARKING AREA
11. FINISH GRADING ENTIRE SITE
12. CONSTRUCT FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT
14. REMOVE ANY ITEMS THAT ARE NOT REQUIRED

TIMING OF CONTROL MEASURES

THE INSTALLATION OF SILT FENCE (AND OTHER EROSION CONTROL MEASURES), A STABILIZED ENTRANCE AND SEDIMENT BASIN SHALL OCCUR PRIOR TO CLEARING AND GRUBBING ACTIVITY. AFTER CONSTRUCTION IS COMPLETE, THE ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE AREAS SHALL BE REGRADED AND PERMANENTLY STABILIZED AS SHOWN ON THE PLANS.

EROSION AND SEDIMENT CONTROLS

BEST MANAGEMENT PRACTICES SHALL BE USED FOR THIS PROJECT TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN-OFF. THE LOCATION AND DETAILS OF EROSION CONTROL METHODS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING THESE CONTROL METHODS AS SHOWN ON THE PLANS OR AS REQUIRED. HE/SHE SHALL ALSO PROVIDE THE REQUIRED EROSION PROTECTION AS REQUIRED BY LOCAL, STATE AND FEDERAL LAW.

STORM WATER MANAGEMENT

STORM WATER COLLECTION SHALL BE MANAGED BY AN EXISTING WET POND SYSTEM, AS WELL AS AN EXISTING EXFILTRATION SYSTEM. THE POND SYSTEM HAS BEEN DESIGNED TO MEET OR EXCEED ALL THE REQUIREMENTS OF ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND CITY OF WINTER SPRINGS, FL.

STABILIZATION PRACTICES:

TEMPORARY STABILIZATION - TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE, SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED REQUIRED CAN BE FOUND IN TABLE 1.65 A OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, WHERE SOILS ARE ACIDIC 2 TONS OF PULVERIZED AGRICULTURAL LIMESTONE SHOULD BE ADDED PER ACRE AND 450 POUNDS OF 10-20-20 FERTILIZER SHALL BE APPLIED TO EACH ACRE. AFTER SEEDING, EACH AREA SHALL BE IMMEDIATELY MULCHED WITH STRAW OR EQUIVALENT EQUAL. AREAS OF THE SITE WHICH ARE TO BE PAVED SHALL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED.

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE APPROPRIATE PERMANENT SEED MIX CAN BE FOUND IN TABLES 1.66A, 1.66B AND 1.66C OF THE FLORIDA DEVELOPMENT MANUAL. PRIOR TO SEEDING, 2 TONS/ACRE OF FINELY GROUND AGRICULTURAL LIMESTONE AND THE PROPER FERTILIZER BASED ON THE TYPE OF SEEDING SHALL BE APPLIED TO EACH ACRE TO PROVIDE PLANT NUTRIENTS. AFTER SEEDING, EACH AREA SHALL BE MULCHED IMMEDIATELY. ALL RETENTION/DETENTION BASINS SHALL BE SODDED AT LEAST TO THE NORMAL WATER LINE. ALL EXPOSED AREAS WITHIN PUBLIC RIGHTS-OF-WAY SHALL BE SOLID SODDED, OTHER AREAS WITH SLOPES STEEPER THAN 4:1 SHALL BE SODDED.

STRUCTURAL PRACTICES:

EARTH DIKE - IF REQUIRED, AN EARTH DIKE SHALL BE CONSTRUCTED ALONG THE SITE PERIMETER. A PORTION OF THE DIKE SHALL DIVERT RUN-ON AROUND THE CONSTRUCTION SITE. THE REMAINING PORTION OF THE DIKE SHALL COLLECT RUNOFF FROM THE DISTURBED AREA AND DIRECT THE RUNOFF TO THE SEDIMENT BASIN.

SEDIMENT BASIN - A SEDIMENT BASIN SHALL BE CONSTRUCTED IN THE COMMON DRAINAGE AREA FOR THE SITE. ALL SEDIMENT COLLECTED IN THE BASIN MUST BE REMOVED FROM THE BASIN UPON COMPLETION OF CONSTRUCTION. SEDIMENT FROM THE BASIN MAY BE USED AS FILL ON THE SITE IF IT IS SUITABLE SOIL.

WASTE DISPOSAL

WASTE MATERIALS - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A METAL DUMPSTER WITH A SECURE LID IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITIES TO HAVE THE DUMPSTER EMPTIED AT LEAST TWICE A WEEK AND THE WASTE TAKEN TO AN APPROPRIATE LANDFILL. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE SUPERINTENDENT SHALL ORGANIZE TRAINING FOR THE EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH WASTE MATERIALS. THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR POSTING AND ENFORCING WASTE MATERIAL PROCEDURES.

HAZARDOUS WASTE - HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS OR AS DIRECTED BY THE MANUFACTURER. THE SUPERINTENDENT SHALL ORGANIZE THE PROPER TRAINING FOR EMPLOYEES IN THE PROPER PRACTICES WHEN DEALING WITH HAZARDOUS WASTE MATERIALS. THESE PROCEDURES SHALL BE POSTED ON THE SITE. THE PERSON WHO MANAGES THE SITE SHALL BE RESPONSIBLE FOR ENFORCING THE PROCEDURES.

SANITARY WASTE - SANITARY WASTE SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS. THE SUPERINTENDENT SHALL COORDINATE WITH THE LOCAL UTILITY FOR COLLECTION OF THE SANITARY WASTE AT LEAST THREE TIMES A WEEK TO PREVENT SPILLAGE ONTO THE SITE.

OFF-SITE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO REDUCE SEDIMENT TRACKING OFFSITE. THE CONTRACTOR SHALL PROMPTLY REMOVE ALL MUD, DIRT, OR OTHER MATERIALS TRACKED OR SPILLED ONTO EXISTING PUBLIC ROADS AND FACILITIES, DUE TO CONSTRUCTION. ALL TRUCKS HAULING MATERIALS OFFSITE SHALL BE COVERED WITH A TARPAULIN.

DUST & DEBRIS CONTROL
THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL WITHIN THE CONSTRUCTION LIMITS AS WELL AS ALONG HAUL ROUTES AND ROADWAYS USED BY THE EQUIPMENT AND VEHICLES. THE CONTRACTOR SHALL ENSURE THAT EXCESSIVE DUST IS NOT TRANSPORTED BEYOND THE LIMITS OF CONSTRUCTION IN POPULATED AREAS. THE CONTRACTOR MAY CONTROL DUST FOR EMBANKMENTS OR OTHER CLEARED OR UNSURFACED AREAS BY APPLYING WATER. INSTALL MULCH, SEED, SOD, OR TEMPORARY PAVING AS EARLY AS PRACTICAL. CONTROL DUST DURING STORAGE AND HANDLING OF DUSTY MATERIALS BY WETTING, COVERING, OR OTHER MEANS AS APPROVED BY THE ENGINEER.
DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE ON THE PROJECT SITE.

ITEMS REQUIRING POLLUTION PREVENTION

THE FOLLOWING ITEMS ARE EXPECTED TO BE PRESENT ON THE PROJECT SITE:

-ASPHALT
-CONCRETE
-FERTILIZERS
-METAL PIECES
-PETROLEUM BASED PRODUCTS
-TAR
-CLEANING SUPPLIES
-DETERGENTS
-MASONARY BLOCK/BRICKS
-PAINT
-WOOD

THE FOLLOWING ARE NON-STORM WATER SOURCES THAT WILL BE ENCOUNTERED AT THE SITE AND SHOULD BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE:

-UNCONTAMINATED GROUNDWATER EXPOSED DURING EXCAVATION
-WATER FROM WATER LINE FLUSHING
-PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).

SPILL PREVENTION AND CONTROL

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

-SUPERINTENDENT SHALL INSPECT PROJECT AREA DAILY FOR PROPER STORAGE, USE, AND DISPOSAL OF CONSTRUCTION MATERIALS.

-STORE ONLY ENOUGH MATERIAL ON SITE FOR PROJECT COMPLETION.

-ALL SUBSTANCES SHOULD BE USED BEFORE DISPOSAL OF CONTAINER.

-ALL CONSTRUCTION MATERIALS STORED SHALL BE ORGANIZED AND IN THE PROPER CONTAINER AND IF POSSIBLE, STORED UNDER A ROOF OR PROTECTIVE COVER.

-PRODUCTS SHALL NOT BE MIXED UNLESS DIRECTED BY THE MANUFACTURER.

-ALL PRODUCTS SHALL BE USED AND DISPOSED OF ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

HAZARDOUS PRODUCTS

-MATERIALS SHOULD BE KEPT IN ORIGINAL CONTAINER WITH LABELS UNLESS THE ORIGINAL CONTAINERS CANNOT BE RESEALED. IF ORIGINAL CONTAINERS CANNOT BE USED, LABELS AND PRODUCT INFORMATION SHALL BE SAVED.

-PROPER DISPOSAL PRACTICES SHALL ALWAYS BE FOLLOWED IN ACCORDANCE WITH MANUFACTURER AND LOCAL/STATE REGULATIONS.

PRODUCT SPECIFIC PRACTICES

-PETROLEUM PRODUCTS MUST BE STORED IN PROPER CONTAINERS AND CLEARLY LABELED. VEHICLES CONTAINING PETROLEUM PRODUCTS SHALL BE PERIODICALLY INSPECTED FOR LEAKS. PRECAUTIONS SHALL BE TAKEN TO AVOID LEAKAGE OF PETROLEUM PRODUCTS ON SITE.

-THE MINIMUM AMOUNT OF FERTILIZER SHALL BE USED AND MIXED INTO THE SOIL IN ORDER TO LIMIT EXPOSURE TO STORM WATER. FERTILIZERS SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

-PAINT CONTAINERS SHALL BE SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT MUST BE DISPOSED OF IN AN APPROVED MANNER.

-CONCRETE TRUCKS SHALL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

-SPILL CLEANUP INFORMATION SHALL BE POSTED ON SITE TO INFORM EMPLOYEES ABOUT CLEANUP PROCEDURES AND RESOURCES.

-THE FOLLOWING CLEAN-UP EQUIPMENT MUST BE KEPT ON-SITE NEAR THE MATERIAL STORAGE AREA: GLOVES, MOPS, RAGS, BROOMS, DUST PANS, SAND, SAWDUST, LIQUID ABSORBER, GOGGLES, AND TRASH CONTAINERS.

-ALL SPILLS SHALL BE CLEANED UP AS SOON AS POSSIBLE.

-WHEN CLEANING A SPILL, THE AREA SHOULD BE WELL VENTILATED AND THE EMPLOYEE SHALL WEAR PROPER PROTECTIVE COVERING TO PREVENT INJURY.

-TOXIC SPILLS MUST BE REPORTED TO THE PROPER AUTHORITY REGARDLESS OF THE SIZE OF THE SPILL.

-AFTER A SPILL, THE PREVENTION PLAN SHALL BE REVIEWED AND CHANGED TO PREVENT FURTHER SIMILAR SPILLS FROM OCCURRING. THE CAUSE OF THE SPILL, MEASURES TO PREVENT IT, AND HOW TO CLEAN THE SPILL UP SHALL BE RECORDED.

-THE SUPERINTENDENT SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR AND IS RESPONSIBLE FOR THE DAY TO DAY SITE OPERATIONS. THE SUPERINTENDENT ALSO OVERSEES THE SPILL PREVENTION PLAN AND SHALL BE RESPONSIBLE FOR EDUCATING THE EMPLOYEES ABOUT SPILL PREVENTION AND CLEANUP PROCEDURES.

MAINTENANCE AND INSPECTION PRACTICES

THE FOLLOWING ARE MAINTENANCE AND INSPECTION PRACTICES THAT SHALL BE COMPLETED BY THE CONTRACTOR:

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE CHECKED DAILY AND AFTER EACH 0.5 INCH OR GREATER RAINFALL BY THE SUPERINTENDENT OR SOMEONE UNDER HIS/HER DIRECT SUPERVISION.

-ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE KEPT IN GOOD CONDITION. REPAIRS MUST BE MADE WITHIN 24 HOURS OF REPORT.

-THE SILT FENCE SHALL BE INSPECTED PERIODICALLY FOR HEIGHT OF SEDIMENT AND CONDITION OF FENCE.

-THE SILT FENCE SHALL BE CLEARED OF SEDIMENT WHEN SEDIMENT MEASURES ONE-THIRD THE HEIGHT OF THE FENCE.

-THE SEDIMENT BASINS/DITCHES SHALL BE CHECKED MONTHLY FOR DEPTH OF SEDIMENT. THEY SHALL BE CLEANED WHEN SEDIMENT REACHES 10% OF TOTAL CAPACITY AND AFTER CONSTRUCTION IS COMPLETE.

-DIVERSION DIKES SHALL BE INSPECTED MONTHLY. ANY BREACHES SHALL BE PROMPTLY REPAIRED.

-ALL SEEDING SHALL BE CHECKED FOR PROPER GROWTH AND UNIFORMITY. UNSTABALIZED AREAS SHALL BE RE-SODDED.

-A MAINTENANCE REPORT SHALL BE COMPLETED DAILY AFTER EACH INSPECTION OF THE SEDIMENT AND EROSION CONTROL METHODS. THE REPORTS SHALL BE FILED IN AN ORGANIZED MANNER AND RETAINED ON-SITE DURING CONSTRUCTION. AFTER CONSTRUCTION IS COMPLETED, THE REPORTS SHALL BE SAVED FOR AT LEAST THREE YEARS. THE REPORTS SHALL BE AVAILABLE FOR ANY AGENCY THAT HAS JURISDICTION OVER EROSION CONTROL.

-THE SUPERINTENDENT SHALL ORGANIZE THE TRAINING FOR INSPECTION PROCEDURES AND PROPER EROSION CONTROL METHODS FOR EMPLOYEES THAT COMPLETE INSPECTIONS AND REPORTS.

ADDITIONAL CONTRACTOR RESPONSIBILITIES

-C.O.R. IS REQUIRED TO SUBMIT A SWPPP TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO MOBILIZING TO THE SITE AND INSTALLING ANY BMPS.

-C.O.R. IS REQUIRED TO COMPLY WITH THE REGULATIONS OF THE CITY, WATER MANAGEMENT DISTRICT, AND FDEP IN MANAGING STORMWATER RUNOFF FROM CONSTRUCTION SITES.

-C.O.R. IS REQUIRED TO SUBMIT AND OBTAIN A NOTICE OF INTENT FROM FDEP FOR THIS PROJECT.

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: _____ DATE:_____

CORY SITLER
FLORIDA REGISTRATION NUMBER: 89984
PROFESSIONAL ENGINEER

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FORM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER.

SIGNATURE AND DATE	NAME AND TITLE, COMPANY / ADDRESS AND TELEPHONE NUMBER	RESPONSIBILITY

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

LICENSED PROFESSIONAL ENGINEER CORY R. SITLER STATE OF FLORIDA 89984 PROFESSIONAL ENGINEER 07/18/2025

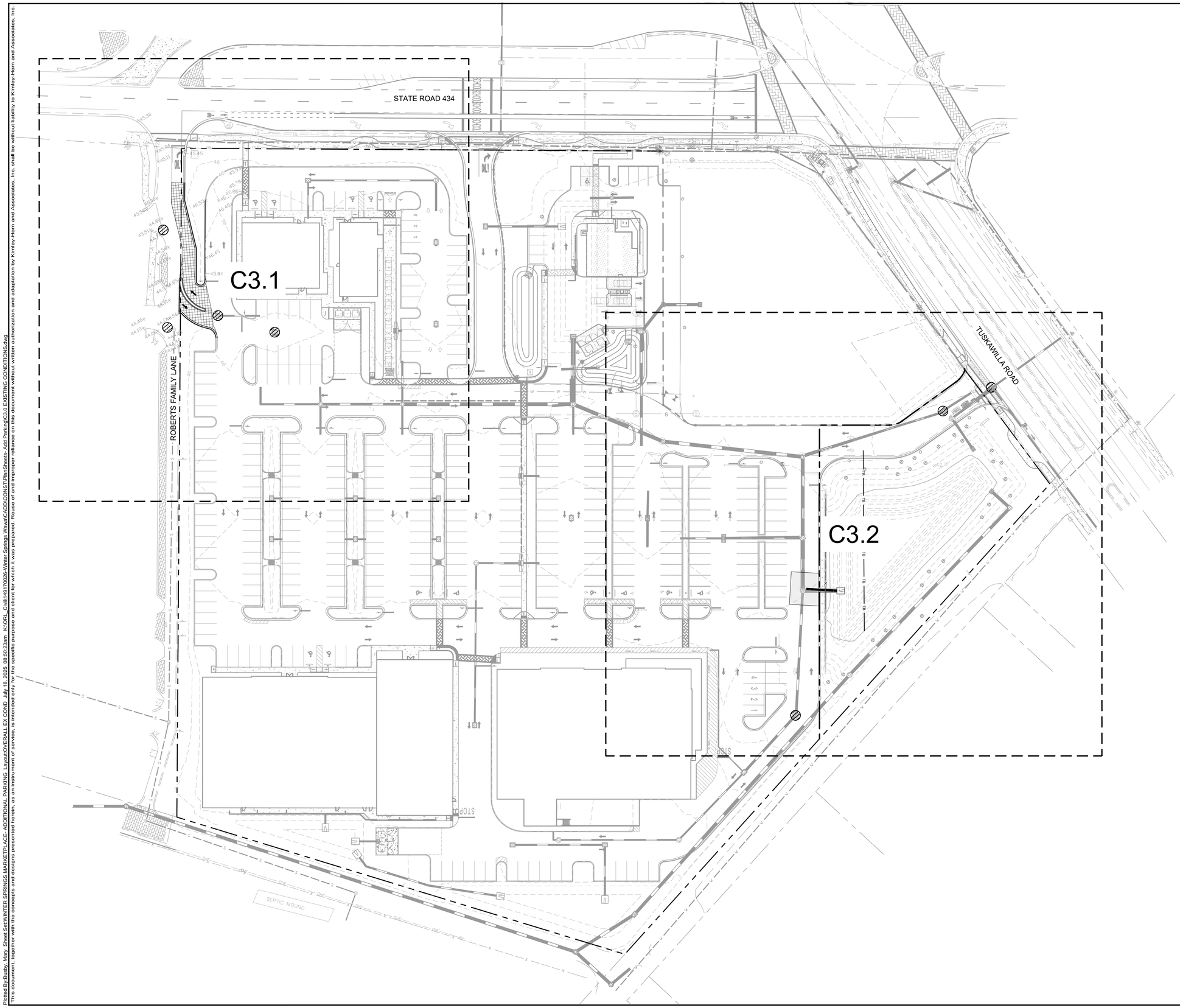
KHA PROJECT 149170026
DATE 07/18/2025
SCALE AS SHOWN
DESIGNED BY ADL
DRAWN BY JCB
CHECKED BY CNS

SWPPP NOTES

WINTER SPRINGS MARKETPLACE-ADDITIONAL PARKING
CITY OF WINTER SPRINGS FL

SHEET NUMBER
C2.1

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:SWPPP NOTES July 18, 2025 08:50:08am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C2.0 SWPPP NOTES.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



SIDEWALK NOTES:

1. ALL SIDEWALK CLOSURES SHALL BE IN ACCORDANCE WITH FDOT DESIGN INDEX #102-600. (PROVIDE TEMPORARY ASPHALT SIDEWALKS AS NEEDED)

DATUM/BENCHMARK NOTE:

1. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE RELATIVE TO OSCEOLA COUNTY BENCHMARK #1189, BEING A 2" BRASS DISK, STAMPED "OC 1189", AND HAVING RECORD ELEVATION OF 81.32 FEET.

EXISTING UTILITY NOTE:

1. THERE MAY BE ON-SITE UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO IRRIGATION, SANITARY SEWER, POTABLE WATER LINES, NATURAL GAS LINES, ELECTRIC, TELEPHONE AND CABLE LINES) THAT WERE NOT LOCATED OR IDENTIFIED BY THE PROJECT SURVEYOR. PRIOR TO CONSTRUCTION START, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ON-SITE UTILITIES AND RIGHT-OF-WAY UTILITIES.
2. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.

DEMOLITION NOTES:

1. SEE ADDITIONAL NOTES, SHEET C1.0 AND C1.1.
2. ANY EXISTING WELLS (I.E. ARTESIAN, IRRIGATION, DRINKING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED. ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE. C.O.R. SHALL PROVIDE A COPY OF ANY WELL ABANDONMENT PERMITS TO THE CITY.

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS, FLORIDA, LLC. DATED NOV. 15, 2018.

EROSION CONTROL NOTE:

1. REFER TO SWPPP SHEETS C2.0 FOR ADDITIONAL NOTES & DETAILS.
2. PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT ALL CONSTRUCTION ACCESS POINTS.
3. UTILIZE PERFORATED SOCK DRAIN (OR EQUIVALENT) IN FRONT OF EXISTING/PROPOSED CURB INLETS ADJACENT TO CONSTRUCTION ACTIVITIES. ALONG ALL ROADWAYS.
4. INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF ALL EXISTING/PROPOSED INLETS.
5. PROVIDE TREE PROTECTION BARRIERS AROUND ALL EXISTING TREES LOCATED ON-SITE WHICH ARE DESIGNATED TO BE PRESERVED. REFER TO LANDSCAPE PLANS FOR TREES TO REMAIN AND TREE PROTECTION DETAILS/NOTES.

BEARING NOTE:

1. BEARINGS SHOWN HEREON ARE BASED ON THE WEST LINE OF LOT 1, KISSIMMEE ELEMENTARY SCHOOL, AS SHOWN ON PLAT BOOK 12, PAGE 162 OF THE PUBLIC RECORDS OF OSCEOLA COUNTY, FLORIDA. AS HAVING AN ASSUMED BEARING OF N00°04'22"W.

LEGEND

- PROPERTY LINE
- TB — TURBIDITY BARRIER
- INLET PROTECTION (FOR DETAIL, SEE SHEET C2.0)
- EXISTING LANDSCAPE
- EXISTING LIGHT POLE
- EXISTING FENCE TO BE REMOVED
- EXISTING STORM PIPE TO REMAIN
- EXISTING STORM PIPE TO BE REMOVED
- EXISTING STORM INLET TO REMAIN
- ASPHALT PAVEMENT TO BE DEMOLISHED

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE (407) 535-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL ENGINEER — CORY N. SITLER — STATE OF FLORIDA — PROFESSIONAL ENGINEER — DATE

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

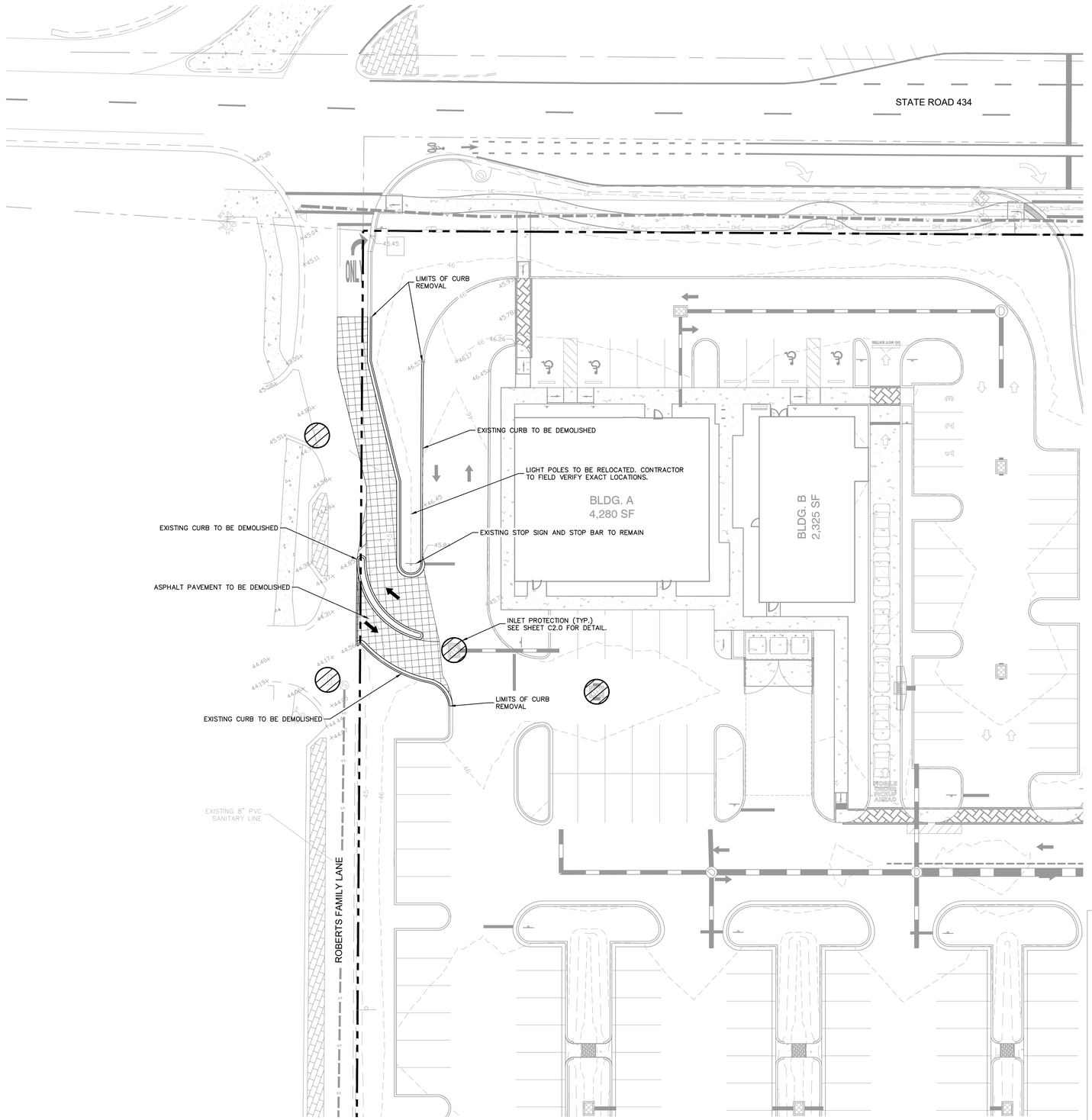
OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN

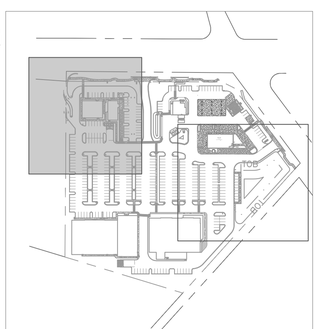
WINTER SPRINGS MARKETPLACE-ADDITIONAL PARKING

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C3.0

Plotted By:Bubby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:OVERALL EX COND July 18, 2025 08:50:23am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C3.0 EXISTING CONDITIONS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.





KEY MAP

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

SIDEWALK NOTES:

1. ALL SIDEWALK CLOSURES SHALL BE IN ACCORDANCE WITH FDOT DESIGN INDEX #102-600. (PROVIDE TEMPORARY ASPHALT SIDEWALKS AS NEEDED)

DATUM/BENCHMARK NOTE:

1. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE RELATIVE TO OSCEOLA COUNTY BENCHMARK #1189, BEING A 2" BRASS DISK, STAMPED "OC 1189", AND HAVING RECORD ELEVATION OF 81.32 FEET.

EXISTING UTILITY NOTE:

1. THERE MAY BE ON-SITE UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO IRRIGATION, SANITARY SEWER, POTABLE WATER LINES, NATURAL GAS LINES, ELECTRIC, TELEPHONE AND CABLE LINES) THAT WERE NOT LOCATED OR IDENTIFIED BY THE PROJECT SURVEYOR. PRIOR TO CONSTRUCTION START, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ON-SITE UTILITIES AND RIGHT-OF-WAY UTILITIES.
2. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.

DEMOLITION NOTES:

1. SEE ADDITIONAL NOTES, SHEET C1.0 AND C1.1.
2. ANY EXISTING WELLS (I.E. ARTESIAN, IRRIGATION, DRINKING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED. ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE. C.O.R. SHALL PROVIDE A COPY OF ANY WELL ABANDONMENT PERMITS TO THE CITY.

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS, FLORIDA, LLC. DATED NOV. 15, 2018.

EROSION CONTROL NOTE:

1. REFER TO SWPPP SHEETS C2.0 FOR ADDITIONAL NOTES & DETAILS.
2. PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT ALL CONSTRUCTION ACCESS POINTS.
3. UTILIZE PERFORATED SOCK DRAIN (OR EQUIVALENT) IN FRONT OF EXISTING/PROPOSED CURB INLETS ADJACENT TO CONSTRUCTION ACTIVITIES. ALONG ALL ROADWAYS.
4. INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF ALL EXISTING/PROPOSED INLETS.
5. PROVIDE TREE PROTECTION BARRIERS AROUND ALL EXISTING TREES LOCATED ON-SITE WHICH ARE DESIGNATED TO BE PRESERVED. REFER TO LANDSCAPE PLANS FOR TREES TO REMAIN AND TREE PROTECTION DETAILS/NOTES.

BEARING NOTE:

1. BEARINGS SHOWN HEREON ARE BASED ON THE WEST LINE OF LOT 1. KISSIMMEE ELEMENTARY SCHOOL, AS SHOWN ON PLAT BOOK 12, PAGE 162 OF THE PUBLIC RECORDS OF OSCEOLA COUNTY, FLORIDA. AS HAVING AN ASSUMED BEARING OF N00°04'22"W.

LEGEND

- PROPERTY LINE
- TB — TURBIDITY BARRIER
- INLET PROTECTION (FOR DETAIL, SEE SHEET C2.0)
- EXISTING LANDSCAPE
- EXISTING LIGHT POLE
- EXISTING FENCE TO BE REMOVED
- EXISTING STORM PIPE TO REMAIN
- EXISTING STORM PIPE TO BE REMOVED
- EXISTING STORM INLET TO REMAIN
- ASPHALT PAVEMENT TO BE DEMOLISHED

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED LANDSCAPE ARCHITECT CHRISTY N. STILLEY STATE OF FLORIDA LICENSE NO. 6667301 CORY N. SHEFFER STATE OF FLORIDA LICENSE NO. 0090827 PROFESSIONAL ENGINEER

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

EXISTING CONDITIONS AND DEMOLITION PLAN

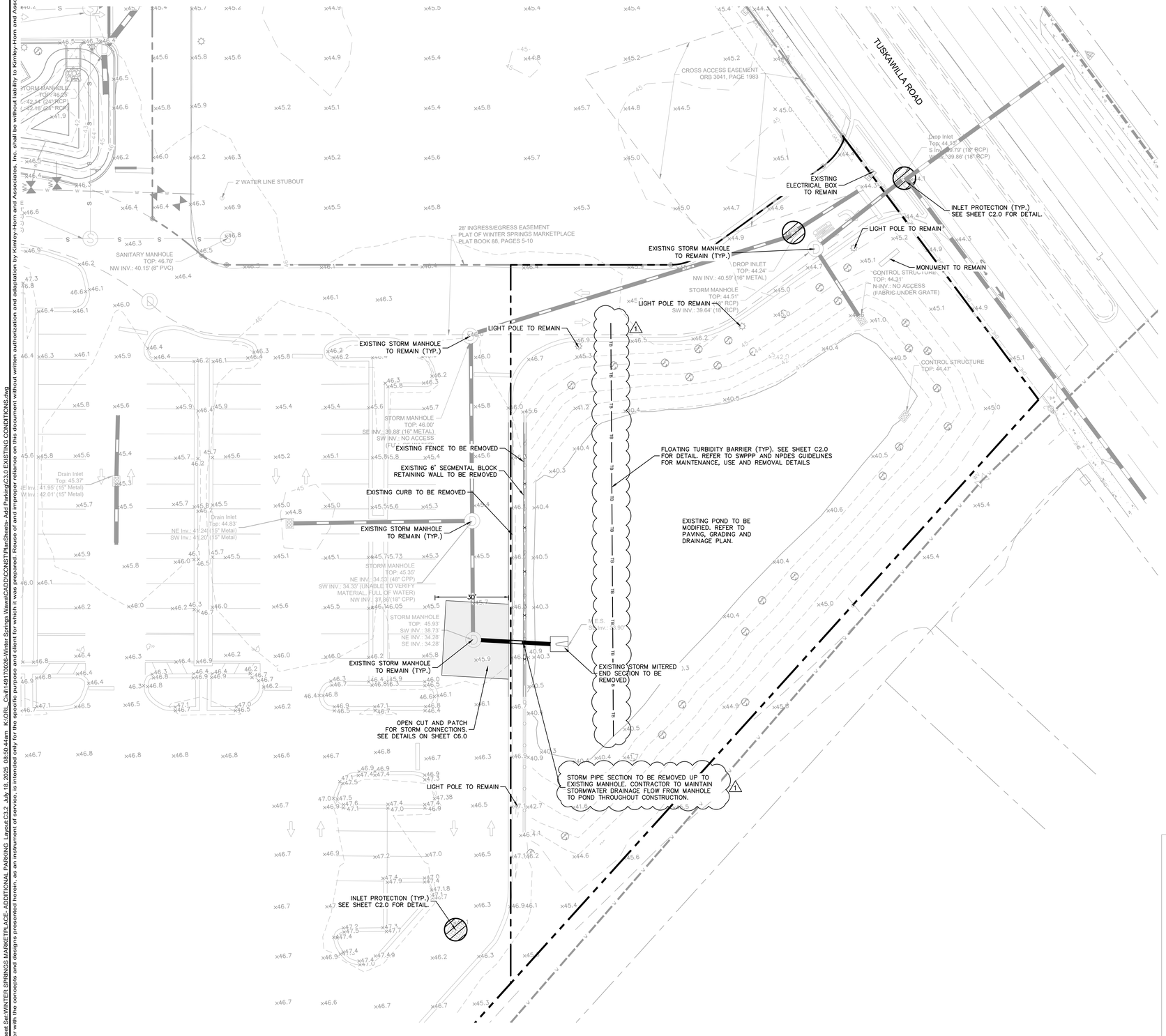
WINTER SPRINGS MARKETPLACE-ADDITIONAL PARKING

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C3.1

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:C3.1 July 18, 2025 08:50:34am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C3.0 EXISTING CONDITIONS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Plotted By: Busby, Mary Sheet Set: WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout: C3.2 July 18, 2025 08:50:44am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C3.0 EXISTING CONDITIONS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



GRAPHIC SCALE IN FEET
0 10 20 40

SIDEWALK NOTES:

1. ALL SIDEWALK CLOSURES SHALL BE IN ACCORDANCE WITH FDOT DESIGN INDEX #102-600. (PROVIDE TEMPORARY ASPHALT SIDEWALKS AS NEEDED)

DATUM/BENCHMARK NOTE:

1. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE RELATIVE TO OSCEOLA COUNTY BENCHMARK #1189, BEING A 2" BRASS DISK, STAMPED "OC 1189", AND HAVING RECORD ELEVATION OF 81.32 FEET.

EXISTING UTILITY NOTE:

1. THERE MAY BE ON-SITE UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO IRRIGATION, SANITARY SEWER, POTABLE WATER LINES, NATURAL GAS LINES, ELECTRIC, TELEPHONE AND CABLE LINES) THAT WERE NOT LOCATED OR IDENTIFIED BY THE PROJECT SURVEYOR. PRIOR TO CONSTRUCTION START, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ON-SITE UTILITIES AND RIGHT-OF-WAY UTILITIES.
2. FLORIDA LAW (F.S. 556) UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT MANDATES THAT EXCAVATORS/CONTRACTORS SHALL CONTACT SUNSHINE 811 (FKA: SUNSHINE STATE ONE-CALL OF FLORIDA) BY CALLING 800-432-4770 OR 811 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION TO ALLOW MEMBER OPERATORS AN OPPORTUNITY TO IDENTIFY AND MARK THEIR UNDERGROUND FACILITIES AND APPROPRIATELY RESPONSE TO THE POSITIVE RESPONSE SYSTEM.

DEMOLITION NOTES:

1. SEE ADDITIONAL NOTES, SHEET C1.0 AND C1.1.
2. ANY EXISTING WELLS (I.E. ARTESIAN, IRRIGATION, DRINKING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED. ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE. C.O.R. SHALL PROVIDE A COPY OF ANY WELL ABANDONMENT PERMITS TO THE CITY.

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS, FLORIDA, LLC. DATED NOV. 15, 2018.

