City of Stuart

AGENDA

REGULAR MEETING OF THE STUART CITY COMMISSION
TO BE HELD August 9, 2021
AT 4:00 PM AT THE BLAKE LIBRARY, 2351 SE MONTEREY RD.
121 SW FLAGLER AVE.
STUART, FLORIDA 34994

CITY COMMISSION

Mayor Eula R. Clarke
Vice Mayor Merritt Matheson
Commissioner Becky Bruner
Commissioner Troy McDonald
Commissioner Mike Meier

ADMINISTRATIVE

City Manager, David Dyess
City Attorney, Michael J. Mortell
City Clerk, Mary R. Kindel

Agenda items are available on our website at http://www.cityofstuart.us
Phone: (772) 288-5306 . Fax: (772) 288-5305 . E-mail: mkindel@ci.stuart.fl.us

In compliance with the Americans with Disabilities Act (ADA), anyone who needs a special accommodation to attend this meeting should contact the City's ADA coordinator at 772-288-5306 at least 48 hours in advance of the meeting, excluding Saturday and Sunday.

If a person decides to appeal any decision made by the Board with respect to any matter considered at this meeting, he will need a record of the proceeding, and that for such purpose he may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

(RC) next to an item denotes there is a City Code requirement for a Roll Call vote.
(QJ) next to an item denotes that it is a quasi-judicial matter or public hearing.

WHAT IS CIVILITY? *Civility is caring about one's identity, needs and beliefs without degrading someone else's in the process. Civility is more than merely being polite. Civility requires staying "present" even with those persons with whom we have deep-rooted and perhaps strong disagreements. It is about constantly being open to hear, learn, teach and change. It seeks common ground as a beginning point for dialogue. It is patience, grace, and strength of character. Civility is practiced in our City Hall.*

PUBLIC COMMENT: *If a member of the public wishes to comment upon ANY subject matter, including quasi-judicial matters, please submit a Request to Speak form. These forms are available in the back of the Commission Chambers, and should be given to the City Clerk prior to introduction of the item number you would like to address.*

CONSENT CALENDAR: *Those matters included under the Consent Calendar are self-explanatory, non-controversial, and are not expected to require review or discussion. All items will be enacted by one motion. If discussion on an item is desired by any City Commissioner that item may be removed by a City Commissioner from the Consent Calendar and considered separately. If an item is quasi-judicial it may be removed by a Commissioner or any member of the public from the Consent Calendar and considered separately.*

QUASI-JUDICIAL HEARINGS: *Some of the matters on the Agenda may be "quasi-judicial" in nature. City Commissioners will disclose all ex-parte communications, and may be subject to voir dire by any interested party regarding those communications. All witnesses testifying will be "sworn" prior to their testimony. However, the public is permitted to comment without being sworn. Unsworn testimony will be given appropriate weight and credibility by the City Commission.*

ROLL CALL

PLEDGE OF ALLEGIANCE

PROCLAMATIONS

1. HUNGER ACTION MONTH - SEPTEMBER 2021

2. 9/11 COMMEMORATIVE ANNUAL BLOOD DRIVE - SEPTEMBER 11, 2021

PRESENTATIONS

3. SERVICE AWARDS - AUGUST 2021

4. The 'HOOKS' CHAMPIONSHIP SEASON

5. LEGISLATIVE APPROPRIATION FOR THE ALTERNATIVE WATER SUPPLY- PHASE III

COMMENTS BY CITY COMMISSIONERS

COMMENTS BY CITY MANAGER

APPROVAL OF AGENDA

COMMENTS FROM THE PUBLIC (3 Minutes Max.)

CONSENT CALENDAR

6. APPROVAL OF 7/26/2021 CCM MINUTES

END OF CONSENT CALENDAR

ORDINANCE SECOND READING

7. KANNER HIGHWAY CPUD - COSTCO (QUASI-JUDICIAL)(RC):

ORDINANCE No. 2466-2021; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, AMENDING THE FUTURE LAND USE MAP OF THE CITY'S COMPREHENSIVE PLAN, THEREBY ASSIGNING A FUTURE LAND USE DESIGNATION OF "NEIGHBORHOOD SPECIAL DISTRICT" TO THE 49+/- ACRE PROPERTY, OWNED BY NEHME HOLDINGS, LLC AND WILLOUGHBY GROUP, LLC LOCATED ALONG SR-76 KANNER HIGHWAY, SOUTH OF MARTIN COUNTY HIGH SCHOOL AND ABUTTING LYCHEE TREE NURSERY; SAID LAND, ANNEXED BY ORDINANCE No. 2327-2016 AND ORDINANCE No. 2337-2017, BEING MORE FULLY DESCRIBED IN EXHIBIT "A" ATTACHED; AND CONCURRENTLY ASSIGNING "CPUD" ZONING TO SAID LAND ON THE CITY'S OFFICIAL ZONING MAP; ESTABLISHING THE KANNER CPUD COMMERCIAL PLANNED UNIT DEVELOPMENT, CONSISTING OF 162,020 SQUARE FEET OF RETAIL, BULK MERCHANDISE, AND AUTOMOBILE REPAIR SERVICES BUILDING FOOTPRINT WITH A STAND ALONE KIOSK AND FUEL FACILITY, 378 RESIDENTIAL APARTMENT UNITS AND RETAIL AND RESTAURANT PADS PROVIDING FOR APPROVAL OF A MASTER SITE PLAN; PROVIDING FOR DEVELOPMENT CONDITIONS, INCLUDING A TIMETABLE OF DEVELOPMENT; DECLARING THE PROJECT TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; REPEALING ALL ORDINANCES IN CONFLICT HEREWITH; PROVIDING A SEVERABILITY CLAUSE; PROVIDING AN EFFECTIVE DATE, PROVIDING FOR ACCEPTANCE BY THE APPLICANT AND FOR OTHER PURPOSES.

ORDINANCE FIRST READING

DISCUSSION AND DELIBERATION

ADJOURNMENT

CITY OF STUART, FLORIDA
AGENDA ITEM REQUEST
CITY COMMISSION

Meeting Date: 8/9/2021 **Prepared by:** Ryanne Cavo

Title of Item:

HUNGER ACTION MONTH - SEPTEMBER 2021

Summary Explanation/Background Information on Agenda Request:

Hunger and poverty remain issues of grave concern in the United States, the State of Florida, the Treasure Coast, and the City of Stuart, with 17,660 children and adults in Martin County now categorized as food insecure.

Funding Source:

N/A

Recommended Action:

Issue the Proclamation.

ATTACHMENTS:

	Description	Upload Date	Type
🗋	Proclamation - Hunger Action Month (September 2021)	7/8/2021	Proclamation

PROCLAMATION
HUNGER ACTION MONTH
SEPTEMBER 2021

WHEREAS, hunger and poverty remain issues of grave concern in the United States, the State of Florida, the Treasure Coast, and the City of Stuart, with 23,304 children and adults in Martin County now categorized as food insecure; and

WHEREAS, the City of Stuart is committed to taking steps to raise awareness about the need to combat hunger in every part of our City and to provide additional resources that citizens of Stuart need; and

WHEREAS, the City of Stuart is committed to working with the Treasure Coast Food Bank in mobilizing people about the role and importance of food banks and other hunger relief organizations in addressing hunger and bringing attention to the need to devote more resources and attention to hunger issues; and

WHEREAS, food banks and hunger relief organizations across the country, including the Treasure Coast Food Bank, coordinated Hunger Action Day® on September 17, 2021 and will continue to host numerous events throughout the month of September to shed light on this important issue and encourage involvement in efforts to end hunger in their local community.

NOW, THEREFORE, I, EULA R. CLARKE, Mayor of the City of Stuart, Florida do hereby proclaim the Month of September, 2021, as

HUNGER ACTION MONTH

IN WITNESS WHEREOF, I have set my hand and caused the seal of the City of Stuart, Florida to be affixed this 9th day of August, 2021.

_____

EULA R. CLARKE
MAYOR

CITY OF STUART, FLORIDA
AGENDA ITEM REQUEST
CITY COMMISSION

Meeting Date: 8/9/2021 **Prepared by:** Ryanne Cavo

Title of Item:

9/11 COMMEMORATIVE ANNUAL BLOOD DRIVE - SEPTEMBER 11, 2021

Summary Explanation/Background Information on Agenda Request:

Florida's blood centers and the Crary Buchanan Law Firm are holding a blood drive on September 11, 2021 from 9:00 AM to 6:00 PM.

Funding Source:

N/A

Recommended Action:

Issue the Proclamation

ATTACHMENTS:

	Description	Upload Date	Type
🗋	Proclamation - 9/11 Commemorative Annual Blood Drive - September 11, 2021	6/4/2021	Proclamation

PROCLAMATION
9/11 COMMEMORATIVE ANNUAL BLOOD DRIVE
SEPTEMBER 11, 2021

WHEREAS, Florida's blood centers and the Crary Buchanan Law Firm are holding a blood drive on September 11, 2021 from 9:00 AM to 6:00 PM; and

WHEREAS, our community requires a reliable blood supply for the use in lifesaving medical treatments. Statistics have shown that one pint of blood can help save the lives of three individuals and making the donation of blood a simple way to help save lives and positively impact the community; and

WHEREAS, the residents of the City of Stuart will always remember and honor the nearly three thousand innocent lives lost on September 11, 2001; as our Nation experienced a series of airline hijackings that led to the worst terrorist attack in United States history; and

WHEREAS, it is important for the residents of Stuart to come together on the Twentieth Anniversary of this tragic event to pay tribute to those who died and to reaffirm their commitment to the principles of this nation of life and liberty.

NOW, THEREFORE, I, EULA R. CLARKE, Mayor of the City of Stuart do hereby proclaim September 11, 2021 as the:

9/11 COMMEMORATIVE ANNUAL BLOOD DRIVE

on the Twentieth Anniversary of September 11, 2001 in the City of Stuart, Florida and encourage our citizens to save a life and donate blood or perform an act of kindness in remembrance of all the innocent lives lost on that day.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the City of Stuart to be affixed this 9th day of August, 2021.

ATTEST:

_____

EULA R. CLARKE
Mayor

CITY OF STUART, FLORIDA
AGENDA ITEM REQUEST
CITY COMMISSION

Meeting Date: 8/9/2021 **Prepared by:** R. Johnson

Title of Item:

SERVICE AWARDS - AUGUST 2021

Summary Explanation/Background Information on Agenda Request:

John Martin	Police	15 years
Walter Hayden	Public Works	5 years
Christopher Giuffrida	Public Works	5 years
James Hall	Police	5 years

Funding Source:

General Fund

Recommended Action:

Present Awards

CITY OF STUART, FLORIDA
AGENDA ITEM REQUEST
CITY COMMISSION

Meeting Date: 8/9/2021 **Prepared by:** jchrulski

Title of Item:

The 'HOOKS' CHAMPIONSHIP SEASON

Summary Explanation/Background Information on Agenda Request:

Scott Procter will present the amazing winning season of 'The Hooks' baseball team. The core team is made of local youth from the East Stuart neighborhood.

'The Hooks' record was 23-2, and they won their division with the 'Martin County North Little League Minor Championship,' and additionally won the 'Tournament of Champions.'

Funding Source:

N/A

Recommended Action:

- Scott Procter presentation
- Picture with City Commission, athletes and coaches

ATTACHMENTS:

	Description	Upload Date	Type
🗋	Picture of the 'HOOKS' winning season	7/16/2021	Exhibit



CITY OF STUART, FLORIDA
AGENDA ITEM REQUEST
CITY COMMISSION

Meeting Date: 8/9/2021 **Prepared by:** jchrulski

Title of Item:

LEGISLATIVE APPROPRIATION FOR THE ALTERNATIVE WATER SUPPLY- PHASE III

Summary Explanation/Background Information on Agenda Request:

The City of Stuart received a legislative appropriation from the State of Florida in the amout of $500,000 for Phase III of the City's Alternative Water Supply system. Mr. Jordan Connors, City of Stuart Lobbyist, will present the $500,000.00 check to the Commission.

Funding Source:

State of Florida Appropriation History

- Phase 1 - $ 250,000
- Phase 2 - $ 1,000,000
- Phase 3 - $ 500,000

Total $ 1,750,000

Recommended Action:

- Enjoy the presentation
- Accept Check
- Thank State Legislators & Mr. Connors
- Photo with Mr. Connors and State Legislators that are present

ATTACHMENTS:

	Description	Upload Date	Type
🗋	Alternative Water Supply Appropriation Summary - 2021	7/15/2021	Attachment

City of Stuart
Alternative Water Supply – Phase III - $500,000
Summary

As a result of continuing concerns regarding a long-term sustainable water supply in the City of Stuart that is susceptible to saltwater intrusion, contamination from per-fluorinating compounds, and other emerging contaminants, the Stuart City Commission authorized City Staff to move forward with an alternative water supply project by adopting Resolution 115-2017.

Phase III of the Alternative Water Supply Project includes modification to the City's existing Deep Injection Well 2 in order to accept the RO membrane treatment byproducts from the new RO Facility, as well as, replacement of the existing Deep Monitoring Well 1. Construction is expected to be completed by December 31, 2022.

Budget Request

The City of Stuart is seeking a legislative appropriation of $500,000 for Phase III of the City's Alternative Water Supply Project. The overall project cost of Phase III is estimated at $4,500,000. The City is providing matching funds in the amount of $4,000,000.

Additional Information:

Phase I of the Alternative Water Supply Project included construction of a 1.0 million gallon per day Floridan Aquifer Water Supply Well and the design of the Reverse Osmosis (RO) Facility. Both construction of the water supply well and design of the RO Facility were completed in December 2020.

The City received $250,000 from the Legislature for 1st phase of the project and dedicated $3,900,000 in matching funds.

Phase II of the Alternative Water Supply Project included the construction of the RO Facility. The RO Facility included the wellhead for the Floridan well, raw water main, pre-treatment, membrane system, post-treatment, chemical systems, concentrate disposal pipeline, electrical/standby power, supervisory control and data acquisition system. Construction is expected to commence in October 2021 with completion anticipated in October 2023.

The City received $1,000,000 from the Legislature for 2nd phase of the project and dedicated $12,900,000 in matching funds.

CITY OF STUART, FLORIDA
AGENDA ITEM REQUEST
CITY COMMISSION

Meeting Date: 8/9/2021 **Prepared by:** Susej Meleqi, Deputy Clerk

Title of Item:

APPROVAL OF 7/26/2021 CCM MINUTES

Summary Explanation/Background Information on Agenda Request:

N/A

Funding Source:

N/A

Recommended Action:

Approve Minutes.

ATTACHMENTS:

	Description	Upload Date	Type
🗋	07/26/2021 CCM Minutes	8/2/2021	Cover Memo

MINUTES
REGULAR MEETING OF THE STUART CITY COMMISSION
HELD July 26, 2021
AT 5:30 PM Commission Chambers
121 SW FLAGLER AVE
STUART, FLORIDA 34994

CITY COMMISSION
Mayor Eula R. Clarke
Vice Mayor Merritt Matheson
Commissioner Becky Bruner
Commissioner Troy McDonald
Commissioner Mike Meier

ADMINISTRATIVE
City Manager, David Dyess
City Attorney, Michael J. Mortell
City Clerk, Mary R. Kindel

SERGEANT AT ARMS: Police Chief Joseph Tumminelli

5:44 PM ROLL CALL

Present: Mayor Clarke, Vice Mayor Matheson, Commissioner Bruner, Commissioner McDonald, Commissioner Meier

PLEDGE OF ALLEGIANCE

COMMENTS BY CITY COMMISSIONERS

Commissioner Meier

- Thanked colleagues for joining him at the TCCLG Luncheon Meeting in Okeechobee.
- Announced that next week, attending the Florida League of Cities Conference.

Vice Mayor Matheson

- Commented that it was a pleasure attending the Treasure Coast Council of Local Governments Luncheon in Okeechobee.
- Thanked Anne Ellig, Programs Manager, for her efforts in planning the Treasure Coast Waterway Cleanup this past Saturday, he and his family picked up several

trash bags full and noticed a downed "No Wake" sign and contacted the authorities; fortunately, no one hit it.
- Tomorrow at City Hall, the Army Corp of Engineers is hosting a meeting at 2:00 p.m. as part of their LOSOM Listening Tour. He provided a brief River and Lake Okeechobee update.

Mayor Clarke
- Commented on receiving a message from a citizen that contacted her about being disappointed about not being able to attend tonight's meeting, nice to know people want to attend.
- Stood and announced that the City is hosting the Cal Ripken World Series, estimating that close to 10,000 people will come to Stuart and play in Sailfish Park. Clarke read from a flyer to report on the details of the event.
- Thanked everyone who came out for the cleanup and asked Anne Ellig how much was filled.

Anne came forward and reported on the Treasure Coast Waterway Cleanup.
- Read from a letter received announcing the City being awarded the CDBG Grant for $750,000 and turned it over the City Manager.
- Received letter from the Boys and Girls Club to ensure they are included in the City's programs.
- Florida League of Cities Meeting, August 12th through the 14th, Commissioner Meier attending and Mayor considering attending as well.
- Commented on communities adopting May 20th Emancipation Day and Juneteenth Day as employee holidays. Would like that discussed at the upcoming budget meeting.
- Met with the head of the Housing Authority and she may be soon making a presentation to the Commission on how the Authority works.
- Announced per Agenda Item #5, ROW abandonment, she is completing the Form 8B and will file it with the City Clerk as she lives in the area.

COMMENTS BY CITY MANAGER

City Manager Dyess
- Thanked Anne Ellig and those who participated for job well done with the cleanup, hoping for a better participation next year.
- Thanked Milton Leggett, his team, and the Tram team. Mentioned that the Wells Fargo property owned by the City now has a tram stop and is open as public parking spots.

APPROVAL OF AGENDA

6:09 PM MOTION: Move to approve.
MOVED BY: Commissioner McDonald
SECONDED BY: Vice Mayor Matheson
Motion approved unanimously.

6:10 PM

COMMENTS FROM THE PUBLIC (3 Minutes Max.)

1) Walter Loyd – SW Cabana Point Cir; Commented on the Commission being the leaders but seeing where the City is being used to get around the County, in reference to the Kanner Hwy. CPUD, respectfully appealing to them to hear them and their experts, recommending the book that was originally suggested "Strong Town".