EROSION CONTROL NOTE:

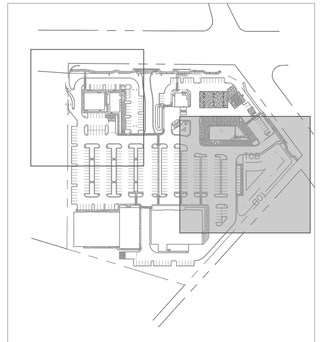
1. REFER TO SWPPP SHEETS C2.0 FOR ADDITIONAL NOTES & DETAILS.
2. PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT ALL CONSTRUCTION ACCESS POINTS.
3. UTILIZE PERFORATED SOCK DRAIN (OR EQUIVALENT) IN FRONT OF EXISTING/PROPOSED CURB INLETS ADJACENT TO CONSTRUCTION ACTIVITIES. ALONG ALL ROADWAYS.
4. INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF ALL EXISTING/PROPOSED INLETS.
5. PROVIDE TREE PROTECTION BARRIERS AROUND ALL EXISTING TREES LOCATED ON-SITE WHICH ARE DESIGNATED TO BE PRESERVED. REFER TO LANDSCAPE PLANS FOR TREES TO REMAIN AND TREE PROTECTION DETAILS/NOTES.

BEARING NOTE:

1. BEARINGS SHOWN HEREON ARE BASED ON THE WEST LINE OF LOT 1, KISSIMMEE ELEMENTARY SCHOOL, AS SHOWN ON PLAT BOOK 12, PAGE 162 OF THE PUBLIC RECORDS OF OSCEOLA COUNTY, FLORIDA. AS HAVING AN ASSUMED BEARING OF N00°04'22"W.

LEGEND

- PROPERTY LINE
- TB — TURBIDITY BARRIER
- INLET PROTECTION (FOR DETAIL, SEE SHEET C2.0)
- EXISTING LANDSCAPE
- EXISTING LIGHT POLE
- EXISTING FENCE TO BE REMOVED
- EXISTING STORM PIPE TO REMAIN
- EXISTING STORM PIPE TO BE REMOVED
- EXISTING STORM INLET TO REMAIN
- ASPHALT PAVEMENT TO BE DEMOLISHED



KEY MAP

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 535-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED LANDSCAPE ARCHITECTURAL CONSULTANT CORY S. MILLER FLORIDA REGISTRATION NO. 1667890 STATE OF FLORIDA REGISTERED LANDSCAPE ARCHITECT CORY S. MILLER No. 1667890 PROFESSIONAL ENGINEER DATE:

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

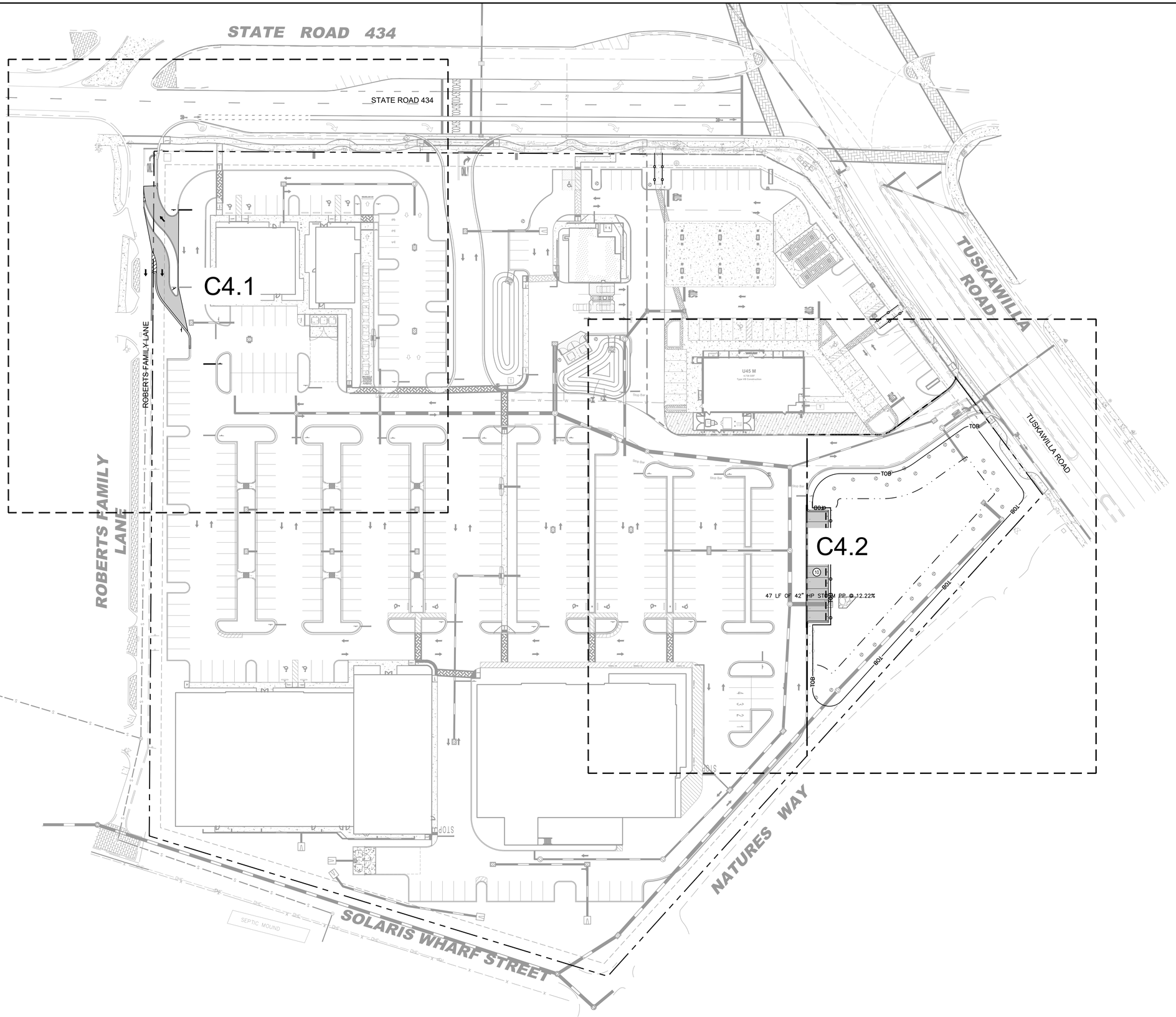
EXISTING CONDITIONS AND DEMOLITION PLAN

WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

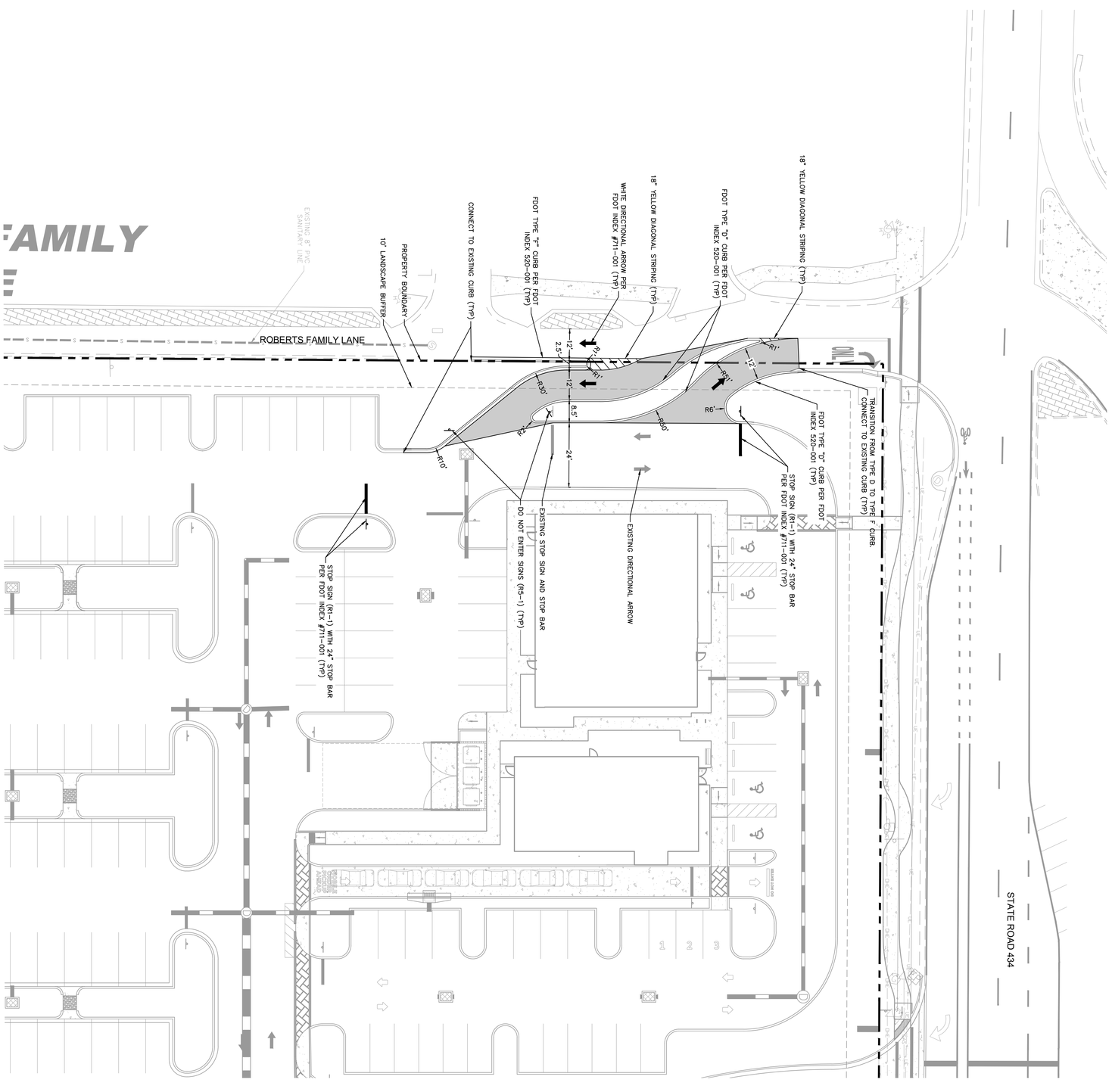
CITY OF WINTER SPRINGS FL

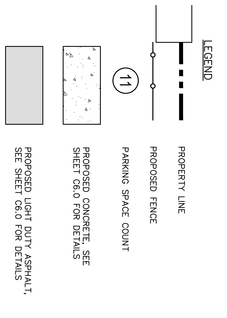
SHEET NUMBER C3.2

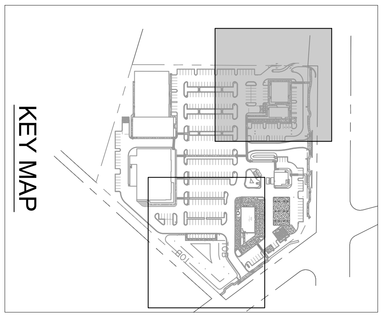
Plotted By:Bastiy, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:OVERALL SITE PLAN July 18, 2025 08:51:02am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C4.0 SITE PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

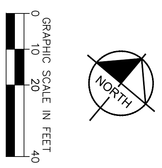

STATE ROAD 434
STATE ROAD 434
C4.1
C4.2
ROBERTS FAMILY LANE
ROBERTS FAMILY LANE
TUSKAWILLA ROAD
TUSKAWILLA ROAD
NATURES WAY
SOLARIS WHARF STREET
SEPTIC MOUND
47 LF OF 42" HP STORM PIPE @ 12.22%
U45 M
4,736 GSF
Type VB Construction
TOB
TOB
TOB
TOB
801
801
801

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:C4.1 July 18, 2025 08:51:09am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C4.0 SITE PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.









SHEET NUMBER C4.1

WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

CITY OF WINTER SPRINGS FL

SITE PLAN

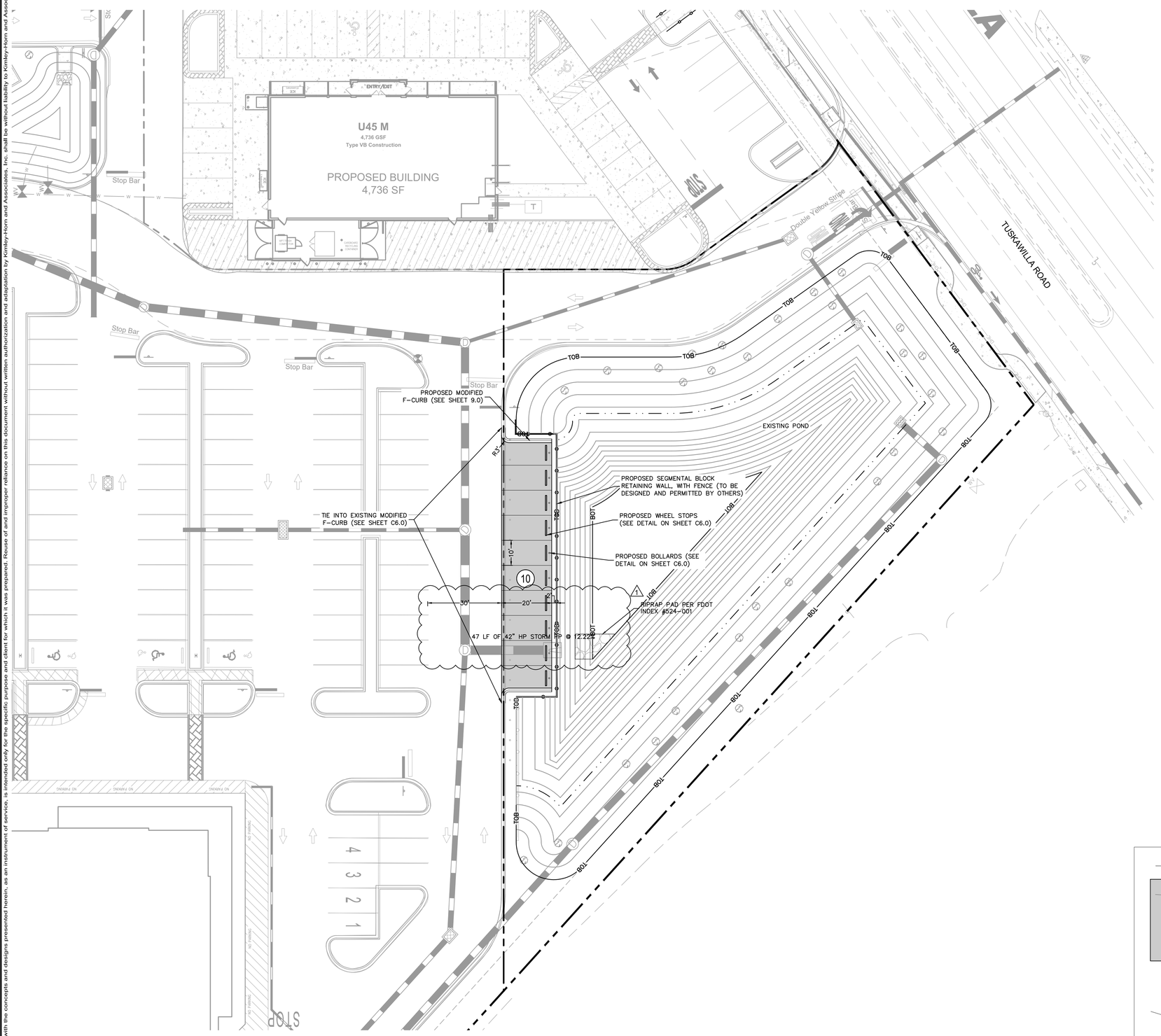
KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

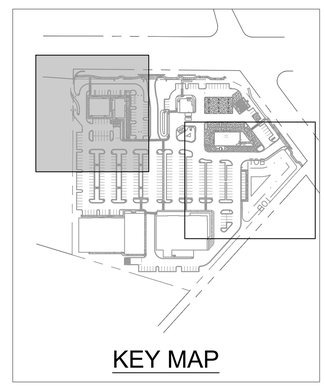
LICENSED PROFESSIONAL CORY N. SITLER LICENSE NUMBER 73930 STATE OF FLORIDA PROFESSIONAL ENGINEER
DATE:

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:C4.2 July 18, 2025 08:51:18am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONSTPlanSheets- Add Parking\C4.0 SITE PLAN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.





LEGEND

- PROPERTY LINE
- PROPOSED FENCE
- (11) PARKING SPACE COUNT
- PROPOSED CONCRETE, SEE SHEET C6.0 FOR DETAILS
- PROPOSED LIGHT DUTY ASPHALT, SEE SHEET C6.0 FOR DETAILS

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

OVERALL SITE DATA:

PROJECT AREA:	5,227 SQ. FT (0.12 AC)
ZONING:	T-5 URBAN CENTER ZONE
FUTURE LAND USE:	COMMERCIAL
PROPOSED USE:	COMMERCIAL

OVERALL IMPERVIOUS CALCULATIONS

MAXIMUM ALLOWABLE IMPERVIOUS AREA (100%): 0.12 AC

ASPHALT AREA:	0.05 AC (41.7%)
CONCRETE AREA:	0.02 AC (16.7%)
TOTAL IMPERVIOUS AREA:	0.07 AC (58.4%)
TOTAL OPEN SPACE:	0.05 AC (41.7%)

REQUIRED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
SIDE:	10 FT
REAR:	10 FT

PROVIDED YARD/LANDSCAPE SETBACKS

FRONT (TUSKAWILLA RD):	12 FT
SIDE:	0 FT
REAR:	0 FT

PROVIDED PARKING: 1

REGULAR SPACES (10'X20'):	10 SPACES
ADA SPACES (ALL VAN ACCESSIBLE, 0 REQUIRED):	0 SPACES
TOTAL PARKING SPACES PROVIDED:	10 SPACES

LANDSCAPING

ALL LANDSCAPING SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE

SITE SIGNAGE

PERMANENT SITE SIGNAGE WILL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS LAND DEVELOPMENT CODE.

REGULATORY SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH MUTCD (2009 ED.) AND FDOT DESIGN STANDARDS (LATEST ED.)

STORMWATER MANAGEMENT

STORMWATER RUNOFF FOR THE PROPOSED ONSITE IMPROVEMENTS WILL BE MANAGED THROUGH THE EXISTING WET DETENTION, DRY DETENTION, AND EXFILTRATION STORMWATER MANAGEMENT SYSTEM WHICH HAS BEEN DESIGNED TO MEET THE CITY OF WINTER SPRINGS CODE AND THE REQUIREMENTS OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SJRWMD).

100-YEAR FLOOD PLAIN

THE PROPERTY IS LOCATED OUTSIDE THE FLOODPLAIN WITHIN "ZONE X" – AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN – PER FEMA FIRM, MAP NUMBER 12117C0160F, REVISED ON SEPTEMBER 28, 2007.

PHASING

ALL SITE WORK AND INFRASTRUCTURE WILL BE COMPLETED IN ONE (1) PHASE

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

LUCAS N. SITLER — LICENSED PROFESSIONAL ENGINEER — STATE OF FLORIDA — 92662 — 07/18/2025

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

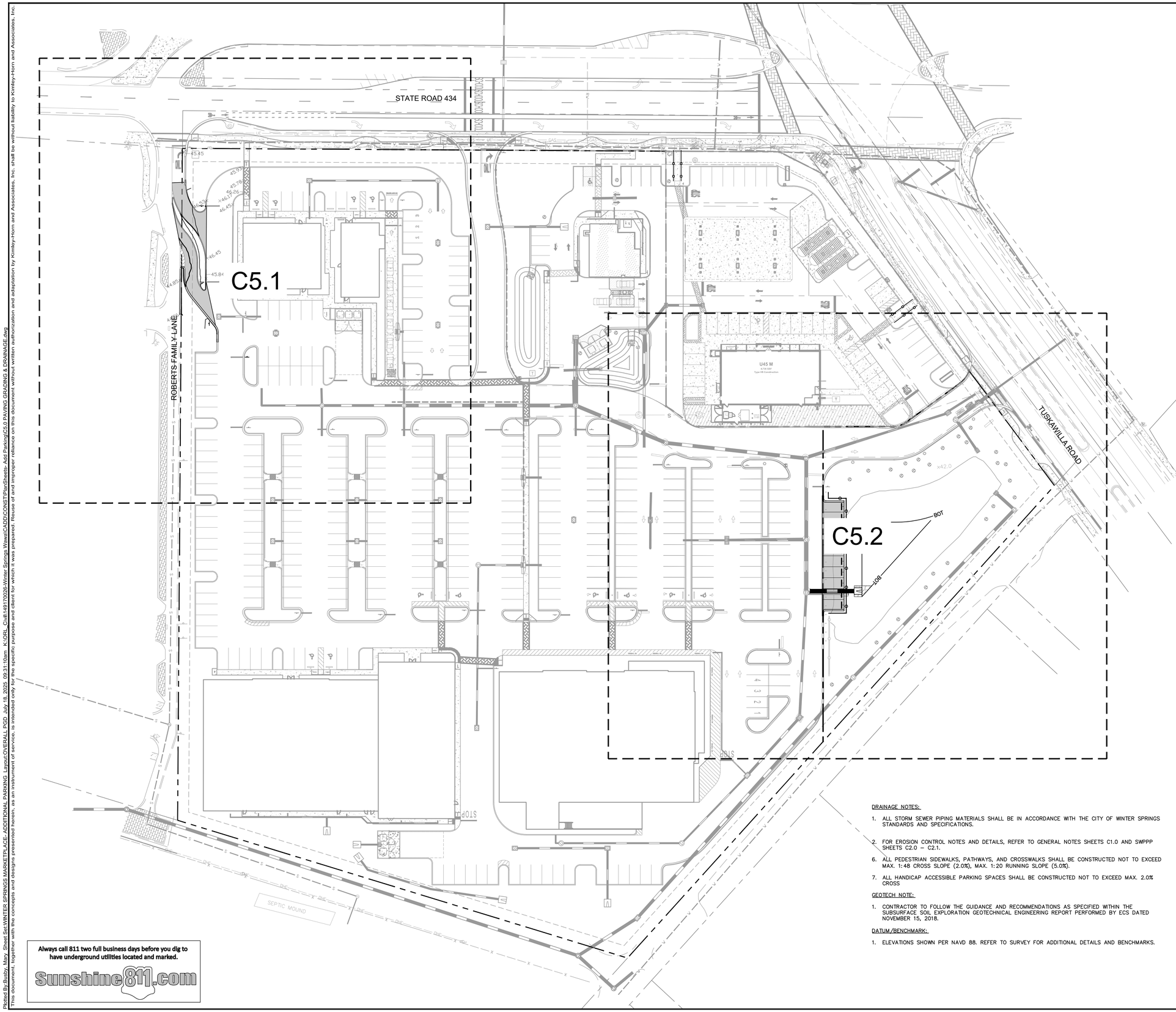
SITE PLAN

WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C4.2

Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE ADDITIONAL PARKING Layout:OVERALL PGD July 18, 2025 09:31:10am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets: Add Parking\C5.0 PAVING GRADING & DRAINAGE.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



LEGEND

- ×44.00 — EXISTING SPOT ELEVATION
- 93.50 — PROPOSED ELEVATION
- 94.00 / 93.50 — PROPOSED TOP OF CURB/ PAVEMENT ELEVATION
- PROPOSED MITERED END
- PROPERTY LINE
- 44 — EXISTING CONTOUR
- 44 — PROPOSED CONTOUR
- PROPOSED STORM PIPE
- PROPOSED STORM INLET
- PROPOSED STORM MANHOLE
- EXISTING STORM PIPE
- EXISTING GRATE INLET
- PROPOSED DIRECTION OF SURFACE WATER RUNOFF
- PROPOSED YARD DRAIN

DRAINAGE NOTES:

1. ALL STORM SEWER PIPING MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS.
2. FOR EROSION CONTROL NOTES AND DETAILS, REFER TO GENERAL NOTES SHEETS C1.0 AND SWPPP SHEETS C2.0 – C2.1.
6. ALL PEDESTRIAN SIDEWALKS, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 1:48 CROSS SLOPE (2.0%), MAX. 1:20 RUNNING SLOPE (5.0%).
7. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS DATED NOVEMBER 15, 2018.

DATUM/BENCHMARK:

1. ELEVATIONS SHOWN PER NAVD 88. REFER TO SURVEY FOR ADDITIONAL DETAILS AND BENCHMARKS.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED LANDSCAPE ARCHITECT CORY R. SITTLER LICENSE NO. LA0001811 STATE OF FLORIDA
LICENSED PROFESSIONAL ENGINEER CORY SITTLER LICENSE NO. 0073657 STATE OF FLORIDA PROFESSIONAL ENGINEER
DATE: 7/18/2025

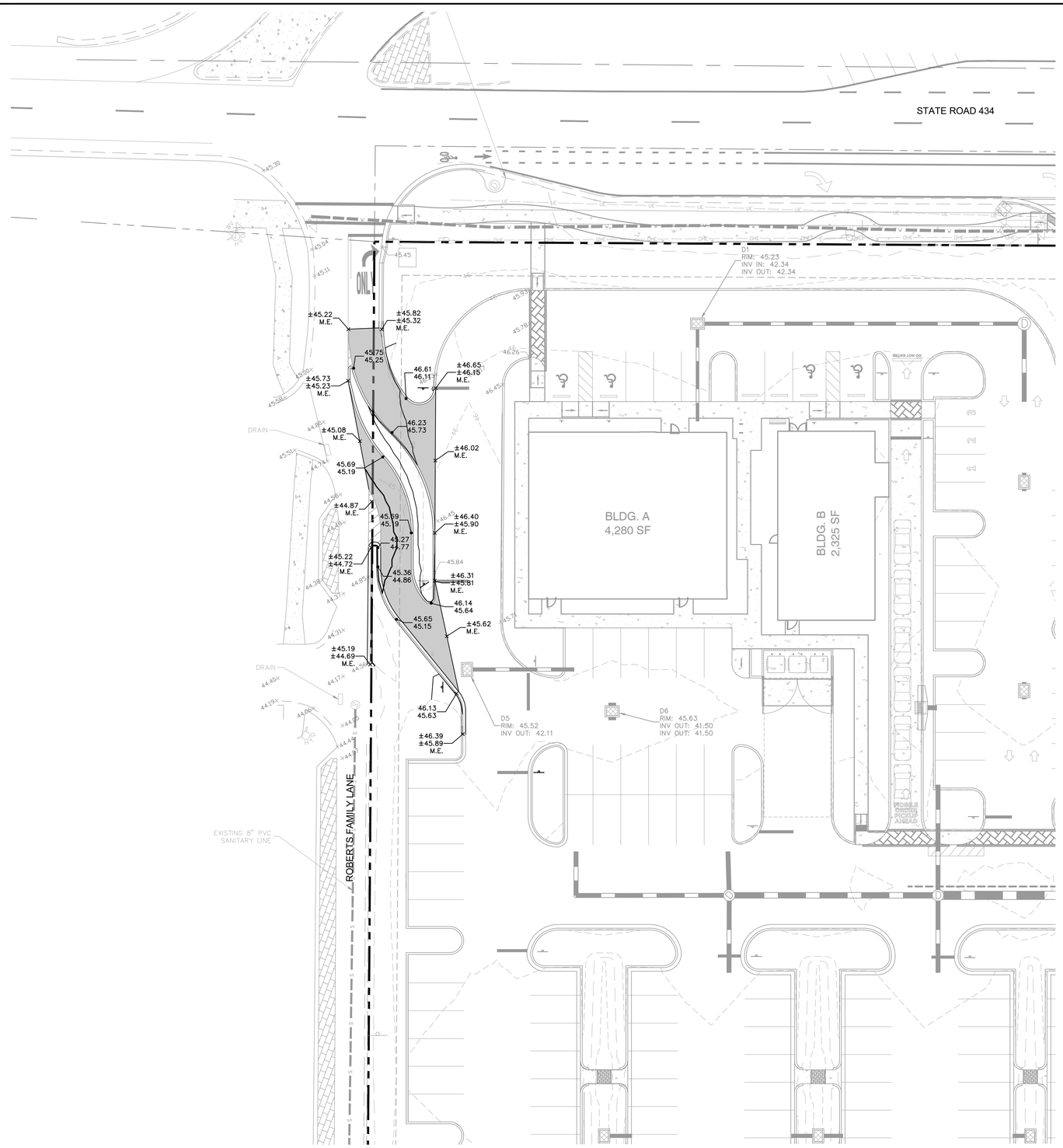
KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

OVERALL PAVING GRADING & DRAINAGE

WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

CITY OF WINTER SPRINGS FL

SHEET NUMBER
C5.0



NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

×44.00	EXISTING SPOT ELEVATION
93.50	PROPOSED ELEVATION
94.00 / 93.50	PROPOSED TOP OF CURB/ PAVEMENT ELEVATION
	PROPOSED MITERED END
	PROPERTY LINE
44	EXISTING CONTOUR
44	PROPOSED CONTOUR
	PROPOSED STORM PIPE
	PROPOSED STORM INLET
D	PROPOSED STORM MANHOLE
	EXISTING STORM PIPE
	EXISTING GRATE INLET
	PROPOSED DIRECTION OF SURFACE WATER RUNOFF
	PROPOSED YARD DRAIN

DRAINAGE NOTES:

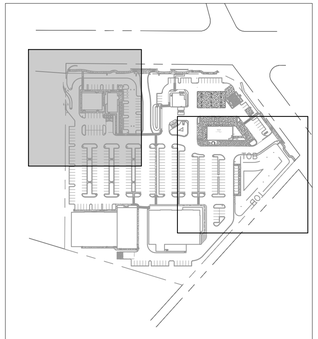
1. ALL STORM SEWER PIPING MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS.
2. FOR EROSION CONTROL NOTES AND DETAILS, REFER TO GENERAL NOTES SHEETS C1.0 AND SWPPP SHEETS C2.0 – C2.1.
6. ALL PEDESTRIAN SIDEWALKS, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 1:48 CROSS SLOPE (2.0%), MAX. 1:20 RUNNING SLOPE (5.0%).
7. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS DATED NOVEMBER 15, 2018.

DATUM/BENCHMARK:

1. ELEVATIONS SHOWN PER NAVD 88. REFER TO SURVEY FOR ADDITIONAL DETAILS AND BENCHMARKS.



KEY MAP

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	NMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED PROFESSIONAL ENGINEER
CORY N. SMELTZER
STATE OF FLORIDA
No. 93927
PROFESSIONAL ENGINEER
DATE:

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

PAVING GRADING & DRAINAGE PLAN

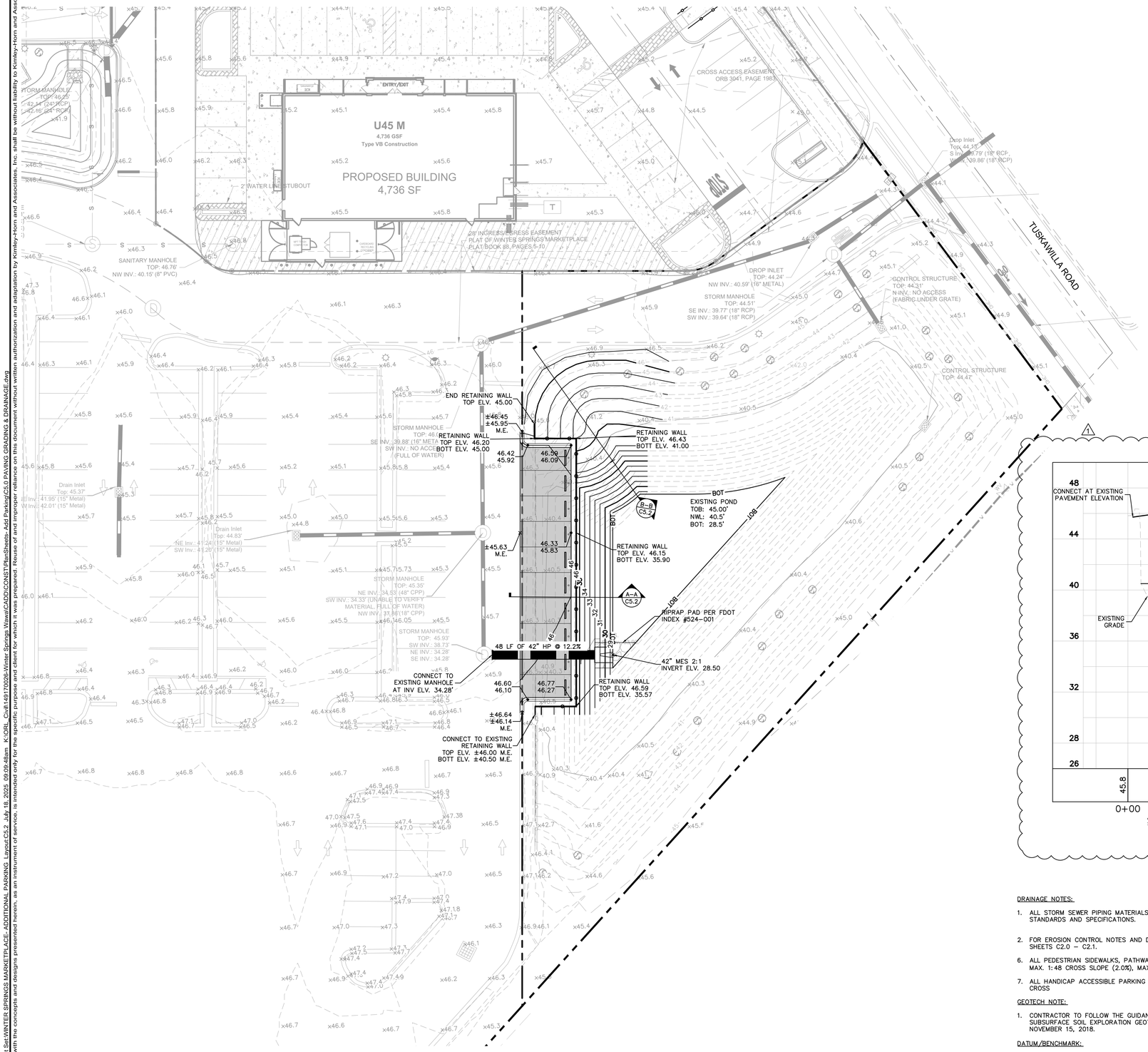
WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

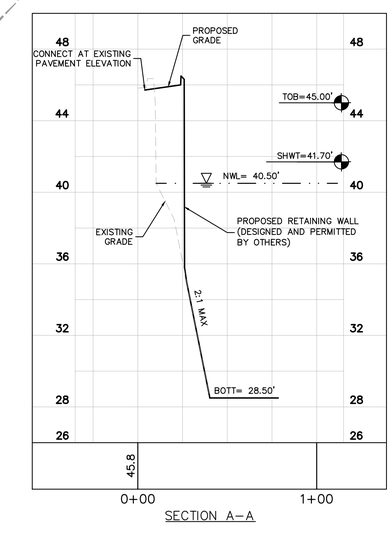
CITY OF WINTER SPRINGS FL

SHEET NUMBER
C5.1

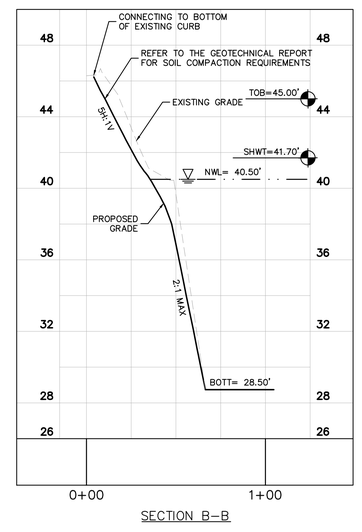
Plotted By:Busby, Mary Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:C5.1 July 18, 2025 09:09:41am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets- Add Parking\C5.0 PAVING GRADING & DRAINAGE.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Plotted By: Bastby, Mary Sheet Set: WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout: C5.2 July 18, 2025 09:09:48am K:\ORL_Civil\149170026-Winter Springs Wawa\CADD\CONST\PlanSheets\C5.0 PAVING GRADING & DRAINAGE.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.





SECTION A–A



SECTION B–B

DRAINAGE NOTES:

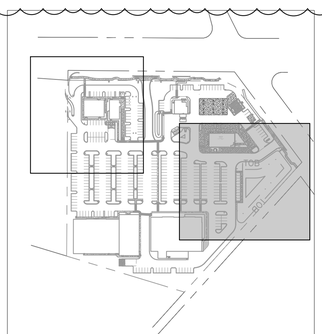
1. ALL STORM SEWER PIPING MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF WINTER SPRINGS STANDARDS AND SPECIFICATIONS.
2. FOR EROSION CONTROL NOTES AND DETAILS, REFER TO GENERAL NOTES SHEETS C1.0 AND SWPPP SHEETS C2.0 – C2.1.
6. ALL PEDESTRIAN SIDEWALKS, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 1:48 CROSS SLOPE (2.0%), MAX. 1:20 RUNNING SLOPE (5.0%).
7. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS

GEOTECH NOTE:

1. CONTRACTOR TO FOLLOW THE GUIDANCE AND RECOMMENDATIONS AS SPECIFIED WITHIN THE SUBSURFACE SOIL EXPLORATION GEOTECHNICAL ENGINEERING REPORT PERFORMED BY ECS DATED NOVEMBER 15, 2018.