6:14 PM

CONSENT CALENDAR

1. APPROVAL OF 7/12/2021 CCM MINUTES

2. AUTHORIZATION TO ENTER INTO A SOVEREIGN SUBMERGED LANDS EASEMENT RENEWAL:

RESOLUTION No. 68-2021; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA AUTHORIZING THE MAYOR TO ENTER INTO AND TO EXECUTE A SOVEREIGN SUBMERGED LANDS EASEMENT RENEWAL AND MODIFICATION TO REFLECT CHANGE IN OWNERSHIP WITH THE BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

3. FEMA STAFFING FOR ADEQUATE FIRE AND EMERGENCY RESPONSE (SAFER) GRANT APPLICATION:

RESOLUTION No. 71-2021; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA AUTHORIZING THE FILING OF AN APPLICATION TO THE U.S. DEPARTMENT OF HOMELAND SECURITY (FEMA) FOR FUNDING UNDER THE FY2021 STAFFING FOR ADEQUATE FIRE AND EMERGENCY RESPONSE (SAFER) GRANT PROGRAM; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

END OF CONSENT CALENDAR

6:14 PM MOTION: Motion to approve the Consent Calendar.
MOVED BY: Commissioner Matheson
SECONDED BY: Commissioner Meier
Motion approved unanimously.

COMMISSION ACTION

6:15 PM

4. R.O.W. ABANDONMENT OF PORTION OF SEMINOLE STREET AND OSCEOLA STREET ALLEY:

RESOLUTION No. 70-2021; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA DECLARING PURSUANT TO CHAPTER 36 OF THE CODE OF ORDINANCES OF THE CITY OF STUART, FLORIDA THE INTENTION OF THE CITY COMMISSION TO ABANDON AND TO SET PUBLIC HEARINGS ON AUGUST 23, 2021 AT 5:30 PM, AND SEPTEMBER 13, 2021, AT 4:00 P.M. IN THE CITY COMMISSION CHAMBERS TO CONSIDER THE ABANDONMENT OF CERTAIN PUBLIC RIGHT-OF-WAY WITHIN THE CITY, BEING THAT PORTION OF ALLEY, MORE CLEARLY DESCRIBED IN EXHIBIT "A" ATTACHED; AND FOR OTHER PURPOSES.

Noted that this was put on "Commission Action" because we are making an announcement, and this is just informative.

Tom Reetz, Senior Planner, announced that this item will be brought back before the Commission on August 23rd for First Reading.

Commissioner Meier stated that he believes if there are intact alley ways in the middle of the city that can serve a purpose down the road really consider preserving them so in the future, they can be useful but if it is not complete, he is in favor of relinquishing it.

1) Helen McBride – Questioned the Commission that if the alleyways are being "abandoned" does that mean we are selling the land to the landowners?

Attorney Mike Mortell responded we will not sell the alleyway but instead charge a "privilege fee". Further discussed.

6:16 PM MOTION: Move approval.
MOVED BY: Commissioner Meier
SECONDED BY: Commissioner McDonald
Motion approved unanimously.

5. AUTHORIZATION TO ABANDON RIGHT-OF-WAY BETWEEN SE 16TH COURT AND SE 18TH STREET:

RESOLUTION No. 72-2021; A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA AUTHORIZING THE ABANDONMENT OF A CERTAIN RIGHT-OF-WAY WITHIN THE CITY LIMITS, BEING THAT PORTION OF LAND, WHICH LIES BETWEEN S.E. 16TH COURT AND S.E. 18TH STREET, WHICH IS MORE FULLY DEPICTED IN EXHIBIT "A" ATTACHED HERETO, PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

Clarke abstaining from Vote, see Form 8B attached.

6:22 PM MOTION: Move to approve.
MOVED BY: Commissioner McDonald
SECONDED BY: Commissioner Meier
Motion approved 4/1, Clarke abstaining.

ORDINANCE SECOND READING

ORDINANCE FIRST READING

6:23 PM

6. APPEAL OF DETERMINATION OF COMPARABILITY AT 728 NW DIXIE HWY FOR USE OF RETAIL SALE OF VEHICLE PARTS TOGETHER WITH VEHICLE REPAIR, WITH ALL ACTIVITIES TAKING PLACE WITHIN AN ENCLOSED BUILDING. THE PROPERTY IS ZONED URBAN HIGHWAY. (QUASI-JUDICIAL):

Kev Freeman, Development Director, presented the City's Determination of Compatibility, addressing the location, the urban code uses, the address options of Dixie Hwy and US1.

Nick Schroth, Appellant, presented a power point on his property located at 623 NW Palm Street in Stuart, reviewing the investment made, previous determination, and identifying his disagreement of the address being identified as Dixie Hwy.

Commissioner Meier requested clarification from Attorney as to what they are looking for.

City Attorney Mortell clarified the appeal process and reviewed Section 2.02.01(a) of the Code. The Commission must determine whether the Development Director had ability to make the Determination of Comparability.

Further Commission discussion and review of code took place. Commissioner Meier made a Motion.

7:01 PM

Commissioner Meier asked Kev Freeman, Development Director to please describe his reasoning pertaining to the address.

Freeman reported that he does think its listed for the urban highway. The question from his point of view is whether that property fronts Federal Hwy or does it not.

Commissioners and staff continued discussion.

Public Comment:

1) Chis Klein – NW Federal Hwy.; Commented that he is in favor of this property not becoming an automotive business, it is about the address.
2) Blair Scott – property owner; commented that she agrees with everything Mr. Schroth stated, the use proposed by Giant Oil does not conform with Stuart, and concerned with the environmental impact on the community, feels it would be better suited for something more environmentally friendly.

6:59 PM MOTION: Because the use is indeed listed, in the Land Development Code 3.01.03, I move that the Development Director does not have the authority to grant the use, as a finding of fact.
MOVED BY: Commissioner Meier
SECONDED BY: Commissioner McDonald
Motion approved unanimously. 7:23 PM

7:23 PM MOTION: Grant the appeal. [Rule in favor of Mr. Schroth]
MOVED BY: Commissioner McDonald
SECONDED BY: Commissioner Meier
Motion approved unanimously.

7. CHAPTER 16- EMERGENCY MANAGMENT:

ORDINANCE No. 2468-2021; AN ORDINANCE OF THE CITY OF STUART AMENDING CHAPTER 16- EMERGENCY MANAGEMENT; PROVIDING FOR A SEVERABILITY CLAUSE AND A CONFLICTS CLAUSE; PROVIDING FOR AN EFFECTIVE DATE AND FOR OTHER PURPOSES.

Commissioner McDonald commented that he feels this is another attack on Home Rule.

7:28 PM MOTION: Move to approve.
MOVED BY: Commissioner McDonald
SECONDED BY: Commissioner Matheson
Motion approved unanimously.

DISCUSSION AND DELIBERATION

7:31 PM

8. DISCUSSION OF A PROPOSED AMENDMENT TO THE CITY'S LAND DEVELOPMENT CODE FOR EXTENDING OR REMOVING THE DEADLINE OF THE AMORTIZATION PERIOD FOR NON-CONFORMING POLE SIGNS WITHIN THE CITY LIMITS.

CRA Administrator, Pinal Gandhi-Savdas briefly reviewed the proposed amendments brought before the Commission pertaining to pole signs, explaining that according to existing Code, all pole signs must come down by January 2022. There are 190 pole signs remaining within City limits. New signs have been prohibited since 1997. Staff has reviewed the Code and come up with the following three options:

1) Poles must be removed within 30 days when the sign is damaged or when business closes.
2) Code be extended with a 5-year amortization period to January 2027
3) Staff return with draft amendment to remove Code all together

Commissioners participated in a discussion with Gandhi-Savdas about extensions, deadlines, business owners that have fixed their signs, and the various options.

Commissioners agreed to Option 3.

7:55 PM ADJOURNMENT

Mary R. Kindel, City Clerk	**Eula R. Clarke, Mayor**

Minutes to be approved at the Regular Commission Meeting this 9th day of August, 2021.

CITY OF STUART, FLORIDA
AGENDA ITEM REQUEST
CITY COMMISSION

Meeting Date: 8/9/2021 **Prepared by:** Tom Reetz

Title of Item:

KANNER HIGHWAY CPUD - COSTCO (QUASI-JUDICIAL)(RC):

ORDINANCE No. 2466-2021; AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, AMENDING THE FUTURE LAND USE MAP OF THE CITY'S COMPREHENSIVE PLAN, THEREBY ASSIGNING A FUTURE LAND USE DESIGNATION OF "NEIGHBORHOOD SPECIAL DISTRICT" TO THE 49+/- ACRE PROPERTY, OWNED BY NEHME HOLDINGS, LLC AND WILLOUGHBY GROUP, LLC LOCATED ALONG SR-76 KANNER HIGHWAY, SOUTH OF MARTIN COUNTY HIGH SCHOOL AND ABUTTING LYCHEE TREE NURSERY; SAID LAND, ANNEXED BY ORDINANCE No. 2327-2016 AND ORDINANCE No. 2337-2017, BEING MORE FULLY DESCRIBED IN EXHIBIT "A" ATTACHED; AND CONCURRENTLY ASSIGNING "CPUD" ZONING TO SAID LAND ON THE CITY'S OFFICIAL ZONING MAP; ESTABLISHING THE KANNER CPUD COMMERCIAL PLANNED UNIT DEVELOPMENT, CONSISTING OF 162,020 SQUARE FEET OF RETAIL, BULK MERCHANDISE, AND AUTOMOBILE REPAIR SERVICES BUILDING FOOTPRINT WITH A STAND ALONE KIOSK AND FUEL FACILITY, 378 RESIDENTIAL APARTMENT UNITS AND RETAIL AND RESTAURANT PADS PROVIDING FOR APPROVAL OF A MASTER SITE PLAN; PROVIDING FOR DEVELOPMENT CONDITIONS, INCLUDING A TIMETABLE OF DEVELOPMENT; DECLARING THE PROJECT TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; REPEALING ALL ORDINANCES IN CONFLICT HEREWITH; PROVIDING A SEVERABILITY CLAUSE; PROVIDING AN EFFECTIVE DATE, PROVIDING FOR ACCEPTANCE BY THE APPLICANT AND FOR OTHER PURPOSES.

Summary Explanation/Background Information on Agenda Request:

On May 24, 2021, the City Commission unanimously approved the Kanner CPUD based upon the representation that the applicant would comply with 12 new conditions. The project was transmitted to the Department of Economic Opportunity (DEO) for review. The review was completed under the expedited state review process and the Department identified 'no comment' related to adverse impacts to important state resources and facilities within their authorized scope of view concerning the proposed large scale land use amendment. The letter did, however, provide two 'technical assistance comments' that do not form a basis of a challenge. *See attachment C.2 DEO response letter dated June 25, 2021. Staff provide an analysis of maximum potential Future Land Use build-out at attachment B.3 to address the DEO technical comment.*

Since the First Reading and in response to conditions of approval, the applicant has provided explanation for the following:

1. 5% Density Reduction - A 5% density reduction was accomplished by reducing the dwelling one-bedroom units bringing the total to 378 units, a reduction of 20 units. Resulting in a decrease in density and an increase in landscaping area and open space.
2. Fertilizer Use - Fertilizer use is now a condition of the ordinance, (Exhibit C, #33) prohibiting the use of herbicides with glyphosate.

3. Pervious Parking - Pervious parking is now provided in the form of pervious pavers within the Costco parking area adjacent to the connector road and in the proposed connector road roundabout.
4. Oaks/Shade Trees - Oak trees now make up 83% of required shade trees. Plum trees are provided within the parking diamonds.
5. Fountains in Lakes -The applicant has agreed to add fountains in the proposed lakes.
6. Fence in front of Lake 2 adjacent to the connector road has been removed resulting in a more open plan.
7. Irregular shaped lakes continue to be provided with the addition of Littoral plants within the proposed Lakes.
8. The roadway will not be named Costco Blvd., The applicant welcomes suggestion from the Commission.
9. The decorative Roundabout feature now consist of natural cap-rock, water features and landscaping. The design approach is to extend the natural native landscape palette and 'water' experience (lakes and storm-water improvements) within the connector road green-way.
10. The applicant is no longer asking for fill credit, however, is asking for pervious pavers and concrete credits in respect of tree replacement and storm-water.
11. Breakdown of Tree mitigation - A full breakdown of Tree mitigation has been provided on the Landscape Plans. The applicant is proposing to meet 100 % of the required mitigation on-site using new plantings and innovative storm-water improvements.
12. Storm-water function-monitoring and reporting is now a condition of development (Exhibit C, #23.c) with samples taken and analyzed for nutrients prior to and after completion of the project. *See Attachment D.1 - Applicant response to 1st Reading Conditions of Approval.*

Local Planning Agency Conditions of Approval

On April 29, 2021, at a Special Local Planning Agency Meeting, the LPA unanimously approved the Kanner CPUD proposal, recommending that the applicant address certain conditions of development prior to First Reading, these being:

1. Consider the Architectural, Urban design/layout and a variety of unit styles/types/design of the residential portion to get a better sense of community. Including the connectivity through and between parts of the site; internal and external sidewalks/multi-modal paths pedestrian safety etc. 2. Provide shade trees in the parking area, possibly a reduction in parking spaces.
3. Revise the design of the lakes to make them less rectangular/formal.
4. Provide explanation of the calculation that would be used to determine stormwater improvements.
5. Provide Enhanced crossing signals at the intersections for walkers and a bus stop.
6. Provide Full Crosswalk design at each curb cut (Kanner & Willoughby)
7. Provide a Bus Stop near the roundabout located on site.
8. Provide an updated concurrency review prior to construction approval docs. Since then, the applicant has re-submitted revised Site, Landscaping, Photo-metric and Architectural Plans, along with Architectural Elevations. *Note: The applicant met all LPA conditions prior to First Reading.

Background Information

The intent of this application is to assign CPUD zoning and a Neighborhood Special District land use designations to property recently annexed in order to construct a 162,020 sq.ft Costco Wholesale building with standalone kiosk and fuel facility, 378 residential apartment units, retail and restaurant buildings and approve a Master Site Plan including a connector road between S. Kanner Hwy. and SE Willoughby Blvd.

The applicant is proposing 193,146 sq. ft. of commercial building area and 378 apartment units within 4 (four) 4-storey buildings with a density of 7.7 dwelling units per acre for the 48.99 acre site. The City's Comprehensive Plan, Policy A7.2 Table of Land Use Densities and Intensities allows up to 15 dwelling units per gross acre for the Neighborhood/Special District Land Use category.

Traffic improvements to S. Kanner Highway include the addition of a signalized entry with full turning movement, a left-turn lane for southbound traffic and a right-turn lane for northbound traffic. A controlled directional access median break (left-turn in, right-turn in, and right-turn out only) will be provided at the northern portion of the site. A right-turn in and right-turn out with no median break is proposed for the southern portion of the site. An eight (8) foot wide sidewalk will be constructed within the S. Kanner Highway right-of-way offset from the western property boundary (revised since first reading) to connect the existing adjacent sidewalks to the north

and south of the property entrance. Pedestrian routes will connect to the sidewalk within the right-of-way (offset from the connector road) to provide access to the buildings. Sidewalks internal to the development shall have a minimum width of 6 feet.

A total of 1,672 parking spaces are provided for the development with the parking for the Costco Wholesale building being sufficiently parked at 1 parking space for every 250 square feet of building with additional parking available for customers that is being offset with additional landscaping at the projects entrance.

The proposed project's master storm water management system consist of a series of interconnected wet detention lakes and dry retention ponds. The system satisfies criteria of the South Florida Water Management District (SFWMD), City of Stuart, Florida Department of Transportation. (FDOT) The applicant will provide monitoring reports at regular intervals.

The proposed system will expand the existing FDOT lake on-site that currently serves Kanner Hwy. The design also includes littoral plantings at the project's proposed lakes and expanded D.O.T. pond that are stated to reduce the storm water system of excess nitrogen and phosphorus and potentially could count towards offsetting a portion of the project's tree mitigation requirement.

The applicant is asking to depart from the to the City's Land Development Code which may be offset by providing other aspects of the project which exceed code requirements and or are amenities of value to the community. The departure is as follows:

1. Parking Code Section 6.01.13: Multi-family dwelling units (studios or 1 bedroom) require 1.5 spaces per unit; Multi-family dwelling units (2 or more bedrooms) require 2 space per unit. Required parking for the project is 692 spaces and the applicant is providing for 647 residential spaces. An average of 1.71 parking spaces per unit. Note: the city has accepted an average of 1.6 parking spaces per unit for multi-family development in the recent past.

2. Parking Code Section 6.01.14.C Within an large commercial development which provide shopping carts for use by patrons, one parking space per 25 spaces shall be dedicated for the storage of shopping carts. This storage area shall include fence materials to keep the shopping carts in the space. Required spaces to be dedicated for storage of shopping carts is 24 and the applicant is providing 16 spaces for cart storage.

3. Landscaping Code Section 6.04.07C.5 Interior landscaped islands shall be provided between every ten (10) parking spaces. Each interior island shall be not less than six feet in width. Each interior island shall contain not less than one shade tree and a combination of shrubs, ground cover, grass and mulch. The commercial parking areas for Costco building's parking lot contains 18 rows with more than 10 spaces without a landscaped island. (The applicant has provided diamond landscaping between parking spaces at the Costco parking area planted with plum trees)

NOTE: Staff has received correspondence (emails) from citizens since the First Reading in relation to this item. *See Attachment G.1 Emails received since First Reading.*

Funding Source:

N/A

Recommended Action:

Staff's recommendation is that the Commission consider the application and either find the application:
A. In compliance – Approved
B. In compliance subject to stated conditions or modifications;
C. Not in compliance – Not approved

ATTACHMENTS:

	Description	Upload Date	Type
🗋	A.1 Ordinance 2466-2021	8/4/2021	Ordinance add to Y drive
🗋	A.2 Ordinance 2466-2021 Exhibit D(1)	7/30/2021	Ordinance add to Y drive
🗋	A.3 Ordinance 2466-2021 Exhibit D(2)	7/29/2021	Ordinance add to Y drive
🗋	A.4 Ordinance 2466-2021 Exhibit D(3)	7/29/2021	Ordinance add to Y drive
🗋	A.5 Ordinance 2466-2021 Exhibit D (4)	7/30/2021	Ordinance add to Y drive
🗋	B.1 Staff Review	7/29/2021	Staff Report
🗋	B.2 Staff Code Review	7/29/2021	Staff Report
🗋	B.3 Staff Maximum Buildout Analysis	8/2/2021	Staff Report
🗋	C.1 Applications	7/29/2021	Attachment
🗋	C.2 DEO review letter	7/29/2021	Attachment
🗋	C.3 Treasure Coast Regional Planning Council Action	8/1/2021	Attachment
🗋	D.1 Applicant response to 1st Reading Conditions of Approval	7/30/2021	Attachment
🗋	D.2 Traffic Review comments and response	7/30/2021	Backup Material
🗋	D.3 Engineering Review Comments	8/4/2021	Exhibit
🗋	E.1 Published Public Notice in newspaper	7/30/2021	Attachment
🗋	F.1 Stipulation regarding Quasi-Judicial Hearing for Second Reading	7/30/2021	Backup Material
🗋	F.3 Linda Richards Intervenor application-opinion testimony report	7/30/2021	Exhibit
🗋	F.2 Bob Raynes opinion testimony report	7/30/2021	Exhibit
🗋	F.4 Brian DiVentura Intervenor application-opinion testimony report	7/30/2021	Exhibit
🗋	G.1 Emails since First Reading	8/1/2021	Attachment

BEFORE THE CITY COMMISSION

CITY OF STUART, FLORIDA

ORDINANCE NUMBER 2466-2021

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, AMENDING THE FUTURE LAND USE MAP OF THE CITY'S COMPREHENSIVE PLAN, THEREBY ASSIGNING A FUTURE LAND USE DESIGNATION OF "NEIGHBORHOOD SPECIAL DISTRICT" TO THE 49+/- ACRE PROPERTY, OWNED BY NEHME HOLDINGS, LLC AND WILLOUGHBY GROUP, LLC LOCATED ALONG SR-76 KANNER HIGHWAY, SOUTH OF MARTIN COUNTY HIGH SCHOOL AND ABUTTING LYCHEE TREE NURSERY; SAID LAND, ANNEXED BY ORDINANCE No. 2327-2016 AND ORDINANCE No. 2337-2017, BEING MORE FULLY DESCRIBED IN EXHIBIT "A" ATTACHED; AND CONCURRENTLY ASSIGNING "CPUD" ZONING TO SAID LAND ON THE CITY'S OFFICIAL ZONING MAP; ESTABLISHING THE KANNER CPUD COMMERCIAL PLANNED UNIT DEVELOPMENT, CONSISTING OF 162,020 SQUARE FEET OF RETAIL, BULK MERCHANDISE, AND AUTOMOBILE REPAIR SERVICES BUILDING FOOTPRINT WITH A STAND ALONE KIOSK AND FUEL FACILITY, 378 RESIDENTIAL APARTMENT UNITS AND RETAIL AND RESTAURANT PADS PROVIDING FOR APPROVAL OF A MASTER SITE PLAN; PROVIDING FOR DEVELOPMENT CONDITIONS, INCLUDING A TIMETABLE OF DEVELOPMENT; DECLARING THE PROJECT TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; REPEALING ALL ORDINANCES IN CONFLICT HEREWITH; PROVIDING A SEVERABILITY CLAUSE; PROVIDING AN EFFECTIVE DATE, PROVIDING FOR ACCEPTANCE BY THE APPLICANT AND FOR OTHER PURPOSES.

* * * * *

WHEREAS, on August 22, 2016 and January 9th, 2017, the City Commission adopted Ordinance No. 2327-2016 and 2337-2017 respectively, annexing a total of 5 parcels fronting S. Kanner Highway south of Martin County High School and abutting the Lychee Tree Nursery.

WHEREAS, the City of Stuart has determined the need to apply the Future Land Use and Land Development Zoning district for said lands; and

WHEREAS, On May 24, 2021, the City Commission held a properly noticed hearing at a regularly scheduled City Commission to consider the application by M&M Realty Partners, amending the Future Land Use Map of the City's Comprehensive Plan, amending the city's official zoning map and approving a master site plan for a retail, bulk merchandise and automobile repair services with a standalone kiosk and fueling facility, and 398 residential apartment units (reduced to 378 total units at second reading) and retail and restaurant pads; and

WHEREAS, the Applicant has committed to the City that its development will comply with all development codes, plans, standards and conditions approved by the City Commission; and that it will bind its successors in title to any such commitments made upon approval of this ordinance; and

WHEREAS, the City Commission considered and determined that the wetlands existing on the Property have been highly disturbed and that invasive exotic and nuisance vegetation have reduced the quality of the wetlands and that the wetlands and water surfaces are scattered throughout the Property thereby limiting avoidance and minimization of impacts to wetlands to the extent that such impacts must be addressed by offsite mitigation pursuant to Section 5.03.03 of the City of Stuart Land Development Code; and

WHEREAS, the City Commission recognizes and acknowledges that there are no state or federal mitigation banks within the boundaries of the City of Stuart, the City Commission

therefore accepts offsite mitigation for this Project at the Bluefield Ranch Mitigation Bank pursuant to Section 5.03.03. of the City of Stuart Land Development Code; and

WHEREAS, the City Commission considered and determined that the native upland vegetation areas on the Property are scattered and have been previously disturbed, and that invasive exotic and nuisance vegetation has reduced the quality of the native upland vegetation areas on site, and that the disturbed native upland vegetations areas do not provide sufficient wildlife habitat necessary for the long term survival of listed species as determined by the Florida Fish and Wildlife Conservation Commission (FFWCC) and because the Property is not identified as a Strategic Habitat Conservation Area by FFWCC and the scattered and disturbed native upland vegetation areas on the Property limits avoidance and minimization impacts to native upland habitat the native upland vegetation has been recreated on site; and

WHEREAS, at the hearing the applicant showed by substantial competent evidence that the application is consistent with the Stuart Comprehensive Plan, Land Development Code of the City, and with the procedural requirements of law; and

WHEREAS, this CPUD development will be in harmony with surrounding properties; and

WHEREAS, the foregoing recitals are true and adopted as findings of fact and conclusions of law; and

WHEREAS, the Property is legally described in **Exhibit "A"** of this ordinance, a map depicting the Property is attached hereto as **Exhibit "B"** and made a part hereof by reference; and Development conditions including a timetable for construction of development are attached hereto as **Exhibit "C"**;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA THAT:

SECTION 1: The following documents are on file as public records of the City, at the office of the City Clerk in City Hall and are attached hereto as **Exhibit "D"**, hereinafter the "Development Documents", shall be deemed a part of this ordinance:

1. **Drainage and Utility Statement, by Engineering Design and Construction Engineers, last revised June 16, 2021.**
2. **Tree Replacement – Innovative Stormwater Treatment, by Engineering Design and Construction Engineers, last revised June 16, 2021.**
3. **Traffic Analysis for Kanner CPUD, by O'Rourke Engineering and Planning, Pages 1-52, dated December 16, 2020, April 21, 2021 and last revised on June 25, 2021.**
4. **Land Use Plan Amendment Traffic Analysis, by O'Rourke Engineering and Planning, Pages 1-36, dated December 18, 2020, February 18, and last revised on April 21, 2021.**
5. **Signal Warrant Analysis for Kanner CPUD, Pages 1-23, by O'Rourke Engineering and Planning, dated February 18, 2021, March 16, 2021, April 22, 2021 and last revised on June 25, 2021.**
6. **Environmental Assessment Report, by EW Consultants, Inc. Pages 1-41, dated March, 2021**
7. **Proposed Retail Buildings and Proposed Restaurant Buildings: Stuart Retail Center, by EP Design Services, Sheets A-001 thru A-004, dated March 3, 2021.**

8. **Residential Multifamily Plans and Elevations and Proposed Retail Buildings, by Forum Architecture & Interior Design, Inc. Pages A5.11, A5.21, A5.31, A5.41, A5.51, A5.61, A6.11, A6.51 and A6.61 all dated 12.14.21 and last revised on 7.13.21.**
9. **Costco Building Elevations, by MG2, Pages 1-9, dated December 16, 2020 and last revised on 5.12.2021.**
10. **Master Site Plan, Sheet 1 of 1, By Lucido and Associates Dated March 16, 2021 and last revised on 7.02.2021.**
11. **Phasing Plan, by Engineering Design and Construction Engineers Sheet 1 of 1, dated 07 July 2021.**
12. **Boundary, Topographic & Tree Survey, by Engineering Design and Construction Engineers, Sheets 1-9. dated February 26, 2021**
13. **Landscape plan, By Lucido and Associates, Sheets CV-1 & LA1-LA16, dated December 17, 2020, 03.19.2021, 04.21.2021, 05.13.21 and last revised on 7.1.2021**
14. **Preliminary Engineering Plans and Specifications, by Engineering Design and Construction Engineers, Pages 1-9, dated July 07, 2021**
15. **Kanner CPUD Garbage Truck Turning Exhibit, by Engineering Design and Construction Engineers, Sheet 1 of 1, dated 12 May 2021.**
16. **Kanner CPUD Fire Truck Turning Exhibit, by Engineering design and Construction Engineers Sheet 1 of 1; dated 19 March 2021.**
17. **Photometric plans, sheets E0.1, E1.1, E1.10, E1.11, E1.2 E1.9, By Lucido and Associates, dated 8.21.2020 and 12.18.2020.**

SECTION 2: The Future Land Use designation in the City's Comprehensive Land Use Plan shall be established as "Neighborhood Special District". If challenged within 30 days after adoption, this ordinance may not become effective until the State Land Planning Agency or the Administration Commission, respectively, issues a final order determining that the adopted large scale development amendment is in compliance as defined in F.S. 163.3184(1)(b).

SECTION 3: The Land Development (Zoning) District designation on the City of Stuart Official Zoning Map shall be established as "CPUD" Commercial Planned Unit Development.

SECTION 4: Except as otherwise provided herein, no development permits, site permits, or building permits shall be issued by the City except in compliance with the City's Land Development Code.

SECTION 5: All ordinances or parts of ordinances in conflict with this ordinance or any part thereof is hereby repealed to the extent of such conflict. If any provision of this ordinance conflicts with any contractual provision between the City and the Developer of the site, this ordinance shall prevail.

SECTION 6: If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or applications which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared severable.

SECTION 7: Following the adoption and acceptance of this ordinance by the Owners, and in addition to any other action for failure to complete development or otherwise comply with the Development Documents, the City Development Director may obtain a hearing before the City Commission, and shall thereupon give at least five (5) days written notice of the time, date and location of the hearing, along with specific notice of the alleged breach. At the hearing

before the City Commission the developer may appear and may contest the allegation of breach or explain the reason or reasons for the breach. Upon a finding of a material breach of the Development Documents and therefore, the Ordinance(s) adopting the same, the City Commission may impose or do any or all of the following:

a. Initiate the process to amend or repeal this or any other ordinance pertaining to the development.

b. Direct the City Development Director to initiate the process to rezone the PUD property or any portion of the PUD property.

c. Impose an administrative penalty of up to $1,000.00 for each violation, and up to $5,000.00 for each repeat violation that occurs, along with all reasonable costs, including attorney's fees incurred by the City.

Any breach of any provision or condition of this CPUD ordinance by the Developer shall be considered a zoning violation subject to any remedies provided herein, or as otherwise provided by law. In the event a violation found continues from day to day, each day the violation is found to continue shall be deemed a separate violation.

SECTION 8: This ordinance and agreement shall be effective upon the last of the following to occur: adoption by the City Commission, and proper execution and acceptance by the Owner. However, the Future Land Use and Zoning Designations granted herein shall not be effective until thirty-one (31) days after adoption, or as otherwise provided by law.

SECTION 9: The complete execution and recording of this Ordinance by the City Clerk shall occur no later than 60 days from the date of this approval, failing which this ordinance shall be void.

SECTION 10: Upon complete execution of this Ordinance, including the Acceptance and Agreement by the Owner, the City Clerk is directed to record a Certified Copy of the same in the Public Records of Martin County, Florida.

Passed on first reading the 24th day of May, 2021.

Commissioner _____ offered the foregoing Ordinance and moved its adoption. The motion was seconded by Commissioner _____ and upon being put to a roll call vote, the vote was as follows:

	YES	NO	ABSENT	ABSTAIN
EULA R. CLARKE, MAYOR				
MERRITT MATHESON, VICE MAYOR				
BECKY BRUNER, COMMISSIONER				
TROY MCDONALD, COMMISSIONER				
MIKE MEIER, COMMISSIONER				

ADOPTED on second and final reading this _____day of _____, 2021.

ATTEST:

_____ _____

MARY R. KINDEL
CITY CLERK

EULA R. CLARKE
MAYOR

APPROVED AS TO FORM
AND CORRECTNESS:

_____

MICHAEL J. MORTELL, ESQ.

CITY ATTORNEY

ACCEPTANCE AND AGREEMENT

BY SIGNING THIS ACCEPTANCE AND AGREEMENT, THE UNDERSIGNED HEREBY ACCEPTS AND AGREES TO ALL OF THE TERMS AND CONDITIONS CONTAINED IN A COMMERCIAL PLANNED UNIT DEVELOPMENT AND IN ALL EXHIBITS, ATTACHMENTS AND DEVELOPMENT DOCUMENTS, INTENDING TO BE BOUND THEREBY, AND THAT SUCH ACCEPTANCE AND AGREEMENT IS DONE FREELY, KNOWINGLY, AND WITHOUT ANY RESERVATION, AND FOR THE PURPOSES EXPRESSED WITHIN THE ABOVE ORDINANCE. IF IT IS LATER DISCOVERED THAT THE UNDERSIGNED, OR ITS SUCCESSORS OR ASSIGNS HAVE FAILED IN ANY MATERIAL WAY TO DEVELOP THIS COMMERCIAL PLANNED UNIT DEVELOPMENT ACCORDING TO THIS ORDINANCE, ITS CONDITIONS, AND THE DEVELOPMENT PLANS AND DOCUMENTS, THE UNDERSIGNED UNDERSTANDS AND AGREES THAT THIS ORDINANCE MAY BE AMENDED OR REPEALED BY THE CITY COMMISSION, AND THAT OTHER ACTIONS MAY BE TAKEN AGAINST THE UNDERSIGNED BY THE CITY, INCLUDING BUT NOT LIMITED TO CODE ENFORCEMENT ACTIONS, PERMIT AND LICENSING REVOCATIONS, AND ALL APPLICABLE CIVIL AND CRIMINAL ACTIONS.

IN WITNESS WHEREOF THE UNDERSIGNED HAS EXECUTED THIS ACCEPTANCE AND AGREEMENT:

WITNESSES:

Nehme Holdings, LLC
Ms. Eileen Nehme, Owner

_____ By: _____

Print Name: _____

_____

Print Name: _____

OWNERS ACKNOWLEDGMENT

The above Ordinance, Acceptance and Agreement was acknowledged before me by means of ☒ physical presence or ☐ online notarization this _____ day of _____, 2021, by _____, who ☐ is personally known to me or ☐ has produced _____as identification.

(Notary Seal)

_____
Signature of Notary Public

Printed Name: _____

IN WITNESS WHEREOF THE UNDERSIGNED HAS EXECUTED THIS ACCEPTANCE AND AGREEMENT:

WITNESSES:

Willoughby Group, LLC
Mahmoud Hadid, Managing Director

_____ By: _____

Print Name: _____

_____

Print Name: _____

OWNERS ACKNOWLEDGMENT

The above Ordinance, Acceptance and Agreement was acknowledged before me by means of ☒ physical presence or ☐ online notarization this _____ day of _____, 2021, by _____, who ☐ is personally known to me or ☐ has produced _____as identification.

(Notary Seal)

_____
Signature of Notary Public

Printed Name: _____

CITY'S ACKNOWLEDGMENT

The above Ordinance, Acceptance and Agreement was acknowledged before The above Ordinance, Acceptance and Agreement was acknowledged before me by means of ☒ physical presence or ☐ online notarization this _____ day of _____, 2021, Eula R. Clarke, Mayor, and Mary Kindel, City Clerk, respectively, of the City of Stuart, Florida, a Florida municipal corporation, who ☐ are personally known to me or ☐ have produced _____as identification.

(Notary Seal)

_____
Signature of Notary Public

Printed Name: _____

'EXHIBIT A' – LEGAL DESCRIPTION

PARCEL 1

THE REAL PROPERTY LYING AND BEING IN GOVERNMENT LOT 5 AND 6, SECTION 16, TOWNSHIP 38 SOUTH , RANGE 41 EAST, MARTIN COUNTY, FLORIDA, DESCRIBED AS:

BEGINNING AT THE POINT OF INTERSECTION OF THE NORTH LINE OF THE HANSON GRANT AND THE CENTERLINE OF STATE ROAD 76, THENCE PROCEED NORTH 66°18'30" EAST ALONG THE NORTH LINE OF THE HANSON GRANT FOR A DISTANCE OF 50.08 FEET TO A CONCRETE MONUMENT ON THE EAST RIGHT OF WAY LINE OF STATE ROAD 76. THENCE PROCEED NORTH 20°23'20" WEST ALONG THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76 FOR A DISTANCE OF 330 FEET AND THE POINT OR PLACE OF BEGINNING. THENCE PROCEED NORTH 66°18'30" EAST FOR A DISTANCE OF 984.42 FEET TO A POINT, THENCE PROCEED NORTH 20°23'20" WEST FOR A DISTANCE OF 350 FEET TO A POINT, THENCE PROCEED SOUTH 66°18'30" WEST FOR A DISTANCE OF 984.42 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76; THENCE PROCEED SOUTH 20°23'20" EAST ALONG THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76 FOR A DISTANCE OF 350 FEET TO THE POINT OR PLACE OF BEGINNING.

LESS AND EXCEPT PARCEL NO. 145 CONVEYED TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, RECORDED IN 0.R. BOOK 951, PAGE 284, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF GOVERNMENT LOT 5, SECTION 16, TOWNSHIP 38 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 5; THENCE SOUTH 66°02'08" WEST ALONG THE SOUTH LINE OF SAID GOVERNMENT LOT 5, A DISTANCE OF 127.80 FEET TO A POINT ON THE EASTERLY EXISTING RIGHT OF WAY LINE FOR STATE ROAD 76 (KANNER HIGHWAY); THENCE NORTH 20°39'37" WEST ALONG SAID EASTERLY EXISTING RIGHT OF WAY LINE, A DISTANCE OF 330.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 20°39'37" WEST ALONG SAID EXISTING RIGHT OF WAY LINE, A DISTANCE OF 350.00 FEET; THENCE NORTH 66°02'08" EAST, A DISTANCE OF 20.03 FEET; THENCE SOUTH 20°39'37" EAST, A DISTANCE OF 350.00 FEET; THENCE SOUTH 66°02'08" WEST, A DISTANCE OF 20.03 FEET.