DATUM/BENCHMARK:

1. ELEVATIONS SHOWN PER NAVD 88. REFER TO SURVEY FOR ADDITIONAL DETAILS AND BENCHMARKS.



KEY MAP

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

×44.00	EXISTING SPOT ELEVATION
93.50	PROPOSED ELEVATION
94.00 / 93.50	PROPOSED TOP OF CURB/ PAVEMENT ELEVATION
	PROPOSED MITERED END
	PROPERTY LINE
44	EXISTING CONTOUR
44	PROPOSED CONTOUR
	PROPOSED STORM PIPE
	PROPOSED STORM INLET
D	PROPOSED STORM MANHOLE
	EXISTING STORM PIPE
	EXISTING GRATE INLET
	PROPOSED DIRECTION OF SURFACE WATER RUNOFF
	PROPOSED YARD DRAIN

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	MMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

CONSTRUCTION RELEASE
NOT FOR CONSTRUCTION UNLESS SIGNED BY SITE ENGINEER
CORY O'NEILL
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CORY O'NEILL DATE

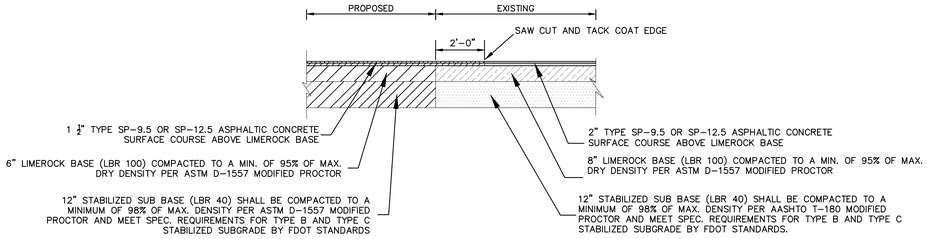
KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

PAVING GRADING & DRAINAGE PLAN

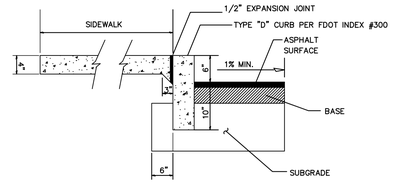
WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING

CITY OF WINTER SPRINGS FL

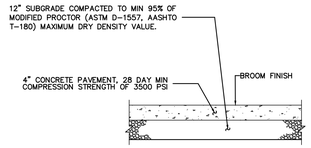
SHEET NUMBER
C5.2



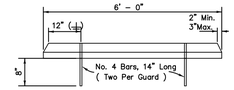
CONNECT TO EXISTING ASPHALT PAVEMENT SECTION
NTS



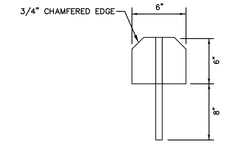
SIDEWALK INTEGRAL CURB DETAIL
NTS



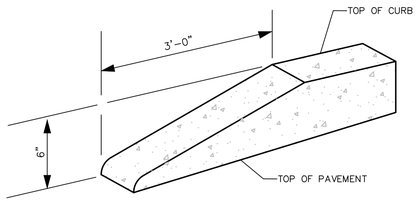
CONCRETE SIDEWALK DETAIL
NTS



WHEEL STOP FRONT VIEW
NTS

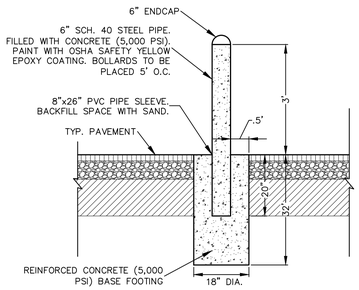


WHEEL STOP PROFILE (TYP.)
NTS

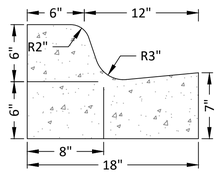


CURB TERMINUS TRANSITION DETAIL
NTS

NOTE:
ALL CURBS TO HAVE STANDARD 3' TRANSITION FROM 6" HEIGHT TO FLUSH (0" HEIGHT). A STANDARD TEMPLATE SHALL BE USED AT ALL LOCATIONS TO PROVIDE UNIFORM CURB TRANSITION THROUGHOUT THE PROJECT.



TYP. BOLLARD DETAIL
NTS



MODIFIED TYPE F CURB
NTS

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/18/25	NMB

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

LICENSED LANDSCAPE ARCHITECT CORY N. STELLER LICENSE NUMBER 6667 STATE OF FLORIDA * PROFESSIONAL ENGINEER CORY NOLAN STELLER 90667 * PROFESSIONAL LANDSCAPE ARCHITECT DATE

KHA PROJECT	149170026
DATE	07/18/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

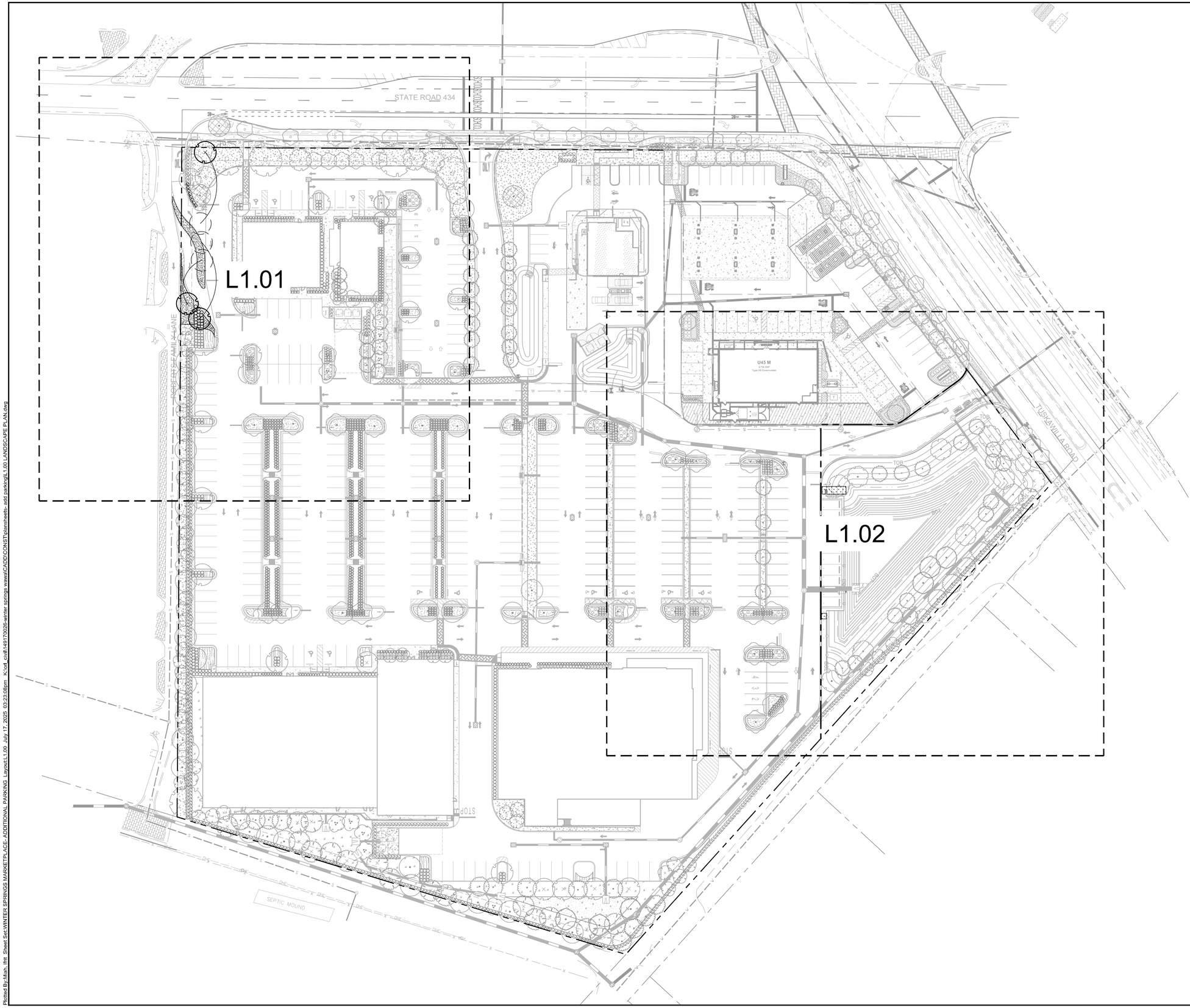
CONSTRUCTION DETAILS

WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING
CITY OF WINTER SPRINGS FL

SHEET NUMBER
C6.0

Plotted By: Busby, Mary Sheet Set: WINTER SPRINGS MARKETPLACE - ADDITIONAL PARKING Layout: C6.0 CONSTRUCTION DETAILS July 18, 2025 08:52:06am K:\ORL_Civil\149170026 - Winter Springs Wawa\CAD\CONST\PlanSheets- Add Parking\C6.0 DETAILS.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Plotted By:Matt Ihle Sheet Set:WINTER SPRINGS MARKETPLACE-ADDITIONAL PARKING Layout:L1.00 July 17, 2025 09:23:08pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\plansheets- add parking\L1.00 LANDSCAPE PLAN.dwg



No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	NMB

Kimley»Horn

6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 536-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT
MATTHEW TAYLOR FRANKO
LA6667292
STATE OF FLORIDA

THIS DRAWING HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MATTHEW TAYLOR FRANKO, PLA USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON any ELECTRONIC COPIES

Digitally signed by Matthew T Franko
DN: CN=Matthew T Franko, O=KIMLEY-HORN AND ASSOCIATES INC., C=US
Date: 2025-07-17 16:27:39-04'00'

DATE: 07/17/2025

KHA PROJECT 149170026
DATE 07/17/2025
SCALE AS SHOWN
DESIGNED BY ADL
DRAWN BY JCB
CHECKED BY CNS

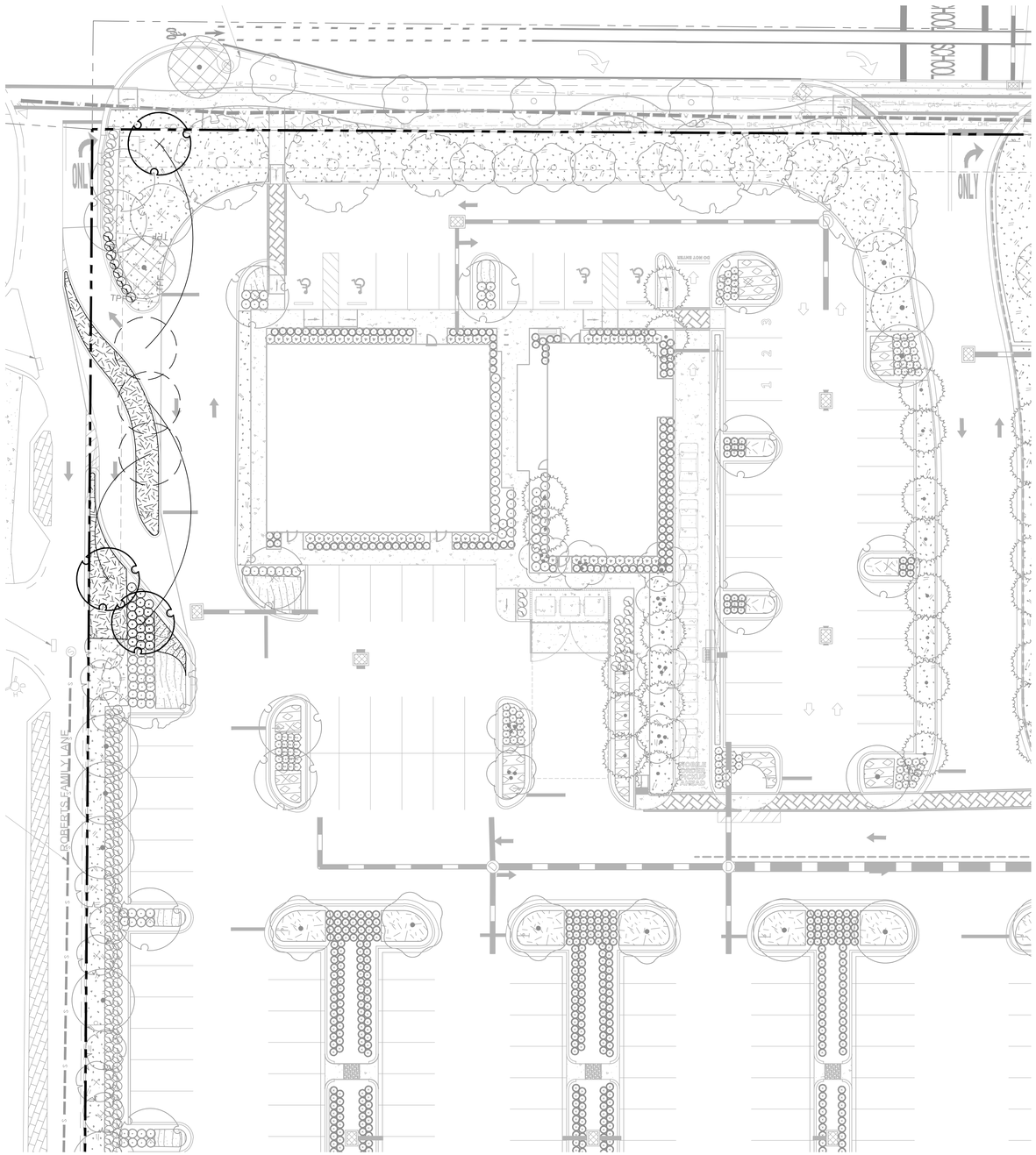
OVERALL LANDSCAPE PLAN

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L1.00

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com



PLANT SCHEDULE TURN ADJUST

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	CAL	SIZE
CANOPY TREE							
	AF	3	FLORIDA FLAME RED MAPLE STRAIGHT, SINGLE LEADER, FL#1, FULL	ACER RUBRUM 'FLORIDA FLAME'	FG	3" CAL MIN	14` HT., 4` SPR.

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	SPACING
SHRUBS							
	VD	20	DWARF WALTER`S VIBURNUM FULL	VIBURNUM OBOVATUM `DWARF WALTER`S`	7 GAL	36" OC	30" FULL
	VO	8	SWEET VIBURNUM FULL	VIBURNUM ODORATISSIMUM	7 GAL	36" OC	30" FULL
GROUND COVERS							
	BF	86	BULBINE FL #1, FULL	BULBINE FRUTESCENS	3 GAL	14" FULL	12" OC
SOD							
	SA	923 SF	FLORATAM ST, AUGUSTINE GRASS ROLLED TIGHT, 100% INSECT, WEED, DIEASE, DEBRIS FREE	STENOTAPHRUM SECUNDATUM 'FLORATAM'	SOD	-	-

MISC.	QTY	BOTANICAL/COMMON NAME	SPECIFICATIONS
MULCH	TBD	DESIGNER BROWN HARDWOOD MULCH	3" DEPTH MINIMUM, SHREDDED, FREE OF WEEDS/INVASIVE PLANT MATERIAL

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

LANDSCAPE NOTES:

1. ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY
2. ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.
3. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK, LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA 2) TO PROTECT ALL UTILITY LINES CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH O RESULT OF THE CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WO
9. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAI HEALTHY PLANT CONDITIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
11. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
12. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
13. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
14. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
15. ALL INVASIVE / EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
16. ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
17. TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS "ESTABLISHED" (AS APPROVED BY THE LANDSCAPE ARCHITECT).
18. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.
19. ALL PLANTED LANDSCAPE AREAS TO HAVE 3" DEEP DESIGNER BROWN HARDWOOD MULCH TO FULLY COVER DRIP IRRIGATION & AMENDED SOILS. REPAIR AS NEEDED DURING CONSTRUCTION. SUBMIT ALTERNATIVE MULCH SPECIFICATION FOR LANDSCAPE ARCHITECT APPROVAL.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	MMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT MATTHEW W TAYLOR FRANKO LA6667292 STATE OF FLORIDA

Digitally signed by Matthew T Franko
DN: CN=Matthew T Franko, oid=0.9.2342.19200300.100.1.1=matthew.franko@kimley-horn.com, O=KIMLEY-HORN AND ASSOCIATES, INC., C=US
Date: 2025.07.17 16:28:43-04'00'

THIS DRAWING HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MATTHEW FRANKO, PLA USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

DATE: 07/17/2025

KHA PROJECT	149170026
DATE	07/17/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

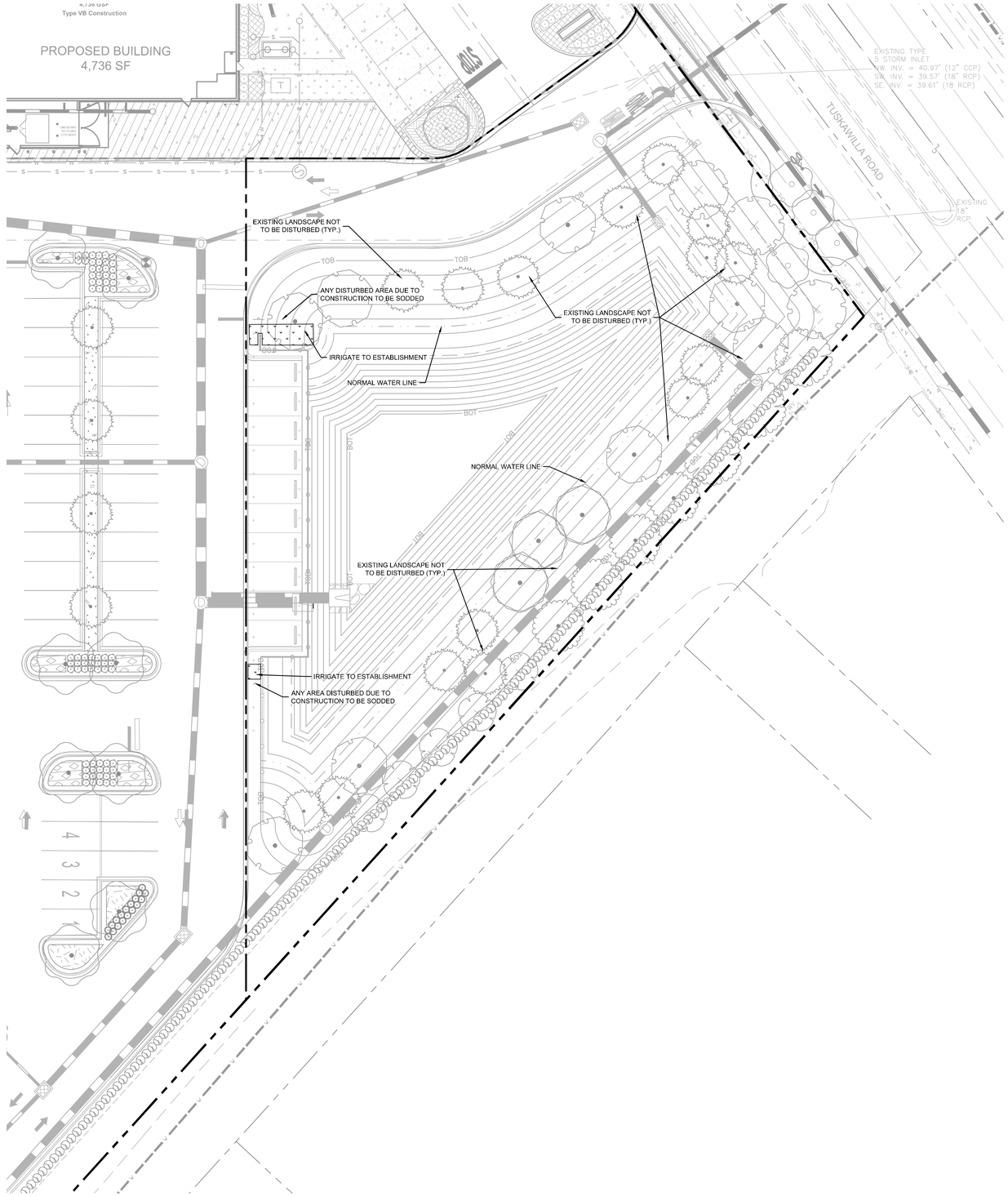
LANDSCAPE PLAN

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L1.01

Plotted By:Mah, Imt Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:L1.01 July 17, 2025 03:23:38pm K:\orl_civil\149170026-winter springs wawa\CAD\CONSTplansheets- add parking\L1.01 LANDSCAPE PLAN.dwg



PLANT SCHEDULE ADDITIONAL PARKING

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	SIZE	SPACING
SOD							
	PA	178 SF	ARGENTINE BAHIAGRASS ROLLED TIGHT, 100% INSECT, WEED, DIEASE, DEBRIS FREE	PASPALUM NOTATUM 'ARGENTINE'	SOD	-	-

MISC.	QTY	BOTANICAL/COMMON NAME	SPECIFICATIONS
MULCH	TBD	DESIGNER BROWN HARDWOOD MULCH	3" DEPTH MINIMUM, SHREDDED, FREE OF WEEDS/INVASIVE PLANT MATERIAL

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LANDSCAPE NOTES:

1. ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY
2. ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.
3. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHAL DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK, LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY O CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA 2) TO PROTECT ALL UTILITY LINES CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH C RESULT OF THE CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE W
9. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MA HEALTHY PLANT CONDITIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
11. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
12. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
13. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
14. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
15. ALL INVASIVE / EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
16. ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
17. TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS "ESTABLISHED" (AS APPROVED BY THE LANDSCAPE ARCHITECT).
18. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.
19. ALL PLANTED LANDSCAPE AREAS TO HAVE 3" DEEP DESIGNER BROWN HARDWOOD MULCH TO FULLY COVER DRIP IRRIGATION & AMENDED SOILS. REPAIR AS NEEDED DURING CONSTRUCTION. SUBMIT ALTERNATIVE MULCH SPECIFICATION FOR LANDSCAPE ARCHITECT APPROVAL.

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	NMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT MATTHEW TAYLOR FRANKS LA6667292 STATE OF FLORIDA

THIS DRAWING HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MATTHEW TAYLOR FRANKS, PLA USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Digitally signed by Matthew T Franks
DN: CN=Matthew T Franks, oid=0.9.2342.19200300.100.1.1=AO1410D000001936AQ0L0000026BF, OU=KIMLEY-HORN AND ASSOCIATES INC., C=US
Date: 2025.07.17 16:27:41-04'00'

DATE 07/17/2025

KHA PROJECT	149170026
DATE	07/17/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

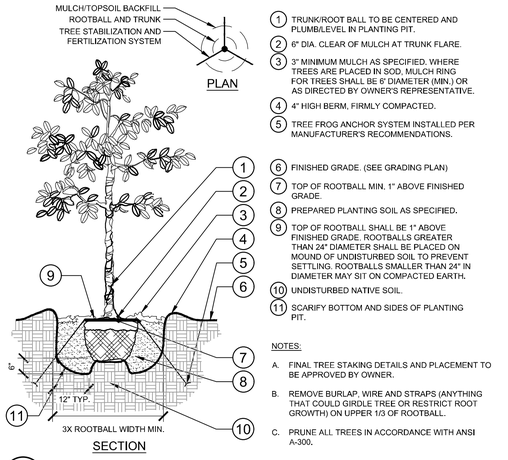
LANDSCAPE PLAN

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L1.02

Plotted By:Mah, Jiht Sheet Set:WINTER SPRINGS (MARKETPLACE- ADDITIONAL PARKING Layout:L1.02 July 17, 2025 03:23:21pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\plansheets- add parking\L1.01 LANDSCAPE PLAN.dwg



1. TRUNK/ROOT BALL TO BE CENTERED AND PLUMB/LEVEL IN PLANTING PIT.
2. 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
3. 3" MINIMUM MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 6' DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
4. 4" HIGH BERM, FIRMLY COMPACTED.
5. TREE FROG ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. FINISHED GRADE. (SEE GRADING PLAN)
7. TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE.
8. PREPARED PLANTING SOIL AS SPECIFIED.
9. TOP OF ROOTBALL SHALL BE 1" ABOVE FINISHED GRADE. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
10. UNDISTURBED NATIVE SOIL.
11. SCARIFY BOTTOM AND SIDES OF PLANTING PIT.

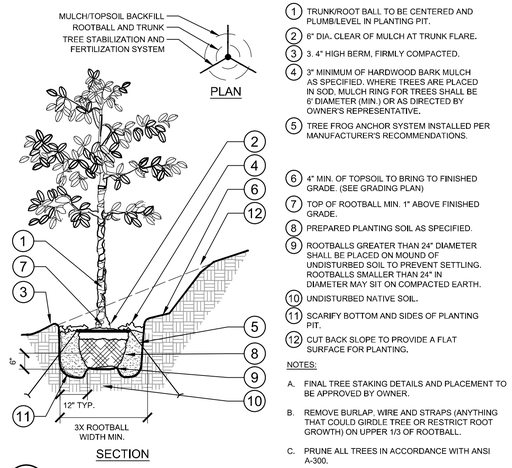
NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.

C. PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-300.

1 L1.50 TREE PLANTING
SECTION / PLAN NTS



1. TRUNK/ROOT BALL TO BE CENTERED AND PLUMB/LEVEL IN PLANTING PIT.
2. 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
3. 3. 4" HIGH BERM, FIRMLY COMPACTED.
4. 3" MINIMUM OF HARDWOOD BARK MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 6' DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
5. TREE FROG ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
6. 4" MIN. OF TOPSOIL TO BRING TO FINISHED GRADE. (SEE GRADING PLAN)
7. TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE.
8. PREPARED PLANTING SOIL AS SPECIFIED.
9. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
10. UNDISTURBED NATIVE SOIL.
11. SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
12. CUT BACK SLOPE TO PROVIDE A FLAT SURFACE FOR PLANTING.

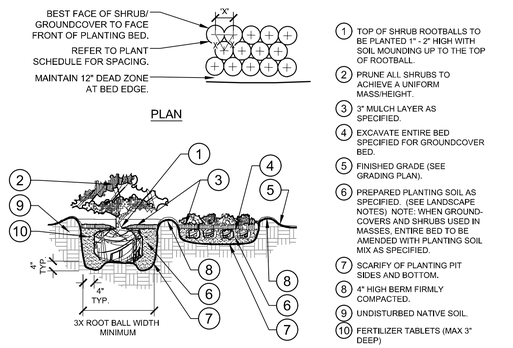
NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.

C. PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-300.

2 L1.50 TREE PLANTING ON A SLOPE
SECTION / PLAN NTS



1. TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
2. PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.
3. 3" MULCH LAYER AS SPECIFIED.
4. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
5. FINISHED GRADE (SEE GRADING PLAN).
6. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES) NOTE: WHEN GROUND-COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
7. SCARIFY OF PLANTING PIT SIDES AND BOTTOM.
8. 4" HIGH BERM FIRMLY COMPACTED.
9. UNDISTURBED NATIVE SOIL.
10. FERTILIZER TABLETS (MAX 3" DEEP)

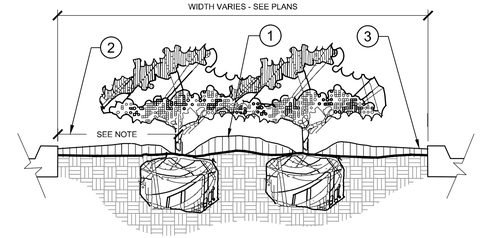
NOTES:

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

B. WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.

C. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

3 L1.50 SHRUB/GROUNDCOVER PLANTING
SECTION / PLAN NTS



1. CROWN ISLANDS @ 5:1 SLOPES (OR AS SPECIFIED ON THE LANDSCAPE PLANS).
2. CLEAR ZONE: 36" MIN. FROM BACK OF CURB TO CENTER OF NEAREST SHRUB. CLEAR ZONE SHALL CONTAIN 3" CONTINUOUS MULCH OR TURF, SEE PLANS.
3. 2" MIN VERTICAL CLEARANCE, TOP OF CURB TO TOP OF MULCH.

NOTES:

A. EXCAVATE A CONTINUOUS 24" DEEP PIT (FROM TOP OF CURB) FOR ENTIRE LENGTH AND WIDTH OF ISLAND & BACKFILL WITH APPROVED PLANTING MIX.

B. PROTECT AND RETAIN ALL CURBS AND BASE. COMPACTED SUBGRADE TO REMAIN FOR STRUCTURAL SUPPORT OF CURB SYSTEM (TYP).

C. ALL ISLANDS SHALL UTILIZE POOR DRAINAGE DETAIL WHEN PERCOLATION RATES ARE 2" PER HOUR OR LESS.

4 L1.50 PLANTED PARKING LOT ISLANDS/MEDIANS
SECTION NTS

1. TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
2. PRUNE SHRUBS AS DIRECTED BY OWNER'S REPRESENTATIVE.
3. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE SHRUBS ARE PLACED IN MASSES, MULCH SHALL BE SPREAD IN A CONTINUOUS BED.
4. SOIL BERM TO HOLD WATER, TOP OF PLANTING PIT 'BERM' TO BE LEVEL ACROSS PIT. SLOPE DOWNHILL PORTION OF BERM AS REQUIRED TO MEET EXISTING GRADE. MULCH OVER EXPOSED TOPSOIL.
5. FINISHED GRADE (SEE GRADING PLAN)
6. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES).
7. SCARIFY SIDES AND BOTTOM OF PLANTING PIT.
8. FERTILIZER TABLETS (MAX 3" DEEP).
9. UNDISTURBED NATIVE SOIL

NOTES:

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

B. WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.

C. ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

5 L1.50 SHRUB/GROUNDCOVER PLANTING ON A SLOPE
SECTION NTS

NOTES:

1. CLEAR ZONE: 36" MIN. FROM BUILDING TO CENTER OF NEAREST SHRUB.
2. INSTALL SPECIFIED MULCH: 24" MIN, FROM BUILDING. SPECIFIED MULCH TO BE INSTALLED AT A DEPTH OF 3" (MIN.)

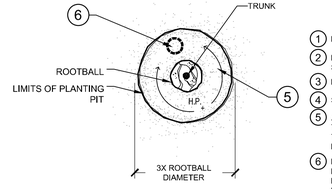
6 L1.50 PLANTINGS ADJACENT TO BUILDINGS
SECTION NTS

1. INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 3" DEEP. NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE.
2. CURB / PARKING LOT EDGE.

7 L1.50 PARKING SPACE/CURB PLANTING
SECTION NTS

1. FIRE HYDRANT.
2. NO PLANT EXCEED: MATURE HEIGHT MATERIAL SHALL BE PLACED WITHIN SHOWN RADIUS OF ALL PROPOSED OR EXISTING FIRE HYDRANTS. CONTRACTOR SHALL ADJUST PLANT MATERIAL SO THAT NO CONFLICTS WITH FIRE HYDRANTS OCCUR ON SITE.
3. FRONT OF HYDRANT (TOWARD CURB)

8 L1.50 SHRUB PLANTING AT FIRE HYDRANT
SECTION / PLAN NTS



1. FINISH GRADE (SEE GRADING PLANS).
2. BACKFILL WITH PREPARED PLANTING SOIL MIX AS SPECIFIED.
3. FILTER CLOTH, MIRAFI 500X OR BETTER.
4. SLOPE BOTTOM TO DRAIN.
5. AUGURED HOLE Ø ±18" PENETRATE THROUGH OCCLUDING LAYER TO WATER TABLE OR TO A DEPTH OF 7' TO ASSURE PROPER PERCOLATION.
6. BACKFILL WITH 1/2" - 3/4" GRAVEL TO REQUIRED DEPTH THROUGH OCCLUDING LAYER TO ASSURE PROPER PERCOLATION.
7. WATER TABLE. (DEPTH VARIES)
8. UNDISTURBED NATIVE SOIL.
9. SET ROOTBALL ON UNDISTURBED STABLE SUBSOIL SO THAT TOP OF ROOT BALL IS 1" ABOVE FINISHED GRADE.

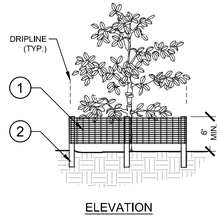
NOTES:

A. THIS DETAIL SHALL BE IMPLEMENTED WHERE PERCOLATION RATES ARE 2" PER HOUR OR LESS.

B. CONTRACTOR TO PERFORM PERCOLATION TEST AS REQUIRED. AND NOTIFY OWNER/LANDSCAPE ARCHITECT.

C. SEE TYPICAL TREE PLANTING DETAIL THIS SHEET FOR PLANT STAKING.

9 L1.50 POOR DRAINAGE CONDITION
SECTION / PLAN NTS



1. 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
2. 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:

A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.

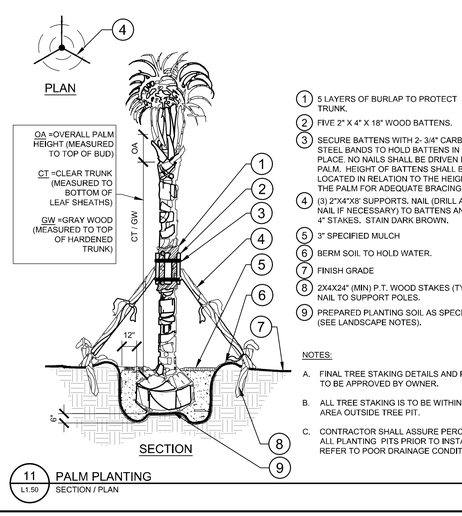
B. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/3 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 6' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.

C. SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).

D. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

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

10 L1.50 TREE PROTECTION FENCING
ELEVATION / PLAN NTS



1. 5 LAYERS OF BURLAP TO PROTECT TRUNK.
2. FIVE 2" X 4" X 18" WOOD BATTENS.
3. SECURE BATTENS WITH 2- 3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED IN RELATION TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
4. (3) 2"X4"X8' SUPPORTS, NAIL (DRILL AN NAIL IF NECESSARY) TO BATTENS AND 2" 4" STAKES. STAIN DARK BROWN.
5. 3" SPECIFIED MULCH
6. BERM SOIL TO HOLD WATER.
7. FINISH GRADE
8. 2X4X24" (MIN) P.T. WOOD STAKES (TYP.) NAIL TO SUPPORT POLES.
9. PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES).

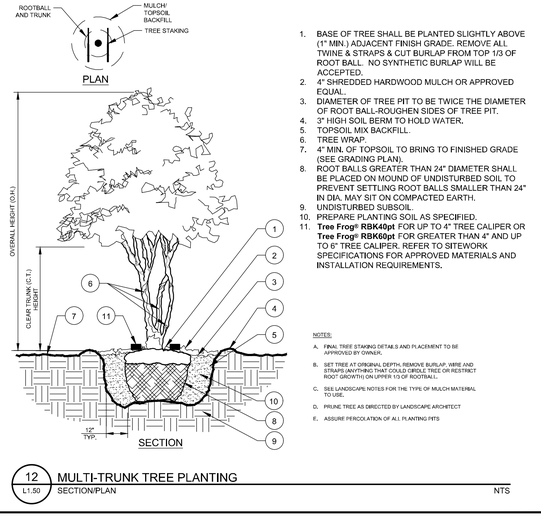
NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. ALL TREE STAKING IS TO BE WITHIN MULCH BED AREA OUTSIDE TREE PIT.

C. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION. REFER TO POOR DRAINAGE CONDITION DETAIL.

11 L1.50 PALM PLANTING
SECTION / PLAN NTS



1. BASE OF TREE SHALL BE PLANTED SLIGHTLY ABOVE (1" MIN.) ADJACENT FINISH GRADE. REMOVE ALL TWINE & STRAPS & CUT BURLAP FROM TOP 1/3 OF ROOT BALL. NO SYNTHETIC BURLAP WILL BE ACCEPTED.
2. 4" SHREDDED HARDWOOD MULCH OR APPROVED EQUAL.
3. DIAMETER OF TREE PIT TO BE TWICE THE DIAMETER OF ROOT BALL-ROUGHEN SIDES OF TREE PIT.
4. 3" HIGH SOIL BERM TO HOLD WATER.
5. TOPSOIL MIX BACKFILL.
6. TREE WRAP.
7. 4" MIN. OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).
8. ROOT BALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING ROOT BALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.
9. UNDISTURBED SUBSOIL.
10. PREPARE PLANTING SOIL AS SPECIFIED.
11. **Tree Frog® RBK40pt** FOR UP TO 4" TREE CALIPER OR **Tree Frog® RBK60pt** FOR GREATER THAN 4" AND UP TO 6" TREE CALIPER. REFER TO SITEWORK SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION REQUIREMENTS.

NOTES:

A. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

B. SET TREE AT ORIGINAL DEPTH. REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.

C. SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

D. PRUNE TREE AS DIRECTED BY LANDSCAPE ARCHITECT

E. ASSURE PERCOLATION OF ALL PLANTING PITS

12 L1.50 MULTI-TRUNK TREE PLANTING
SECTION/PLAN NTS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	NMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT MATTHEW TAYLOR FRANKS LA6667292 STATE OF FLORIDA

Digitally signed by Matthew T Franks
DN: CN=Matthew T Franks, E=Matthew.Franks@kimley-horn.com, OU=Matthew T Franks, O=KIMLEY-HORN AND ASSOCIATES INC., C=US
Date: 2025.07.17 16:26:52 -04'00'

DATE 07/17/2025

THIS DRAWING AND SPECIFICATION, AS AN INSTRUMENT OF SERVICE, IS AND SHALL REMAIN THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES INC. ALL RIGHTS RESERVED. THIS DRAWING AND SPECIFICATION MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN AUTHORIZATION OF KIMLEY-HORN AND ASSOCIATES INC. IN THE EVENT OF UNAUTHORIZED REUSE, THE USER AGREES TO INDEMNIFY AND HOLD HARMLESS KIMLEY-HORN AND ASSOCIATES INC. FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

KHA PROJECT	149170026
DATE	07/17/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

LANDSCAPE DETAILS

WINTER SPRINGS
WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L1.50

Plotted By:Mah, Itm Sheet Set:WINTER SPRINGS MARKETPLACE ADDITIONAL PARKING Layout:L1.50 July 17, 2025 03:23:48pm K:\cvl_civil\149170026-winter springs wawa\CAD\CONST\plansheets and parking\L1.00 LANDSCAPE PLAN.dwg

GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS SPECIFIED HEREIN.

2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.

3. THE CONTRACTOR SHALL SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FDOT DESIGN STANDARDS, INDEX 600. IF A DIRECT APPLICATION OF INDEX 600 IS PROPOSED, THE CONTRACTOR SHALL SUBMIT IN WRITING A STATEMENT INDICATING THE STANDARD INDEX AND PAGE NUMBER NO LESS THAN 10 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION. WHEN A DIRECT APPLICATION OF FDOT STANDARD INDEX 600 IS NOT ACCEPTABLE A PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A FLORIDA PROFESSIONAL ENGINEER WHO HAS SUCCESSFULLY COMPLETED ADVANCED TRAINING IN MAINTENANCE OF TRAFFIC, AS DEFINED BY FDOT FOR APPROVAL BY THE COUNTY ENGINEER'S REPRESENTATIVE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNER OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR: REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA; LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION; THE SAFETY AND PROTECTION THEREOF; REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

C. PROTECTION OF EXISTING PLANT MATERIALS

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC... THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF THREE HUNDRED DOLLARS ($300) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.

D. MATERIALS

1. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

2. PLANT MATERIALS

a. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.

b. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

c. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

1. CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW:

2. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

a. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND HAVE A PH BETWEEN 5.5 AND 7.0.

b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.

c. SOIL AMENDMENT (IF NEEDED PER SOIL TESTING) THE CONTRACTOR SHALL FURNISH AND INSTALL A 3" LAYER OF AMENDED PLANTING SOIL IN ALL PLANTING BEDS, EXCLUDING SOD AREAS. THE AMENDED PLANTING SOIL SHALL BE COMPOSED OF 35% FERTICOMP 20% FLORIDA PEAT 45% SANDY LOAM. THE AMENDED PLANTING SOIL SHALL BE MIXED INTO THE BEDS UPON PLANTING.

2. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING (SUBMIT SOIL TESTING RESULTS AFTER INCORPORATING AMENDMENTS TO DEMNSTRATE COMPLIANCE WITH SOIL QUALITY REQUIREMENTS .

F. WATER

1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

* WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

G. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

* FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE), MULCH SHALL BE "FLORIMULCH," EUCALYPTUS MULCH, OR SIMILAR SUSTAINABLY HARVESTED MULCH UNLESS SPECIFIED OTHERWISE.

2. PROVIDE A THREE (3) INCH MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT (6' MINIMUM) PLANTED UNDER THIS CONTRACT.

I. DIGGING AND HANDLING

1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.

2. BALLED AND BURLAPPED (B&B), AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.

4. PROTECTION OF PALMS: ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.

5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.

J. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.

4. RPG= "ROOTS PLUS GROWER" CONTAINER PRODUCTS SHALL BE USED WHERE SPECIFIED.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

N. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.

2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.

3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

O. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.

4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ONSITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.

6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS, COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.

7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.

8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.

10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.

12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET, PACK LIGHTLY WITH FEET, ADD MORE WET SOIL MIXTURE, DO NOT COVER TOP OF BALL WITH SOIL MIXTURE. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.

13. TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST, IN ACCORDANCE WITH ANSI A-300.

14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOW ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.

16. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

P. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.

2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

3. PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

4. SODDING

a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.

b. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.

c. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.

5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

6. LAWN MAINTENANCE

a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).

b. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP

UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

R. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

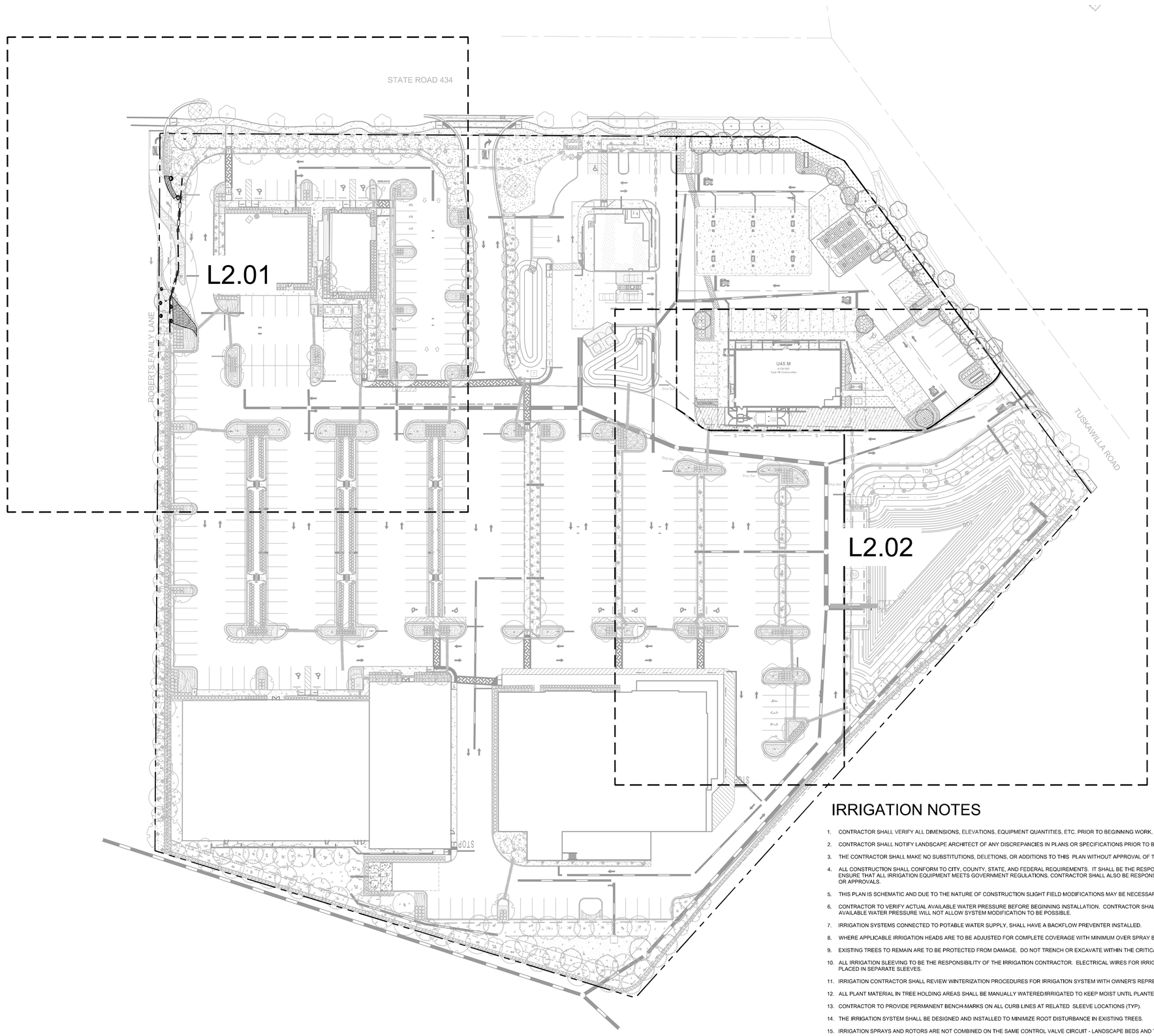
S. FINAL INSPECTION AND ACCEPTANCE OF WORK

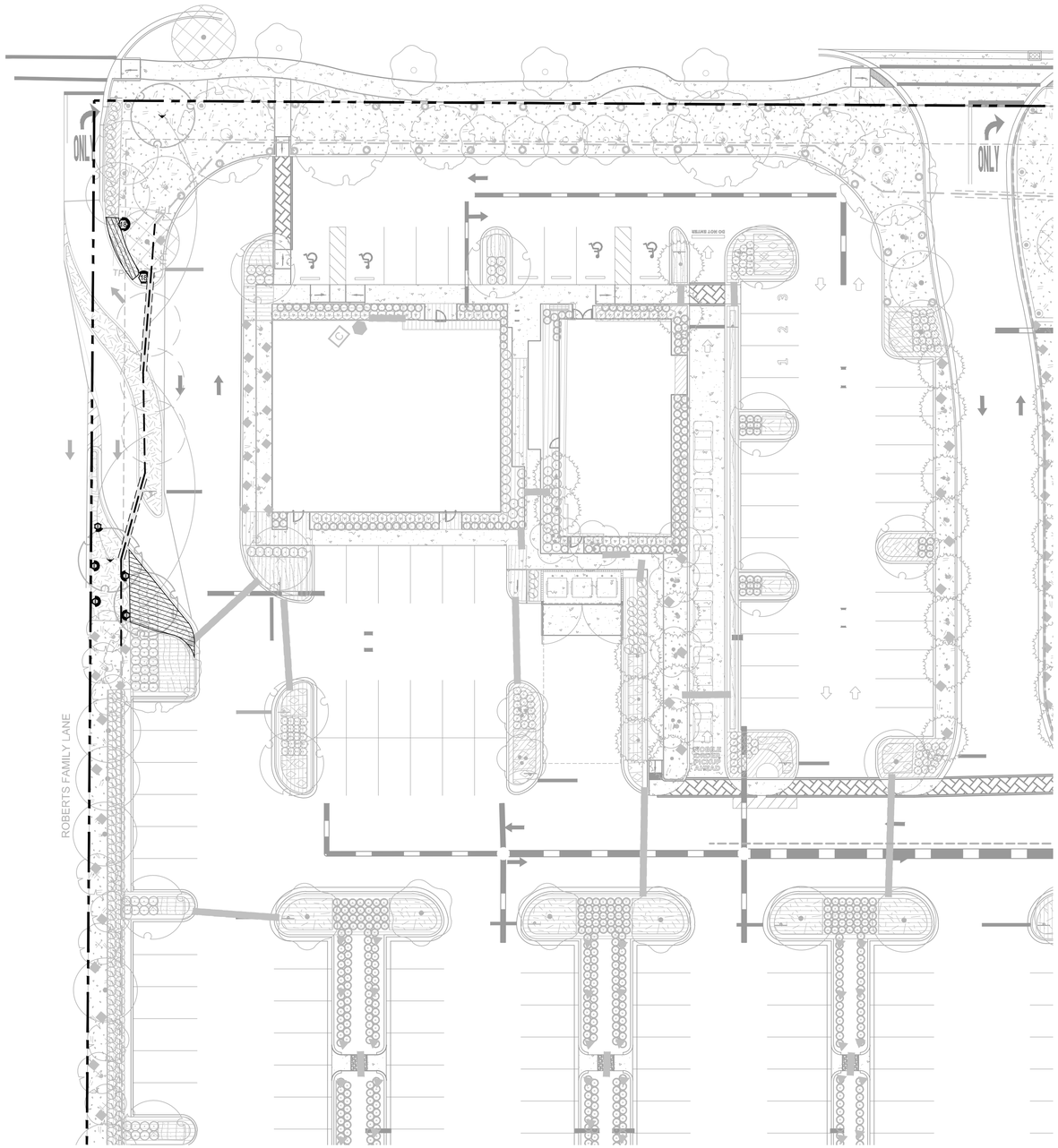
FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

T. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.

2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PL


STATE ROAD 434
ROBERTS FAMILY LANE
TUSKAWILLA ROAD
L2.01
L2.02
U45 M
4.0% SSP
Type RE Construction
TOB
STOP
Stop Bar
Stop Bar
Stop Bar



GRAPHIC SCALE IN FEET
0 10 20 40

IRRIGATION SCHEDULE TURN MODIFICATION

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
14 ADJ 14 F	RAIN BIRD R-VAN14 RD-06-S-P45-F TURF ROTARY, 8FT.-14FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 TURF SPRAY BODY ON 6IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR, FLOW-SHIELD TECHNOLOGY, 1/2IN. NPT FEMALE THREADED INLET.	5	30
18 ADJ 18 F	RAIN BIRD R-VAN18 RD-06-S-P45-F TURF ROTARY, 13FT.-18FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 TURF SPRAY BODY ON 6IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR, FLOW-SHIELD TECHNOLOGY, 1/2IN. NPT FEMALE THREADED INLET.	2	30
1401 1402 1404	RAIN BIRD 1806-SAM-NP-1400 FLOOD FLOOD BUBBLER 6IN. POPUP WITH CHECK VALVE, AND NON-POTABLE PURPLE CAP. INSTALL W/ PA-80 ADAPTER.	2	20

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	AREA TO RECEIVE DRIPLINE RAIN BIRD XFDEP-09-12 XFDE ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE. 0.9 GPH EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. UV & KINK RESISTANT. USE XF INSERT FITTINGS.	345.2 LF

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	IRRIGATION MAINLINE: PVC SCHEDULE 40	132.5 LF
	PIPE SLEEVE: PVC SCHEDULE 40 - MAINLINE	57.0 LF

FLOW TOTALS TURN MODIFICATION

Area for Dripline:	5.2
Bubbler:	0.5
Turf Rotary:	3.3
Total:	9.0 GPM

NOTE: IF SOURCE TO BE RECLAIMED (NON-POTABLE) ALL EQUIPMENT TO BE INDICATED AS SUCH AND PURPLE IN COLOR. FOLLOW ALL LOCAL JURISDICTION STANDARDS FOR RECLAIMED IRRIGATION SYSTEMS.

CONTRACTOR TO PERMANENTLY MARK ALL SLEEVE CROSSINGS AT ASSOCIATED TOPS OF CURB (TYP).

CONTRACTOR TO ADJUST ALL OVERHEAD SPRAY HEADS TO ENSURE MINIMAL OVER-SPRAY OCCURS ON ANY HARDSCAPE SURFACE (TYP).

COORDINATE/DISCUSS PROJECT LIMITS WITH GENERAL CONTRACTOR TO ENSURE ALL IRRIGATION EQUIPMENT IS INSTALLED WITHIN PROJECT AREA.

NOT ALL NECESSARY SLEEVES SHOWN. INSTALL WHERE NECESSARY AND COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND FACILITATE THE CONSTRUCTION PROCESS.

CONTRACTOR RESPONSIBLE FOR EVALUATING/ CONNECTING TO EXISTING SYSTEM AND ZONING (POTENTIALLY ADDING NEW VALVES) AS NECESSARY. FIELD LOCATE ALL EQUIPMENT NEEDED FOR IRRIGATION MODIFICATION/EXPANSION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE P.O.C FOR INCLUSION INTO THE SYSTEM (INCLUDES ALL NECESSARY BORING, TRENCHING, ETC.)

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	NMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT
MATTHEW TAYLOR FRANKO
LA6667292
STATE OF FLORIDA

Digitally signed by Matthew T Franko
DN: CN=Matthew T Franko, C=US, E=matthew.franko@kimley-horn.com, O=KIMLEY-HORN AND ASSOCIATES INC., OU=LANDSCAPE ARCHITECTURE, 0.9.2342.19200300.100.1.1=A01410D000001936A52013800026185F
Date: 2025.07.17 17:17:48-04'00'

THIS DRAWING HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MATTHEW TAYLOR FRANKO, PLA USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

LICENSED PROFESSIONAL
DATE: 07/17/2025

KHA PROJECT	149170026
DATE	07/17/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

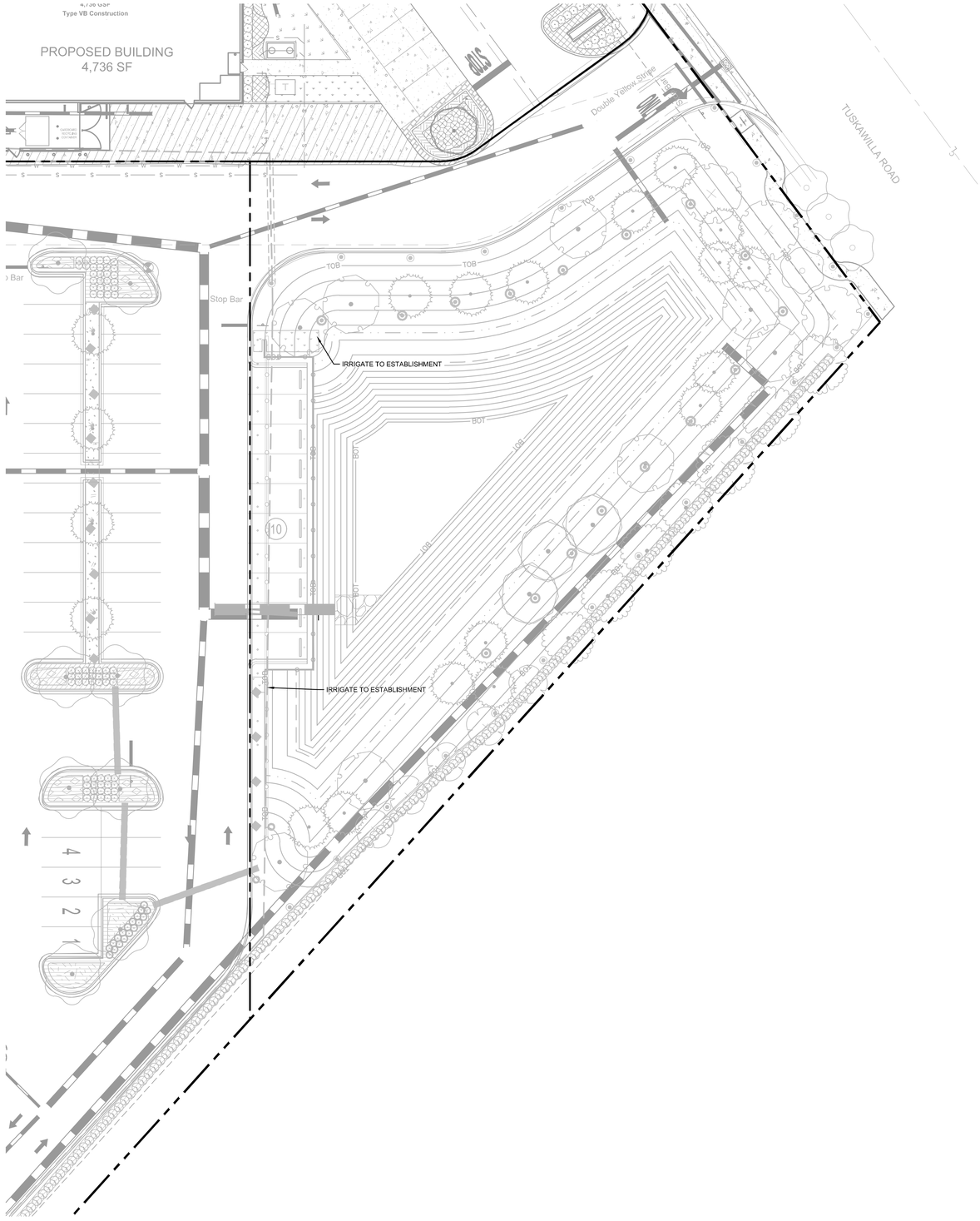
IRRIGATION PLAN

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L2.01

Plotted By:Matth, Ifht Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:L2.01 July 17, 2025 04:37:01pm K:\orl_civil\149170026-winter springs wawa\CADD\CONST\plansheets- add parking\L2.01 IRRIGATION PLAN.dwg



NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

NOTE: IF SOURCE TO BE RECLAIMED (NON-POTABLE) ALL EQUIPMENT TO BE INDICATED AS SUCH AND PURPLE IN COLOR. FOLLOW ALL LOCAL JURISDICTION STANDARDS FOR RECLAIMED IRRIGATION SYSTEMS.

CONTRACTOR TO PERMANENTLY MARK ALL SLEEVE CROSSINGS AT ASSOCIATED TOPS OF CURB (TYP).

CONTRACTOR TO ADJUST ALL OVERHEAD SPRAY HEADS TO ENSURE MINIMAL OVER-SPRAY OCCURS ON ANY HARDSCAPE SURFACE (TYP).

COORDINATE/DISCUSS PROJECT LIMITS WITH GENERAL CONTRACTOR TO ENSURE ALL IRRIGATION EQUIPMENT IS INSTALLED WITHIN PROJECT AREA.

NOT ALL NECESSARY SLEEVES SHOWN. INSTALL WHERE NECESSARY AND COORDINATE WITH OTHER DISCIPLINES TO AVOID CONFLICTS AND FACILITATE THE CONSTRUCTION PROCESS.

CONTRACTOR RESPONSIBLE FOR EVALUATING/ CONNECTING TO EXISTING SYSTEM AND ZONING (POTENTIALLY ADDING NEW VALVES) AS NECESSARY. FIELD LOCATE ALL EQUIPMENT NEEDED FOR IRRIGATION MODIFICATION/EXPANSION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE P.O.C FOR INCLUSION INTO THE SYSTEM (INCLUDES ALL NECESSARY BORING, TRENCHING, ETC.)

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

Sunshine811.com

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	NMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT
MATTHEW TAYLOR FRANKO
LA6667292
STATE OF FLORIDA

Digitally signed by Matthew T Franko
DN: CN=Matthew T Franko
email=MATTHEW.FRANKO@KIMLEY-HORN.COM, C=US
Date: 2025.07.17 17:18:05-04'00'

THIS DRAWING HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MATTHEW TAYLOR FRANKO, PLA USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT SIGNED AND SEALED AND THE INFORMATION MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

DATE: 07/17/2025

KHA PROJECT	149170026
DATE	07/17/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

IRRIGATION PLAN

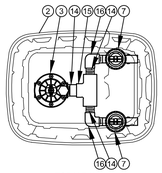
WINTER SPRINGS WAWA

FL

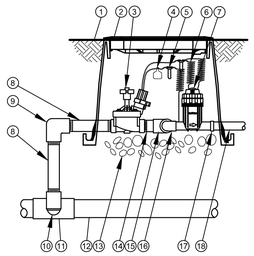
CITY OF WINTER SPRINGS

SHEET NUMBER
L2.02

Plotted By: Matt, Ifft Sheet Set: WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout: L2.02 July 17, 2025 04:37:11pm K:\ord_civil\149170026-winter springs wawa\CADD\CONST\plansheets- add parking\L2.02 IRRIGATION PLAN.dwg



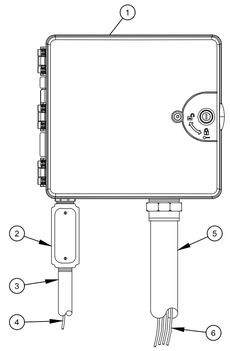
TOP VIEW



SIDE VIEW

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

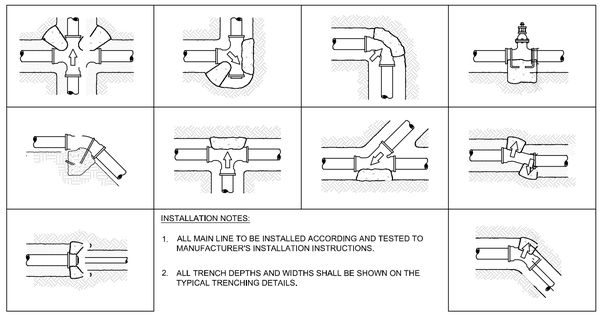
1 COMMERCIAL CONTROL DRIP ZONE VALVE KIT
L2.50 SECTION / PLAN — NTS



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

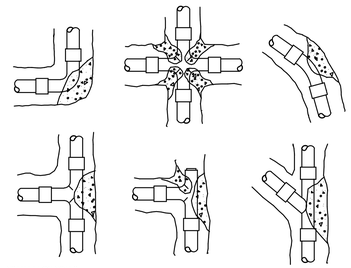
NOTES:
1. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT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

2 TYPICAL CONTROLLER
L2.50 ELEVATION — NTS



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

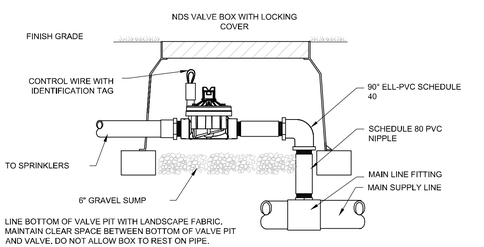
3 TYPICAL THRUST BLOCK
L2.50 SECTION — NTS



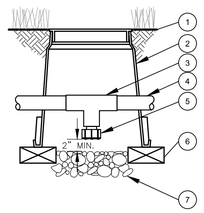
INSTALLATION NOTES
1. 3000 PSI CONCRETE OR BETTER IS TO BE USED FOR THRUST BLOCKS.
2. FOR 45°/60° FITTINGS, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED.
3. FOR 22-1/2° FITTINGS, MINIMUM OF 0.5 CUBIC FEET OF CONCRETE TO BE USED.
4. FOR TEES, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED. THRUST

BLOCKS REQUIRED FOR IRRIGATION MAINLINE 2 1/2" AND LARGER.

4 THRUST BLOCK REINFORCEMENT
L2.50 SECTION — NTS

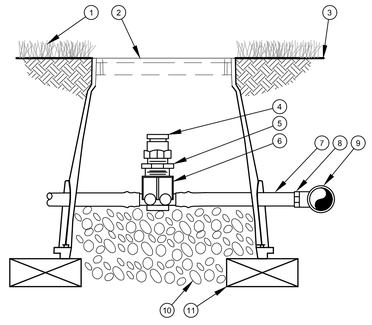


5 TYPICAL CONTROL VALVE
L2.50 SECTION — NTS



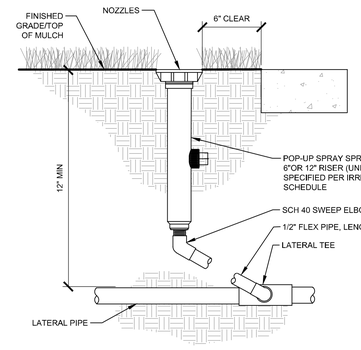
1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER:
3. PVC SCH 40 TEE
4. PVC LATERAL PIPE
5. FILTERED DRAIN VALVE:
6. BRICK (1 OF 2)
7. 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

6 DRAIN VALVE
L2.50 SECTION — NTS

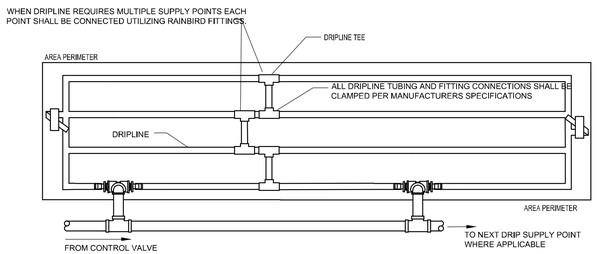


1. TURF GRASS
2. VALVE BOX LID
3. FINISH GRADE
4. ½" AIR RELIEF VALVE: TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
5. ½" X ¾" PVC REDUCER BUSHING
6. BARB X FEMALE THREAD CONNECTOR:
7. ½" BLANK DRIPLINE TUBING:
8. BARB X MALE THREAD CONNECTOR:
9. PVC TEE CONNECTED TO PVC HEADER PIPE
10. 3" MINIMUM DEPTH OF ¾" WASHED GRAVEL
11. BRICK (1 OF 2)

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



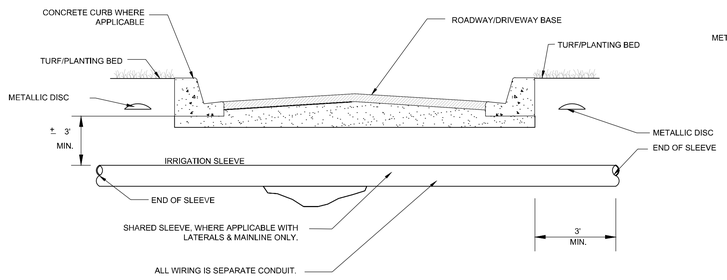
8 TYPICAL IRRIGATION HEAD
L2.50 SECTION — NTS



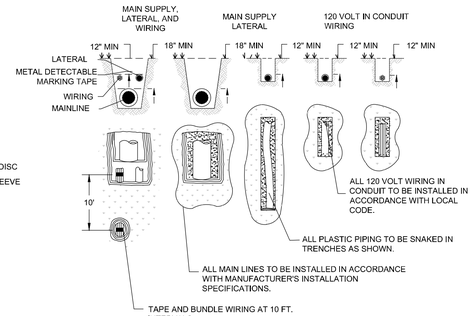
CONTRACTOR TO REFER TO IRRIGATION PLAN FOR LOCATION OF CONTROL VALVES THAT UTILIZE MULTIPLE DRIPLINE SUPPLY CONNECTIONS. IF NOT SHOWN, INSTALL WITHIN ADJACENT GREEN AREA NOT IN A HIGHLY VISIBLE AREA.

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

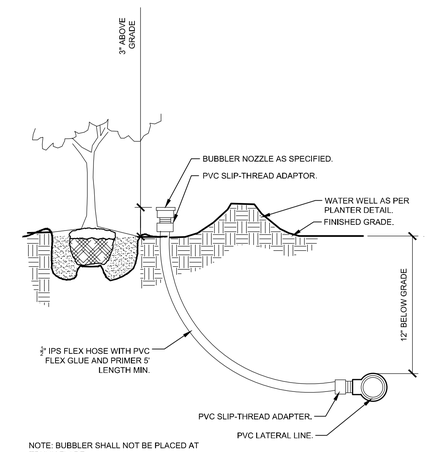
9 TYPICAL DRIP LINE
L2.50 PLAN — NTS



10 TYPICAL SLEEVING
L2.50 SECTION — NTS



11 TYPICAL TRENCHING
L2.50 SECTION / PLAN — NTS



NOTE: BUBBLER SHALL NOT BE PLACED AT TRUNK FLARE.

12 TYPICAL BUBBLER
L2.50 SECTION — NTS

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	MMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT — MATTHEW TAYLOR FRANKO — LA6667292 — STATE OF FLORIDA

Digitally signed by Matthew T Franko
DN: CN=Matthew T Franko, OU=Auth=A01410D000001936A52010800292B8, O=KIMLEY-HORN AND ASSOCIATES INC., C=US
Date: 2025.07.17 16:26:35-04'00'

THIS DRAWING HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY MATTHEW TAYLOR FRANKO, PLA USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

LICENSE NUMBER — DATE: 07/17/2025

KHA PROJECT	149170026
DATE	07/17/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

IRRIGAITON DETAILS

WINTER SPRINGS WAWA — FL

CITY OF WINTER SPRINGS

SHEET NUMBER
L2.50

Plotted By:Miah, Ifht Sheet Set:WINTER SPRINGS MARKETPLACE- ADDITIONAL PARKING Layout:L2.50 July 17, 2025 03:24:54pm K:\orl_civil\149170026-winter springs wawa\CAD\CONST\plansheets- add parking\L2.50 - add parking.dwg

IRRIGATION SYSTEM NOTES:

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

PRE-APPROVED MANUFACTURERS:
1. TORO
2. HUNTER
3. RAINBIRD

13. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION.
14. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED WITHIN SCH. 40 PVC 2x SIZE OF PIPE AND FREE OF STONES/DEBRIS. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS.
15. MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
16. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVING AND DIRECTIONAL BORES.
17. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
18. ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SCH. 40 PVC SLEEVES. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
19. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION "HB". LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
20. THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW." THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
21. ELECTRIC SERVICE TO THE CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
22. ALL 24 VAC WIRING FROM DECODER TO VALVE SHALL BE OF DIRECT BURIAL COPPER WIRE. MAXIMUM LENGTH OF WIRE FROM DECODER TO VALVE SHALL NOT EXCEED 400 FEET. AS FOLLOWS:
    CONTROL WIRES - #14
    COMMON WIRES - #14
23. ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS:
    -RECTANGULAR 12"X17" HEAVY DUTY BOX. (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
24. ALL IRRIGATION HEADS/DRIP TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY, (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES).
25. HEADS, LATERALS, EMITTERS, AND VALVES ARE NOT SHOWN, BUT ARE NECESSARY FOR A FULLY FUNCTIONING IRRIGATION SYSTEM.
26. LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE. WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
27. IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. BUBBLERS, DRIPLINE, AND SPRAY HEADS SHALL BE SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
28. ALL DRIP ZONES SHALL BE INSTALLED WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE. DRIPLINE SHALL PROVIDE 0.9 GPH EMITTERS, 12" O.C. WITH 12" LINE SPACING AT A MINIMUM.
29. ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURERS SPECIFICATIONS. IF REQUIRED, ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1,000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2,500' REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICE KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY. IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
30. ALL CONTROL WIRE SHALL BE INSTALLED IN A 1 ½" ELECTRICAL CONDUIT.
31. SMALLEST DIAMETER LATERAL PIPE SHALL BE 3/4".
32. IRRIGATION SYSTEM SHALL BE CAPABLE OF SUPPLYING AN AVERAGE OF 1.05" OF WATER PER WEEK WITHIN WATERING RESTRICTIONS AS APPLICABLE.
33. IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING, OR PRESERVED PLANT COMMUNITIES. DO NOT TRENCH THROUGH EXISTING ROOT SYSTEMS OF ANY VEGETATION INTENDED TO BE PRESERVED.
34. CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
35. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THE CONDITION DENOTED ON THE LANDSCAPE PLAN.
36. IRRIGATION PIPING INSTALLED UNDER ROADS AND SIDEWALKS SHALL BE IN SCHEDULE 40 PVC SLEEVING AT 2X THE PIPE SIZE. ALL SLEEVING SHALL BE FREE OF STONES AND DEBRIS.
37. IRRIGATION SOURCE TO BE EITHER WELL, POTABLE, OR NON-POTABLE WATER. IRRIGATION CONTRACTOR TO VERIFY SOURCE PRIOR TO DESIGN.
38. POINT OF CONNECTION TO BE DETERMINED BY OWNER. IRRIGATION SYSTEM CONNECTIONS TO THE LOCAL JURISDICTION SERVICE SHALL COMPLY WITH ALL APPLICABLE CODES.
39. IRRIGATION CONNECTION MAY REQUIRE BACKFLOW PREVENTION, VERIFY WITH LOCAL JURISDICTION.
40. IRRIGATION SYSTEM SHALL COMPLY WITH THE LOCAL JURISDICTION LAND DEVELOPMENT CODE.

1 / L2.51 TYPICAL SCHEMATIC IRRIGATION NOTES

No.	REVISIONS	DATE	BY
1	REVISED PER CITY COMMENTS	07/17/25	MMB

Kimley»Horn
6876 MARWICK LANE, SUITE 350, ORLANDO, FL 32827
PHONE: (407) 539-4440
WWW.KIMLEY-HORN.COM REGISTRY No. 35105

REGISTERED LANDSCAPE ARCHITECT MATTHEW TAYLOR FRANKO LA6667292 STATE OF FLORIDA

Digitally signed by Matthew T Franko
DN: CN=Matthew T Franko, email=matthew.franko@kimley-horn.com, C=US
Reason: I am approving this document
Date: 2025.07.17 10:28:35-04'00'

THIS DRAWING AND WRITTEN MATERIAL CONSTITUTE ORIGINAL DESIGN WORK PREPARED BY KIMLEY-HORN AND ASSOCIATES, INC. AND SEALED BY MATTHEW TAYLOR FRANKO, FLA. LANDSCAPE ARCHITECT NO. LA6667292. THE REPRODUCTION OR UNAUTHORIZED USE OF THESE DOCUMENTS WITHOUT THE WRITTEN CONSENT OF KIMLEY-HORN AND ASSOCIATES, INC. IS PROHIBITED AND WILL BE SUBJECT TO LEGAL ACTION.
PRINTED COPIES OF THIS DOCUMENT ARE NOT SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

DATE 07/17/2025

KHA PROJECT	149170026
DATE	07/17/2025
SCALE	AS SHOWN
DESIGNED BY	ADL
DRAWN BY	JCB
CHECKED BY	CNS

IRRIGATION NOTES

WINTER SPRINGS WAWA

CITY OF WINTER SPRINGS FL

SHEET NUMBER
L2.51

Plotted By:Mah, Ifft Sheet Set:WINTER SPRINGS (MARKETPLACE- ADDITIONAL PARKING Layout:L2.51 July 17, 2025 03:24:57pm K:\cal_civil\149170026-winter springs wawa\CADD\CONST\plansheets- add parking\L2.0 IRRIGATION PLAN.dwg

Kimley»Horn

MEMORANDUM

To: Terrilyn Rolle, MPA, AICP
Director of Community Development, Winter Springs

From: Emanuelle D Rodríguez Muñiz, P.E., IMSA[1]
Kimley-Horn and Associates, Inc.