PARCEL 2:

A PARCEL OF LAND LYING IN GOVERNMENT LOTS 6 AND 7, SECTION 16, TOWNSHIP 38 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF TRACT 2, STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD; THENCE NORTH 23°40'21" WEST ALONG SAID WESTERLY RIGHT-OF-WAY LINE, FOR A DISTANCE OF 208.04 FEET TO A POINT OF CURVATURE CONCAVE TO THE EAST; THENCE NORTHERLY ALONG SAID CURVE AND SAID WESTERLY RIGHT-OF-WAY LINE HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 14°55'37", AND AN ARC LENGTH OF 369.95 FEET TO THE POINT OF BEGINNING; THENCE DEPARTING SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 66°43'59" WEST, FOR A DISTANCE OF 791.02 FEET TO A POINT; THENCE NORTH 20°39'22" WEST FOR A DISTANCE OF 395.23 FEET TO A POINT ON THE SOUTH LINE OF A MARTIN COUNTY ACCESS STRIP RECORDED IN OFFICIAL RECORDS BOOK 882, PAGES 783 AND 785, MARTIN COUNTY, FLORIDA; THENCE SOUTH 89°28'43" EAST ALONG SAID MARTIN COUNTY ACCESS STRIP, FOR A DISTANCE OF 859.34 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, POINT ALSO BEING ON THE ARC OF A CURVE CONCAVE TO THE EAST, RADIAL LINE BEARS NORTH 82°49'31" EAST; THENCE SOUTHERLY ALONG SAID CURVE AND SAID WESTERLY RIGHT-OF-WAY LINE, HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 02°01'03", AND AN ARC LENGTH OF 50 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION:

TITLE COMMITMENT # 807690

A PARCEL OF LAND LYING IN GOVERNMENT LOTS 5, 6, AND 7, SECTION 16, TOWNSHIP 38 SOUTH RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS :
BEGINNING AT THE NORTHEAST CORNER OF TRACT 2, STUART FARMS, AS RECORDED IN PLAT BOOK I, PAGE 63, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD AND ALSO BEING A POINT ON THE NORTH LINE OF THE HANSON GRANT; THENCE SOUTH 65°51'31" WEST ALONG THE NORTH LINE OF SAID HANSON GRANT, FOR A DISTANCE OF 1738.28 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF SOUTH KANNER HIGHWAY (S.R. 76); THENCE NORTH 20°39'22" WEST ALONG SAID EASTERLY RIGHT OF WAY LINE, FOR A DISTANCE OF 330.00 FEET TO A POINT; THENCE DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE, NORTH 65°51'31" EAST, FOR A DISTANCE OF 964.39 FEET TO A POINT; THENCE NORTH 20°39'22" WEST, FOR A DISTANCE OF 256.55 FEET TO A POINT; THENCE NORTH 66°43'59" EAST, FOR A DISTANCE OF 791.02 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, SAID POINT ALSO BEING A POINT ON A NON-TANGENT CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 14°55'37", A CHORD BEARING OF SOUTH 16°11'46" EAST AND A CHORD LENGTH OF 368.90 FEET; THENCE TRAVEL COUNTER-CLOCKWISE ALONG THE ARC OF SAID NON-TANGENT CURVE AND THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, FOR A DISTANCE OF 369.95 FEET TO A POINT OF TANGENCY; THENCE SOUTH 23°40'21" EAST ALONG SAID WESTERLY RIGHT-OF-WAY LINE, FOR A DISTANCE OF 208.04 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION:
TITLE COMMITMENT # 807694
A PARCEL OF LAND LYING WITHIN THE HANSON GRANT, MARTIN COUNTY, FLORIDA, BEING DESCRIBED AS FOLLOWS:
THE WESTERLY 330.00 FEET OF LOT 2, AND ALL OF LOTS 3 AND 4 OF STUART FARMS, AS RECORDED IN PLAT BOOK I, PAGE 63, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NOW SITUATED, LYING AND BEING IN MARTIN COUNTY, FLORIDA.
LESS AND EXCEPT
THAT PORTION CONVEYED TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION AS RECORDED IN OFFICIAL RECORDS BOOK 951, PAGE 282, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
A 1O FOOT WIDE PARCEL OF LAND OVER THE WESTERLY PORTION OF LOT 4, ACCORDING TO THE PLAT OF STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF PALM BEACH (NOW MARTIN) COUNTY, FLORIDA, LYING EASTERLY OF STATE ROAD 76, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCE AT THE NORTHEAST CORNER OF SAID LOT 4; THENCE RUN SOUTH 66°02'08" WEST, ALONG THE NORTH LINE OF SAID LOT 4 AND ALONG THE NORTH LINE OF HANSON GRANT, A DISTANCE OF 376.46 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 66°02'08" WEST, ALONG THE NORTH LINE OF SAID LOT 4, A DISTANCE OF 10.01 FEET; THENCE SOUTH 20°39'37" EAST, ALONG A LINE THAT IS 1O FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE EASTERLY RIGHT OF WAY LINE OF THE 100 FOOT WIDE STATE ROAD 76, A DISTANCE OF 600.55 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE NORTH 66°06'12" EAST, ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 10.01 FEET; THENCE NORTH 20°39'37" WEST, ALONG A LINE 20 FEET EASTERLY OF AS MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE EASTERLY RIGHT OF WAY LINE OF THE SAID 100 FOOT WIDE STATE ROAD 76, A DISTANCE OF 600.56 FEET TO THE POINT OF BEGINNING.
TOGETHER WITH AN ABANDONED 40 FOOT DEDICATED RIGHT OF WAY LYING BETWEEN SAID LOTS 2 AND 3.

'EXHIBIT B' – LOCATION MAP

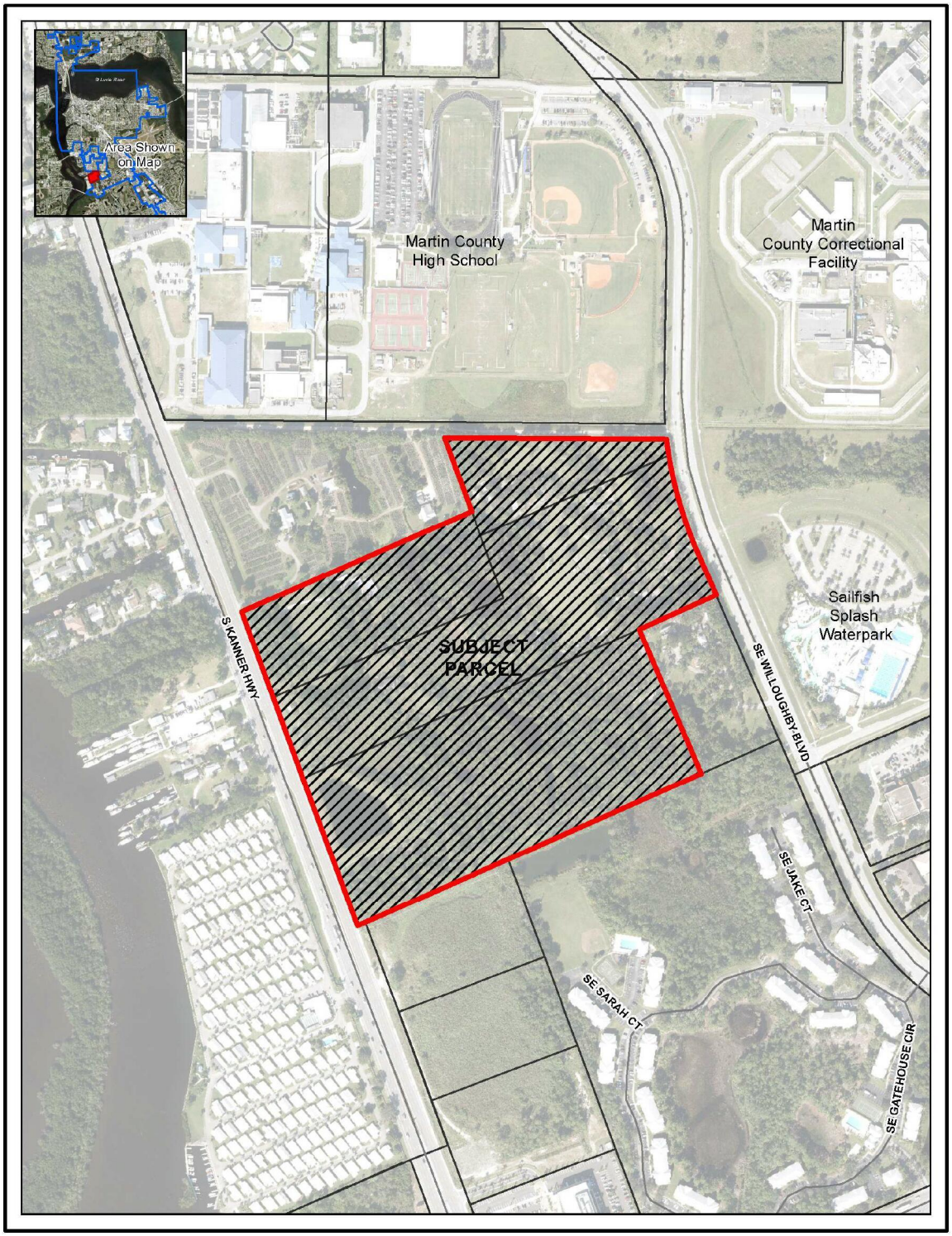


EXHIBIT C – DEVELOPMENT CONDITIONS

1. All development approved hereby, and the use thereof, shall comply with the following drawings:

Approved Plans and Documents (Exhibit D)

A. Drainage and Utility Statement, by Engineering Design and Construction Engineers, revised June 16, 2021.

B. Tree Replacement – Innovative Stormwater Treatment, by Engineering Design and Construction Engineers, last revised June 16, 2021.

C. Traffic Analysis for Kanner CPUD, by O'Rourke Engineering and Planning, Pages 1-52, dated December 16, 2020, April 21, 2021 and last revised on June 25, 2021.

D. Land Use Plan Amendment Traffic Analysis, by O'Rourke Engineering and Planning, Pages 1-36, dated December 18, 2020, February 18, 2021 and last revised on April 21, 2021

E. Signal Warrant Analysis for Kanner CPUD, Pages 1-23, by O'Rourke Engineering and Planning, dated December 18, 2021, March 16, 2021, and last revised on April 21, 2021 and last revised on June 25, 2021.

F. Environmental Assessment Report, by EW Consultants, Inc. Pages 1-41, dated March 2021

G. Proposed Retail Buildings and Proposed Restaurant Buildings: Stuart Retail Center, by EP Design Services, Sheets A-001 thru A-004, dated March 3, 2021.

H. Residential Multifamily Plans and Elevations, by Forum Architecture & Interior Design, Inc. Pages A5.11, A5.21, A5.31, A5.41, A5.51, A5.61, A6.11, A6.51 and A6.61 all dated 12.14.21 and last revised on 7.13.21.

I. Costco Building Elevations, by MG2, Pages 1-9, dated December 16, 2020 and last revised on 5.12.2021.

J. Master Site Plan, Sheet 1 of 1, By Lucido and Associates Dated March 16, 2021 and last revised on 7.02.2021.

K. Phasing Plan, by Engineering Design and Construction Engineers Sheet 1 of 1, dated 07 July 2021.

L. Boundary, Topographic & Tree Survey, by Engineering Design and Construction Engineers, Sheets 1-9. dated February 26, 2021

M. Landscape plan, By Lucido and Associates, Sheets CV-1 & LA1-LA16, dated December 17, 2020, 03.19.2021, 04.21.2021, 05.13.21 and last revised on 7.1.2021

N. Preliminary Engineering Plans and Specifications, by Engineering Design and Construction Engineers, Pages 1-9, dated July 07, 2021

O. Kanner CPUD Garbage Truck Turning Exhibit, by Engineering Design and Construction Engineers, Sheet 1 of 1, dated 12 May 2021.

P. Kanner CPUD Fire Truck Turning Exhibit, by Engineering design and Construction Engineers Sheet 1 of 1; dated 19 March 2021.

Q. Photometric plans, sheets E0.1, E1.1, E1.10, E1.11, E1.2 E1.9, By Lucido and Associates, dated 8.21.2020 and 12.18.2020.

Prior to Issuance of Site Permits

2. Applicant shall provide a digital boundary survey and civil plan prior to the issuance of any final site permits.

3. Final Development plans and/or Construction Drawings and Building Plans shall be submitted, reviewed, and approved by the City prior to the issuance of any Development Permits.

4. Civil Plans shall be reviewed and approved by all applicable City departments prior to the issuance of a final site permit.

5. All required regulatory agency permits, including but not limited to the South Florida Water Management District and Army Corp of Engineers, shall be obtained by the applicant and copies provided to the City prior to the commencement of any phase of development activities.

6. All development activities shall comply with the City's Concurrency Management System prior to the issuance of building permits.

7. The applicant shall provide a photometric plan prior to building permit approval (Final Site Plan approval). Lighting shall comply with Section 6.07.00 of the Land Development Code and reviewed by police for CEPTED/Crime Prevention recommendations. Lighting shall include shields to direct the light away from the Lychee Tree Nursery.

Development and Construction

8. Except as otherwise set forth in the Kanner CPUD, development shall comply with the City Land Development Code. Any modifications to the Master Site Plan that is 10%, or less, of the approved building footprint, building setbacks, gross square footage, building location, parking size, location and number of parking, drainage areas, and location of landscaping, may be approved by the City's Development Director, provided however,

the Development Director may refer the matter to the City Commission for approval via public hearing.

9. All applicable state, local or federal permits must be obtained before the commencement of any development activities. Issuance of this development order/permit/approval by the City of Stuart does not in any way create any right on the part of an applicant to obtain a permit from a state, local or federal agency and does not create any liability on the part of the City of Stuart for the issuance of this order/permit/approval if the applicant fails to obtain requisite approvals or fulfill the obligations imposed by a state or federal agency or undertakes actions that result in a violation of state or federal law.

10. Development of the Property as a CPUD shall include a net impervious area of not more than seventy-five (75%) for the combination of parcels within the CPUD.

11. The maximum building height within the CPUD shall be 4 stories or forty-five (45) feet. Height shall be measured from the lowest permissible finished first floor elevation to the surface of a flat roof and to the eave of a pitched roof. The peak of a pitched roof may not exceed 15 feet above the maximum building height.

12. Water and Sewer Services shall be provided by City of Stuart Utilities.

13. In the event of any conflict in the provisions of Exhibit 'C' Development Conditions and attached exhibits, Exhibit 'C' shall prevail.

14. Prior to certificate of occupancy of the retail, bulk merchandise and automobile repair services building and fueling facility, the applicant shall provide an engineer's written confirmation attesting that the necessary components of the CPUD's stormwater and utility systems are in place and functioning in compliance with all approved plans and specifications.

15. Construction activity shall be limited from 6.00 am to 6:00 pm. Monday – Saturday. However, the City's Development Director shall have the discretion to authorize

construction to take place outside the standard construction hours set forth in the City's Land Development Code and Code of Ordinances.

16. Notwithstanding anything to the contrary in the City of Stuart Land Development Code of City of Stuart Code of Ordinances, there shall be no restrictions on delivery hours for the retail, bulk merchandise and automobile repair services building and fueling facility.

17. Erosion and dust control measures to be implemented during construction shall be provided on the civil plans and submitted during site permit review. Water trucks and/or temporary construction water service shall be utilized by the Developer in order to reduce dust generated onsite during construction.

18. Any existing infrastructure, sidewalk or private property including adjacent property boundaries that are damaged during construction shall be repaired or replaced prior to the issuance of a Certificate of Occupancy.

19. All on-site utilities shall be buried unless overhead lines are otherwise required by local utility authorities.

20. Prior to Final Plan approval the Developer shall obtain the necessary water use permits from the South Florida Water Management District for irrigation and temporary construction dewatering. As part of these approvals the Developer shall demonstrate the project will not adversely impact adjacent properties, wetlands, surface waters or cause adverse migration of saline water and regulated contaminants.

21. All utility and driveway connection improvements constructed by the Developer within Florida's Department of Transportation's or Martin County's right-of-way shall be constructed in a manner and form acceptable to the FDOT or Martin County, as applicable. The developer shall grant any such utility easements necessary for this site as may be required by the FDOT and or Martin County.

22. a. Sidewalk shall be constructed as needed within the S. Kanner Highway right-of-way to connect with the existing sidewalk. The proposed sidewalk adjacent to the internal

connector road shall be eight (8) feet in width; all other sidewalks internal to the development shall have a minimum width of six (6) feet.

b. Traffic improvements to S.E. Willoughby Boulevard will include a northbound left turn lane into the project and a southbound right turn lane into the project.

c. The Developer shall construct a two-lane local privately maintained roadway prior to certificate of occupancy for the retail, bulk merchandise and automobile repair services building and fueling facility to connect S. Kanner Highway to S.E. Willoughby Boulevard. Notwithstanding anything to the contrary herein, including the Development Timetable, the completion of the connection road from S. Kanner Highway to S.E. Willoughby Boulevard shall constitute vesting of the Kanner CPUD project for development purposes.

d. All improvements identified in paragraphs 22a, 22b, and 22c which meet the 'rational nexus' criteria as outlined in Florida State Statute, that requires an impact fee to have a reasonable connection (or rational nexus) between the proposed new development and the need and the impact of additional capital facilities, and the expenditure of funds and the benefits accruing to the proposed new development, shall be eligible for impact fee credits from the City of Stuart and from Martin County, subject to agreement.

e. The City of Stuart and its police department shall have the authority to enforce, any and all traffic laws and investigate traffic accidents throughout the entire project.

f. Enhanced crosswalks designs, and appropriate signage, requested by the Martin County School District, but subject to the approval of the Florida Department of Transportation and Martin County, shall be provided to the City prior to the submittal of the construction site permit.