Date: December 6, 2024

Subject: Wawa Winter Springs
Parking Demand Study



This document has been digitally signed and sealed by Emanuelle D Rodriguez Muñiz, P.E. on the date adjacent to the seal

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

Emanuelle D Rodriguez

Digitally signed by Emanuelle D Rodriguez
DN: CN=Emanuelle D Rodriguez, dnQualifier=A01410C000001934168451000 2EF49, O=KIMLEY-HORN AND ASSOCIATES INC, C=US
Date: 2024.12.06 10:35:24-05'00'

Introduction

Kimley-Horn and Associates, Inc. has undertaken the following review and analysis to evaluate the anticipated parking needs for the proposed Wawa convenience store/gas station to be located south of SR 434 and west of Tuskawilla Road in the City of Winter Springs, Florida.

The site is zoned as (T-C) Town Center District. As stated in Section 20-324 of the City's Land Development Code (LDC), there are no minimum parking requirements for T-C; instead, a parking analysis shall be performed justifying the proposed parking solution. This study provides a comparison between the City's code-required parking for the most similar land use, Institute of Transportation Engineers (ITE) *Parking Generation Manual 6th Edition*, and Urban Land Institute (ULI) *Shared Parking 3rd Edition*. The study also includes the required bicycle parking for the site based on the Association of Pedestrian and Bicyclist Professionals (APBP).

The proposed Wawa development will consist of the following uses, as shown in the site plan provided in **Attachment A**:

- 4,736 square feet of convenience store
- 12 vehicle fueling positions (VFP)

Code Parking Requirements

Section 9-277 of the City's LDC defines the off-street parking requirements for specific land uses. The LDC does not have a specific land use for convenience store/gas station therefore “General business and retail commercial” was reviewed:

- General business and retail commercial. One (1) parking space for each three hundred (300) square feet of floor space in the building exclusive of storage space.

Kimley»Horn

As shown in **Table 1,** a total parking supply of 16 spaces (rounded to nearest integer) at a parking ratio of 3.38 spaces per a thousand square feet would potentially be required depending on interpretation of the City's LDC.

Table 1: City Code Parking Requirement

City LDC		Proposed Development		Required Parking
Land Use	Min. Requirement	Size	Units	
General business and retail commercial	1 space per 300 SF	4,736	SF	16

ITE's Parking Generation Manual, 6th Edition Evaluation

A calculation of the anticipated parking demand was undertaken using data published by the Institute of Transportation Engineers (ITE) *Parking Generation Manual 6th Edition*. Empirical data collected on sites throughout the country are compiled to develop parking demand ratios for similar land uses. The 85th percentile peak parking demand was utilized in accordance with industry-accepted standards.

As shown in **Table 2,** a total parking supply of 50 spaces (rounded to nearest integer) at a parking ratio of 10.56 spaces per a thousand square feet would be needed to serve the proposed convenience store/gas station as an isolated and stand-alone establishment.

Table 2: ITE Parking Demand Summary

ITE ParkGen			Proposed Development		Required Parking
Land Use	LUC	85th Percentile	Size	Units	
Convenience Store/Gas Station	945	10.65 per KSF	4.736	KSF	50

ULI Shared Parking, 3rd Edition Evaluation

Parking within mixed-use developments means patrons can "park once" though are able to visit multiple establishments essentially reducing overall parking demand. The Urban Land Institute (ULI) *Shared Parking 3rd Edition* provides a methodology to calculate the parking demand reduction based on the mix of land uses. The proposed Wawa is within a mixed-use development as shown in **Table 3.** Properties were identified through a desktop search as well as using data from the Seminole County Property Appraiser. Building configuration of the development is shown as **Attachment C**.

Table 3: ULI Land Uses by Existing Tenants

Bldg.	Existing Tenant	ULI Land Use	Sq. Ft.
A	Lake Jesup Dental Care	Medical/Dental Office	4,280
B	Chipotle	Fast Casual/Fast Food	2,325
C	Fifth Third Bank	Bank (Drive In Branch)	2,065
D	Crunch Fitness	Health Club	19,200
E	Dollar Tree	Discount Stores/Superstores	10,000
F	Aldi	Supermarket/Grocery	19,209
G	Wawa	Retail (over 2KSF)	4,736
		Total	**61,815**

Kimley»Horn

The ULI Shared Parking provides monthly adjustment factors and weekend time-of-day adjustment factors, which show the peak season and peak time-of-day, respectively. The parking ratio applied is the highest demand period which potentially generates demand for 311 spaces (rounded to the nearest integer). The results of ULI's Shared Parking analysis are shown in **Attachment D.**

As shown in **Table 4**, the mixed-use development *without* Wawa currently provides 344 parking spaces. ULI estimates even including Wawa's parking demand, 307 spaces would be sufficient. Therefore, a 33-parking space surplus exists prior to adding parking by Wawa.

Table 4: Parking Ratio Determination

ULI Peak Demand Estimate	Existing Spaces	Surplus/Deficit
311	344	+33

Bicycle Parking

According to the Association of Pedestrian and Bicyclist Professionals (APBP), bicycle parking can be measured by commercial activity including retail. Long-term bicycle parking is considered utilized by employees demanding less spaces per square foot. Short-term bicycle parking is considered utilized by patrons who routinely generate demand and require more spaces per square foot. Therefore, the short-term bicycle parking recommendation of 2 spaces is applied to the Wawa as shown in **Table 5**:

Table 5: Bicycle Parking Spaces Summary

Commercial Activity	Long-Term Bicycle Parking Requirement	Short-Term Bicycle Parking Requirement
General Retail	1 space for each 12,000 sf of floor area. Minimum requirement is 2 spaces	1 space for each 5,000 sf of floor area. Minimum requirement is 2 spaces

Conclusion

Upon review of the ITE parking ratio for a stand-alone convenience store/gas station, 10.65 spaces per KSF could be recommended. However, Wawa is within a mixed-use development which ULI measures would have shared parking capacity. The mixed-use development including the Wawa would generate demand for a total of 311 spaces. The mixed-use development currently supplies 344 parking spaces which *does not* reflect potential future parking from Wawa. Therefore, the existing 344 spaces is considered sufficient to address both the mixed-use development and Wawa's peak parking demand. Additional parking by Wawa will only serve to increase the existing 33 space surplus.

Additionally, it is recommended that 2 bicycle parking spaces be provided at the Wawa location based on the Association of Pedestrian and Bicyclist Professionals (APBP) guidelines.

ATTACHMENT A

Site Plan

S.R. 434 & TUSCAWILLA RD.

WINTER SPRINGS, FLORIDA

SP-47

PROPOSED SITE LAYOUT

06/2052024 - CONTACT JONATHAN A. MARTIN, P.E. (407) 427-1686

EQUINOX DEVELOPMENT

GRAPHIC SCALE IN FEET 0 20 40 80

NORTH

Kimley»Horn

1005

K:\ORL_Civil\149170016 - Winter Springs Marketplace\CADD\CONCEPT\SP-47.dwg

ATTACHMENT B

ITE Parking Generation Manual

Land Use: 945 Convenience Store/Gas Station

Description

A convenience store/gas station is a facility with a co-located convenience store and gas station. The convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel. The sites in this land use include both self-pump and attendant-pumped fueling positions and both pre-pay and post-pay operations.

A convenience store/gas station is typically located along a major thoroughfare to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) are common at these facilities.

The convenience store product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine. Coffee and premade sandwiches are also commonly sold. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

Convenience Store (Land Use 851) is a related use.

Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at five study sites in a general urban/suburban setting.

Hour Beginning	Percent of Weekday Peak Parking Demand
12:00–4:00 a.m.	-
5:00 a.m.	-
6:00 a.m.	-
7:00 a.m.	54
8:00 a.m.	73
9:00 a.m.	65
10:00 a.m.	72
11:00 a.m.	80
12:00 p.m.	100
1:00 p.m.	89
2:00 p.m.	69
3:00 p.m.	63
4:00 p.m.	54
5:00 p.m.	54
6:00 p.m.	49
7:00 p.m.	-
8:00 p.m.	-
9:00 p.m.	-
10:00 p.m.	-
11:00 p.m.	-

Additional Data

The reported parking demand does not include any vehicles parked at fueling pump spaces even though some motorists may leave their vehicle at the fueling pump while inside the convenience store.

The average parking supply ratio for the 15 study sites in a general urban/suburban setting with parking supply information is 12 spaces per 1,000 square feet GFA. The average peak parking occupancy at these sites is 69 percent.

The sites were surveyed in the 1990s, the 2000s, and the 2020s in California, New Jersey, Pennsylvania, Texas, and Virginia.

Source Numbers

417, 433, 443, 444, 626, 637

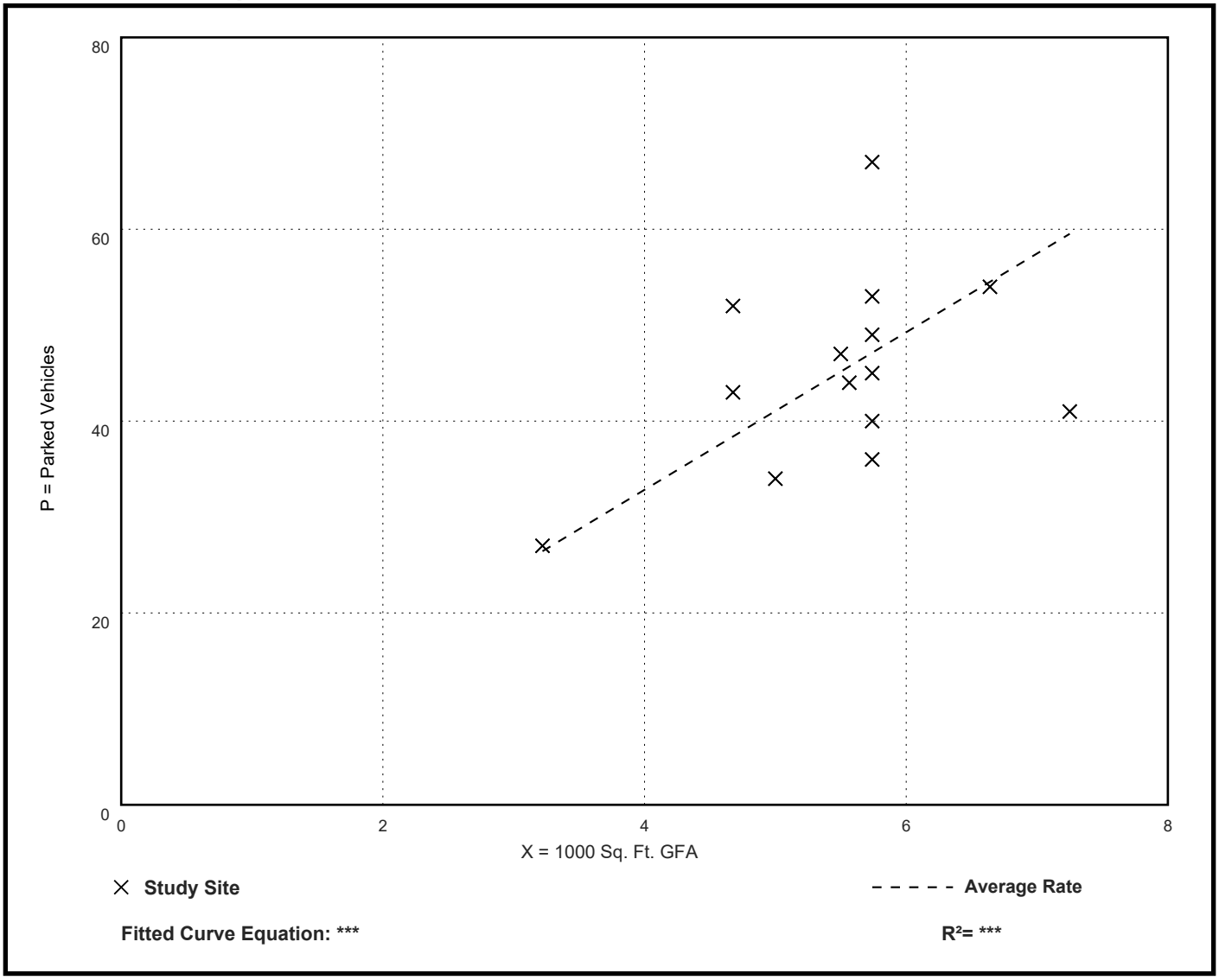
Convenience Store/Gas Station (945)

Peak Period Parking Demand vs: 1000 Sq. Ft. GFA
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. 1000 Sq. Ft. GFA: 5.5

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
8.21	5.66 - 11.67	7.80 / 10.65	***	1.71 (21%)

Data Plot and Equation



Fitted Curve Equation: *

R^2= *

ATTACHMENT C

Mixed-Use Development Layout

S.R. 434 & TUSCAWILLA RD.

WINTER SPRINGS, FLORIDA

SP-47

PROPOSED SITE LAYOUT

06/2052024 - CONTACT JONATHAN A. MARTIN, P.E. (407) 427-1686

EQUINOX DEVELOPMENT

GRAPHIC SCALE IN FEET 0 20 40 80

NORTH

Kimley»Horn

K:\ORL_Civil\149170016 - Winter Springs Marketplace\CADD\CONCEPT\SP-47.dwg

ATTACHMENT D

ULI Shared Parking Results

Copyright © 2020 All rights reserved. The Urban Land Institute, International Council of Shopping Centers, and National Parking Association.

Project: Winter Spring
Description: Wawa

Shared Parking Demand Summary

Peak Month: DECEMBER -- Peak Period: 5 PM, WEEKDAY

Land Use	Project Data		Weekday					Weekend					Weekday			Weekend		
	Quantity	Unit	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj 5 PM	Peak Mo Adj December	Estimated Parking Demand	Peak Hr Adj 5 PM	Peak Mo Adj December	Estimated Parking Demand
Retail																		
Retail (over 2,000 ksf)	4,736	sf GLA	2.90	100%	100%	2.89	ksf GLA	3.20	100%	100%	3.20	ksf GLA	85%	100%	12	80%	100%	13
Employee			0.70	99%	100%	0.69		0.80	99%	100%	0.79		100%	100%	4	55%	100%	2
Supermarket/Grocery	19,209	sf GLA	4.00	100%	100%	3.99	ksf GLA	4.00	100%	100%	3.99	ksf GLA	100%	100%	77	90%	100%	69
Employee			0.75	99%	100%	0.74		0.75	99%	100%	0.74		100%	100%	15	55%	100%	8
Discount Stores/Superstores	10,000	sf GLA	3.40	100%	100%	3.39	ksf GLA	3.80	100%	100%	3.80	ksf GLA	85%	100%	29	95%	100%	36
Employee			0.85	99%	100%	0.84		0.95	99%	100%	0.94		95%	100%	8	100%	100%	10
Food and Beverage																		
Fast Casual/Fast Food	2,325	sf GLA	12.40	100%	50%	6.16	ksf GLA	12.70	100%	57%	7.26	ksf GLA	60%	96%	10	60%	96%	13
Employee			2.00	99%	100%	1.98		2.00	99%	100%	1.98		70%	100%	3	70%	100%	3
Entertainment and Institutions																		
Health Club	19,200	sf GLA	6.60	100%	99%	6.54	ksf GLA	5.50	100%	99%	5.47	ksf GLA	90%	100%	114	100%	100%	106
Employee			0.40	99%	100%	0.40		0.25	99%	100%	0.25		100%	100%	8	100%	100%	5
Hotel and Residential																		
Office																		
Medical/Dental Office	4,280	sf GFA	3.00	100%	100%	2.99	ksf GFA	0.00	100%	100%	0.00	ksf GFA	80%	100%	10	0%	100%	-
Employee			1.60	100%	100%	1.60		0.00	100%	100%	0.00		100%	100%	7	0%	100%	-
Bank (Drive In Branch)	2,065	sf GFA	3.50	100%	95%	3.34	ksf GFA	3.00	100%	100%	3.00	ksf GFA	100%	100%	8	0%	100%	-
Employee			2.50	100%	100%	2.50		1.75	100%	100%	1.75		100%	100%	6	0%	100%	-
Additional Land Uses																		

	Weekday		Weekend	
Customer/Visitor	260		Customer/Visitor	237
Employee/Resident	51		Employee/Resident	28
Reserved	-		Reserved	-
Total	311		Total	265
Shared Parking Reduction	13%			16%

August 4, 2020

Ms. Kirsten Davis
Equinox Development
630 S. Maitland Avenue
Suite 100
Maitland, Florida 32751

ECS Project No. 55:3210

SUBJECT: Listed Wildlife Species Survey
± 10.25 - Acre Winter Springs Property
Winter Springs, Seminole County, Florida

Dear Ms. Davis:

As requested, ECS Florida, LLC (ECS) is pleased to present the following Listed Wildlife Species Survey for the ± 10.25 - Acre Winter Springs Property located in Winter Springs, Seminole County, Florida. Work was provided by our sub-consultant, Thomson Environmental Consulting (Thomson). We have attached Thomson's report. Thank you for this opportunity to offer our services. Please call the undersigned with questions or comments at (407) 859-8378.

Respectfully submitted,

ECS FLORIDA, LLC

Ivona Minossora
Environmental Group Manager

James (Cliff) Hendrickson, P.G.
Florida Professional Geologist 2226
Environmental Principal

Attachment: Thomson's Listed Wildlife Species Survey

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

October 22, 2018

Ivona Minossora
ECS Florida, LLC
2815 Directors Row, Suite 500
Orlando, Florida 32809

RE: Listed Wildlife Species Survey
±10.25-Acre Winter Springs Property
Winter Springs, Seminole County, Florida
Thomson Project No. 18-650

Ms. Minossora:

Thomson Environmental Consulting, LLC (Thomson) completed a Listed Wildlife Species Survey of the ±10.25-Acre Winter Springs Property (the property) generally located in the southwest corner of the intersection of State Road 434 and Tuskawilla Road. The field portion of the survey was conducted on October 9, 2018. The purpose of the field visit was to evaluate the subject property for the occurrence and/or potential for occurrence of protected wildlife species (and their habitat). The following report (and referenced exhibits) describes relevant ecological conditions observed on the site during the field investigation and the results of documented literature regarding the presence of protected wildlife species and/or habit on the site and its relevant surroundings.

SITE DESCRIPTION AND LOCATION

The property is generally located in the southwest corner of the intersection of State Road 434 and Tuskawilla Road in Winter Springs, Seminole County, Florida. The property measures ±10.25 acres using the Seminole County Geographic Information System (GIS) coverages, but only ±9.9 acres according to the Seminole County Property Appraiser (SCPA). Per the SCPA, the property comprises 4 legal parcels identified as follows:

- SCPA PID 36-20-30-502-0000-0070 (±2.82 acres)
- SCPA PID 36-20-30-502-0000-0080 (±3.03 acres)
- SCPA PID 26-20-30-5AR-0A00-008F (±0.26 acre)
- SCPA PID 36-20-30-502-0000-0090 (±3.79 acres)

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

Figure 1 is a location map showing the entirety of the property, including internal named streets.

Figure 2 is a true-color rectified aerial (circa 2017) of the property and its immediate surroundings.

Figure 3 is a topographic quadrangle map showing the topographic relief on the property and in the local region surrounding the site.

SOILS

Soils were identified using the Natural Resource Conservation Service's *Soil Survey of Seminole County, Florida*. The following soil units and descriptions were mapped by the soil survey on the property:

Myakka and EauGallie Fine Sands (Map Unit 20) – This soil represented approximately 2.66 acres of the property. The soils in this map unit are nearly level and poorly drained. These soils are on broad plains on the flatwoods. The slopes are dominantly less than 2 percent. During most years, the soils in this map unit have a seasonal high water table within 12 inches of the surface for 1 month to 4 months. The permeability of Myakka soil is rapid in the surface and subsurface layers and substratum and moderate or moderately rapid in the subsoil. The permeability of EauGallie soil is rapid in the surface and subsurface layers, moderate or moderately rapid in the sandy part of the subsoil, and moderately slow in the loamy part of the subsoil.

Paola-St. Lucie Sands, 0 to 5 percent slopes (Map Unit 24) – This soil represented approximately 6.33 acres of the property. The soils in this map unit are nearly level to gently sloping and excessively drained. These soils are on upland ridges. The slopes are 0 to 5 percent. The soils in this map unit have a seasonal high water table at a depth of 80 inches or more.

Tavares-Millhopper Fine Sands, 0 to 5 percent slopes (Map Unit 31) – This soil represented approximately 1.26 acres of the property. The soils in this map unit are nearly level to gently sloping and moderately well drained. These soils are on low ridges and knolls on the uplands. The slopes are nearly smooth to slightly convex. The soils in this map unit have a seasonal high water table at a depth of 36 to 60 inches for 2 to 6 months.

Figure 4 shows the property and soils as mapped by the Soil Survey.

Soils observed during the site visit seemed to generally match those as described in the Soil Survey. No indications of hydric soils were observed.

thomson
ENVIRONMENTAL CONSULTING

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

VEGETATIVE COMMUNITIES AND LAND USES

Prior to the field visit, Geographic Information System (GIS) data from the St. Johns River Water Management District (SJRWMD) was reviewed to identify documented vegetative communities and land uses on the property. These site conditions are documented using the Florida Land Use, Cover and Forms Classification System (FLUCCS, Florida Department of Transportation, 1999). FLUCCS classifications for the land covers and uses (as adapted from SJRWMD coverages) on the property are as follows:

Commercial and Services - Abandoned (FLUCFCS code 0140) – This classification represented approximately 1.24 acres of the property. It is the eastern portion of the property that was formerly a Pinch a Penny pool supply store accessible from both Tuskawilla Road and SR 434.

Hardwood-Conifer Mixed (FLUCFCS code 434) – This classification represented approximately 9.01 acres and the majority of the property. This upland, undeveloped area was dominated by slash and sand pine, with a dense subcanopy of xeric oaks in the central portion of the property.

Figure 5 is a FLUCFCS map that depicts the land cover classification described above.

PROTECTED WILDLIFE SPECIES SURVEY

Protected wildlife species are defined as those listed as Threatened, Endangered, or Species of Special Concern by the U.S. Fish and Wildlife Service (USFWS) and/or the Florida Fish and Wildlife Conservation Commission (FWC). The survey consisted of both a search of documented literature and a field reconnaissance.

Documented Literature Search

Prior to the field investigation, documented literature resources were consulted regarding known occurrences of protected wildlife species on or in the vicinity of the project site. These included the FWC's Bald Eagle (*Haliaeetus leucocephalus*) Nest Locator (*https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx*) and Waterbird Colony Locator (*http://atoll.floridamarine.org/waterBirds/*) online locator sites. A query of both databases (from the center of the site extending outward a radius of one mile) revealed no documented occurrences of waterbird colonies within 1 mile of the property. The closest documented bald eagle nest (Nest ID SE087) was documented approximately 2,250 feet east of the property, which is well outside of any applicable buffer zones.

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

The NRCS Web Soil Survey (*https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx*) was used to identify soils suitable for the burrowing needs of gopher tortoises (*Gopherus polyphemus*, state-Threatened). The areas identified as Paola-St. Lucie Sands and Tavares-Millhopper Complex were rated as "Highly Suited" soils for gopher tortoises, while the area identified as Myakka and EauGallie Fine Sands are rated as "Less Suited".

The property was mapped within the USFWS Consultation Area for the following federally-listed species: Audubon's Crested Caracara (*Polyborus plancus audubonii*, Threatened), Red-Cockaded Woodpecker (*Picoides borealis*, Endangered), Florida Scrub-Jay (*Aphelocoma coerulescens*, Threatened), the Everglades Snail Kite (*Rostrhamus sociabilis plumbeus*, Endangered), and the Florida Wood Stork (*Mycteria americana*, Endangered).

Field Reconnaissance and Observations

A protected wildlife species survey and habitat assessment was conducted over the entire property on October 9, 2018. Protected wildlife species are defined as those listed as Threatened, Endangered, or Species of Special Concern by the U.S. Fish and Wildlife Service (USFWS) and/or the Florida Fish and Wildlife Conservation Commission (FWC).

No indication of bald eagle foraging was observed. No nests or juveniles were observed on the property.

A survey for gopher tortoises and/or occupied habitat was conducted over 100% of the suitable soils on the property by Mr. Joel Thomson of Thomson Environmental Consulting, LLC (an Authorized Agent for surveying by FWC). The results of the survey yielded no potentially-occupied gopher tortoise burrows, and no indication of gopher tortoise presence. Based on the quality of habitat, it is recommended that an additional survey of the property be performed within 90 days of intended construction, per the FWC's guidelines.

The presence of some scrub oaks on the property often represents potential habitat for the Florida Scrub-Jay. The habitat was determined to be too overgrown to represent viable habitat, likely the result of fire exclusion and other factors related to the surrounding development. No indications of Florida Scrub-Jays was observed during the survey.

No other protected wildlife species concerns were observed during the course of the field survey. The numerous species with Consultation Areas covering the property have unique, individualized habitat needs that are not offered on the property due to developed nature of much of the property and the lack of natural habitat.

2324 Leu Road
ORLANDO, FLORIDA 32803
407.374.3681 – tel
407.405.8725 – cell

LIMITATIONS OF THIS REPORT

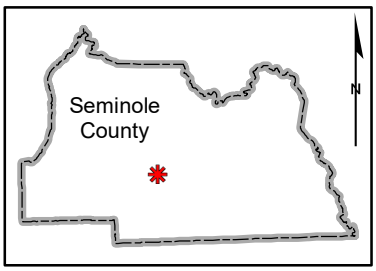
It is important to note that the conclusions of this report are necessarily based on the conditions observed on the day of the field investigation, as well as our scientific judgment of the site's potential to support protected species (based on each species' optimal habitat requirements). Due to this "snapshot" view of the site, the results presented in this report may not accurately reflect changing site conditions and/or wildlife species' temporal and spatial movements.

Thomson appreciates the opportunity to provide these services to you. If there are questions regarding this report, or a need for further information, please contact the undersigned at your convenience.

Respectfully,
Thomson Environmental Consulting, LLC

Joel A. Thomson
President





General Location

0 500 1,000

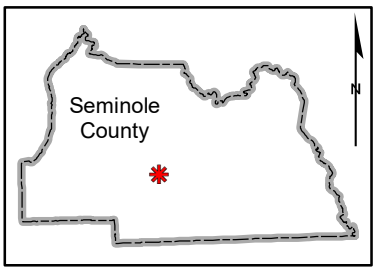
1" = 1,000'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 1
Location Map
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

0 75 150

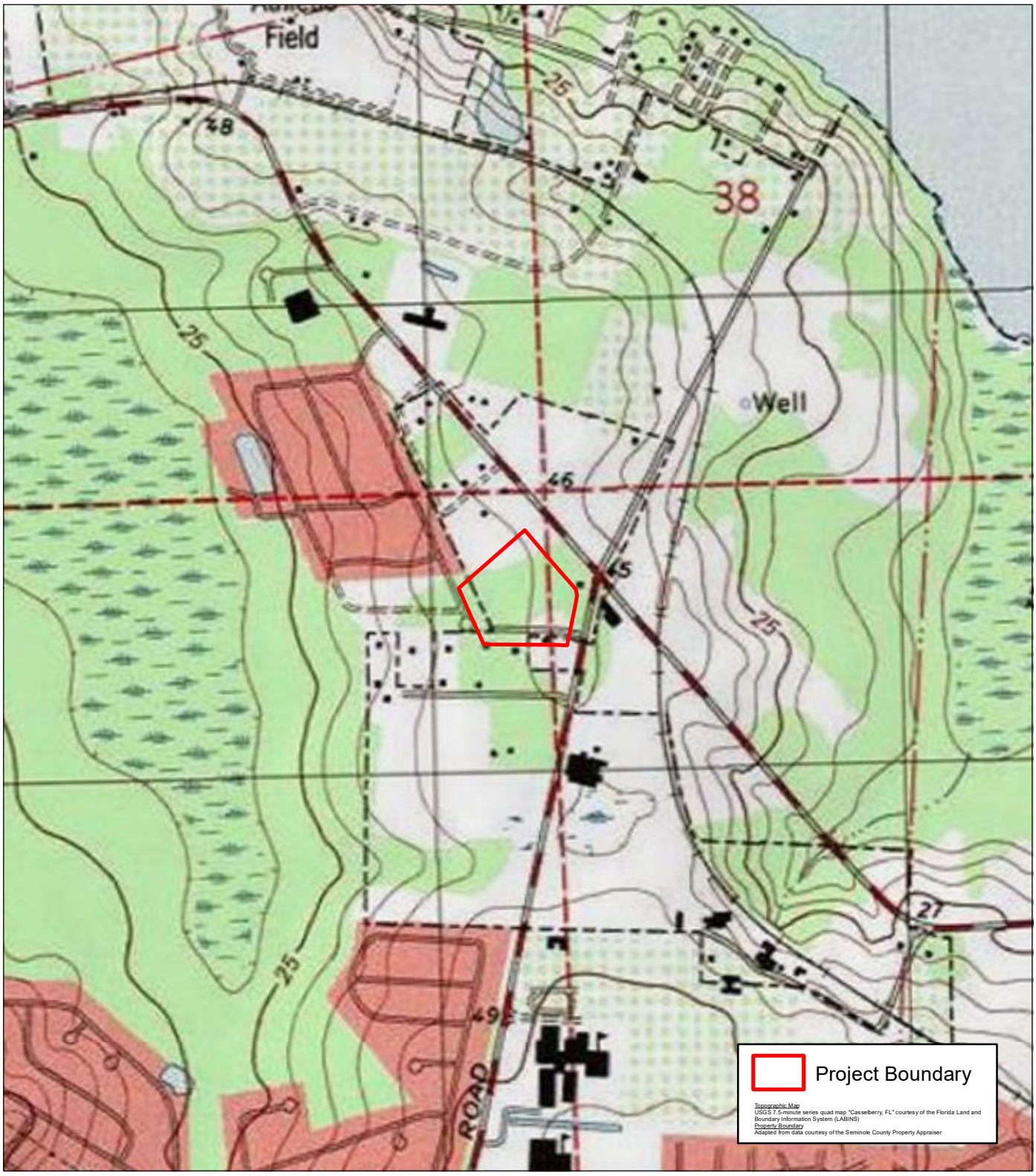
1" = 150'

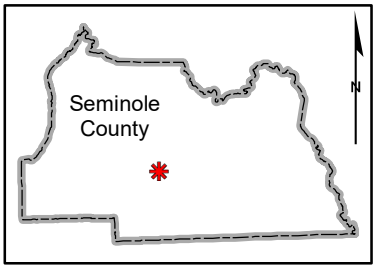
thomson
ENVIRONMENTAL CONSULTING

3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 2
Aerial Photograph
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

0 500 1,000

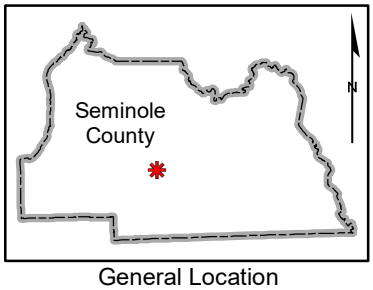
1" = 1,000'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 3
Topographic Map
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

0 75 150

1" = 150'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

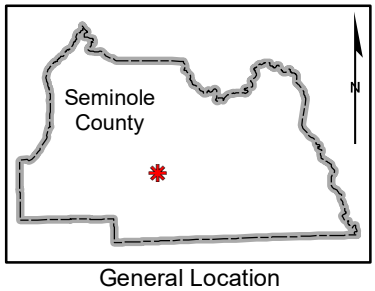
Figure 4
Soils Map

Winter Springs Property
Winter Springs, Seminole County, Florida

Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





General Location

0 75 150

1" = 150'

thomson
ENVIRONMENTAL CONSULTING
3428 PELICAN LANE ORLANDO, FLORIDA 32803
TEL 407.405.8725 FAX 407.792.5692
WWW.THOMSONENV.COM

Figure 5
FLUCCS Map
Winter Springs Property
Winter Springs, Seminole County, Florida
Section 1, Township 21 S, Range 30 E and
Section 6, Township 21 S, Range 31 E

Thomson Project No. 18-650
October 2018





ECS Florida, LLC

Preliminary Geotechnical Engineering Report

Tuskawilla Retail Development

170 Tuskawilla Road
Winter Springs, Seminole County, Florida

ECS Project Number 24:6366

November 15, 2018
Revised December 15, 2020

November 15, 2018
Revised December 15, 2020

Equinox Development Properties, Inc.
630 South Maitland Avenue, Suite 100
Maitland, Florida 32751

Attention: Ms. Kirsten Davis

ECS Project No. 24:6366

Reference: Preliminary Geotechnical Engineering Report
Tuskawilla Retail Development
170 Tuskawilla Road
Winter Springs, Seminole County, Florida

Dear Ms. Davis:

ECS Florida, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our Proposal No. 24:12884-GP dated August 17, 2018. This report presents our understanding of the geotechnical aspects of the project, the results of the field exploration and laboratory testing conducted, and the design and construction aspects. **This report has been revised at the request of your group based on the revised scope of the project.**

It has been our pleasure to be of service to Equinox Development Properties, Inc. during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify the assumptions of subsurface conditions made for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Florida, LLC

Mark Wright EIT
Geotechnical Project Manager
mwright1@ecslimited.com

JOHN P. HICKS LICENSE No. 83517 STATE OF FLORIDA PROFESSIONAL ENGINEER

John P. Hicks, P.E.
Branch Manager
FL PE No. 83517
jhicks@ecslimited.com

MW/JPH/das

TABLE OF CONTENTS

EXECUTIVE SUMMARY 3
1.0 INTRODUCTION 5
1.1 General 5
1.2 Scope of Services 5
1.3 Authorization 6
2.0 PROJECT INFORMATION 7
2.1 Project Location 7
2.2 Past Site History/Uses 7
2.3 Current Site Conditions 7
2.4 Proposed Construction 7
3.0 FIELD EXPLORATION 9
3.1 Field Exploration Program 9
3.1.1 Test Borings 9
3.2 Regional/Site Geology 10
3.3 Karst Geology 10
3.4 Soil Survey Mapping 11
3.5 Subsurface Characterization 12
3.6 Groundwater Observations 13
4.0 LABORATORY TESTING PROGRAM 15
4.1 Visual Classification 15
4.2 Index Testing 15
5.0 DESIGN RECOMMENDATIONS 16
5.1 Building Design 16
5.2 Foundations 16
5.3 Stormwater Management System Design Parameters 17
5.4 Pavement Design Considerations 19
6.0 SITE CONSTRUCTION RECOMMENDATIONS 21
6.1 Subgrade Preparation 21
6.1.1 Stripping and Subgrade Preparation 21
6.1.2 Proofrolling 21
6.2 Earthwork Operations 22
6.2.1 Structural Fill Materials 22
6.3 Utility Installations 23
6.4 General Construction Considerations 24
6.5 Construction Observation and Testing 24
7.0 CLOSING 25

APPENDICES

Appendix A – Diagrams

- Site Location Diagram
- Boring Location Diagram

Appendix B – Field Operations

- Reference Notes for Boring Logs
- Boring Logs (B-1 through B-19)
- Cross Section A-A'
- Cross Section B-B'
- Cross Section C-C'

Appendix C – Laboratory Testing

- Laboratory Testing Results Summary

EXECUTIVE SUMMARY

The following paragraphs provide a brief discussion of our findings and recommendations. Please refer to the complete report for more detailed discussion.

ECS Florida, LLC (ECS) has completed the subsurface exploration for the proposed Tuskawilla Retail Development (approximately 9.95 acres in size) located at 170 Tuskawilla Road in Winter Springs, Seminole County, Florida. The project information summarized below is based exclusively on the information made available to us by your group at the time of this report. Our findings, conclusions and recommendations are summarized below.