23. a. A detailed stormwater analysis for the existing conditions and proposed developed conditions will be generated for comparison. Runoff will be collected by a series of inlets and pipes and directed to the master stormwater management system for treatment and attenuation. The existing FDOT stormwater detention lake will be redesigned and

expanded so that the system can handle the FDOT improvements as well as runoff from the proposed development. The proposed system will discharge via existing connections to the S. Kanner Highway storm system. Conveyances shall be installed to ensure off-site flows that currently drain through the property will be maintained in the post-development condition. The Developer shall take precautions necessary to ensure that groundwater elevations at the Lychee Tree Nursery irrigation ponds are not adversely affected at any time during or after construction of the stormwater management system.

b. Any existing or offsite lakes, ponds or ditches that will be impacted by the construction of the S. Kanner CPUD will be analyzed. The necessary improvements shall be implemented to maintain existing drainage patterns and levels of flood protection. The Developer shall provide drainage bypass of sufficient capacity to ensure existing drainage patterns and conveyance of off-site flows onto the Property are maintained. Final design of the bypass system shall be provided and reviewed prior to Construction Site Plan approval.

c. Prior to initiating construction of the S. Kanner CPUD, one water quality sampling event will be conducted collecting runoff water that is leaving the site during or immediately after a rainfall event that generates sufficient runoff. The sample will be analyzed for nutrients (nitrogen series, phosphorus (dissolved and total), suspended solids, and total dissolved solids. After completion of the S. Kanner CPUD stormwater management system construction and annually thereafter, a sample of runoff water that is leaving the site during or immediately after a rainfall event that generates sufficient runoff will be collected at the final outfall location. The sample will be analyzed for the same parameters as the pre-development samples. A report comparing water quality data findings will be provided to the City annually.

d. The annual water quality data findings shall be submitted on an annual basis with the first data collection period commencing upon the date the City issues the Certificate of Occupancy for Phase IA of the CPUD. The first annual water quality data findings shall be submitted one (1) year from the City's issuance of the Phase IA Certificate of Occupancy and annually thereafter for a time period ending no earlier than five (5) years

after issuance of the Certificate of Occupancy for the final phase of construction. The results of any annual water quality data findings shall not constitute acknowledgment by the developer or the City that the proposed system is deficient or causing and/or contributing to a water quality violation. Rather, the annual water quality data findings shall be provided only as informational purposes to the City as it relates to performance of the proposed stormwater best management practices.

24. The project's storm water facilities, specifically the Native Planting schemes at the detention/retention areas/wetlands, will be designed using Low Impact Development "(LID) Techniques as described in the University of Florida IFSA Extension publication LID Practices: Integration Wetlands and Enhancing Storm water Basins". Littoral planting shall be provided at the perimeter of all lakes including the expanded D.O.T. pond.

25. One or more sanitary pump stations shall be provided by the developer to service the Kanner CPUD and subject to review and approval by the City's Public Works Department.

26. In the event it is determined that any representative of a plant or animal species that is Federally or State designated as Endangered, Threatened, or Species of a Special Concern is resident on or otherwise is significantly dependent upon the property, the Developer shall cease all activities which might negatively affect that individual or population and immediately notify the City of Stuart, the Florida Fish and Wildlife Commission and the U.S. Fish and Wildlife Service. Proper protection to the satisfaction of all agencies shall be provided by the Developer. Construction shall cease until all agencies are satisfied as to the protection of protected species. The developer's Environmental Professional shall conduct a survey for existing Gopher Tortoise burrows and relocate as necessary.

27. Temporary or freestanding storage units are prohibited on the Property once construction is complete.

Landscaping

28. The common areas including the project's entry and driveway connection shall be provided with landscaping with an irrigation system of sufficient capacity to maintain the landscaping in a healthy growing condition as depicted on landscape plans and prior to Certificate of Occupancy.

29. A landscape strip 25' wide (minimum) shall be maintained along all north, south and east CPUD parcel boundaries as depicted on Site and Landscape Plans.

30. Landscaping of the project shall include low volume drip irrigation, drought tolerant vegetation and fifty percent (50%) or more of native plant materials.

31. "Hat racking" of trees is prohibited on the Property.

32. The Landscape Architect and the Environmental Professional shall attest in writing at the time of installation and prior to certificate of occupancy that the landscape and native landscape area plantings have been installed in compliance with the approved plans, specifications, and reports. At one (1) year after certificate of occupancy both professionals will provide a written confirmation that all installed trees, palms and other plants are in good condition and require no replacement. If any material has not survived it will be noted and replaced and a new letter provided.

33. The use of herbicides with Glyphosate active ingredient is prohibited on the S. Kanner CPUD property.

Required Open Space and Native Vegetation Area

34. Open Space. Not less than 25% of the Kanner CPUD shall be open space as defined in the City Land Development Regulations. Required open space may include native vegetation areas and landscape buffers between the CPUD and adjacent property; however, parking area interior landscaping shall not count towards the open space requirement.

35. Excluding wetlands defined by the South Florida Water Management District, not less than 25% of the total development site shall be native vegetation area. The required native vegetation area may include open space areas and the landscape buffer between the site and adjacent property. The location of the native vegetation shall comply with the project's landscape plans by Lucido and Associate described in **Exhibit "C"**, attached hereto.

Tree Mitigation & Wetland Mitigation

36. The developer proposes to meet the tree mitigation by planting on-site, providing innovative stormwater treatment design, and incorporating low impact development (LID) practices and otherwise comply with Section 5.05.02 of the "Tree replacement and protection requirements" of the City's Land Development Code.

37. The CPUD property contains low quality wetlands that may be mitigated as permitted within the City of Stuart Land Development Regulations specifically in Sec. 5.03.03 of the City's land development code.

Signage

38. All signs throughout the CPUD must have a consistent treatment, as to number, location, size, height, lighting, and materials with a unified theme throughout the Planned Unit Development. The development's monument signs shall adhere to the design standards in the City's land development code, with exception to signage associated with the retail, bulk merchandise and automobile repair services building and fueling facility.

39. Timetable for development shall be as follows:

Development Timetable - See Phasing Plan Exhibit by EDC (Exhibit D #11)

Phase 1A – 29.73 Acres:
Retail Bulk Merchandise (Site & Building), Fueling Facility (Site & Building)
Site Lighting
Interior Landscaping

Connector Road
Traffic Signal on S. Kanner Highway
Land Clearing
Master Drainage
Master Utilities
Mass Grading for entire CPUD
Install of Perimeter Buffer Landscape

Site and building permit application deemed sufficient for permit review of Phase 1A under city codes and standards.	**December 31, 2022**
Final Certificate of Occupancy for Phase 1A site and building improvements.	**December 31, 2024**
Permit Approval of Phase 1A Connector Road and Traffic Signal	**December 31, 2022**
Final Inspection of Phase 1A Connector Road and Traffic Signal	**December 31, 2024**

Phase 1B – 14.51 Acres:
Multi-Family (Site & Building)
Site Lighting
Interior Landscaping

Site and building permit application for Phase 1B deemed sufficient for permit review under city codes and standards.	**December 31, 2023**
Final Certificate of Occupancy for Phase 1B site and building improvements.	**December 31, 2026**

Phase 1C – 4.74 Acres:
Retail / Restaurant Outparcel (Site & Building)
Site Lighting
Interior Landscaping

Site and building permit application for Phase 1C deemed sufficient for permit review under city codes and standards.	**December 31, 2025**
Final Certificate of Occupancy for Phase 1C site and building improvements.	**December 31, 2028**

Notes:

1. The dates set forth above may be extended administratively by the Development Director, in incremental periods not to exceed six (6) months, for any delays caused by outside governmental agencies in issuing permits which have been applied for by the Developer.

2. The dates set forth above may be extended pursuant to Section 252.363, Florida Statutes for any declaration of a state of emergency issued by the Governor of the State of Florida.

Allowable Uses

40. The following uses shall be permitted:
    a. Retail, bulk merchandise, and automotive repair services with fueling facility
    b. Retail, intensive sales and Restaurant
    c. Restaurant with drive-thru (Requires Minor Amendment to CPUD)
    d. Multi-Family Residential
    e. Office, medical (Requires Minor Amendment to CPUD)
    f. Office, business or professional (Requires Minor Amendment to CPUD)
    g. Childcare center (Requires Minor Amendment to CPUD)
    h. Banks/financial institution (Requires Minor Amendment to CPUD)
    i. Warehouse, wholesale and retail distribution, including last mile delivery (Requires Minor Amendment to CPUD)

Revised July 30, 2021 *Via: Electronic Mail*

City of Stuart Planning Department
121 SW Flagler Avenue
Stuart, FL 34994

Re: Costco Kanner PUD – Site Plan, Revisions for 2nd Commission Hearing
Drainage and Utility Statements

To Whom it May Concern:

Please find below the proposed drainage and utility statements for the above reference PUD application. This information is reflect on the preliminary engineering plans and site plan (from Lucido and Associates) that is being submitted concurrently with this letter.

DRAINAGE STATEMENT:

THE PROPOSED PROJECT WILL CONSTRUCT A MASTER STORWATER MANAGEMENT SYSTEM CONSISTING OF A SERIES OF INTERCONNECTED WET DETENTION LAKES AND DRY DETENTION / RETENTION PONDS. THE SYSTEM WILL BE DESIGNED TO SATISFY THE APPLICABLE CRITERIA OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), CITY OF STUART, FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), AND MARTIN COUNTY. THE PROJECT WILL PROVIDE THE REQUIRED 0.50" OF DRY PRE-TREATMENT FOR THE COMMERCIAL USE AREAS BY UTILIZING A MIX OF DRY DETENTION / RETENTION PONDS AND UNDERGROUND EXFILTRATION TRENCH. THE PROJECT WILL BE DESIGNED TO MEET THE ALLOWABLE DISCHARGE RATE FOR THE EXISTING DRAINAGE CONNECTIONS DOWNSTREAM TO THE KANNER HIGHWAY DRAINAGE SYSTEM. THIS INCLUDE CONSTRUCTING A DRAINAGE BYPASS SYSTEM TO PROVIDE CONVEYANCE OF OFF-SITE FLOWS THAT CURRENTLY DRAIN WEST THROUGH THE PROPERTY FROM THE SURROUNDING DRAINAGE BASIN AND WILLOUGHBY BLVD TO THE EAST. THE PROPOSED SYSTEM WILL ALSO MODIFY AN EXISTING FDOT LAKE ON-SITE THAT CURRENTLY SERVES KANNER HWY. THE EXPANDED LAKE WILL CONTINUE TO SERVE KANNER HWY IN ADDITION TO THE ON-SITE DEVELOPMENT. THE DEVELOPER SHALL FILE ALL REQUIRED PERMITS AND AGREEMENTS TO CONSTRUCT OR MODIFY THE PROPOSED INFRASTRUCTURE CURRENTLY SERVING OFF-SITE AREAS. THE PROJECT WILL REQUIRE A MODIFICATION TO EXISTING SFWMD ERP CONCEPTUAL PERMIT 43-103195-P THE APPLICANT WILL SUBMIT WATER QUALITY FINDINGS ON AN ANNUAL BASIS WITH THE FIRST DATA COLLECTION PERIOD COMMENCING UPON THE DATE THE CITY ISSUES THE CERTIFICATION OF OCCUPANCY FOR THE FIRST PHASE OF CONSTRUCTION. THE FIRST ANNUAL WATER QUALITY FINDINGS SHALL BE SUBMTTED (1) YEAR FROM THE CITY'S ISSUANCE OF THE CERTIFICATION OF OCCUPANCY FOR THE FIRST PHASE OF CONSTRUCTION AND ANNUALLY THEREAFTER FOR A TIME PERIOD ENDING NO EARLIER THAN (5) YEARS AFTER YEARS AFTER THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY. THE RESULTS OF ANY ANNUAL WATER QUALITY FINDINGS SHALL NOT CONSTITUTE ACKNOWLEDGEMENT BY THE DEVELOPER OR THE CITY THAT THE PROPOSED CITY IS DEFICIENT, OR CAUSING, AND/OR CONTRIBUTING

TO A WATER QUALITY VIOLATION. RATHER, THE ANNUAL WATER QUALITY DATA FINDINGS SHALL BE PROVIDED ONLY AS INFORMATIONAL PURPOSES TO THE CITY AS IT RELATES TO PERFORMANCE OF THE PROPOSED STORMWATER BEST MANAGEMENT PRACTICES.

UTILITY STATEMENT:

WATER, SEWER, AND FIRE PROTECTION SERVICE WILL BE PROVIDED BY THE CITY OF STUART UTILITIES DEPARTMENT VIA CONNECTIONS TO EXISTING MAINS LOCATED ON THE SOUTHERN AND EASTERN PROPERTY BOUNDARIES. THE PROPOSED PROJECT WILL CONSTRUCT ON-SITE UTILITY INFRASTRUCTURE THROUGHOUT THE PUD TO SERVE THE MULTIPLE USES WITHIN THE DEVELOPMENT. ALL UTILITY DESIGN AND CONSTRUCTION WILL BE IN CONFORMANCE WITH THE LATEST STANDARDS OF THE CITY OF STUART AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECITON (FDEP). THE ON-SITE UTILITY SYSTEM FOR WATER, SEWER, AND FIRE PROTECTION WILL BE PRIVATELY OWNED, OPERATED, AND MAINTAINED BY THE DEVELOPER OR A DESIGNATED PROPERTY OWNERS ASSOCIATION UPON PROPER LEGAL ESTABLISHMENT. THE PRIVATE ON-SITE UTILITY INFRASTURCTURE WILL CONSIST OF A GRAVITY SEWER SYSTEM, SEWER AND WATER SERVICES TO THE BUILDINGS, GREASE TRAPS (WHERE REQUIRED), A PRIVATE FIRE PROTECTION MAIN, AND THE ASSOCIATED APPURTENANCES. ALL POINTS OF SERVICE FOR WATER AND SEWER SHALL BE LOCATED WITHIN AN EXISTING RIGHT-OF-WAY OR CITY OF STUART UTILITY EASEMENT. THE ONLY PUBLIC UTILITY TO BE CONSTRUCTED ON-SITE SHALL BE A NEW CITY OF STUART WASTEWATER LIFT STATION. THE LIFT STATION WILL BE DESIGNED TO SERVE THE ENTIRE PUD AND SHALL BE CONSTRUCTED ADJACENT TO THE KANNER HIGHWAY RIGHT-OF-WAY AS SHOWN ON THE SITE PLAN. THE DEVLEOPER SHALL EXTEND AN EXISTING CITY OF STUART WATER MAIN ACROSS THE PROPERTY FRONTAGE ON KANNER HIGHWAY. THE PROPOSED GRAVITY SEWER WILL COLLECT WASTEWATER FROM THE VARIOUS USES AND CONVEY IT TO THE PROPOSED CITY OF STUART LIFT STATION. THE LIFT STATION WILL DISCHARGE TO AN EXISTING CITY OF STUART FORCE MAIN LOCATED AT THE SOUTHERN PROPERTY BOUNDARY.

A PRIVATE FIRE PROTECTION MAIN SHALL BE CONSTRUCTED THROUGH THE PUD WITH CONNECTIONS TO BUILDINGS SPRINKLER SYSTEMS, HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS (FDC'S). THE DEVELOPER SHALL FILE ALL REQUIRED PERMITS AND AGREEMENTS PRIOR TO CONSTRUCTING OR MODIFYING ANY PORTION OF UTILITY INFRASTRUCTURE ASSOCIATED WITH THE APPROVED SITE PLAN. THE DEVELOPMENT WILL RECIEVE ELECTRICAL AND COMMUNICATION SERVICE FROM LOCAL PROVIDER SYSTEMS THAT EXIST ON KANNER HIGHWAY AND WILLOUGHBY BOULEVARD. PRIOR TO CONSTRUCTION COMPLETION THE DEVELOPER SHALL PROVIDE EASEMENTS FOR ON-SITE PRIVATE ELECTRICAL AND COMMUNICATION UTILITIES WHERE REQUIRED.

We feel the above statement accurately reflects the intent of the proposed development design as presented on the PUD site plan.

Respectfully,
ENGINEERING DESIGN & CONSTRUCTION, INC.



David C. Baggett, P.E.
Professional Engineer

Cc: Doug Fitzwater – Lucido and Associates

Z:\EDC-2020\20-313 - Costco Stuart - Kanner Highway\ENGINEERING\Documents\Submittal Documents\Comment Response Letter\2021-07-30_CoS_2nd_Hearing_Submittal\2021-07-30_Revised_Drainage_and_Utility_Statement_Letter.docx

Revised June 16, 2021 *Via: Electronic Mail*

City of Stuart Planning Department
121 SW Flagler Avenue
Stuart, FL 34994

Re: Costco – Kanner PUD
City of Stuart LDC 5.05.02(i) Tree Replacement – Innovative Stormwater Treatment

To Whom it May Concern:

Please find below and enclosed an analysis for the above referenced PUD in accordance with City of Stuart Land Development Code (LDC). The applicant seeks approval of the proposed tree replacement fund credit based on the PUD's stormwater management system removal efficiency of nitrogen and phosphorus per Section 5.05.02(i).

Tree Replacement Credit Criteria:

Per Land Development Code Section 5.05.02, innovative stormwater treatment design which is demonstrated to exceed water quality treatment above that required in section 6.03.00 and South Florida Water Management District best management practice and reduces post-development stormwater pollutant loading of total nitrates and phosphates by 81 or more percent may be substituted for a proportion of the tree replacement fund payment in accordance with table 2 (below) and as approved by the city development director.

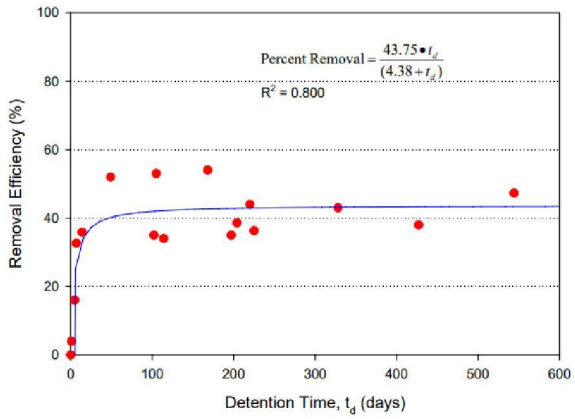
Table 2: Credit for Providing Additional Nitrate and Phosphate Removal

Percentage of Nitrate and Phosphate Loading Reduction from Stormwater	Maximum Pollutant Removal Factor for Construction Value of Additional Stormwater Treatment [a]
81% to 85%	1.25
86% to 89%	1.5
90%+	2.0

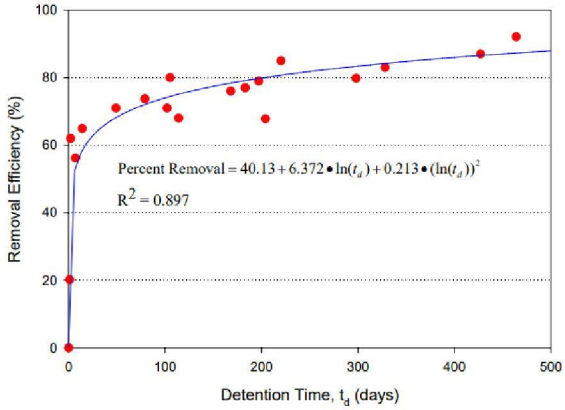
Stormwater Management System Design:

The proposed PUD will convert the existing property from a ruderal upland pine and wet flatwood land coverage to a mixed-use development. The most practical type of stormwater system to serve a development of this size is a wet detention lake system. Lakes provide the required treatment and attenuation per regulations set forth by the City of Stuart, SFWMD, and FDOT while also providing the developer a cost-efficient means of generating fill for their project.

Per the LDC, the City's minimum removal efficiency to qualify for tree replacement credit is 81% for both nitrogen and phosphorus. While wet detention lakes can achieve upwards of almost 90% removal of phosphorus, the maximum removal efficiency of nitrogen is approximately 45% (Evaluation of Current Stormwater Design Criteria within the State of Florida, Harper, 2007).



Nitrogen Removal Efficiency



Phosphorus Removal Efficiency

As such, the developer is proposing to integrate innovative stormwater treatment into the drainage system. In addition to the wet detention lakes the system will incorporate native planted dry retention ponds, a bio-detention shelf, littoral plantings, pervious pavement and pavers, and a nutrient upflow filtration box. These measures will allow for a higher removal efficiency of both nitrogen and phosphorus. The wet detention permanent pool volumes are based on an anoxic depth of 12' below control (not to the maximum excavation depth possible). Dry retention volumes will be provided for in the proposed native planted ponds and underground exfiltration trench. The additional littoral zone and bio-detention plantings are aquatic plant-based BMPs that remove nutrients through a variety of processes related to nutrient uptake, transformation, and microbial activities. The nutrient upflow filtration will be provided by a proprietary system approved for use in Florida known a Nutrient Removal Filtration System ("NRFS") by Oldcastle Infrastructure. The NRFS will be installed downstream of the wet detention lake in basin DA A-3. The systems removes nutrients by directing stormwater underneath a bed of Bold & Gold biosorption filter media where it then flows upward. The Bold & Gold media creates sorbent surface bonds to establish a media nutrient cycle that actively captures and consumes nutrients, while promoting denitrification. High levels of phosphorus and nitrogen can compromise ecosystem integrity and human health. Bold & Gold media is an ideal media for pretreatment prior to rainwater harvesting or post treatment following detention prior to discharge into receiving waters. The Bold & Gold media must be replaced at a minimum of 5 year increments (or as needed) to promote efficiency removal of phosphorus.

Below is the removal efficiency of Total Nitrogen and Phosphorus in the proposed stormwater management system. Please see the enclosed BMP Trains exhibits for more detailed calculations of the nutrient removal efficiency of the proposed stormwater management system. Calculations are based on preliminary engineering of the stormwater management system. The final removal efficiencies will be determined at time of final construction level plan approval.

Provided Total Nitrogen Removal = 81%
Provided Total Phosphorus Removal = 89%

Innovative Stormwater Cost Estimate:

The following is a breakdown of estimated costs associated with the proposed innovative stormwater best management practices (BMP's). Costs a based on latest estimated values per FDOT Historical Cost indices, Martin County Estimates of Probable Cost, quotes from manufacturers (for NRFS), and compiled estimate data by the design team professional engineering and landscape consultants.

Oldcastle Infrastructure Nutrient Removal Filtration System (NRFS):
NRFS Materials (including Bold & Gold Media) = $130,000
NRFS Installation Cost = $50,000
*Bold & Gold Media Replacement ($13,800/replacement, replaced on 5yr inc for 25yr) = $69,000
Total Credited Cost of NRFS = $249,000

Pervious Pavement and Pavers
Pervious Concrete (@ Costco Parking Lot): 10,092 SF = 1,121 SY x $60/SY = $67,260
Pervious Pavers (@ Roundabout): 7,600 SF = 844 SY x $53/SY = $44,732
Pervious pavement surfaces to be constructed in place of typical asphalt paving section. As such the offset cost of typical asphalt is:
1,121 SY + 844 SY = 1,965 SY x $20/SY = $39,300
Net Increase in Paving Cost: $67,260 + $44,732 - $39,300 = $72,692

Wet Detention Lake Littoral and Bio-Detention Plantings
Lump Sum Cost Estimate per Landscape Architect = $32,280

Total Cost of Innovative Stormwater BMP's = $353,972

Tree Replacement Credit Calculation:

Now that total cost of the innovative stormwater BMP's have been determined the applicable credits per LDR Sec 5.05.02 shall be applied. To account for varying treatment efficiencies in the proposed system the tree replacement credit calculations will assume an equal proportionate cost associated with the removal nitrogen and phosphorus. This proportionate share is 50/50 as follows:

Proportionate Cost of Innovative BMPs for Nitrogen Removal = $353,972 / 2 = $176,986
Proportionate Cost of Innovative BMPs for Phosphorus Removal = $353,972 / 2 = $176,986

Based on the calculated removal efficiency or the proposed system the following credit applies:
Provided Total Nitrogen Removal = 81% = 1.25 Credit per LDR 5.05.02
Provided Total Phosphorus Removal = 89% = 1.5 Credit per LDR 5.05.02

Credit for 81% Nitrogen Removal = $176,986 x 1.25 = $221,232.50
Credit for 90% Phosphorus Removal = $176,986 x 1.5 = $265,479.00
Total Credit for Tree Mitigation = $486,711.50

We feel this analysis and the enclosed calculations provide sufficient support for the above tree removal credit to offset a portion of the overall required tree replacement fund. Should you have any questions or comments do not hesitate to contact our office.

Respectfully,
ENGINEERING DESIGN & CONSTRUCTION, INC.



David C. Baggett, P.E.
Professional Engineer

Cc: Doug Fitzwater – Lucido and Associates

Enclosed: BMP Trains Net Improvement Calculations & Exhibits

Z:\EDC-2020\20-313 - Costco Stuart - Kanner Highway\ENGINEERING\Documents\Submittal Documents\Applications\2021-06-XX_CoS_Commission_Resubmittal\2021-03-12_Revised_Tree_Mitigation_Stormwater_Letter.docx

GENERAL SITE INFORMATION: V 8.6	GO TO INTRODUCTION PAGE	6/17/2021	Blue Numbers = Input data Red Numbers = Calculated or Carryover

Select the appropriate Meteorological Zone, input the appropriate Mean Annual Rainfall amount and select the type of analysis

NAME OF PROJECT: Kanner CPUD

HELP Rainfall

VIEW ZONE MAP

Meteorological Zone (Please use zone map): CLICK ON CELL BELOW TO SELECT — Zone 5

Mean Annual Rainfall (Please use rainfall map): 57.00 Inches

VIEW MEAN ANNUAL RAINFALL MAP

Type of analysis: CLICK ON CELL BELOW TO SELECT — Specified removal efficiency

Treatment efficiency (N, P) (ex 80 70 (no decimal points) **use only for specified removal efficiency**): 81 81 %

GO TO WATERSHED CHARACTERISTICS

Select the STORMWATER TREATMENT ANALYSIS Button below to begin analyzing the effectiveness of Best Management Practices.

Model documentation and example problems.

STORMWATER TREATMENT ANALYSIS

Systems available for analysis:
Retention Basin with option for calculating effluent concentration
Wet Detention
Exfiltration Trench
Pervious Pavement
Stormwater Harvesting
Biofiltration
Greenroof
Rainwater Harvesting
Managed Aquatic Plants Detention
Vegetated Natural Buffer
Vegetated Filter Strip
Swale
Rain Garden
Tree Well
Lined reuse pond
User Defined BMP

There is a user's manual for the BMPTRAINS model. It can be downloaded from www.stormwater.ucf.edu. The results from the example problems shown in the manual however may not reflect current model results due to ongoing updates of the model.

RESET INPUT FOR STORMWATER TREATMENT ANALYSIS

METHODOLOGY FOR CALCULATING REQUIRED TREATMENT EFFICIENCY

METHODOLOGY FOR RETENTION SYSTEMS

METHODOLOGY FOR WET DETENTION SYSTEMS

METHODOLOGY FOR GREENROOF SYSTEMS

METHODOLOGY FOR WATER HARVESTING SYSTEMS

WATERSHED CHARACTERISTICS V 8.6

GO TO STORMWATER TREATMENT ANALYSIS | Blue Numbers = Input data | Red Numbers = Calculated | LAND USES/EMC

SELECT CATCHMENT CONFIGURATION 6/17/2021

CLICK ON CELL BELOW TO SELECT CONFIGURATION

J - Mixed-4 Catchment-3 Series-Parallel

VIEW CATCHMENT CONFIGURATION

For comingling, the off-site catchment must be upstream. The delay is only for retention BMPs and must be used in hours as measured by the time of concentration at a one inch/hour rain

COMINGLING | MULTI-LAND USE

GO TO GENERAL SITE INFORMATION PAGE

Delay [hrs] | CATCHMENT NO.1 NAME: POST DA A-2

max delay = 15 hrs.

VIEW AVERAGE ANNUAL RUNOFF "C" Factor

VIEW EMC & FLUCCS

GO TO GIS LANDUSE DATA

OVERWRITE DEFAULT CONCENTRATIONS USING:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

Pre-development land use:	CLICK ON CELL BELOW TO SELECT			
	Undeveloped - Ruderal/Upland Pine: TN=1.694 TP=0.162			
with default EMCs	CLICK ON CELL BELOW TO SELECT			
Post-development land use:	Multi-Family: TN=2.320 TP=0.520			
with default EMCs				
Total pre-development catchment area:	11.910	AC		
Total post-development catchment or for BMP analysis:	11.910	AC	Average annual pre runoff volume:	7.626 ac-ft/year
Pre-development Non DCIA CN:	77.00		Average annual post runoff volume (note no BMP area):	28.460 ac-ft/year
Pre-development DCIA percentage:	0.00	%	Pre-development Annual Mass Loading - **Nitrogen:**	15.932 kg/year
Post-development Non DCIA CN:	92.00		Pre-development Annual Mass Loading - **Phosphorus:**	1.524 kg/year
Post-development DCIA percentage:	65.74	%	Post-development Annual Mass Loading - **Nitrogen:**	81.430 kg/year
Estimated BMP Area (No loading from this area)	2.720	AC	Post-development Annual Mass Loading - **Phosphorus:**	18.251 kg/year

CATCHMENT NO.2 NAME: POST DA A-3

OVERWRITE DEFAULT CONCENTRATIONS:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

Pre-development land use:	CLICK ON CELL BELOW TO SELECT			
	Undeveloped - Wet Flatwoods: TN=1.213 TP=0.021			
with default EMCs	CLICK ON CELL BELOW TO SELECT			
Post-development land use:	High-Intensity Commercial: TN=2.40 TP=0.345			
with default EMCs				
Total pre-development catchment area:	27.130	AC		
Total post-development catchment or BMP analysis area:	27.130	AC	Average annual pre runoff volume:	17.371 ac-ft/year
Pre-development Non DCIA CN:	77.00		Average annual post runoff volume (note no BMP area):	85.491 ac-ft/year
Pre-development DCIA percentage:	0.00	%	Pre-development Annual Mass Loading - **Nitrogen:**	25.987 kg/year
Post-development Non DCIA CN:	95.00		Pre-development Annual Mass Loading - **Phosphorus:**	0.450 kg/year
Post-development DCIA percentage:	81.55	%	Post-development Annual Mass Loading - **Nitrogen:**	253.039 kg/year
Estimated BMP Area (No loading from this area)	2.860	AC	Post-development Annual Mass Loading - **Phosphorus:**	36.374 kg/year

CATCHMENT NO.3 NAME: Post DA B-NWW-4A

OVERWRITE DEFAULT CONCENTRATIONS:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

Pre-development land use:	CLICK ON CELL BELOW TO SELECT			
	Highway: TN=1.520 TP=0.200			
with default EMCs	CLICK ON CELL BELOW TO SELECT			
Post-development land use:	Highway: TN=1.520 TP=0.200			
with default EMCs				
Total pre-development catchment area:	9.386	AC		
Total post-development catchment or BMP analysis area:	9.386	AC	Average annual pre runoff volume:	29.543 ac-ft/year
Pre-development Non DCIA CN:	92.00		Average annual post runoff volume (note no BMP area):	30.674 ac-ft/year
Pre-development DCIA percentage:	68.08	%	Pre-development Annual Mass Loading - **Nitrogen:**	55.380 kg/year
Post-development Non DCIA CN:	93.00		Pre-development Annual Mass Loading - **Phosphorus:**	7.287 kg/year
Post-development DCIA percentage:	71.75	%	Post-development Annual Mass Loading - **Nitrogen:**	57.501 kg/year
Estimated BMP Area (no loading from this area)	0.000	AC	Post-development Annual Mass Loading - **Phosphorus:**	7.566 kg/year

CATCHMENT NO.4 NAME: POST DA A-1

OVERWRITE DEFAULT CONCENTRATIONS:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

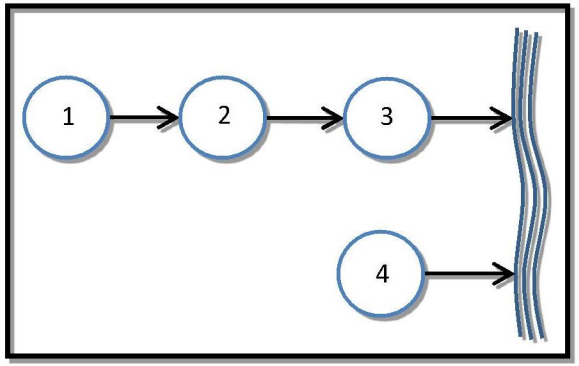
Pre-development land use:	CLICK ON CELL BELOW TO SELECT			
	Undeveloped - Ruderal/Upland Pine: TN=1.694 TP=0.162			
with default EMCs	CLICK ON CELL BELOW TO SELECT			
Post-development land use:	Multi-Family: TN=2.320 TP=0.520			
with default EMCs				
Total pre-development catchment area:	9.950	AC		
Total post-development catchment or BMP analysis area:	9.950	AC	Average annual pre runoff volume:	6.371 ac-ft/year
Pre-development Non DCIA CN:	77.00		Average annual post runoff volume (note no BMP area):	23.846 ac-ft/year
Pre-development DCIA percentage:	0.00	%	Pre-development Annual Mass Loading - **Nitrogen:**	13.310 kg/year
Post-development Non DCIA CN:	92.00		Pre-development Annual Mass Loading - **Phosphorus:**	1.273 kg/year
Post-development DCIA percentage:	65.74	%	Post-development Annual Mass Loading - **Nitrogen:**	68.227 kg/year
Estimated BMP Area (no loading from this area)	2.250	AC	Post-development Annual Mass Loading - **Phosphorus:**	15.292 kg/year

STORMWATER TREATMENT ANALYSIS:	V 8.6	GO TO GENERAL SITE INFORMATION PAGE	Blue Numbers =	Input data
			Red Numbers =	Calculated

If not done, specify pre- and post-development watershed characteristics.

6/17/2021

GO TO WATERSHED CHARACTERISTICS



Total Required Treatment Efficiency:

Required Treatment Eff (**Nitrogen**):	81	%
Required Treatment Eff (**Phosphorus**):	81	%

Select one of the BMPs below to analyze efficiency or review the summary data.

RETENTION BASIN	WET DETENTION / MAP	EXFILTRATION TRENCH	RAIN GARDEN / depression storage	SWALE	USER DEFINED BMP
PERVIOUS PAVEMENT	STORMWATER HARVESTING	FILTRATION	View Media Mixes	NOTE !!!: All individual system must be sized prior to being analyzed in conjunction with other systems. Please read instructions in the CATCHMENT AND TREATMENT SUMMARY RESULTS tab for more information.	
GREENROOF	RAINWATER HARVESTING	LINED REUSE POND & UNDERDRAIN INPUT	GO TO COST ANALYSIS WORKSHEET		
VEGETATED NATURAL BUFFER	VEGETATED FILTER STRIP	TREE WELL	CATCHMENT AND TREATMENT SURFACE		

WET DETENTION / MANAGED AQUATIC PLANTS: 6/17/2021 V 8.6

Blue Numbers =	Input data
Red Numbers =	Calculated or Carryover

Also called: FLOATING ISLANDS and includes a wet detention pond:

Kanner CPUD

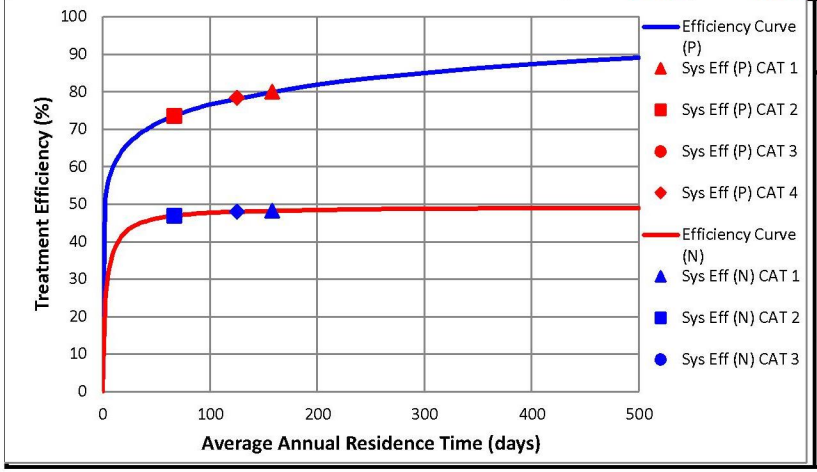
GO TO STORMWATER TREATMENT ANALYSIS

	POST DA A-2	POST DA A-3	st DA B-NWW	POST DA A-1	
Total pre-development catchment area:	11.910	27.130	9.386	9.950	ac
Total post-development catchment area:	9.190	24.270	9.386	7.700	ac
Average annual residence time (between 1 and 500 days)	158.00	66.65		125.21	days
Littoral Zone or other improvements used?*	YES	YES		YES	
Littoral Zone or other improvement efficiency credit:	10.00	10.00		10.00	%
Floating Wetland or Mats used in the design:	NO	NO		NO	
Floating Wetland or Mats credit:	0.00	0.00		0.00	%
Total **Nitrogen** removal required:	81.000	81.000	81.000	81.000	%
Total **Phosphorus** removal required:	81.000	81.000	81.000	81.000	%
Total **Nitrogen** removal efficiency:	48.313	46.947	0.000	48.044	%
Total **Phosphorous** removal efficiency:	80.063	73.580	0.000	78.288	%
Is the wet detention sufficient:	NO	NO		NO	
Average annual runoff volume:	28.460	85.491	30.674	23.846	ac-ft/yr

* pond coverage must follow Regulatory Requirements

Wet Detention Pond Characteristic:

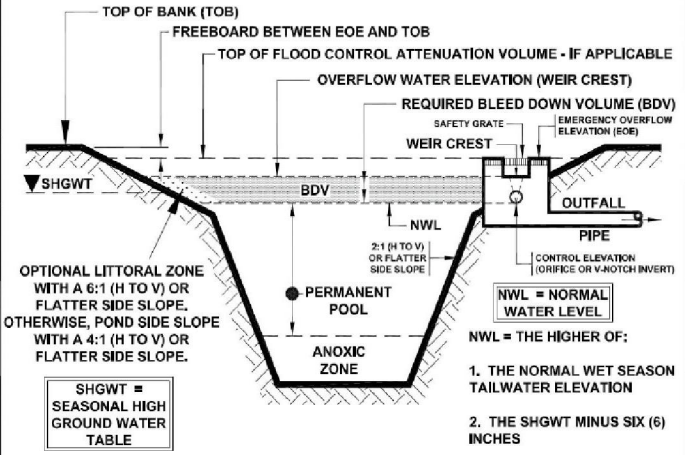
Minimum Pond Permanent Pool Volume:	12.320	15.610		8.180	ac-ft



NOTE FOR TREATMENT EFFICIENCY GRAPH:

The purpose of the treatment efficiency graphs is to help illustrate the treatment efficiency of the wet detention system as the function of average annual residence time (and permanent pool volume). The graph illustrates that there is a point of diminished return as the permanent pool volume is substantially increased. Therefore, to provide the most economical BMP treatment system, other alternatives such as "treatment trains" and compensatory treatment should be considered.