PROJECT INFORMATION:

- Site Location : 170 Tuskawilla Road in Winter Springs, Seminole County, Florida
- Building Scope: Four (4) one-story retail structures & two (2) out parcel buildings
- Building Type: Concrete Masonry Unit (CMU) and steel framed structures.
- Assumed Loads: Max. Column loads = 80 kips, Max. wall loads = 5 klf
- Earthwork: Estimated fills of up to 3 feet and cuts up to 10 feet (pond area)
- SWM Facility: Two (2) dry ponds, one (1) wet pond and five (5) exfiltration systems

SUBSURFACE CONDITIONS:

- Field Exploration: 19 SPT borings drilled within the subject property limits to the depths ranging between 10 feet and 20 feet below the existing ground surface.
- Site Conditions: Heavily wooded except in the north eastern corner of the property, where there is an existing structure with associated parking area.
- Probable Fill: Not encountered
- Natural Soils: SAND (SP), and SAND WITH SILT (SP-SM)
- Refusal Materials: Not encountered within the depths of borings
- Groundwater: Encountered between 3.5 feet and 5.5 feet below the ground surface at the boring locations, seasonal high water table is anticipated to be between 2.5 feet and 5 feet below the existing grades.

GEOTECHNICAL & CONSTRUCTABILITY CONSIDERATIONS

- **Wet fill soils:** We anticipate soils excavated from the proposed pond area will be used for structural fill across the site for grading purposes. Due to a higher groundwater table, soils anticipated to be used as structural fill are expected to be wet. Wet soils will require a drying period prior to being compacted for structural fill. Due to the granular nature of the material encountered; however, we anticipate that the soils should dry relatively quickly if spread during hot/dry conditions.

- **High groundwater table:** High groundwater was observed across the site and will need to be considered with respect to the dewatering of utility excavations.

- **Existing Structure:** An existing structure was noted within the eastern portion of the site. The existing structure and its associated subsurface foundations and utilities should be removed prior to the placement of structural fill or foundations for the proposed building areas.

PRELIMINARY DESIGN & CONSTRUCTION RECOMMENDATIONS:

- Shallow foundations:

Max. Net Allow. Bearing Pressure	= 3,000 psf
Min. Exterior (Unheated) Embedment	= 18 inches
Min. Interior (Heated) Embedment	= Minimum 24 inches
Slab Subgrade Modulus:	= 100 pci

Based on the information provided to us, it should be noted that the recommendations made in our report are preliminary in nature. Therefore, a final geotechnical exploration report meeting regulatory standards may be necessary in future for final design recommendations. The recommendations made in our report are based on the loading assumptions noted above. A final site development plan has not been provided to us. Once the final site plan is developed along with the proposed grading information, we recommend that our office be contacted to review these items and propose a final geotechnical scope of exploration. Final recommendations regarding the bearing capacity, settlements, and foundation design must be made after completion of a final geotechnical exploration program.

This summary should not be considered apart from the entire text of the report with all the qualifications and considerations mentioned herein. Details of our conclusions and recommendations are discussed in the report text.

1.0 INTRODUCTION

1.1 GENERAL

The purpose of this study was to provide geotechnical information for the design of structure foundations and construction consideration and recommendations for the proposed Tuskawilla Retail Development. This report includes preliminary recommendations regarding the new buildings, pavements, stormwater management area, and associated utilities. This report contains the results of our subsurface explorations and laboratory testing programs, site characterization, engineering analyses, and recommendations for the design and construction of the proposed development. The recommendations developed for this report are based on project information supplied by Equinox Development Properties, Inc.

1.2 SCOPE OF SERVICES

In order to explore the subsurface soil conditions and to determine the depth and character of soils on this site, a total of nineteen (19) soil test borings were performed within the proposed area of the development. A Conceptual Sketch dated August 8, 2018 of the proposed development prepared by Kimley-Horn and Associates, Inc. was provided prior to the field exploration and a revised Conceptual Sketch dated October 30, 2018 was provided **after** the field exploration had been completed. **Additionally, this report has been revised based on an updated Overall Site Plan dated November 3, 2020 prepared by Marcus Gieger with Kimley-Horn**. The Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc. was also provided at the time of writing this report.

Conclusions and recommendations contained in this report are based upon these soil borings, a site reconnaissance, laboratory test results of boring samples, and provided plans. This preliminary report discusses our exploratory and testing procedures, presents our findings and evaluations and includes the following:

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of area and site geologic conditions.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- Copies of our soil test boring logs.
- Preliminary recommendations for site preparation and construction of compacted fills, including an evaluation of on-site soils for use as compacted fills and delineation of potentially unsuitable soils and/or soils exhibiting excessive moisture at the time of sampling.
- Evaluation and recommendations relative to groundwater control.
- Preliminary foundation recommendations for the proposed retail buildings.
- Preliminary recommendations for pavement design.
- Stormwater management design parameters for the ten (10) proposed stormwater management facilities anticipated within the property.

The recommendations contained herein were developed from the data obtained in the soil test borings, which indicate subsurface conditions at these specific locations at the time of exploration. Soil conditions may vary between the borings. If during the course of construction variations appear evident; the Geotechnical Engineer should be informed so that the conditions can be addressed.

1.3 AUTHORIZATION

Our services were provided in accordance with our Proposal No. 24:12884-GP dated August 17, 2018 and as authorized by you on September 22, 2018, and includes the Terms and Conditions of Service outlined with our Proposal/Contract between ECS Florida, LLC and Equinox Development Properties, Inc.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION

The subject site is located to the southwest of the intersection between Tuskawilla Road and State Road 434, more specifically at 170 Tuskawilla Road in Winter Springs, Seminole County, Florida. The subject property (approximately 9.95 acres in size) is pentagonal in shape, generally bounded to the north by State Road 434, to the east by Tuskawilla Road, to the south by a vacant property and to the west by a residential community. A Conceptual Sketch is included below and within Appendix A of this report.



Figure 2.1.1 – Approximate Site Location

2.2 PAST SITE HISTORY/USES

A review of available aerial imagery dated back to 1980 and our knowledge of the site, we understand that the site is primarily heavily wooded with a retail building located within the north eastern corner of the proposed area of development which appears to have been built in either the 1980s or 1990s.

2.3 CURRENT SITE CONDITIONS

Based on our site reconnaissance and review of the topographic data, provided by you from Shannon Surveying Inc., dated October 15, 2018, the site is sloping from the south downward to primarily the northwestern portion of the proposed development with existing ground surface elevations varying approximately between EL. +46 feet-datum and EL. +42.5 feet-datum. A boring location survey was not performed as a part of our scope.

2.4 PROPOSED CONSTRUCTION

Our understanding of the proposed construction is based on information provided by Equinox Development Properties, Inc and the Overall Site Plan dated November 3, 2020 prepared by Marcus Gieger with Kimley-Horn. Based on our understanding of the project, the proposed

construction would likely consist of multiple structures including, four (4) one-story retail buildings (approximately between 4,280 and 19,209 square feet, respectively) two (2) out parcel building (approximately 2,325 and 3,056 square feet). Site features are to include a stormwater , one (1) wet pond, two (2) dry retention pond areas within the southern portion of the site, and the associated paved parking areas with five (5) underground exfiltration systems within the northern portion of the property, driveway lanes, and utilities.

We would anticipate based on current site grading as well surrounding grading for adjacent commercial properties that the proposed structures may be supported on conventional shallow foundations bearing at an assumed elevation of EL. +42 feet-datum on natural soils. We assumed that finished floor elevation of the proposed structures would be approximately at EL. +44 feet-datum. Based on the existing and proposed grades, we expect maximum fills for the structures to be on the order of 3 feet given the current conceptual drawings for the development. We understand structural loads for the retail structures will be up to approximately 80 kips for column loading, and we have assumed continuous wall loading up to about 5 kips per linear foot.

3.0 FIELD EXPLORATION

3.1 FIELD EXPLORATION PROGRAM

The field exploration was planned with the objective of providing an assessment of the site, characterizing the project site in general geotechnical and geological terms and to evaluate subsequent field and laboratory data to assist in the determination of geotechnical recommendations.

3.1.1 Test Borings

Prior to performing the subsurface exploration, underground utilities were located through the Sunshine State One-Call system. The soil test borings were located in the field by an ECS representative utilizing a hand held GPS unit as reference. The Boring Location Diagram in the Appendix A indicates the approximate location of the borings. The soil test borings were completed with the following drilling and sampling equipment:

- ATV drill rig
- Mud Rotary drilling utilizing 3 ¼ inch hollow-stem augers
- Manual hammer
- Conventional split-spoon soil sampler

Representative soil samples were obtained by means of the split-barrel sampling procedure in accordance with ASTM Specification D 1586. In this procedure, a two-inch O.D., split-spoon sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler through the final 12-inch interval, after initial setting of 6 inches, is termed the Standard Penetration Test (SPT) N-value and is indicated for each sample on the boring logs (attached in Appendix B). The SPT values can be used as a qualitative indication of the in-place relative density of cohesionless soils, and as a relative indication of consistency in cohesive soils. This indication is qualitative, since many factors can significantly affect the standard penetration resistance value and prevent a direct correlation between drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies.

A field log of the soil encountered at each boring was maintained by the drilling crew. After recovery, each geotechnical sample was removed from the sampler and visually classified by the driller. Representative portions of each sample were then sealed in containers and transported to our laboratory in Orlando, Florida for further visual examination and laboratory testing. After completion of the drilling operations, the boreholes were backfilled with auger cuttings.

Please note that ground surface elevations noted on our boring logs were interpolated from the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc.; however, we recommend that the boring locations are surveyed for elevations to extend the usefulness of the subsurface information obtained.

3.2 REGIONAL/SITE GEOLOGY

Based on the Geologic Map of Florida, Central Florida geologic conditions can generally be described in terms of three basic sedimentary layers. The near-surface layer is primarily composed of sands containing varying amounts of silt and clay fines that are underlain by a layer of clay, clayey sand, locally referred to as the "Hawthorn Group" which is underlain by phosphate, and limestone. The thickness of these strata varies throughout Central Florida. In general, the surficial sands typically extend to depths of 40 feet to 70 feet below the ground surface, while the "Hawthorn Group" ranges from nearly absent in some locations to thicknesses greater than 100 feet. The limestone formation may be several thousand feet thick.

The groundwater hydrogeology of Central Florida can be described in terms of the nature and relationship of the three basic geologic strata. The near surface and upper stratum are fairly permeable and comprise the water table (unconfined) aquifer. The deep limestone formation of the Floridian aquifer is highly permeable due to the presence of large interconnected channels and cavities throughout the rock. The Floridian aquifer is the primary source of drinking water in Central Florida. These two permeable strata are separated by the relatively low permeability clays in the "Hawthorn Group." The amount of groundwater flow between the two aquifer systems is dependent on the thickness and consistency of the "Hawthorn Group" clay confining beds which, as previously stated, varies widely throughout Central Florida. The following Figure 3.2.1 shows the regional geologic map.

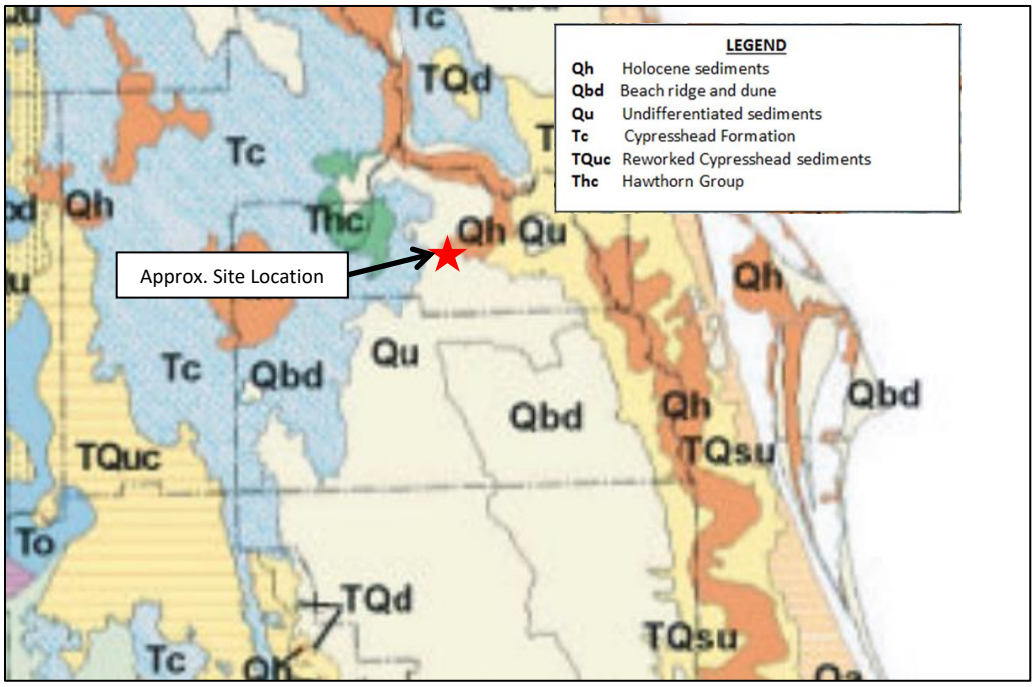


Figure 3.2.1 Regional Geologic Map (Geologic Map of Florida, 2001)

3.3 KARST GEOLOGY

Areas within Central Florida are known to have karst geology. Karst terrain is characterized by voids, soil domes, soil raveling, interrupted drainage, disappearing streams, and topographical

features such as sinkholes and closed depressions. These features are the result of the dissolution of soluble bedrock such as limestone by groundwater and/or the infiltration of surface water.

As water enters fractures, bedding planes, and other bedrock discontinuities within soluble bedrock, it slowly dissolves the rock and enlarges the discontinuities. Over geologic time, this results in the formation of solution channels or underground passages and ravines which may develop into surficial manifestations such as sinkholes and closed depressions. The dissolution of bedrock is generally a very slow process. However, soil may be eroded or raveled into the enlarged bedrock fractures, creating soil domes. Eventually, soil in these features can be lost through groundwater movement, resulting in surface depressions and potential sudden ground subsidence.

The soils derived from and overlying the carbonate bedrock are typically a clayey and silty soil with varying amounts of sand and rock fragments. The bedrock within the general geographic region is characterized by jointed and faulted soluble carbonate lithologies interbedded with non-carbonate lithologies. These carbonate formations are generally moderately to highly solution prone.

The degree of weathering or solutioning is often controlled by lithological variations and structural orientations. Where structural discontinuities intersect or in areas which are highly fractured, solutioning is intensified creating low areas and seams that are typically filled with residual clayey soils. Conversely, more competent, high areas represent slightly- to non-fractured lithologies that are often coarser grained and only slightly solution prone.

The underlying carbonate formations of the project geographic area are susceptible to Karst-related sinkhole development. Contributing characteristics and factors controlling the development include subsurface structural deformation, joint sets, and thick carbonate bedding within the area. Due to the shallow nature of the exploration performed, the borings did not reveal overt signs of soils associated with karst activity or carbonate rocks.

3.4 SOIL SURVEY MAPPING

Based on the Soil Survey for Seminole County, Florida by the US Department of Agriculture (USDA) Soil Conservation Service the predominant predevelopment soil type(s) at the site is identified and a summary of characteristics of this soil series is included below in Table 3.4.1.

Table 3.4.1 Soil Survey

Soil Type	Constituents	Drainage Class	Water Table Depth
20—Myakka and EauGallie	Fine sand	Poorly drained	0.5 to 1.5 feet
24—Paola-St. Lucie sands, 0 to 5 percent slopes	Sand	Excessively drained	-
31—Tavares-Millhopper complex, 0 to 5 percent slopes	Fine sand and sandy loam	Moderately well drained	3.5 to 6 feet

Soil mapping of the site vicinity showing soil numbers (20, 24, and 31) are presented in Figure 3.4.1 below.



Figure 3.4.1 Site Soil Survey

3.5 SUBSURFACE CHARACTERIZATION

The site subsurface conditions were evaluated with 19 SPT borings advanced to the depths ranging between 10 feet and 20 feet below the existing ground surface at the approximate locations shown on the Boring Location Diagram in Appendix A.

The quantity of borings, boring locations, and drilling depths were developed by ECS prior to performing subsurface exploration based on the type and location of the proposed development from the Kimley-Horn Conceptual Sketch dated August 8, 2018.

The subsurface exploration at each boring location indicated generally SAND (SP) and SAND WITH SIL (SP-SM) from existing grade to the maximum termination of the borings (20 feet below existing grade). The soil auger was able to reach the termination depth at each of the borings. SPT N-values ranged from 5 to 19 blows per foot (bpf). The loose soils encountered were primarily observed within the upper 10 feet of the subsurface profiles

The subsurface conditions at each boring are summarized in Table 3.5.1. The subsurface conditions presented in Table 3.5.1 and shown on the Boring Logs should be considered approximate, based on interpretation of the exploration data using normally accepted geotechnical engineering judgments. It should be noted that transitions between different soil strata are typically less distinct than what is shown on the exploration records. Subsurface conditions between the actual boring locations will vary.

Table 3.5.1 Subsurface Stratigraphy

Approximate Depth Range (ft)	Approximate Elev. Range (ft) (1)	Stratum	Description	Ranges of SPT(2) N-values (bpf)
0 – 20(3)	+45.5 to +22.5	I	SAND (SP), SAND WITH SILT (SP-SM)	5 to 19

Notes: (1) Please note elevations at the boring locations were estimated based upon the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc. and should be considered approximate.
(2) Standard Penetration Test.
(3) Maximum Termination Depth.

3.6 GROUNDWATER OBSERVATIONS

Groundwater levels were measured in our borings as noted on the soil boring logs in Appendix B. The groundwater table was measured approximately between 3.5 feet and 5.5 feet below the existing grades at the boring locations within the drilling depths at the time of our exploration. No further groundwater measurements were made subsequent to drilling operations.

Variations in the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors. The groundwater will fluctuate seasonally depending upon local rainfall. The rainy season in Central Florida is normally between June and September. Based upon our site specific field data, our review of the USDA Soils Survey of Seminole County, the topography of the area, the expected regional hydrogeology and our experience in the area, we estimate the seasonal high groundwater levels likely to be encountered approximately between 2.5 feet and 5 feet below existing grades at the boring locations. Please refer to the individual boring logs presented in Appendix B for boring specific groundwater levels.

Variations in the location of the long-term groundwater level may occur as a result of changes in precipitation, evaporation, surface water runoff, and other factors not apparent at the time of this exploration. The summary of groundwater conditions within the boring locations are provided below in Table 3.6.1.

Table 3.6.1 Summary of Groundwater Conditions

Boring ID	Approximate Ground Surface Elevation (ft-datum) *	Encountered Ground Water Table Depth (ft)	Encountered Groundwater Table Elevation (ft-datum)	Estimated Seasonal High Ground Water Table Depth (ft)	Estimated Seasonal High Ground Water Elevation (ft-datum)
B-1	44	4.5	39.5	3.5	40.5
B-2	44	5	39	4	40
B-3	43.5	3.5	40	2.5	41
B-4	44.5	4.5	40	3.5	41
B-5	45	5.5	39.5	4.5	40.5
B-6	45.5	5	40.5	4	41.5
B-7	42.5	4	38.5	3	39.5
B-8	43	4.5	38.5	3.5	39.5
B-9	45	5.5	39.5	5	40
B-10	45.5	5.5	40	5	40.5
B-11	45	5.5	39.5	4.5	40.5
B-12	44	5.5	38.5	4.5	39.5
B-13	44.5	4	40.5	3	41.5
B-14	45	5	40	4	41
B-15	45	5	40	4	41
B-16	45	5	40	4	41
B-17	43.5	4.5	39	3.5	39.5
B-18	44.5	4.5	40	4	40.5
B-19	45	4	41	3.5	41.5

Note: * Elevations at the boring locations were estimated using the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc.

4.0 LABORATORY TESTING PROGRAM

The laboratory testing performed by ECS for this project consisted of selected tests performed on samples obtained during our field exploration operations. The following paragraphs briefly discuss the results of the completed laboratory testing program.

4.1 VISUAL CLASSIFICATION

Each soil sample from the test borings was visually classified on the basis of texture and plasticity in accordance with the Unified Soil Classification System (USCS) and ASTM D 2488 (Description and Identification of Soils-Visual/Manual Procedures). After classification, the various soil types were grouped into the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs are approximate; in situ, the transitions may be gradual.

The soil samples from our current exploration will be retained in our laboratory for a period of two months after the subsurface exploration program is completed, after which they will be discarded unless other instructions are received as to their disposition.

4.2 INDEX TESTING

The index testing performed by ECS for this project consisted of selected tests performed on samples obtained during our field exploration operations. Index property tests were performed on representative soil samples obtained from the test borings in order to aid in classifying soils according to the Unified Soil Classification System (USCS) and to quantify and correlate engineering properties. The index testing program included natural moisture content tests (ASTM D 2216) and percent passing the No. 200 sieve (ASTM D 6913). The results of the index testing results conducted are included in Appendix C of this report.

5.0 PRELIMINARY DESIGN RECOMMENDATIONS

The following sections provide preliminary recommendations for foundation design, pavements and the stormwater management facilities. Loose soils and shallow groundwater condition are likely to be encountered near-surface. The existing building, associated asphalt pavement and utilities within the eastern portion of the property will need to be removed prior to proposed development. Based on our subsurface exploration, the proposed site is feasible given the preliminary recommendations provided within this report. Details associated with the preliminary geotechnical recommendations are provided below.

5.1 BUILDING DESIGN

Based upon information provided at the time this report was prepared, the site is feasible for the proposed development from a geotechnical perspective**.** It is our professional opinion that subsurface conditions are not likely to significantly impact the construction of the proposed development. However, a temporary dewatering program during the installation of the foundations may be necessary based upon the final grades especially during the rainy season given the shallow estimated seasonal high groundwater level.

As previously noted, the site appears to consist of an existing structure within the eastern portion of the property. Uncontrolled fill soils which could contain construction debris and organics from in-place or placed topsoil grubbing operations, while not encountered during this exploration, may be present within the depths of excavation. Special attention should be taken to observe such conditions, if encountered during the foundation excavations. If uncontrolled fill soils are observed, we recommend test pits be performed within the vicinity of the foundation during a final geotechnical exploration in order to access the potential extents and depths of these materials.

All asphalt pavement, structural and site components (foundation, slabs, and utilities) of the existing facility located within the proposed building pad or canopy areas should be removed prior to construction; however, the existing limerock may remain in place if determined to be suitable based upon the design criteria, laboratory testing and satisfactory proofroll testing as determined by the Geotechnical Engineer of Record.

5.2 FOUNDATIONS

We anticipate that the proposed structures for this site can be supported on a shallow foundations after adequate site preparation procedures. Upon successful completion of the recommended site preparation procedure, the anticipated structures would be able to be supported on shallow foundations sized to exert a maximum allowable soil bearing pressure of 3,000 pounds per square foot (psf).

The estimate of maximum allowable bearing pressure is based on assumed column and wall foundation loads of 80 kips and 5 kips per linear foot, respectively bearing at an elevation of approximately EL. +42 feet-datum on natural or controlled, compacted fill soils. If loads are higher than assumed, ECS should be contacted to review the foundation recommendations. Based on the Conceptual Sketch dated October 30, 2018 prepared by Kimley-Horn and existing site grades, we assumed the final finished floor elevation of the proposed structure to be approximately at EL. +44 feet-datum. The estimate of allowable bearing pressure may be refined based on more

precise estimates of loads (provided by the structural engineer) and proposed site grades. The foundations should be designed based on the maximum load which could be imposed by all loading conditions.

All shallow foundations should be embedded at least 18 inches below lowest adjacent grade. Further, we recommend minimum foundation widths of 18 and 24 inches of strip and square footings, respectively, even though the maximum allowable soil bearing pressure may not be developed in all cases.

Post-construction settlements of the structure will be influenced by several interrelated factors, including: (1) strength and compressibility characteristics of the subsurface; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the contractor. Our settlement estimates for the structure are based on the use of the earthwork construction techniques as recommended in Section 6.2 of this report. Any deviation from these recommendations could result in an increase in the estimated post-construction settlements of the structure.

Assuming the site preparation procedure as outlined is followed; we estimate that total post construction settlements of the structure are likely to be 1 inch or less. If the recommended earthwork construction techniques outlined in this report are followed, differential settlements of 0.75 inch or less should be anticipated. The above settlement estimates are based on the assumed maximum structural loads, recommended maximum allowable bearing pressure, and the field data.

5.3 STORMWATER MANAGEMENT SYSTEM DESIGN PARAMETERS

It is our understanding that the proposed development is likely to include a proposed three (3) stormwater dry retention pond areas within the southern portion of the proposed development and seven (7) exfiltration systems within the northern portion of the site. Based on the laboratory test results obtained from the borings performed around the underground exfiltration systems areas (B-2 through B-6, B-8, B-9, B-11, B-12, B-14 and B-16), two (2) dry pond areas (B-1, B-7, and B-13) and wet pond area (B-18 and B-19), the upper stratum is classified predominantly as Fine SAND (SP) and Fine SAND with SILT (SP-SM) to the maximum termination of depth of borings (20 feet below existing grades).

The groundwater table was encountered between approximately 4 feet to 5.5 feet below the existing grades at the boring locations within the drilling depths at the time of our exploration, and therefore the seasonal high groundwater level is estimated to between approximately between 3 feet to 5 feet below existing grades.

Table 5.3.1 outlines the recommended design parameters for the proposed stormwater dry pond area within the southern portion of the property.

Table 5.3.1 Dry Stormwater System Design Subsurface Input Design Parameters

Stormwater System ID	Boring ID	Average Seasonal High Ground Water Table Elevation (ft-datum)*	Average Base of Aquifer Elevation (ft-datum) *	Fillable Porosity	Average Horizontal Saturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kh (ft/day)	Average Vertical Unsaturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kv (ft/day)
SMA-A.1	B-1 & B-7	40.0	34.0	0.25	51**	17**
SMA-A.2	B-13	41.5	35.0	0.25		
SMA-C	B-8, B-11, B-14, B-16	40.5	32.6	0.25	51**	17**
SMA-D	B-9 & B-12	39.8	29.5	0.25	51**	17**
SMA-E	B-6 & B-9	40.8	29.2	0.25	51**	17**
SMA-F	B-3	41	22.5	0.25	51**	17**
SMA-G	B-2, B-3, B-5, B-6 & B-8	40.5	27.9	0.25	55	37
					51**	17**

Notes: : * Elevations at the boring locations were estimated using the available Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc., and therefore these elevations should be considered approximate to the closest half foot.

** Average Horizontal Saturated Hydraulic Conductivity of Mobilized Surficial Aquifer (K_h) and Average Vertical Unsaturated Hydraulic Conductivity of Mobilized Surficial Aquifer (K_v) factored values selected by Kimley Horn for recovery analysis..

Table 5.5.1 Stormwater System Design Parameters

Stormwater System ID	Boring ID	Average Seasonal High Ground Water Table Elevation (ft-datum)*	Average Wet Season Groundwater Table Elevation (ft-datum) *	Average Normal Seasonal Low Ground Water Table Elevation (ft-datum) *	Average Horizontal Saturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kh (ft/day)	Average Vertical Unsaturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kv (ft/day)
SMA-B	B-18 & B-19	41.0	40.5	39.5	51	34

Notes: : * Elevations at the boring locations were estimated using the available Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc., and therefore these elevations should be considered approximate to the closest half foot.

Please note that the hydraulic conductivity values presented in table above do not incorporate any factors of safety, except as otherwise noted. Appropriate factors of safety will have to be applied during design and drawdown analysis. Moreover, please note that parameters presented in the table above are based on assumptions made to ground surface elevations noted on our boring logs are approximately based on the Boundary and Topographic Survey dated October 15, 2018 prepared by Shannon Surveying, Inc. our surface elevations with one-foot contour intervals; therefore, should be considered approximate to the closest half foot. We recommend that boring location survey be performed by a professional surveyor to extend the usefulness of the subsurface information obtained.

ECS can perform a baseflow/groundwater seepage analysis once the stormwater pond configurations have been established. The stormwater pond bottom and side slopes should be stabilized according to applicable Water Management district and local municipality guidelines.

5.4 PAVEMENT DESIGN CONSIDERATIONS

As discussed in the aforementioned Design Considerations Section 5.0, the subsurface conditions are suitable for the proposed pavement design.

General Recommendations: Our scope of services did not include extensive sampling and Limerock Bearing Ratio (LBR) testing of existing subgrade or potential sources of imported fill for the specific purpose of a detailed pavement analysis. Instead, we have assumed pavement-related design parameters that are considered to be typical for the area soil types and roadway type as per the "FDOT Standards & Specifications". The recommended pavement thicknesses presented in this report section are considered typical and minimum for the assumed parameters in the general site area. We understand that budgetary considerations sometimes warrant thinner pavement sections than those presented. However, the client, the owner, and the project designers should be aware that thinner pavement sections may result in increased maintenance costs and lower than anticipated pavement life. We recommend the following pavement section designs included in Table 5.6.1 below.

Table 5.4.1 Pavement Sections

	Asphalt		Concrete	
Component	**Standard**	**Heavy**	**Standard**	**Heavy**
Stabilized Subgrade	12"	12"	12"	12"
Base Course	6"	8"	N/A	N/A
Surface Course	1.5"	2"	5"	6"

All pavement subgrades should be prepared in accordance with the recommendations presented in the section entitled Earthwork Operations.

In areas where Portland cement concrete pavement is planned, the concrete should be placed upon a minimum of 12 inches of compacted, free draining material and compacted to 98 percent of the Modified Proctor maximum dry density (ASTM D1557).

In areas where asphaltic concrete pavements are used, we suggest stabilizing the subgrade materials to a minimum Florida Bearing Value (FBV) of 75 pounds per square inch (psi). As an alternate for the FBV, materials can have a LBR of 40 percent. All stabilized subgrade materials should be compacted to 98 percent of the Modified Proctor (ASTM D-1557) maximum dry density and meet specification requirements for Type B or Type C Stabilized Subgrade by the Florida Department of Transportation (FDOT). The stabilized subgrade may consist of imported material or a blend of on-site soils and imported materials. If a blend is proposed, we recommend that the contractor performs a mix design to find the optimum mix proportions.

Base Course: Based on the groundwater conditions encountered at the subject property, it is our professional opinion that crushed concrete or limerock are likely to be the economical and feasible base course options for this project.

Limerock should follow a minimum LBR of 100 percent and should be mined from an FDOT approved source. Place limerock in maximum six-inch lifts and compact each lift to a minimum density of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557).

Crushed concrete should follow the FDOT specification for material qualifications and placement. Place crushed concrete base in maximum 6-inch lifts and compact to a minimum density of 95 percent of the Modified Proctor (ASTM D-1557) maximum dry density according to their specification. Perform compliance testing for the base course to a depth of one foot at a frequency of one test per 5,000 square feet, or at a minimum of two test locations, whichever is greater.

Effects of Groundwater: One of the most critical influences on the pavement performance in Central Florida is the relationship between the pavement subgrade and the seasonal high groundwater level. Roadways and parking areas that have not considered these effects typically exhibit signs of deterioration due to degradation of the base and the base/surface course bond. Regardless of the type of base selected, we recommend that the seasonal high groundwater (SHGWT) and the bottom of the base course be separated by at least 12 inches for crushed concrete and 18 inches for limerock. Please note that a higher separation criterion between SHGWT and bottom of the base course may be required based on reviewing agency indication.

Landscape Drains and Curbing: If needed, where landscaped sections are located adjacent to parking lots or driveways, we recommend that drains be installed around these landscaped sections to protect the asphalt pavement from excess rainfall and over irrigation. Migration of irrigation water from the landscape areas to the interface between the asphalt and the base usually occurs unless landscape drains are installed. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration. The underdrains or strip drains should be routed to a positive outfall at the pavement area catch basins.

It is recommended that curbing around landscaped sections adjacent to parking lots and driveways be constructed with full-depth curb sections. Using extended curb sections which lie directly on top of the final asphalt level, or eliminating curbing entirely, can allow migration of irrigation water from the landscaped areas to the interface between the asphalt and the base. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration.

6.0 SITE CONSTRUCTION RECOMMENDATIONS

6.1 SUBGRADE PREPARATION

6.1.1 Stripping and Subgrade Preparation

The subgrade preparation should consist of stripping vegetation, rootmat, topsoil, any existing fill materials and any other soft or unsuitable materials from the 10-feet expanded building limit and 5-feet expanded pavement limits. Stripping limits should be extended an additional 1 foot for each foot of fill required at the structure's exterior edge. These activities should include removing soft and/or wet soils or otherwise unsuitable surface materials.

It should be anticipated that existing subgrade materials from the site will be loose and wet. A contingency should be included in the budget for isolated undercutting during proofroll operations. In the building areas, the depth of the soft wet soil, if encountered, should be removed to stable soil and replaced with approved structural fill. If the depth of unsuitable material is identified to be deeper than 3 feet below design subgrade in foundation or pavement areas, then alternative pavement subgrade stabilization may be considered. This could consist of excavating down a maximum of 3 feet below the pavement subgrade elevation, placing geogrid (such as Mirafi BXG-11 or approved equivalent), and then placing granular material over the grid to the design subgrade elevation. The actual depth of the undercut and/or remedial approach will vary depending on the conditions and should be evaluated at the time of construction.

The contractor should have a dewatering plan prepared in order to control high groundwater conditions observed on site. The amount and frequency of precipitation may also affect the groundwater conditions. The contractor should make provisions to keep excavations dry during construction to maintain the integrity of the exposed soils and help reduce the potential for otherwise unnecessary remedial work.

Erosion and sedimentation shall be controlled in accordance with Best Management Practices and current state, local, and NPDES requirements. At the appropriate time, we would be pleased to provide a proposal for construction materials testing and NPDES related services.

6.1.2 Proofrolling

Following the stripping operations and prior to the placement of structural fills or structural elements, the exposed subgrade soils should be observed by a geotechnical engineer or their approved representative. Proofrolling using a loaded dump truck, having an axle weight of at least 10 tons, may be used at this time to aid in identifying localized soft or unsuitable materials that should be removed. Any soft or unsuitable material encountered during proofrolling should be removed to a stable subgrade and replaced with an approved backfill compacted to the criteria given below.

Due to the loose soils encountered within this exploration a representative of the Geotechnical Engineer of Record is recommended to be on-site during the proofroll of the building pad areas to confirm the suitability of the natural soils prior to the placement of structural fill or foundations. The natural soils within the building pad areas should be densified with a 20 ton smooth drum roller that should traverse the pads in a perpendicular (orthogonal) pattern using

the maximum vibratory setting prior to commencing proofroll operations and subsequent structural fill placement.

6.2 EARTHWORK OPERATIONS

6.2.1 Structural Fill Materials

After subgrade preparation and observation has been completed and a stable subgrade exists, fill placement may begin. Structural fill materials should not be placed on soils which have been recently subjected to precipitation. Wet soils should be removed prior to the placement of engineered fill, granular sub-base materials, foundation/slab concrete, or paving materials.

Materials used as structural fill for shallow fill areas should consist of approved material classified as SP, SP-SM, SM, SC or more granular, which are free of debris, particles larger than 3 inches in diameter (4-inches for trench/utility backfill), organic inclusions, cinders, ash, or excess moisture. **It should be noted that the soils observed within the proposed dry pond area would be considered suitable for use as structural fill; however, due to the nature of the high groundwater table there should be consideration with respect to a time allowance for these soils to dry prior to compactive effort being applied. Due to the coarse, granular nature of the soils, we would expect the soils to dry relatively quickly during periods of no precipitation.**

Prior to placement of structural fill, representative bulk samples (about 50 pounds) of on-site and off-site borrow should be submitted to ECS for laboratory testing, which will include natural moisture content, grain-size distribution, and moisture-density relationships for compaction. Import materials should be tested prior to being hauled to the site to determine if they meet project specifications.

The structural fill, consisting of suitable on-site soils or off-site granular borrow material, or a mixture thereof, should be placed in essentially horizontal lifts with a maximum loose thickness of 8 inches and moisture conditioned to within $\pm$3 percentage points of the optimum moisture content. Structural fill should be placed and compacted to a minimum compaction of 95% of the maximum dry density in accordance with the Modified Proctor method (ASTM D1557).

Each lift of compacted engineered fill should be tested by a representative of the geotechnical engineer prior to placement of subsequent lifts. Compaction testing should be performed at the rate of at least 1 test per 2,500 square feet for each lift of fill within the building pad and at the rate of at least 1 test per 5,000 square feet for each lift of fill outside of the building pad, with a minimum of 3 tests per lift of fill within the building footprint. The elevation and location of the tests should be accurately identified at the time of fill placement. Areas which fail to achieve the required degree of compaction should be recompacted and retested until minimum compaction is achieved. Failing test areas may require adjustments in moisture content or other suitable remedial activities in order to achieve the required compaction.