REQUIRED REMAINING TREATMENT EFFICIENCIES OF TREATMENT SYSTEM IN SERIES WITH FLOATING ISLANDS WITH WET DETENTION. USE FOR SIZING OF TREATMENT SYSTEM IN SERIES WITH FLOATING ISLANDS WITH WET DETENTION.



TYPICAL X-SECTION OF A WET DETENTION SYSTEM

Source of Graphic: draft **STORMWATER QUALITY APPLICANT'S HANDBOOK** dated March 2010, by the Department of Environmental Protection, available at: http://www.dep.state.fl.us/water/wetlands/erp/rules/stormwater, March 2010

RETENTION BASIN: 6/17/2021 V 8.6

Blue Numbers =	Input data
Red Numbers =	Calculated or Carryover

RETENTION BASIN SERVING: Kanner CPUD

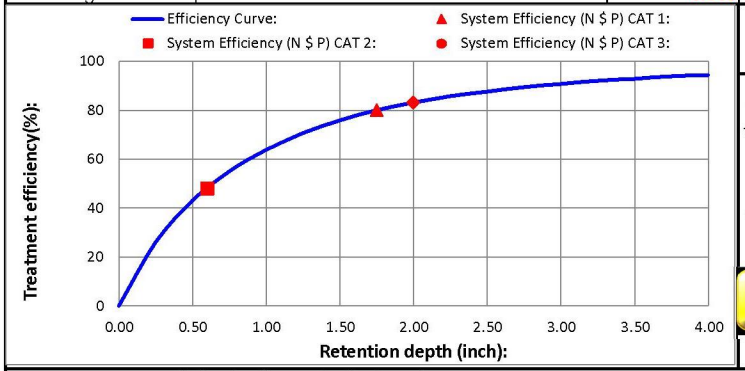
GO TO STORMWATER TREATMENT ANALYSIS

Loadings from BMP area are contained by the BMP, thus no BMP area load.

	POST DA A-2	POST DA A-3	ost DA B-NWW-4	POST DA A-1	
Watershed area cotributing to basin:	9.190	24.270	9.386	7.700	ac
Required Treatment Eff (**Nitrogen**):	81.000	81.000	81.000	81.000	%
Required Treatment Eff (**Phosphorus**):	81.000	81.000	81.000	81.000	%
Required retention depth over the watershed to meet required efficiency:	1.815	1.815	1.815	1.815	in
Required water quality retention volume:	1.390	3.672	1.420	1.165	ac-ft

RETENTION BASIN FOR MULTIPLE TREATMENT SYSTEMS (if there is a need for additional removal efficiencies in a series of BMPs):

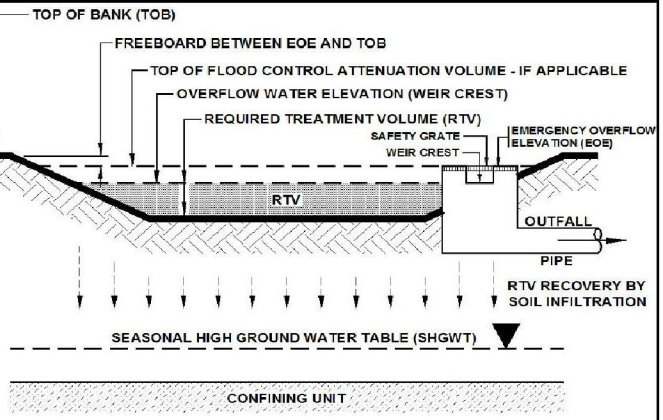
Retention volume based on retention depth and Total area - BMP area	1.340	1.214	0.000	1.283	ac-ft
Provided retention depth (0.1-3.99 inches over the watershed)	1.750	0.600		2.000	in
Provided treatment efficiency (**Nitrogen**):	80.178	48.022	0.000	83.323	%
Provided treatment efficiency (**Phosphorus**):	80.178	48.022	0.000	83.323	%
Remaining treatment efficiency (**Nitrogen**):	4.148	63.446	81.000	0.000	%
Remaining treatment efficiency (**Phosphorus**):	4.148	63.446	81.000	0.000	%
Remaining retention depth needed:	0.065	1.215	1.815	0.000	in



NOTE FOR TREATMENT EFFICIENCY GRAPH:

The purpose of this graph is to help illustrate the treatment efficiency of the retention system as the function of retention depth **for a single BMP and in a single catchment**. The graph illustrates that there is a diminished return as the retention depth is increased. Thus evaluations of other alternatives in "treatment trains" and compensatory treatment should be considered. **NOTE:** the retention volume can not exceed 3.99 inches to be within the range of data used to determine effectiveness.

HELP - EXAMPLE PROBLEM 3



TYPICAL CROSS SECTION OF A "DRY" RETENTION SYSTEM

View Media Mixes

Estimate of groundwater impacts	Catchment 1	Catchment 2	Catchment 3	Catchment 4
Use only down flow media mix before water enters the ground, specify type				
Nitrogen mass reduction in groundwater discharge (%)				
Phosphorus mass reduction in groundwater discharge (%)				

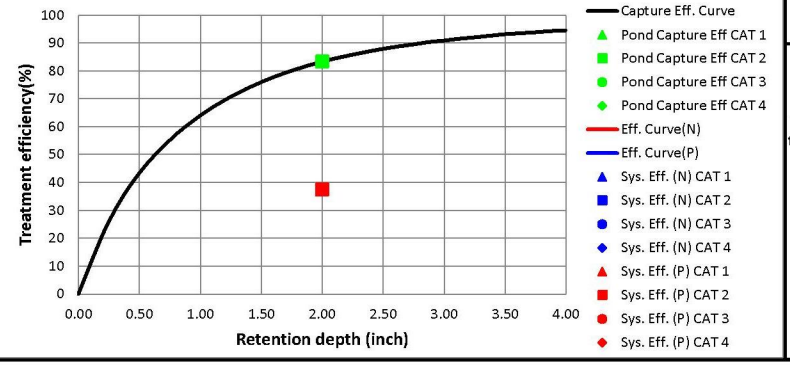
Source of Graphic: draft **STORMWATER QUALITY APPLICANT'S HANDBOOK** dated March 2010, by the Department of Environmental Protection, available at: http://www.dep.state.fl.us/water/wetlands/erp/rules/stormwater, March 2010.

FILTRATION (Underdrained Dry Basin or Upflow Filter after Wet Detention) 6/17/2021 V 8.6

FILTRATION SERVING EITHER WET POND OR DRY POND: Kanner CPUD

Notes: No loadings from this BMP area and media must match location.	POST DA A-2	POST DA A-3	ıst DA B-NWW-	POST DA A-1	
Contributing catchment area:	9.190	24.270	9.386	7.700	ac
Treatment depth (0.0-4.0 inches):		2.00			in
Treatment volume provided for treatment depth:	0.000	4.045	0.000	0.000	ac-ft
Provided water capture efficiency:	0.000	83.323	0.000	0.000	%
Required treatment efficiency (**Nitrogen**):		81.000			%
Required treatment efficiency (**Phosphorus**):		81.000			%
Type of media mixes: View Media Mixes		B&G ECT3			
Provided treatment efficiency (**Nitrogen**):		37.495			%
Provided treatment efficiency (**Phosphorus**):		37.495			%
Is this effluent filtration for a wet detention pond?		Yes			

ERROR MESSAGE WINDOW FOR FILTRATION INCLUDING BIOFILTRATION:



NOTE FOR TREATMENT EFFICIENCY GRAPH:

The purpose of this graph is to help illustrate the treatment efficiency of the system as the function of retention depth. The graph illustrates that there is a point of diminished return as the retention depth is substantially increased. Therefore, to provide the most economical BMP treatment system, other alternatives such as "treatment trains" and compensatory treatment should be considered.

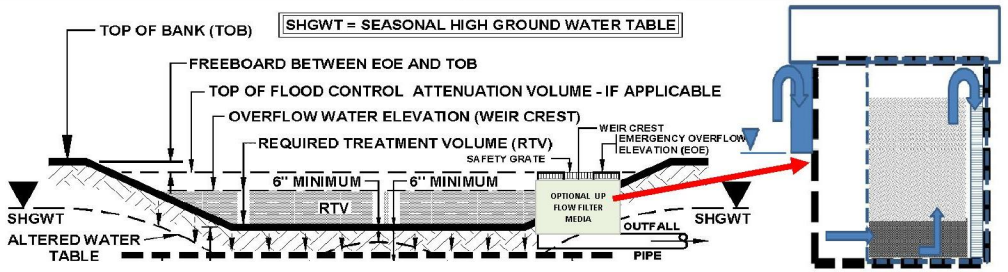
Blue Numbers =	Input data
Red Numbers =	Calculated or Carryover

GO TO STORMWATER TREATMENT ANALYSIS

FOR UNDERDRAINS GO TO LATTERAL SPACING CALCULATOR

REQUIRED REMAINING TREATMENT EFFICIENCIES.

	POST DA A-2	POST DA A-3	st DA B-NWW	POST DA A-1	
Remaining treatment efficiency needed (**Nitrogen**):		43.505			%
Remaining treatment efficiency needed (**Phosphorus**):		43.505			%



The use of a Biosorption Activated Media may be required.

Source of Graphic: Stormwater Management Academy, University of Central Florida

CATCHMENTS AND TREATMENT SURFACE DISCHARGE SUMMARY V 8.6

CALCULATION METHODS:

1. The effectiveness of each BMP in a single catchment is converted to an equivalent capture volume.
2. Certain BMP treatment train combinations have not been evaluated and in practice they are at this time not used, an example is a greenroof following a tree well.
3. Wet detention is last when used in a single catchment with other BMPs, except when followed by filtration

PROJECT TITLE	Kanner CPUD	Optional Identification	Kanner CPUD	
	POST DA A-2	POST DA A-3	Post DA B-NWW-4A	POST DA A-1
BMP Name	Retention Basin	Retention Basin		Retention Basin
BMP Name	Wet Detention/ MAPs	Filtration		Wet Detention/ MAPs
BMP Name		Wet Detention/ MAPs		

REVIEW, ONE OR MORE CATCHMENT HAS BEEN SPECIFIED WITHOUT A BMP

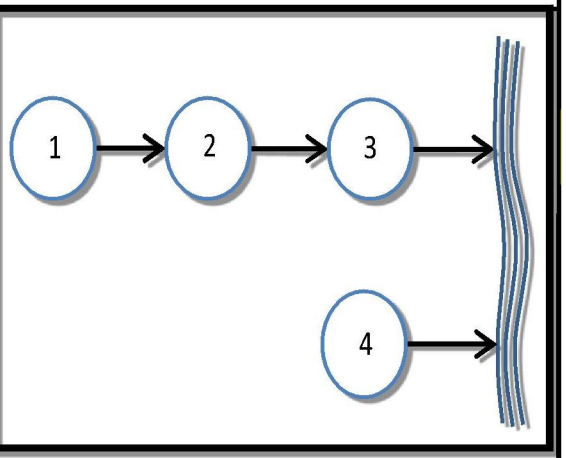
Surface Water Discharge Summary Performance of Entire Watershed

Catchment Configuration	J - Mixed-4 Catchment-3 Series-Parallel		6/17/2021
Nitrogen Pre Load (kg/yr)	110.61		BMPTRAINS MODEL
Phosphorus Pre Load (kg/yr)	10.53		
Nitrogen Post Load (kg/yr)	460.20		
Phosphorus Post Load (kg/yr)	77.48		
Target Load Reduction (N) %	81		
Target Load Reduction (P) %	81		
Target Discharge Load, N (kg/yr)	87.44		
Target Discharge Load, P (kg/yr)	14.72		
Provided Overall Efficiency, N (%):	81		
Provided Overall Efficiency, P (%):	89		
Discharged Load, N (kg/yr & lb/yr):	89.60	197.35	
Discharged Load, P (kg/yr & lb/yr):	8.37	18.44	
Load Removed, N (kg/yr & lb/yr):	370.60	816.28	
Load Removed, P (kg/yr & lb/yr):	69.11	152.23	

Treatment Objectives or Target for

TN MET

TP MET



Oldcastle Infrastructure™
A CRH COMPANY

BOLD & GOLD®

Biosorption Activated Media (BAM)



Bold & Gold® Removal Efficiencies up to:

- 75% Nitrogen
- 95% Phosphorous
- 95% TSS

**Varies based on sizing & site conditions*

Bold & Gold is a Biosorption Activated Media (BAM) used for pollution control to reduce nitrogen and phosphorus levels in stormwater. Bold and Gold creates sorbent surface bonds to establish a media nutrient cycle that actively captures and consumes nutrients, while promoting denitrification. High levels of phosphorus and nitrogen can compromise ecosystem integrity and human health. Bold & Gold Media is an ideal media for pre-treatment prior to rainwater harvesting or post treatment following detention prior to discharge into receiving waters.

Benefits:

- High Surface Area
- Biological Activity: Denitrification and Nutrient Consumption
- No Biological Toxic Effects
- Sustainable: Long Life Media Made from Recycled Material
- Economical (Lower Cost Media)
- Available in Various Blends
- Removes TN, TP, TSS and Metals
- Physical Filtration of Solids
- Sorbent Surface Bonding for Capture of Dissolved Pollutants

LEED Credit Eligible:

4.1;4.2	Materials & Resources Recycled Content
6.2	Stormwater Design / Quality Control

Suntree Technologies Inc.

ADVANCED BIOSORPTION FILTRATION

Bold & Gold Combined Stormwater Treatment Technologies



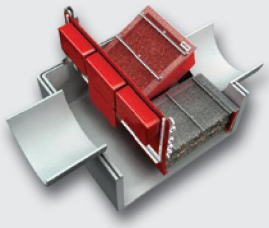
Nutrimax™

The only engineered wetland built to maximize the power of Bold & Gold Media for superior nutrient reduction. Nutrimax does not require a prefilter and averts typical clogging failures associated with other biofilters. The incorporation of Hydro-Variant Technology® allows for extensive treatment of lower flows, without compromising watershed hydrology during peak flows, affording an ideal solution for space restricted areas.



NRFS®

The NRFS uses an orifice flow control to maximize contact time with Bold & Gold media to remove nutrients and TSS prior to discharge. The optional addition of a SkimBoss MAX allows the NRFS to bolster detention time and removal potential through Hydro-Variant Technology. The NRFS is ideal for pretreatment of rainwater prior to harvesting, LID, water quality improvement or post treatment following detention.



SkimBoss® UpFlow Filter

Designed for online installation, as an option to the NSBB™, to boost nutrient and TSS removal without the associated headloss. Combining Bold & Gold media with Hydro-Variant Technology resists clogging and automatically adjusts to rising water levels during peak flows without compromising watershed hydrology.

Modeling available in BMPTRAINS
Bold & Gold Media for an unbeatable treatment train!



Use Bold & Gold in BMPs for nitrogen and phosphorus reduction credits:

- ERP (Environmental Resource Permit)
- TMDL (Total Maximum Daily Load)
- MS4 (Municipal Separate Storm Sewer System)
- BMAP (Basin Management Action Plans)
- Net Improvement

Pervious Concrete

When it Rains, it Drains.

Naturally...

Reduces Runoff

Cleans Stormwater

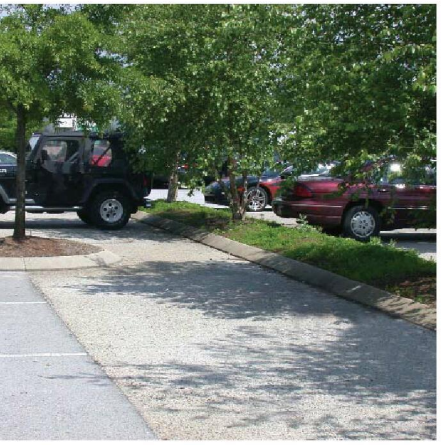
Replenishes Aquifers

Conserves Water

Protects Streams

ADA Friendly









Pervious Concrete: The Natural Choice

It's tough to balance the demand for development with the need to preserve our natural resources. However, this balance becomes easy to achieve when you construct parking lots using pervious concrete.

Pervious concrete is a mix of coarse aggregate, cement, water, and little to no sand. Also known as "no-fines" or porous concrete, this mixture creates an open-cell structure, allowing rainwater to filter through to underlying soil. By modeling natural ground cover, pervious concrete is an excellent choice for stormwater management.