The expanded limits of the proposed construction areas should be well defined, including the limits of the fill zones for buildings, pavements, and slopes, etc., at the time of fill placement. Grade controls should be maintained throughout the filling operations.

Compaction equipment suitable to the soil type being compacted should be used to compact the subgrades and fill materials. Sheepsfoot compaction equipment should be suitable for the fine-

grained soils (Clays and Silts). A vibratory steel drum roller should be used for compaction of coarse-grained soils (Sands) as well as for sealing compacted surfaces. In confined areas such as utility trenches, portable compaction equipment and thin lifts of 3 to 4 inches may be required to achieve specified degrees of compaction.

At the end of each work day, all fill areas should be graded to facilitate drainage of any precipitation and the surface should be sealed by use of a smooth-drum roller to limit infiltration of surface water. During placement and compaction of new fill at the beginning of each workday, the contractor may need to scarify existing subgrades to a depth on the order of 4 inches so that a weak plane will not be formed between the new fill and the existing subgrade soils.

Positive site drainage should be maintained during earthwork operations in an effort to maintain the integrity of the site surface soil. When wet, the site soils may degrade quickly with disturbance from contractor operations and will be extremely difficult to stabilize for fill placement. Consequently, the contractor should be prepared to implement aggressive mechanical or chemical drying, depending upon the actual site conditions. We strongly recommend that mass grading for the project be performed during the drier summer months to help facilitate favorable moisture conditions for the site soils. If water must be added to raise the moisture content of the soil, it should be uniformly applied and thoroughly mixed into the soil. In addition to maintaining proper site drainage for the purpose of maintaining the integrity of the site soils, care must be taken to control the surface water flow due to the inherent risks associated with risk for sinkhole development as previously discussed.

6.3 UTILITY INSTALLATIONS

Utility Subgrades and Excavation: The soils encountered in our exploration are expected to be generally suitable for support of utility pipes to include an underground storage tank (UST). The pipe subgrade, especially where existing fill was encountered, should be observed and probed for stability by the testing agency to evaluate the suitability of the materials encountered. Any loose or unsuitable materials encountered at the utility pipe subgrade elevation should be removed and replaced with suitable compacted structural fill or pipe bedding material. Based upon the type of soils and high groundwater table encountered on site, the contractor will need to consider installing trench boxes during deep utility and UST excavations.

Utility Backfilling: The granular bedding material should be at least 4 inches thick, but not less than that specified by the project drawings and specifications. Fill placed for support of the utilities, as well as backfill over the utilities, should satisfy the requirements for structural fill given in this report. Compacted backfill should be free of topsoil, roots, ice, or any other material designated as unsuitable. The backfill should be moisture conditioned, placed, and compacted in accordance with the recommendations of this report. Where the utility and UST will be located below water, the contractor should be aware of potential buoyancy and tie down the pipes or UST structure. In addition, soil backfill will not be able to be compacted. In this case, backfill can consist of FDOT 57 stone to approximately 1 foot over the water level, a fabric separator placed, followed by compacted fill to design subgrade.

Utility Excavation Dewatering: Groundwater will likely be encountered for UST and utility excavations. Depending on the amount of controlled fill and the depth of the utility, pumping from the excavations may not be enough for the installation of the utility and UST. Well points

would need to be considered if localized dewatering equipment such as sump pumps are unable to control water during the installation of the utilities and UST. It is expected that removal of perched water which seeps into excavations could be accomplished by pumping from sumps excavated in the trench bottom and which are backfilled with FDOT Size No. 57 Stone or open graded bedding material. Should water conditions beyond the capability of sump pumping be encountered, the contractor should submit a Dewatering Plan in accordance with project specifications.

6.4 GENERAL CONSTRUCTION CONSIDERATIONS

Site Drainage and Surface Water Control: Adequate temporary and permanent control of surface water runoff will be required in order to allow site access, grading and construction to proceed. Standing water or ice should be removed from the completed building pad and pavement subgrades as soon as practical after each precipitation event without damaging the subgrade throughout the construction period. This may include the use of temporary under-drains, sump pits and pumps, plowing, or other means. In addition, the building pad and pavement subgrades should be maintained on a regular basis to grade out any ruts or low points where water may accumulate, and to aerate and/or re-compact any areas disturbed by weather or construction activities. The responsibility for this maintenance role should be clearly defined in the contract documents.

Subgrade Protection: Measures should also be taken to limit site disturbance, especially from rubber-tired heavy construction equipment, and to control and remove surface water from development areas, including structural and pavement areas. It would be advisable to designate a haul road and construction staging area to limit the areas of disturbance and to prevent construction traffic from excessively degrading sensitive subgrade soils and existing pavement areas. Haul roads and construction staging areas could be covered with excess depths of aggregate to protect those subgrades. The aggregate can later be removed and used in pavement areas.

Excavation Safety: Cuts or excavations associated with utility excavations may require forming or bracing, slope flattening, or other physical measures to control sloughing and/or prevent slope failures. Contractors should be familiar with applicable OSHA codes to ensure that adequate protection of the excavations and trench walls is provided.

Erosion Control: Install soil erosion and sedimentation control devices, as well as temporary stormwater management facilities, as specified by Site/Civil Engineer. Maintain positive drainage conditions throughout construction, avoiding unnecessary ponding of stormwater in excavations or low areas of the site. Seal-roll exposed soil or subgrade surfaces prior to rain events, and promptly remove any standing water immediately afterwards.

6.5 CONSTRUCTION OBSERVATION AND TESTING

Regardless of the thoroughness of a geotechnical engineering study, there is always a possibility that subsurface conditions between test borings may be different from those encountered at the test boring locations, that conditions are not as anticipated by the designers, or that the demolition or construction process has altered the subsurface conditions. Therefore, geotechnical engineering construction observation should be performed under the supervision of a qualified

Geotechnical Engineer who is familiar with the intent of the recommendations presented in this report. Such observation services are recommended to evaluate whether the conditions anticipated in the design actually exist, or whether the recommendations presented in the report should be modified where necessary.

7.0 CLOSING

The report has been prepared for the exclusive use of Equinox Development Properties Inc., and their design team. ECS has prepared this report of findings, evaluations, and recommendations to guide geotechnical-related design and construction aspects of the project.

The description of the proposed project is based on information provided to ECS by Equinox Development Properties Inc. If any of this information is inaccurate, either due to our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted immediately in order that we can review the report in light of the changes and provide additional or alternate recommendations as may be required to reflect the proposed construction.

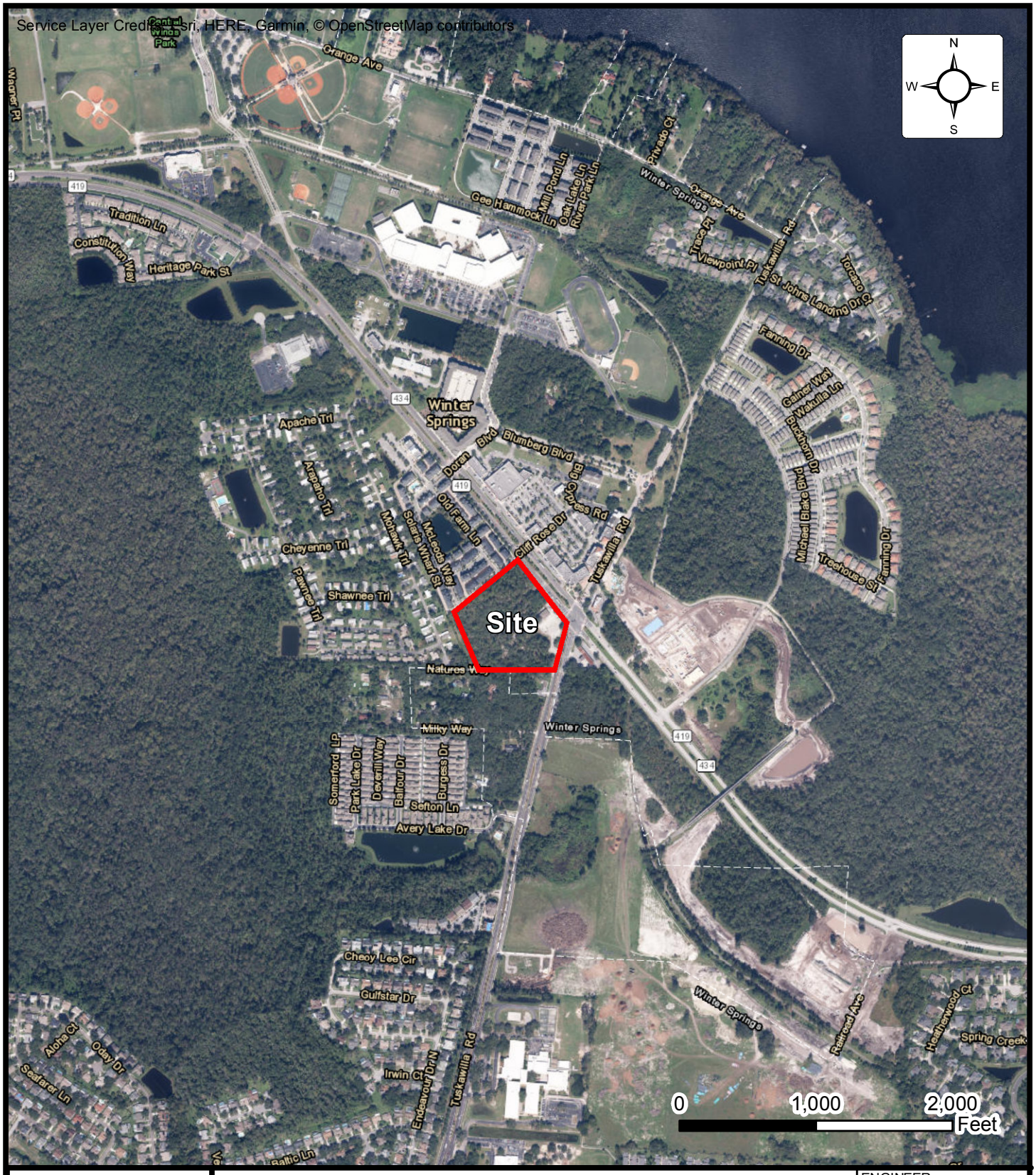
We recommend that ECS be allowed to review the project's plans and specifications pertaining to our work so that we may ascertain consistency of those plans/specifications with the intent of the geotechnical report.

Field observations, monitoring, and quality assurance testing during earthwork and foundation installation are an extension of and integral to the geotechnical design recommendation. We recommend that the owner retain these quality assurance services and that ECS be allowed to continue our involvement throughout these critical phases of construction to provide general consultation as issues arise. ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

The scope of this investigation was limited to the evaluation of the load-carrying capabilities and load stability of the soils and bedrock. Oil, hazardous waste, radioactivity, irritants, pollutants, radon or other dangerous substances and conditions were not the subject of this study. Their presence and/or absence are not implied, inferred or suggested by this report or results of this study.

APPENDIX A – Diagrams

Site Location Diagram
Boring Location Diagram



Site Line Location Diagram
TUSKAWILLA RETAIL DEVELOPMENT

170 TUSKAWILLA ROAD, WINTER SPRINGS, FL

EQUINOX DEVELOPMENT PROPERTIES, INC.

ENGINEER	JPH
SCALE	1 " = 1000 '
PROJECT NO.	6366
SHEET	1 OF 1
DATE	11/8/2018

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors



Boring Location Diagram

EQUINOX DEVELOPMENT PROPERTIES, INC.

TUSKAWILLA RETAIL DEVELOPMENT

170 TUSKAWILLA RD, WINTER SPRINGS, FL

ENGINEER	JPH
SCALE	AS NOTED
PROJECT NO.	24:6366
SHEET	1 OF 1
DATE	12/11/2020

APPENDIX B – Field Operations

Reference Notes for Boring Logs
Boring Logs (B-1 through B-19)
Cross Section A-A'
Cross Section B-B'
Cross Section C-C'

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]	
	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
	FILL[3] MAN-PLACED SOILS
	GW **WELL-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GP **POORLY-GRADED GRAVEL** gravel-sand mixtures, little or no fines
	GM **SILTY GRAVEL** gravel-sand-silt mixtures
	GC **CLAYEY GRAVEL** gravel-sand-clay mixtures
	SW **WELL-GRADED SAND** gravelly sand, little or no fines
	SP **POORLY-GRADED SAND** gravelly sand, little or no fines
	SM **SILTY SAND** sand-silt mixtures
	SC **CLAYEY SAND** sand-clay mixtures
	ML **SILT** non-plastic to medium plasticity
	MH **ELASTIC SILT** high plasticity
	CL **LEAN CLAY** low to medium plasticity
	CH **FAT CLAY** high plasticity
	OL **ORGANIC SILT or CLAY** non-plastic to low plasticity
	OH **ORGANIC SILT or CLAY** high plasticity
	PT **PEAT** highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION		
DESIGNATION		**PARTICLE SIZES**
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSIVE STRENGTH, Q_P[4]	**SPT[5] (BPF)**	**CONSISTENCY[7] (COHESIVE)**
<0.25	<3	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT[5]	**DENSITY**
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
Dual Symbol *(ex: SW-SM)*	10	10
With	15 - 20	15 - 25
Adjective *(ex: "Silty")*	≥25	≥30

WATER LEVELS[6]		
	WL	Water Level (WS)(WD)
		(WS) While Sampling
		(WD) While Drilling
	SHW	Seasonal High WT
	ACR	After Casing Removal
	SWT	Stabilized Water Table
	DCI	Dry Cave-In
	WCI	Wet Cave-In

[1] *Classifications and symbols per ASTM D 2488-09 (Visual-Manual Procedure) unless noted otherwise.*

[2] *To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.*

[3] *Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-**FILL**)].*

[4] *Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).*

[5] *Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf).*

[6] *The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.*

[7] *Minor deviation from ASTM D 2488-09 Note 16.*

[8] *Percentages are estimated to the nearest 5% per ASTM D 2488-09.*

© 2017 ECS Corporate Services, LLC. All Rights Reserved

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-4	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			3 2 4 4 4 4 3 4 4 5 4 6 5 6 5 7 9 7 8 7 7
	S-2	SS	24	24			40	
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense			
	S-4	SS	24	24				
	S-5	SS	24	24			35	
10					(SP) SAND, light gray, wet, medium dense			
	S-6	SS	18	18			30	7 7 7
15								
	S-7	SS	18	18			25	6 7 9
20					END OF BORING @ 20'		20	
25							15	
30								

6 – 7 – 10 – 12 – 15 – 14 – 16

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-9	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			2 2 3
	S-2	SS	24	24				5 4 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense		40	4 4 3
	S-4	SS	24	24				5 4 6
	S-5	SS	24	24			35	6 5 7
10					(SP) SAND, light gray, wet, medium dense			7 6 8
	S-6	SS	18	18			30	7 8 6
15								7 9
	S-7	SS	18	18			25	8 7 8
20					END OF BORING @ 20'			
25							20	
							15	
30								

5 9 9 12 15 16 15

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-15	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 43.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			3 5 4 4
	S-2	SS	24	24			40	4 3 4 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense			4 5 5 4
	S-4	SS	24	24				6 7 8 7
	S-5	SS	24	24			35	7 5 7 8
10								9
	S-6	SS	18	18	(SP) SAND, light gray, wet, medium dense		30	6 7 9
15								
	S-7	SS	18	18			25	8 8 10
20					END OF BORING @ 20'			
							20	
25								
							15	
30								

9 9 9 15 15 16 18

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 3.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 2.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-5	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

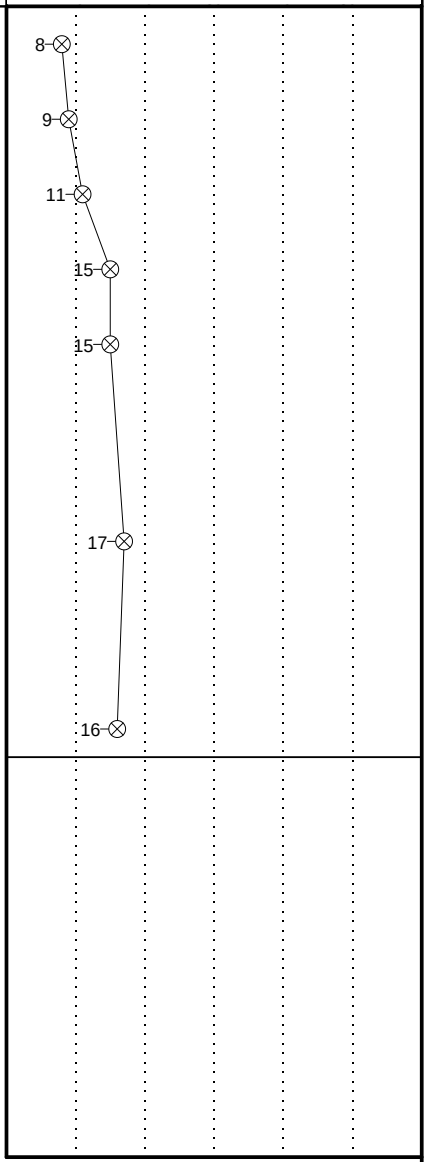
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			4 3 5
	S-2	SS	24	24				4 5 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	4 6 7
	S-4	SS	24	24	(SP) SAND, light gray, wet, medium dense			5 8 7
	S-5	SS	24	24			35	8 7 7
10								8
	S-6	SS	18	18			30	6 7 10
15								
	S-7	SS	18	18			25	6 8 8
20					END OF BORING @ 20'		20	
25							15	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-10	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	3 4
	S-2	SS	24	24				3 3
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	2 4 5 5
	S-4	SS	24	24				4 5 7 8
	S-5	SS	24	24	(SP) SAND, light gray, wet, medium dense		35	6 7 6 7 8 7 6 8
10								
	S-6	SS	18	18			30	6 7 7
15								
	S-7	SS	18	18			25	5 7 8
20					END OF BORING @ 20'			
25							20	
30							15	

7 9 12 13 13 14 15

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-14	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

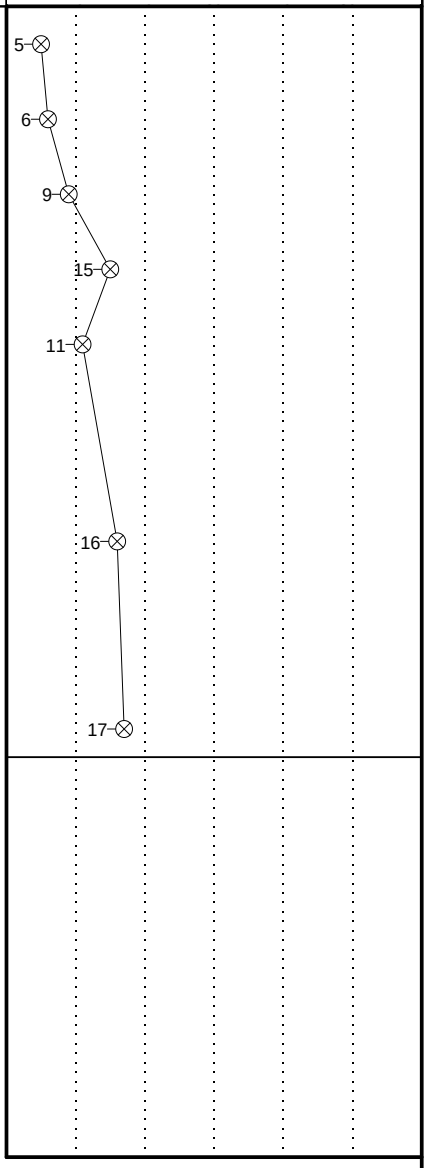
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	3 2 3
	S-2	SS	24	24				3 4 3
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense		40	3 5 4
	S-4	SS	24	24				4 5 7
	S-5	SS	24	24	(SP) SAND, light gray, wet, medium dense		35	6 7 8 7 6 6 5 8
10								
	S-6	SS	18	18			30	7 7 9
15								
	S-7	SS	18	18			25	6 7 10
20					END OF BORING @ 20'			
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-3	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

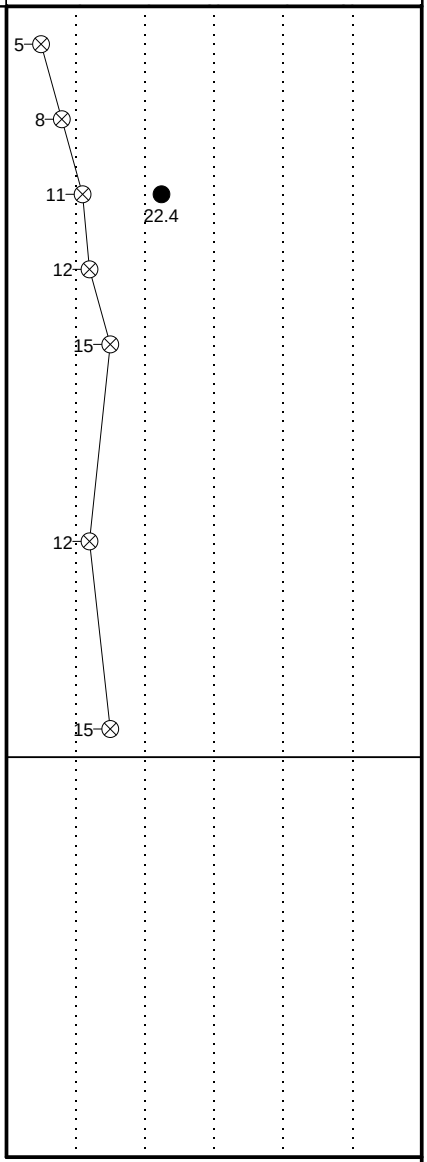
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 42.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			2 3 2 2 2
	S-2	SS	24	24			40	5 4 4 6 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense			6 5 7 6 7
	S-4	SS	24	24			35	5 8 6 8 7
	S-5	SS	24	24				7
10					(SP) SAND, light gray, wet, medium dense		30	
	S-6	SS	18	18				6 5 7
15							25	
	S-7	SS	18	18				5 8 7
20					END OF BORING @ 20'		20	
25							15	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-2	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

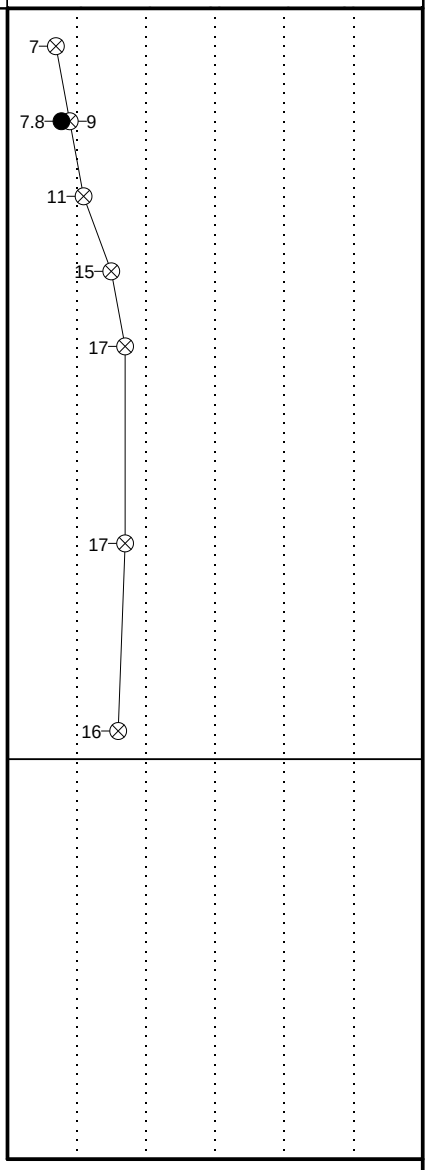
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 43'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0					Topsoil Thickness [3.00"]			4 3 4 4 4 5 4 5 5 5 4 6 5 7 6 8 7 8 9 9 8 7
	S-1	SS	24	24	(SP) SAND, gray to light gray, moist, loose			
	S-2	SS	24	24			40	
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense			
	S-4	SS	24	24				
	S-5	SS	24	24			35	
10								
					(SP) SAND, light gray, wet, medium dense		30	5 8 9
	S-6	SS	18	18				
15							25	7 8 8
	S-7	SS	18	18				
20					END OF BORING @ 20'		20	
25							15	
30								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-19	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

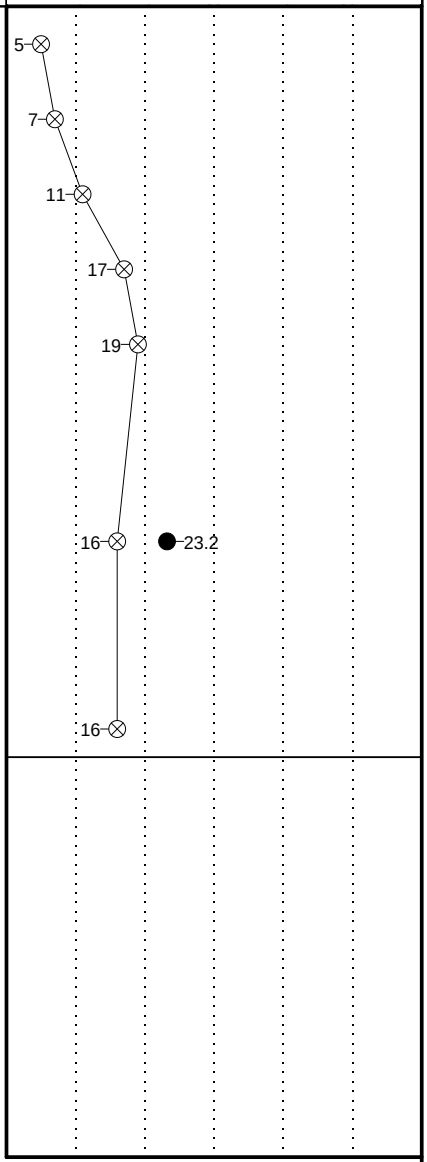
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, gray to light gray, moist, loose		45	3 2 3 3
	S-2	SS	24	24				4 3 4 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense		40	4 6 5 7
	S-4	SS	24	24				6 8 9 8
	S-5	SS	24	24				9 9 10 9
10							35	
					(SP) SAND, gray, wet, medium dense			
	S-6	SS	18	18				6 7 9
15							30	
	S-7	SS	18	18				8 8 8
20					END OF BORING @ 20'		25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-18	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

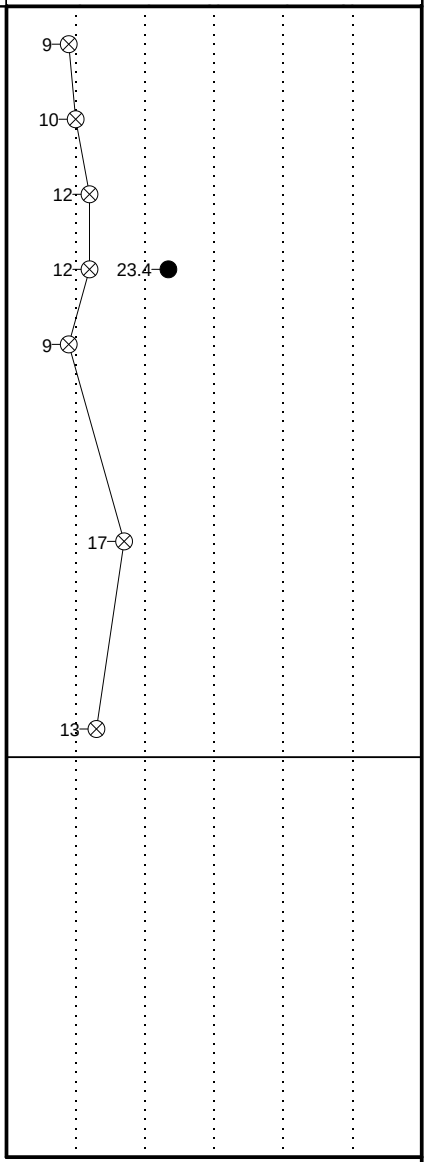
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	3 4 5
	S-2	SS	24	24				4 4 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense to loose		40	5 5 4 6 5 7 7
	S-4	SS	24	24				8 7 5 6
	S-5	SS	24	24				5 5 4 5
10					(SP) SAND, light gray, wet, medium dense		35	
	S-6	SS	18	18				5 7 10
15							30	
	S-7	SS	18	18				6 6 7
20					END OF BORING @ 20'		25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-12	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

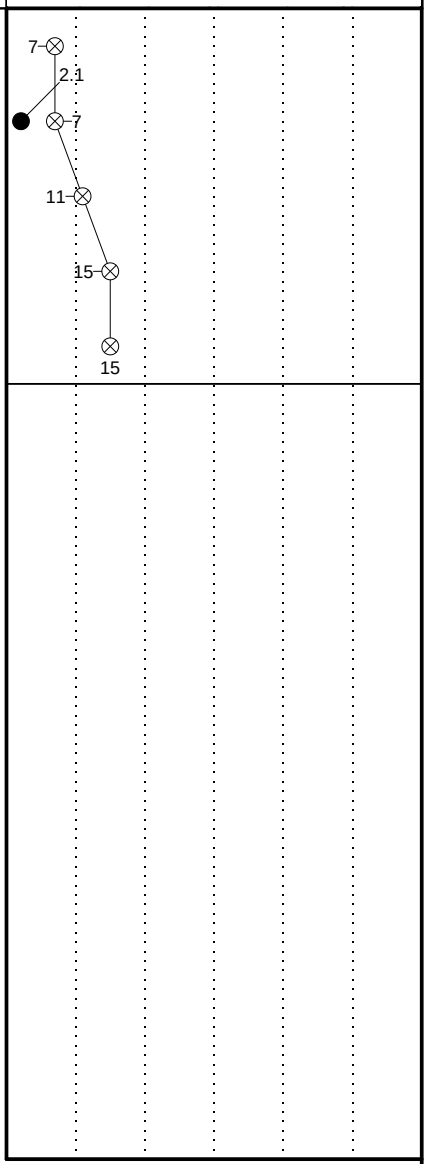
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	4 4 3
	S-2	SS	24	24				5 2 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense		40	3 4 4
	S-4	SS	24	24				6 5 7
	S-5	SS	24	24				6 8 7
10					END OF BORING @ 10'		35	9 6 8 7 10
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-17	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL (ENGLISH UNITS)	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Asphalt Thickness [2.00"] Limerock Thickness [5.00"] (SP) SAND, brown, moist, loose to medium dense		40	4 4 5
	S-2	SS	24	24				5 4 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, moist to wet, loose		35	6 5 5
	S-4	SS	24	24				5 7 4
	S-5	SS	24	24				4 4 5
10					END OF BORING @ 10'		30	5 4 4 6
15							25	
20							20	
25							15	
30								

9 11 10 13.8 8 8

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-6	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION

170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 44.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			3 2 4
	S-2	SS	24	24				3 6 5
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, brown, wet, medium dense		40	5 5 6
	S-4	SS	24	24				5 7 8
	S-5	SS	24	24	(SP) SAND, light gray, wet, loose		35	7 6 5 4 7
10					END OF BORING @ 10'			
15							30	
20							25	
25							20	
30							15	

6 – 10 – 11 – 15 – 9

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-11	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	4 3 2
	S-2	SS	24	24				3 4 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	4 3 5
	S-4	SS	24	24	(SP) SAND, light gray, wet, medium dense			7 6 7
	S-5	SS	24	24				6 5 7
10					END OF BORING @ 10'		35	7 6 8
15							30	7 8
20							25	
25							20	
30							15	

5 8 13 12 22.1 15

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-8	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

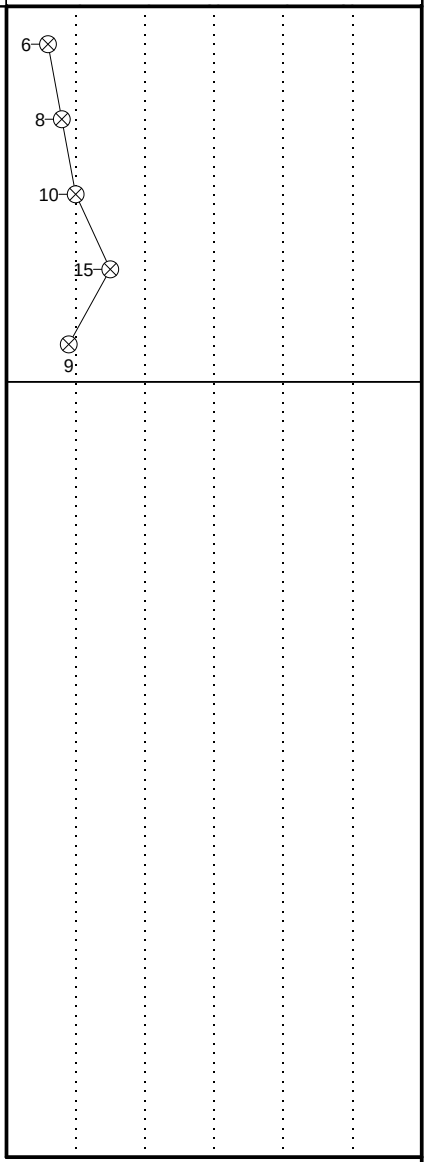
STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	4 3 3 3 4
	S-2	SS	24	24				5 5 3 5 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose		40	5 5 5 4 6
	S-4	SS	24	24	(SP) SAND, light gray, wet, medium dense to loose			8 7 7 5 4
	S-5	SS	24	24				5 7
10					END OF BORING @ 10'		35	
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-16	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION

170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

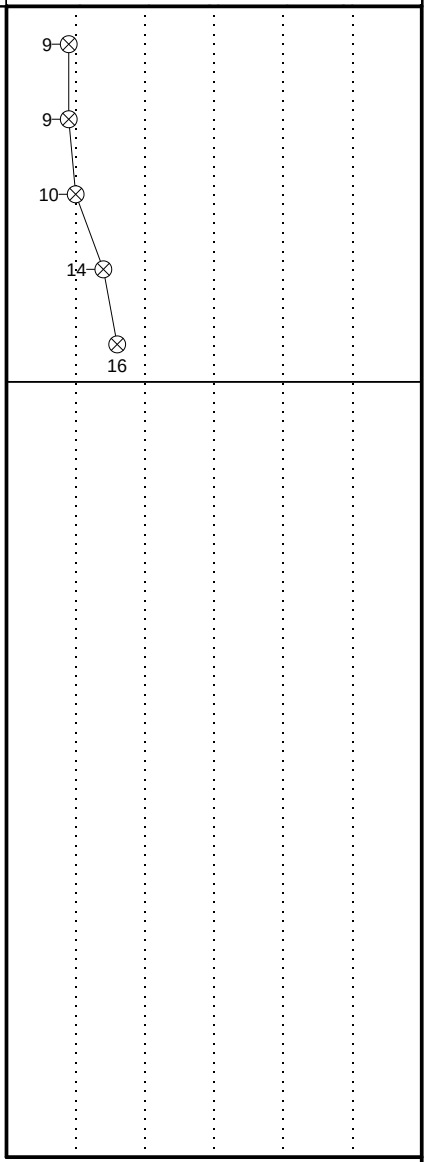
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	2 5 4 3 3 5 4 6 6 5 5 5 6 5 9 7 8 7 9 9
	S-2	SS	24	24				
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense		40	
	S-4	SS	24	24				
	S-5	SS	24	24				
10					END OF BORING @ 10'		35	
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-1	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 43.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			4 3 3 3 4
	S-2	SS	24	24			40	3 2 4 3 3
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, loose to medium dense			4 4 5 4 5
	S-4	SS	24	24				7 6 7 6 5
	S-5	SS	24	24			35	7 7 7
10					END OF BORING @ 10'			
							30	
15								
							25	
20								
							20	
25								
							15	
30								

6 6 9 13 12

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-7	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC% ———

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

ENGLISH UNITS

BOTTOM OF CASING ▰ LOSS OF CIRCULATION

SURFACE ELEVATION 44.5'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose			4 5 4 4 4 3 5 4 6 5 7 6 7 4 7 6 7 5 8 7 7
	S-2	SS	24	24				
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	
	S-4	SS	24	24				
	S-5	SS	24	24			35	
10					END OF BORING @ 10'			
15							30	
20							25	
25							20	
30							15	

9 9 13 13 15

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4.5' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 4' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

CLIENT	Job #:	BORING #	SHEET
Equinox Development Properties, Inc.	24:6366	B-13	1 OF 1

PROJECT NAME	ARCHITECT-ENGINEER
Tuskawilla Retail Development GEO	Kimley Horn

SITE LOCATION: 170 Tuskawilla Road, Winter Springs, Seminole County, FL

NORTHING | EASTING | STATION

CALIBRATED PENETROMETER TONS/FT^2

ROCK QUALITY DESIGNATION & RECOVERY
RQD% – — – REC%

PLASTIC LIMIT% | WATER CONTENT% | LIQUID LIMIT%

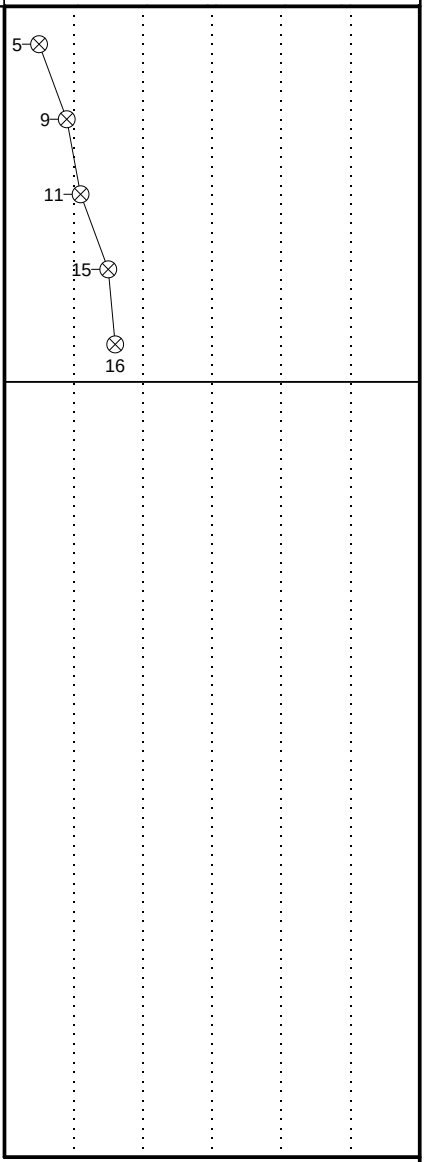
STANDARD PENETRATION BLOWS/FT

DESCRIPTION OF MATERIAL — ENGLISH UNITS

BOTTOM OF CASING | LOSS OF CIRCULATION

SURFACE ELEVATION 45'

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Topsoil Thickness [3.00"] (SP) SAND, light gray, moist, loose		45	3 3 2
	S-2	SS	24	24				4 5 4
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, wet, medium dense		40	5 4 6
	S-4	SS	24	24				5 7 6
	S-5	SS	24	24				8 7 7
10					END OF BORING @ 10'		35	6 9 7 9
15							30	
20							25	
25							20	
30							15	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL 4' WS ☐ WD ☒	BORING STARTED 10/08/18	CAVE IN DEPTH
WL(SHW) 3.5' WL(ACR)	BORING COMPLETED 10/08/18	HAMMER TYPE Manual
WL	RIG ATV FOREMAN Gary	DRILLING METHOD Mud Rotary

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GM - SILTY GRAVEL
GP - POORLY GRADED GRAVEL
GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT
ST - SHELBY TUBE
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND
RC - ROCK CORE
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY
PM - PRESSURE METER
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
- FILL
- POSSIBLE FILL
- PROBABLE FILL

SURFACE MATERIALS

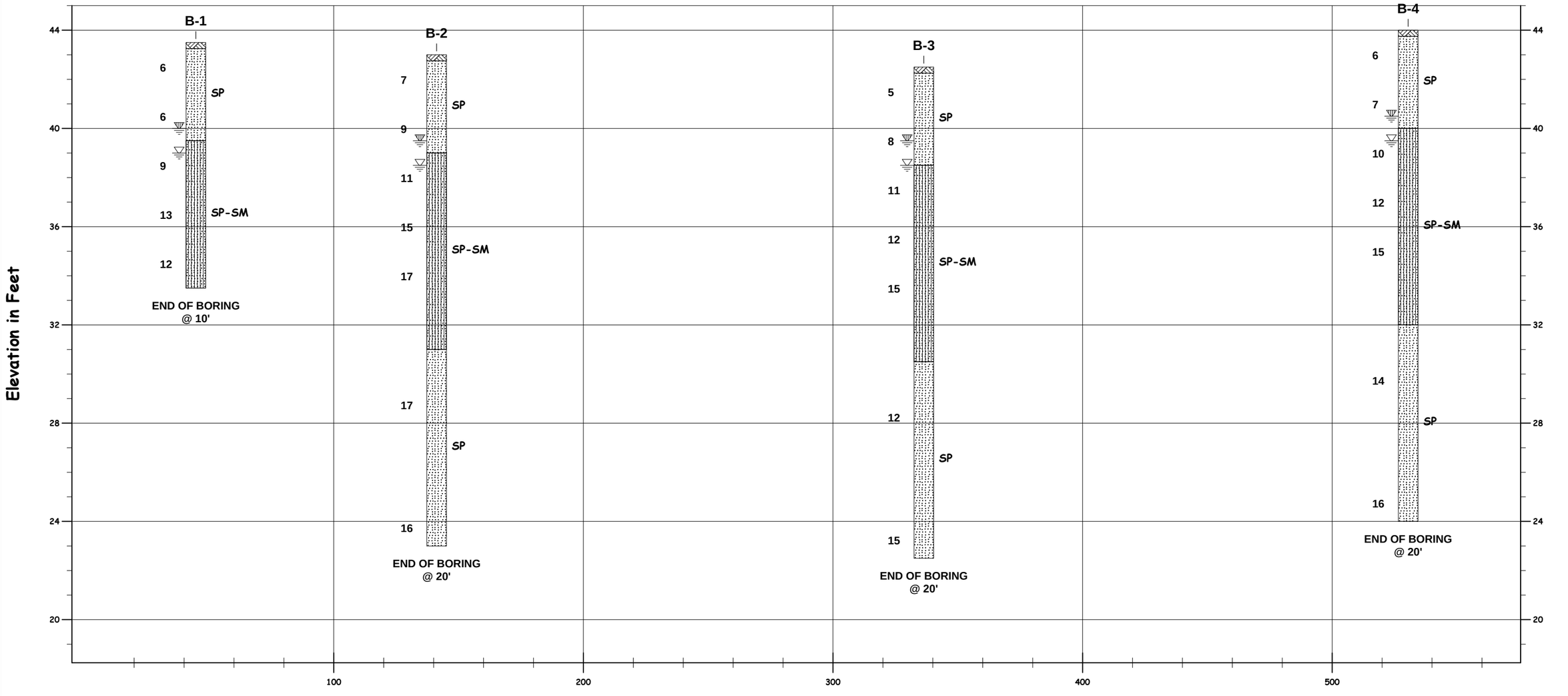
TOPSOIL
ASPHALT
GRAVEL
CONCRETE
VOID

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT% WATER CONTENT% % PASSING #200 SIEVE [88%] LIQUID LIMIT%



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile
Cross Section A-A

Tuskawilla Retail Development GEO
Equinox Development Properties, Inc.
170 Tuskawilla Rd, Winter Springs, Seminole County, FL

PROJECT NO.: 6366 | DATE: 11/14/2018 | VERTICAL SCALE: 1"=4'

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GP - POORLY GRADED GRAVEL
GM - SILTY GRAVEL
GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT
ST - SHELBY TUBE
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND
RC - ROCK CORE
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY
PM - PRESSURE METER
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
- FILL
- POSSIBLE FILL
- PROBABLE FILL

SURFACE MATERIALS

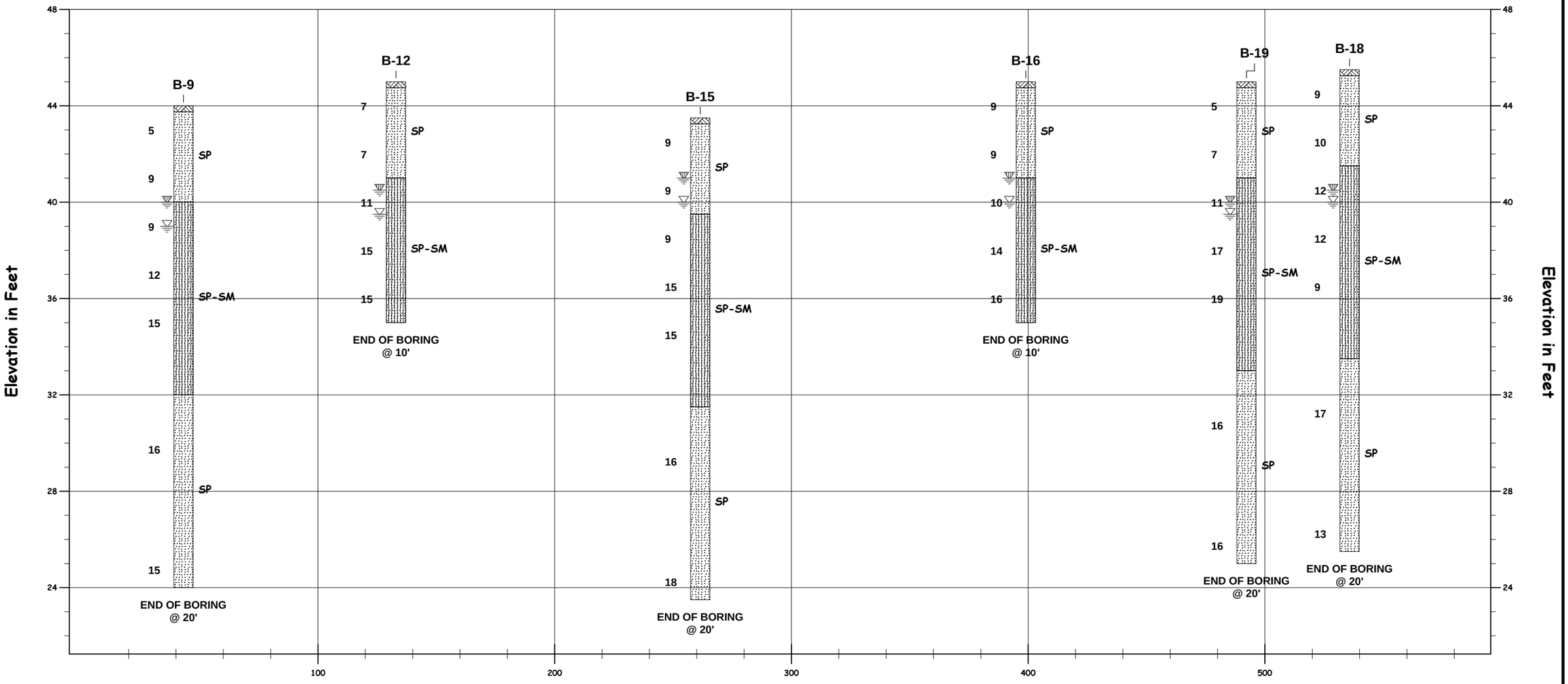
TOPSOIL
CONCRETE
ASPHALT
VOID
GRAVEL

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT% WATER CONTENT% % PASSING #200 SIEVE [88%] LIQUID LIMIT%



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile
Cross Section B-B

Tuskawilla Retail Development GEO
Equinox Development Properties, Inc.
170 Tuskawilla Rd, Winter Springs, Seminole County, FL

PROJECT NO.: 6366 | DATE: 11/14/2018 | VERTICAL SCALE: 1"=4'

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GP - POORLY GRADED GRAVEL
GM - SILTY GRAVEL
GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT
WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
- FILL
- POSSIBLE FILL
- PROBABLE FILL

ST - SHELBY TUBE
RC - ROCK CORE
PM - PRESSURE METER

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

SURFACE MATERIALS

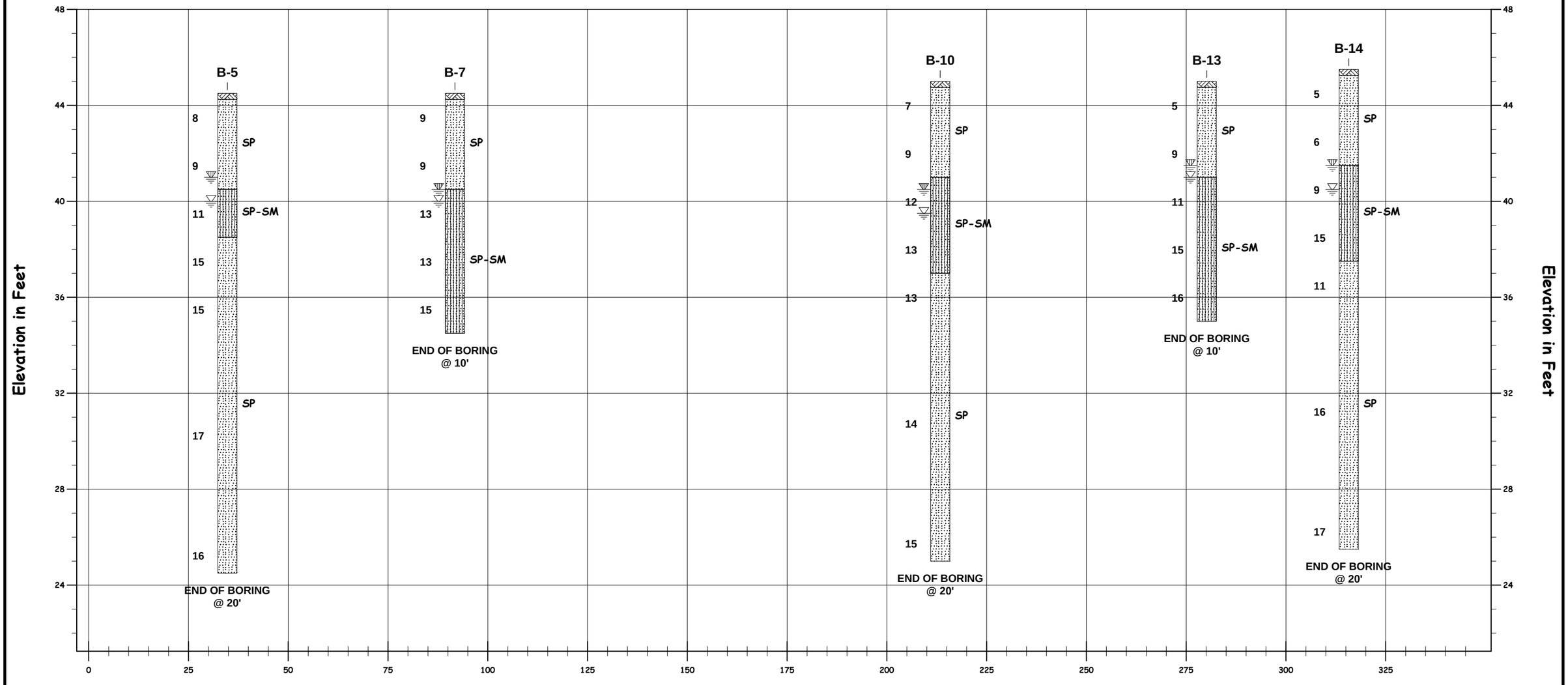
TOPSOIL
ASPHALT
GRAVEL
CONCRETE
VOID

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT% WATER CONTENT% % PASSING #200 SIEVE [88%] LIQUID LIMIT%



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).

Subsurface Soil Profile
Cross Section C-C

Tuskawilla Retail Development GEO
Equinox Development Properties, Inc.
170 Tuskawilla Rd, Winter Springs, Seminole County, FL

PROJECT NO.: 6366 | DATE: 11/14/2018 | VERTICAL SCALE: 1"=4'

APPENDIX C – Laboratory Testing

Laboratory Testing Results Summary

Laboratory Testing Summary

Sample Source	Sample Number	Depth (feet)	MC[1] (%)	Soil Type[2]	Atterberg Limits[3]			Percent Passing No. 200 Sieve[4]	Moisture - Density (Corr.)[5]		CBR Value[6]	Other
					LL	PL	PI		Maximum Density (pcf)	Optimum Moisture (%)		
B-3	S-3	4.00 - 6.00	22.4	SP-SM				5.8				
B-2	S-2	2.00 - 4.00	7.8	SP				2.7				Kh = 55 ft/day Kv = 37 ft/day
B-19	S-6	13.50 - 15.00	23.2	SP				1.7				
B-18	S-4	6.00 - 8.00	23.4	SP-SM				5.1				Kh = 51 ft/day Kv = 34 ft/day
B-12	S-2	2.00 - 4.00	2.1	SP				0.7				
B-17	S-3	4.00 - 6.00	13.8	SP-SM				8.9				
B-11	S-4	6.00 - 8.00	22.1	SP				0.9				

Notes: 1. ASTM D 2216, 2. ASTM D 2487, 3. ASTM D 4318, 4. ASTM D 1140, 5. See test reports for test method, 6. See test reports for test method

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content (ASTM D 2974)

Project No. 24:6366
Project Name: Tuskawilla Retail Development GEO
PM: DAS
PE: JPH
Printed On: Tuesday, November 13, 2018

ECS FLORIDA, LLC
2815 Directors Row, Suite 500
Orlando, FL 32809
Phone: (407) 859-8378
Fax: (407) 859-9599

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Site Plan Review

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Florida Statue 419.001. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. By submitting this application, you hereby grant temporary right of entry for City officials to enter upon the subject property for purposes of evaluating this application.

Site Plan Type

Type of Development: ____ Residential __X__ Non-Residential

___Preliminary Review __X__Final Review ___Combined Preliminary/Final ___Resubmittal ___ Recorded Plat

Project Name: Winter Springs Marketplace - Additional Parking Date: 5/13/2025

Applicant/Agent Information

Applicant(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Person Who Will Upload Plans: Cory Sitler

Email: cory.sitler@kimley-horn.com Phone#: 407-536-4440

Property Owner(s) Name (If Applicant is not the Property Owner)

Name: Winter Springs Net, LLC

Email: Rob@tricondev.com Phone #: (321) 452-0888

Mailing Address: 6525 3rd Street, Suite 409, Rockledge, FL 32955

Phone Number:

Site Information

Project Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Existing Use: Commercial

Proposed Use: Commercial

Zoning District: T-5 Urban Ceneter

Future Land Use: Commercial

Is the property located in the Town Center District? _X__Yes _____No

Is the property within the S.R. 434 Corridor Overlay District? _X__Yes _____No

Is the property located in the Greeneway Interchange Zoning District? _____Yes _X__No

The Planning and Zoning Board/Local Planning Agency shall review Site Plan Applications and make a written recommendation to the City Commission. The City Commission shall render all final decisions regarding Preliminary and Final Engineering Plans and may impose reasonable conditions on any approved plans to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the City Code and Comprehensive Plan. All formal decisions shall be based upon the applicable criteria as set forth in the City's Code of Ordinances Chapter 9, Land Development and Chapter 20, Zoning.

Applicants are advised, that if they decide to appeal any decisions made at the meetings or hearings, with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to ensure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per 286.0105, Florida Statutes.

Application Fees

Fees are as reflected on the Fee Schedule plus actual costs incurred for advertising or notification, and reimbursement for technical, and/or professional services which may be required in connection with the review, inspection, or approval of any development (based on accounting submitted by the City Consultant), payable prior to approval of the pertinent stage of development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Development Agreement

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Development Agreement for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl

Applicant Signature: _____ Date: 7.21.25

Business Name: Tuscawilla Property Investors, LLC

Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 01-21-30-5VK-0C00-0000

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 21st day of July, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 7/21/2025 (seal):

Notary Public Signature: _____

My Commission expires: June 4, 2027

KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): Robert Kodsi

Property Owner Signature: _____ Date August 1, 2025

STATE OF Florida COUNTY OF Brevard

The foregoing instrument was acknowledged before me this 1st day of August, 2025, by Robert Kodsi who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

_____ Date: 8/1/25 (seal):

Notary Public Signature: Brenda Shektman

My Commission expires: 6/22/29

BRENDA SHEKTMAN
MY COMMISSION # HH 670754
EXPIRES: June 22, 2029

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Site Plan Review

The Community Development Director reserves the right to determine whether this application is complete and accurate. An incomplete application will not be processed and will be returned to the applicant. The application shall be reviewed per Florida Statue 419.001. Applications shall be reviewed for sufficiency (completeness) within thirty (30) calendar days per FL Statue 166.033. By submitting this application, you hereby grant temporary right of entry for City officials to enter upon the subject property for purposes of evaluating this application.

Site Plan Type

Type of Development: ____ Residential __X__ Non-Residential

___Preliminary Review __X__Final Review ___Combined Preliminary/Final ___Resubmittal ___ Recorded Plat

Project Name: Winter Springs Marketplace - Additional Parking Date: 8/5/2025

Applicant/Agent Information

Applicant(s): Tuscawilla Property Investors, LLC

Mailing Address: 630 South Maitland Avenue, Suite 1000, Maitland FL 32751

Email: RStahl@equinox-development.com

Phone Number: (407) 628-0077

Person Who Will Upload Plans: Cory Sitler

Email: cory.sitler@kimley-horn.com Phone#: 407-536-4440

Property Owner(s) Name (If Applicant is not the Property Owner)

Name: Thistlewood Winter Springs, LLC

Email: kleiman@solo-cap.com Phone #: (917) 805-3552

Mailing Address: 677 King Street Charleston, SC 29403

Phone Number:

Site Information

Project Address: Northwest corner of FL-434 & Tuskawilla Rd

Parcel ID(s): 36-20-30-502-0000-0090

Parcel Size: 1.21 Acres

Existing Use: Commercial

Proposed Use: Commercial

Zoning District: T-5 Urban Ceneter

Future Land Use: Commercial

Is the property located in the Town Center District? _X__Yes _____No

Is the property within the S.R. 434 Corridor Overlay District? _X__Yes _____No

Is the property located in the Greeneway Interchange Zoning District? _____Yes _X__No

The Planning and Zoning Board/Local Planning Agency shall review Site Plan Applications and make a written recommendation to the City Commission. The City Commission shall render all final decisions regarding Preliminary and Final Engineering Plans and may impose reasonable conditions on any approved plans to the extent deemed necessary and relevant to ensure compliance with applicable criteria and other applicable provisions of the City Code and Comprehensive Plan. All formal decisions shall be based upon the applicable criteria as set forth in the City's Code of Ordinances Chapter 9, Land Development and Chapter 20, Zoning.

Applicants are advised, that if they decide to appeal any decisions made at the meetings or hearings, with respect to any matter considered at the meetings or hearings, they will need a record of the proceedings and, for such purposes, they will need to ensure that a verbatim record of the proceedings is made, at their cost, which includes the testimony and evidence upon which the appeal is to be based, per 286.0105, Florida Statutes.

Application Fees

Fees are as reflected on the Fee Schedule plus actual costs incurred for advertising or notification, and reimbursement for technical, and/or professional services which may be required in connection with the review, inspection, or approval of any development (based on accounting submitted by the City Consultant), payable prior to approval of the pertinent stage of development.

CITY OF WINTER SPRINGS
COMMUNITY DEVELOPMENT DEPARTMENT
1126 East State Road 434
Winter Springs, Florida 32708
customerservice@winterspringsfl.org

Application – Development Agreement

CITY LIMITED RIGHT OF ENTRY: By submitting this Application you hereby grant temporary right of entry for City Officials to enter upon the subject property for purposes of evaluating this Application and posting on the subject property.

APPLICANT'S AUTHORIZATION: I desire to make Application for a Development Agreement for the aforementioned project and have read and agree to the terms contained herein. In addition, if the Applicant is a corporate entity, the undersigned hereby represents and warrants that he/she is authorized to act on behalf of, and bind, the corporate entity.

Applicant Name (Print): Ryan Stahl
Applicant Signature: _____ Date: 7.21.25
Business Name: Tuscawilla Property Investors, LLC
Address: Northwest corner of FL-434 & Tuskawilla Rd Parcel ID: 01-21-30-5VK-0C00-0000

STATE OF Florida COUNTY OF Orange

The foregoing instrument was acknowledged before me this 21st day of July, 2025, by Ryan Stahl who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

Kristin Banks Date: 7/21/2025 (seal):
Notary Public Signature: Kristin Banks
My Commission expires: June 4, 2027

NOTARY PUBLIC STATE OF FLORIDA
KRISTIN BANKS
Commission # HH 405810
Expires June 4, 2027

Note: The Property Owner shall sign and have their signature notarized below if the Applicant is not the owner of the subject property.

Property Owner's Name (Print): Steven Kleiman
Property Owner Signature: _____ Date 8/4/2025
STATE OF SC COUNTY OF Charleston

The foregoing instrument was acknowledged before me this 4th day of August, 2025, by Steven Kleiman who is personally known to me or who has produced N/A as identification and who did/did not take an oath.

_____ Date: August 4 2025 (seal):
Notary Public Signature: MaryKatherine Roberson
My Commission expires: June 30, 2030

THIS INSTRUMENT WAS PREPARED BY
AND SHOULD BE RETURNED TO:

Anthony A. Garganese
City Attorney of Winter Springs
Garganese, Weiss, D'Agresta & Salzman, P.A.
111 N. Orange Avenue, Suite 2000
Orlando, FL 32802

(407) 425-9566

FOR RECORDING DEPARTMENT USE ONLY

THIRD MODIFICATION TO

DEVELOPMENT AND PROPERTY DIVISION AGREEMENT

(Winter Springs Marketplace – Additional Parking and Modifications to Robert Family Lane)

THIS THIRD MODIFICATION TO DEVELOPMENT AND PROPERTY DIVISION AGREEMENT ("Third Modification") is made and executed this _____ day of _____, 2025, by and between the **CITY OF WINTER SPRINGS**, a Florida Municipal Corporation ("City"), whose address is 1126 East S.R. 434, Winter Springs, Florida 32708, and **THISTLEWOOD WINTER SPRINGS, LLC,** a Florida Limited Liability Company, whose address is 677 King Street, 3rd Floor, Charleston, SC 29403 and **WINTER SPRINGS NET, LLC**, a Florida Limited Liability Company, whose address is 6525 3rd Street, Suite 409, Rockledge, Florida 32955 (collectively "Owners").

WITNESSETH:

WHEREAS, Owners' predecessor in interest, Tuscawilla Property Investors, LLC, and the City entered into and executed that certain Development and Property Division Agreement for Winter Springs Marketplace, dated March 8, 2021, and recorded in the Official Records of Seminole County at Book 9887, Pages 718-751 (the "Development Agreement") as well as that certain First Modification to the Development and Property Division Agreement for Winter Springs Marketplace, dated January 30, 2023, and recorded in the Official Records of Seminole County at Book 10397, Pages 628-643 (the "First Modification"), and that certain Second Modification to the Development and Property Division Agreement for Winter Springs Marketplace, dated _____, and recorded in the Official Records of Seminole County at Book _____, Pages _____ (the "Second Modification"); and

WHEREAS, the Development Agreement governs the development of the Winter Springs Marketplace shopping center, consisting of both the Property and Trust Property, as legally

described and defined therein, the Trust Property having been conveyed to Tuscawilla Property Investors subsequent to the execution and recordation of the Development Agreement, and the Trust Property being more particularly described in Exhibit "D" of the Development Agreement; and

WHEREAS, the Property and Trust Property have been subdivided and are no longer entirely owned by Tuscawilla Property Investors, LLC; and

WHEREAS, as described in the Second Modification, Tuscawilla Property Investors, LLC, desires to construct a Wawa neighborhood convenience store with gas pumps on the Resulting Trust Property Parcel #2, as more particularly described in Exhibit "G" of the Second Modification; and

WHEREAS, Tuscawilla Property Investors, LLC, as authorized by the Owners, further desires to modify the existing parking area of the Winter Springs Marketplace development by adding an additional 10 parking spaces which will be available to service the proposed Wawa development located upon the Resulting Trust Property Parcel #2, and by remodeling a portion of Roberts Family Lane which services the Property and Trust Property, as more particularly described and depicted on **Exhibit "J,"** attached hereto and incorporated herein by this reference (hereinafter the "Parking and Access Improvements"); and

WHEREAS, the Parking and Access Improvements are located on a portion of the Property within the Winter Springs Marketplace now owned by the Owners; and

WHEREAS, Section 20-29(c) of the City Code requires that all site plans shall be binding on the use of the subject property; and

WHEREAS, this Third Modification shall be recorded against a portion of the Property described herein so that the terms and conditions of approval shall run with the land; and

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties mutually agree as follows:

1.0 Recitals. The foregoing recitals are true and correct and are hereby incorporated herein by this reference.

2.0 Authority. This Third Modification is entered into pursuant to the Florida Municipal Home Rule Powers Act.

3.0 The Project Area. The real property that is the subject of this Third Modification is legally described in **EXHIBIT "I,"** attached hereto and fully incorporated herein by this reference for convenience (the "Improvements Project Area").

4.0 Project Description and Requirements; Phasing. Tuscawilla Property Investors has constructed Phases I and II of the Winter Springs Marketplace shopping center on the Property,

as well as supporting infrastructure, stormwater pond, parking lots, and landscaping. Owners intend to construct certain improvements, consisting of ten (10) additional parking spaces in the Improvements Project Area and certain improvements to Roberts Family Lane, as depicted in **Exhibit "J."**

(Hereinafter, all project description and requirements and references to the **"Parking and Access Improvements"** shall refer to the additional parking spaces and the associated improvements to Roberts Family Lane).

Owners shall construct the Parking and Access Improvements in a manner consistent with the approved Final Engineering/Site Plans that are on file with the City with the following file numbers and consistent with the requirements contained in this Third Modification:

File Nos: FEDP-2025-0017. FINAL ENGINEERING/SITE PLAN.

The overall Final Engineering/Site Plan for the Parking and Access Improvements is attached hereto as **EXHIBIT "J"** for convenience and incorporated herein by this reference.

5.0 Conditions of Approval. Specific conditions of approval for the above-referenced Final Engineering Plans include the following, which are also addressed in the staff report for the Final Engineering/Site Plans:

a. All grass areas in the Improvements Project Area shall use Bahia grass. No St. Augustine grass or any grass type with low drought tolerance shall be permitted.

b. Construction of the Parking and Access Improvements shall not commence until appropriate permitting has been obtained from the St. Johns River Water Management District, to the extent required.

6.0 Termination of Approval as to Parking and Access Improvements. In the event the Owners or their authorized agents fail to obtain the building permit and substantially commence construction of the Parking and Access Improvements within two (2) years of the Effective Date of this Third Modification, then the City shall have the right to terminate and/or void the approvals set forth herein and require the Owners to reapply to the City. The Owners may apply to the City Commission for an extension of this deadline, which may be granted upon good cause shown.

7.0 Representations of the Parties. The City and Owners hereby each represent and warrant to the other that it has the power and authority to execute, deliver and perform the terms and provisions of this Third Modification and has taken all necessary action to authorize the execution, delivery and performance of this Third Modification. The Owners further agrees and make the following representations and warranties to the City:

A. The Owners are lawfully seized of the Improvements Project Area property in fee simple and has full and lawful authority to execute this Third Modification and bind the Improvements Project Area property as set forth herein.

This Third Modification will, when duly executed and delivered by the City and Owners, constitute a legal, valid and binding obligation enforceable against the parties hereto. Upon recording of this Third Modification in the Public Records of Seminole County, Florida, the Third Modification shall be a binding obligation upon the Improvements Project Area property in accordance with the terms and conditions of this Agreement. Owners represent that it has voluntarily and willfully executed this Third Modification for purposes of binding himself and the Project Area property to the terms and conditions set forth in this Third Modification.

8.0 Successors and Assigns. This Third Modification shall automatically be binding upon and shall inure to the benefit of the City and Owners and their respective successors and assigns. The terms and conditions of this Third Modification similarly shall be binding upon the Improvements Project Area property, and shall run with title to the same upon being duly recorded against the Improvements Project Area property by the City.

9.0 Effective Date. This Third Modification shall become effective upon approval by the City Commission and execution by all parties hereto.

10.0 Recordation. Upon full execution by the Parties, this Third Modification shall be recorded in the Public Records of Seminole County, Florida by the City and shall be binding upon the Improvements Project Area property and all future owners thereof.

11.0 Effect of Modification. All other terms and conditions of the Development Agreement, First Modification, and Second Modification not in conflict with this Third Modification, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seal on the date first above written.

CITY OF WINTER SPRINGS

By: _____
Kevin McCann, Mayor

Date: _____

ATTEST:

By: _____

Christian Gowan, City Clerk

APPROVED AS TO FORM AND LEGALITY
For the use and reliance of the City of Winter Springs, Florida only.

CITY SEAL

Date: _____
By: _____
Anthony A. Garganese, City Attorney for the City of Winter Springs, Florida

STATE OF FLORIDA
COUNTY OF SEMINOLE

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by Kevin McCann, Mayor of the City of Winter Springs, Florida**,** a Florida municipal corporation, on behalf of the corporation, who is personally known to me or produced _____ _____ as identification.

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)
Notary Public, State of _____
Commission No.: _____
My Commission Expires: _____

Signed, sealed and delivered in the presence of the following witnesses:

WINTER SPRINGS NET, LLC

By: _____
Print Name:_____

Date: _____

_____
Signature of Witness

_____
Printed Name of Witness

_____
Signature of Witness

_____
Printed Name of Witness

DRAFT

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by _____, the Manager of Winter Springs Net, LLC**,** a limited liability company, on behalf of the company, who is personally known to me or produced _____ _____ as identification.

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)
Notary Public, State of _____
Commission No.: _____
My Commission Expires: _____

Signed, sealed and delivered in the presence of the following witnesses:

THISTLEWOOD WINTER SPRINGS, LLC

By: _____
Print Name:_____

Date: _____

_____
Signature of Witness

_____
Printed Name of Witness

_____
Signature of Witness

_____
Printed Name of Witness

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by _____, the Manager of Thistlewood Winter Springs, LLC**,** a limited liability company, on behalf of the company, who is personally known to me or produced _____ _____ as identification.

DRAFT

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)
Notary Public, State of _____
Commission No.: _____
My Commission Expires: _____

OWNERS ARE HEREBY ADVISED THAT SHOULD OWNERS FAIL TO FULLY EXECUTE, AND DELIVER TO THE CITY, THIS AGREEMENT WITHIN THIRTY (30) DAYS FROM THE DATE THAT THE CITY COMMISSION APPROVES THIS AGREEMENT, THIS AGREEMENT, AND THE DEVELOPMENT PERMIT APPROVALS REFERENCED HEREUNDER, SHALL AUTOMATICALLY BE DEEMED NULL AND VOID.

DRAFT

EXHIBIT I

LEGAL DESCRIPTION OF IMPROVEMENTS PROJECT AREA

Lots 1, 3, and Tract C of the Winter Springs Marketplace plat, recorded in the Plat Book of Seminole County, Book 88, Page 5.

DRAFT

EXHIBIT J

OVERALL SITE PLAN FOR PARKING AND ACCESS IMPROVEMENTS

DRAFT

JOINDER AND CONSENT

For and in consideration of the mutual covenants, terms, and conditions and restrictions contained herein, together with other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **One Florida Bank**, a Florida banking corporation, as holder of that certain Mortgage, Security Agreement, Financing statement and Assignment of Rents which is recorded in Official Records Book 10107, Page 1 of the Public Records of Seminole County, Florida, as affected by that certain Cross-Default and Cross-Collateralization Agreement recorded in Official Records Book 10108, Page 57, that certain Assignment of Rents, Leases, Profits and Contracts recorded in Official Records Book 10107, Page 20, and that certain UCC-1 Financing Statement recorded in Official Records Book 10147, Page 359; and that certain Mortgage, Security Agreement, Financing statement and Assignment of Rents which is recorded in Official Records Book 9757, Page 1364, as affected by that certain Cross-Default and Cross-Collateralization Agreement recorded in Official Records Book 10108, Page 57, that certain Assignment of Rents, Leases, Profits and Contracts recorded in Official Records Book 9757. Page 1386, and that certain UCC-1 Financing Statement recorded in Official Records Book 9757, Page 1396, all of the Public Records of Seminole County, Florida (collectively, the "Mortgage") hereby joins in and consents to the foregoing Third Modification to the Development and Property Division Agreement by and between the City of Winter Springs, a Florida municipal corporation, and Tuscawilla Property Investors, LLC, a Florida limited liability company, and further acknowledges and agrees that its Mortgage shall be subordinated to such Third Modification to the Development and Property Division Agreement and the obligations contained therein.

Dated this _____ day of _____, 2025.

DRAFT

Signed and sealed in the presence of:

By: _____

_____ Name: _____

Print Name: _____ Title :_____

Address: _____

_____

Print Name: _____

Address: _____

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of (___) physical presence or (___) online notarization, this _____ day of _____, 2025, by _____, the _____ of _____, a _____, on behalf of the company, who is personally known to me or produced _____ _____ as identification.

(NOTARY SEAL)

_____
(Notary Public Signature)

_____
(Print Name)

Notary Public, State of _____

Commission No.: _____

My Commission Expires: _____

DRAFT