Pervious Concrete: The Environmentally Sound Choice

According to the United States Environmental Protection Agency (EPA), stormwater runoff can send as much as 90% of the pollutants—such as oil and other hydrocarbon liquids found on the surface of traditional parking lots—directly into our rivers and streams. The EPA now requires state and local governments to implement measures to reduce and improve the overall quality of stormwater runoff in an effort to address this important pollution problem. Pervious concrete has been recognized by the EPA as a best management practice (BMP) to address this most vital environmental concern. The open-cell structure of pervious concrete provides a medium for aerobic bacteria that break down many of the pollutants that seep from parked cars.

Pervious concrete also contributes to enhanced air quality by lowering atmospheric heating through lighter color and lower density, decreasing the impact of heat island effects. The heat island effect occurs when tree-covered areas are replaced with dark pavement surfaces, and is characterized by up to a 12-degree average temperature increase between an urban area and its surrounding countryside. This heat island effect increases ground level ozone production by as much as 30%.

Concrete surfaces, both pervious and conventional, have a much higher albedo—a measure of reflectance—than competitive paving materials. Specifications requiring a minimum surface albedo are becoming increasingly popular. The inherently light color of concrete naturally reflects heat and light. Studies have shown as much as a 30% savings in lighting costs over other pavement types due to concrete pavement's reflectivity.

Pervious Concrete: The Smart Business Choice

Using pervious concrete pavement in your parking lot can reduce the need for large detention ponds because the pavement acts as a detention area. Lot owners will spend fewer dollars on labor, construction and maintenance of detention ponds, skimmers, pumps, drainage pipes, and other stormwater management systems. Expensive irrigation systems can also be downsized or eliminated.

A pervious concrete parking lot will help reduce demands upon sewer systems. Today, many government agencies are now implementing stormwater impact fees for all impervious areas. Pervious concrete can reduce these fees for the property owner.

Developers are using pervious concrete for parking lots to increase utilization of commercial properties. The land ordinarily devoted to costly stormwater management practices or compliance with maximum impervious area ordinances can now be developed or preserved, enhancing the bottom line.

Pervious concrete is a durable material—parking areas properly designed and constructed will last 20-40 years with little or no maintenance. Thus concrete, conventional or pervious, is widely recognized as the lowest life cycle cost option available for paving.

Benefits of Pervious Concrete

Reduces stormwater runoff

Eliminates need for detention ponds and other costly stormwater management practices

Replenishes water tables and aquifers

Allows for more efficient land development

Minimizes flash flooding and standing water

Prevents warm and polluted water from entering our streams

Mitigates surface pollutants



The best application for pervious concrete is parking lots.

When it Rains, it Drains.

Stormwater runoff occurs when rain falls. This runoff causes increased pollution in rivers and streams, flash floods, and loss of rainwater that could otherwise replenish water tables and aquifers. Pervious concrete has a 15-25% void structure and allows 3–8 gallons of water per minute to pass through each square foot—accounting for far more than is generated during most rain events. Pervious concrete puts rainwater back in the ground where it belongs.

Pervious Concrete
Frequently Asked Questions

Q: What about drainage issues in soils with high clay content?

A: Typically if a soil type has sufficient percolation to support a septic tank system it will be allowable for pervious concrete. If a soil is truly impervious, the pervious concrete system will still be useful for detention pond requirements. Soil percolation rates are most important if you must meet stormwater quality requirements. A typical parking lot design may have 5"–8" of pervious pavement on top of a 6"–12" sub-base of #57 stone (40% voids) on a geotextile fabric. In sandy areas pervious is placed directly above the sand.

Q: What about freeze-thaw issues?

A: Pervious concrete has been in place as far north as Raleigh, N.C., for over 12 years with no freeze thaw problems. Only a few installations exist in extreme wet freeze-thaw regions. There are many studies underway. Visit our Web site to find current information about this topic.

Q: What about clogging?

A: Clogging problems are mainly an issue of design. If a natural area with grass or exposed soil is allowed to drain stormwater across a pervious concrete pavement, fine material can be introduced into the system causing localized clogging. Vegetative matter can collect on the surface of the pervious concrete causing some clogging, but routine sweeping or vacuuming will restore porosity. Studies have been conducted that indicate pressure washing will restore most of the porosity of clogged pervious concrete to nearly new conditions.

Q: What other uses are there for pervious concrete?

A: Pervious concrete has been successfully used for low volume streets, driveways, sidewalks, golf cart paths, retaining walls, and French drains. Pervious concrete can be utilized in a variety of paving applications to provide hardscape without altering hydrology of the land.

For more information and contacts on pervious concrete go to:

www.pervious.info

Concrete Thinking for a sustainable world

Southeast Cement Association

www.secement.org









FLORIDA WATERWAYS INC.

Benefits of Littoral Plants

The littoral zone of a pond or lake is the shallow, transitional area between dry land and open water. With the low depth of water, as well as plenty of light and nutrients, this zone provides the ideal conditions for plants and animals to thrive. As an essential part of the aquatic ecosystem, littoral plants can even provide added benefits to pond and lake managers.

When it comes to adding pond plants, you should always remember that there is a lot more than meets the eye. Knowing what benefits to expect from littoral zone plants and how to find the right choice for your needs can often be overwhelming. To help you get started, here's a look at everything you need to know about littoral zone planting.







Blog Posts

- Nutrient Pollution and Digestive Bacteria
- Importance of Carp Containment Barriers
- Benefits of Littoral Plants
- Solutions for Aquatic Midges
- Are Grass Carp Right For My Pond?
- Pond Aeration 101

4 Benefits to Littoral Zone Planting

- **Aesthetics**

  Aquatic plants in the littoral zone are lush and healthful, providing an enhanced appearance to any pond or lake. To achieve a beautiful look, common options often

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and enhanced depth and color. Typically, plants will offer significant visual impact when planted in clusters throughout the body of water. They should be evenly spaced carefully to ensure there is no unintended spread of invasive plant species within the planting.

- **Reduced Erosion**

  Planting flora in a pond's littoral zone can also help control and prevent erosion. Plants closer to the shore typically referred to as emergent plants (those with root systems in submerged soils but which extend above the water) and shoreline plants (those with root systems along the shoreline), are often the best at providing erosion control. With their large root structures, they are able to reduce waves and stabilize the soil, effectively preventing erosion.

- **Increased Wildlife Habitat**

  Plants often provide ideal and attractive habitats for birds and other animals, often bringing the pond to life. Fish receive shade, which is the perfect spot to hide from predators. Aquatic plants are also often used as food for a variety of wildlife, including turtles, ducks, fish, insects, and wading birds. They also attract insects, which are a food source for frogs.

- **Nutrient Absorption**

  Littoral zone plants further maintain the balance of the aquatic ecosystem by enhancing water quality and absorbing excess nutrients from the environment. Waste

Learn

Pond Aeration 101

Nutrient Pollution and Digestive Bacteria

Solutions for Aquatic Midges

Are Grass Carp Right For My Pond?

Benefits of Littoral Plants

Importance of Carp Barriers

Glossary

Contact

Client Portal

ponds. Thankfully, plants can absorb these contaminants, maintaining great water quality, and preventing potential problems for wildlife or concentrations.

What Should You Plant?

Because of these benefits, littoral zone planting is common practice for Florida lakes and ponds. With a wide variety of native plants to choose from, a great place to start is by checking out our recommendations in this guide.

SHORELINE PLANTING RECOMMENDATIONS FOR PONDS AND LAKES

Pickerelweed, bulrush, duck potato, blue flags, cattails, and golden canna are all plants covered in the guide and can be beneficial to just about any water body.

Download The Guide

Keep in mind, however, that this list is far from exhaustive. *Juncus*, a genus of plant species typically referred to as rushes, are reliable and hold up well in areas where water conditions often vary. They are stylistic in appearance and offer a wide variety, as some have straight stems and others are cultivated with curly or twisting stems. And *Spartina bakeri*, also known as sand cordgrass and Baker's cordgrass, is a popular species often used in transitions from pond banks to upland landscapes.

Choosing the right species for your pond or lake is crucial to a successful and well-balanced aquatic ecosystem. At Florida Waterways, we have the foundational knowledge and skills necessary to set your pond up for success through careful planning and installation, as well

Interested in learning more? Check out these resources:

- https://edis.ifas.ufl.edu/pdffiles/EP/EP47600.pdf
- https://www.pinellascounty.org/environment/watershed/pdf/adoptapond/Lakefront_Revegetation.pdf

When you're ready to start customizing a lakefront vegetation plan, contact us to get started!

About the Author: Sheri Schwartz



Sheri Schwartz is a Marine Biologist and Marine Scientist. As a Florida native, she holds a Master of Science degree in Marine Science and Marine Biology from Nova Southeastern University, a Bachelor of Science degree in Biological Sciences from Florida State University, and she is a PADI SCUBA-certified diver, wildlife observer, and published science writer. Since completing her graduate program, she has worked in the marine and environmental sectors, including government contracts and private industry, and has developed a breadth of knowledge in the fields of biological and environmental science, water sampling, water quality testing and monitoring, benthic and pelagic habitat monitoring, and quantitative data analysis. Florida Waterways, Inc. is a State-wide environmental firm specializing in pond and lake management using solution-focused, science-based approaches. Florida Waterways has a team of environmental professionals who specialize in multiple disciplines including: aquatic biology and ecology, limnology, entomology, soils, chemistry, sampling, and landscape sciences.

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GENERAL SITE INFORMATION: V 8.6 | GO TO INTRODUCTION PAGE | 6/17/2021 | Blue Numbers = Input data | Red Numbers = Calculated or Carryover

Select the appropriate Meteorological Zone, input the appropriate Mean Annual Rainfall amount and select the type of analysis

NAME OF PROJECT: Kanner CPUD

HELP Rainfall

VIEW ZONE MAP

Meteorological Zone (Please use zone map): CLICK ON CELL BELOW TO SELECT — Zone 5

Mean Annual Rainfall (Please use rainfall map): 57.00 Inches

VIEW MEAN ANNUAL RAINFALL MAP

Type of analysis: CLICK ON CELL BELOW TO SELECT — Specified removal efficiency

Treatment efficiency (N, P) (ex 80 70 (no decimal points) **use only for specified removal efficiency**): 81 81 %

GO TO WATERSHED CHARACTERISTICS

Select the STORMWATER TREATMENT ANALYSIS Button below to begin analyzing the effectiveness of Best Management Practices.

Model documentation and example problems.

STORMWATER TREATMENT ANALYSIS

Systems available for analysis:
Retention Basin with option for calculating effluent concentration
Wet Detention
Exfiltration Trench
Pervious Pavement
Stormwater Harvesting
Biofiltration
Greenroof
Rainwater Harvesting
Managed Aquatic Plants Detention
Vegetated Natural Buffer
Vegetated Filter Strip
Swale
Rain Garden
Tree Well
Lined reuse pond
User Defined BMP

There is a user's manual for the BMPTRAINS model. It can be downloaded from www.stormwater.ucf.edu. The results from the example problems shown in the manual however may not reflect current model results due to ongoing updates of the model.

RESET INPUT FOR STORMWATER TREATMENT ANALYSIS

METHODOLOGY FOR CALCULATING REQUIRED TREATMENT EFFICIENCY

METHODOLOGY FOR RETENTION SYSTEMS

METHODOLOGY FOR WET DETENTION SYSTEMS

METHODOLOGY FOR GREENROOF SYSTEMS

METHODOLOGY FOR WATER HARVESTING SYSTEMS

WATERSHED CHARACTERISTICS V 8.6

GO TO STORMWATER TREATMENT ANALYSIS | Blue Numbers = Input data | Red Numbers = Calculated | LAND USES/EMC

SELECT CATCHMENT CONFIGURATION 6/17/2021

CLICK ON CELL BELOW TO SELECT CONFIGURATION

J - Mixed-4 Catchment-3 Series-Parallel

VIEW CATCHMENT CONFIGURATION

For comingling, the off-site catchment must be upstream. The delay is only for retention BMPs and must be used in hours as measured by the time of concentration at a one inch/hour rain

COMINGLING | MULTI-LAND USE

GO TO GENERAL SITE INFORMATION PAGE

Delay [hrs] | CATCHMENT NO.1 NAME: POST DA A-2

max delay = 15 hrs.

VIEW AVERAGE ANNUAL RUNOFF "C" Factor

VIEW EMC & FLUCCS

GO TO GIS LANDUSE DATA

OVERWRITE DEFAULT CONCENTRATIONS USING:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

Pre-development land use:	CLICK ON CELL BELOW TO SELECT		Total pre-development catchment area:	11.910	AC
	Undeveloped - Ruderal/Upland Pine: TN=1.694 TP=0.162		Total post-development catchment or for BMP analysis:	11.910	AC
with default EMCs	CLICK ON CELL BELOW TO SELECT		Pre-development Non DCIA CN:	77.00	
Post-development land use:	Multi-Family: TN=2.320 TP=0.520		Pre-development DCIA percentage:	0.00	%
with default EMCs			Post-development Non DCIA CN:	92.00	
			Post-development DCIA percentage:	65.74	%
			Estimated BMP Area (No loading from this area)	2.720	AC

Average annual pre runoff volume:	7.626	ac-ft/year	
Average annual post runoff volume (note no BMP area):	28.460	ac-ft/year	
Pre-development Annual Mass Loading - **Nitrogen:**	15.932	kg/year	
Pre-development Annual Mass Loading - **Phosphorus:**	1.524	kg/year	
Post-development Annual Mass Loading - **Nitrogen:**	81.430	kg/year	
Post-development Annual Mass Loading - **Phosphorus:**	18.251	kg/year	

CATCHMENT NO.2 NAME: POST DA A-3

OVERWRITE DEFAULT CONCENTRATIONS:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

Pre-development land use:	CLICK ON CELL BELOW TO SELECT		Total pre-development catchment area:	27.130	AC
	Undeveloped - Wet Flatwoods: TN=1.213 TP=0.021		Total post-development catchment or BMP analysis area:	27.130	AC
with default EMCs	CLICK ON CELL BELOW TO SELECT		Pre-development Non DCIA CN:	77.00	
Post-development land use:	High-Intensity Commercial: TN=2.40 TP=0.345		Pre-development DCIA percentage:	0.00	%
with default EMCs			Post-development Non DCIA CN:	95.00	
			Post-development DCIA percentage:	81.55	%
			Estimated BMP Area (No loading from this area)	2.860	AC

Average annual pre runoff volume:	17.371	ac-ft/year	
Average annual post runoff volume (note no BMP area):	85.491	ac-ft/year	
Pre-development Annual Mass Loading - **Nitrogen:**	25.987	kg/year	
Pre-development Annual Mass Loading - **Phosphorus:**	0.450	kg/year	
Post-development Annual Mass Loading - **Nitrogen:**	253.039	kg/year	
Post-development Annual Mass Loading - **Phosphorus:**	36.374	kg/year	

CATCHMENT NO.3 NAME: Post DA B-NWW-4A

OVERWRITE DEFAULT CONCENTRATIONS:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

Pre-development land use:	CLICK ON CELL BELOW TO SELECT		Total pre-development catchment area:	9.386	AC
	Highway: TN=1.520 TP=0.200		Total post-development catchment or BMP analysis area:	9.386	AC
with default EMCs	CLICK ON CELL BELOW TO SELECT		Pre-development Non DCIA CN:	92.00	
Post-development land use:	Highway: TN=1.520 TP=0.200		Pre-development DCIA percentage:	68.08	%
with default EMCs			Post-development Non DCIA CN:	93.00	
			Post-development DCIA percentage:	71.75	%
			Estimated BMP Area (no loading from this area)	0.000	AC

Average annual pre runoff volume:	29.543	ac-ft/year	
Average annual post runoff volume (note no BMP area):	30.674	ac-ft/year	
Pre-development Annual Mass Loading - **Nitrogen:**	55.380	kg/year	
Pre-development Annual Mass Loading - **Phosphorus:**	7.287	kg/year	
Post-development Annual Mass Loading - **Nitrogen:**	57.501	kg/year	
Post-development Annual Mass Loading - **Phosphorus:**	7.566	kg/year	

CATCHMENT NO.4 NAME: POST DA A-1

OVERWRITE DEFAULT CONCENTRATIONS:

	PRE:	POST:
EMC(N):	mg/L	mg/L
EMC(P):	mg/L	mg/L

USE DEFAULT CONCENTRATIONS

Pre-development land use:	CLICK ON CELL BELOW TO SELECT		Total pre-development catchment area:	9.950	AC
	Undeveloped - Ruderal/Upland Pine: TN=1.694 TP=0.162		Total post-development catchment or BMP analysis area:	9.950	AC
with default EMCs	CLICK ON CELL BELOW TO SELECT		Pre-development Non DCIA CN:	77.00	
Post-development land use:	Multi-Family: TN=2.320 TP=0.520		Pre-development DCIA percentage:	0.00	%
with default EMCs			Post-development Non DCIA CN:	92.00	
			Post-development DCIA percentage:	65.74	%
			Estimated BMP Area (no loading from this area)	2.250	AC

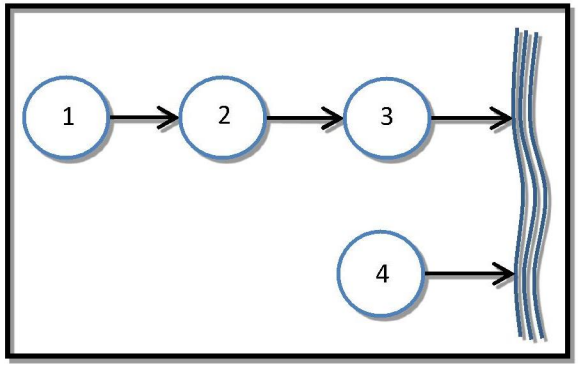
Average annual pre runoff volume:	6.371	ac-ft/year	
Average annual post runoff volume (note no BMP area):	23.846	ac-ft/year	
Pre-development Annual Mass Loading - **Nitrogen:**	13.310	kg/year	
Pre-development Annual Mass Loading - **Phosphorus:**	1.273	kg/year	
Post-development Annual Mass Loading - **Nitrogen:**	68.227	kg/year	
Post-development Annual Mass Loading - **Phosphorus:**	15.292	kg/year	

STORMWATER TREATMENT ANALYSIS:	V 8.6	GO TO GENERAL SITE INFORMATION PAGE	Blue Numbers =	Input data
			Red Numbers =	Calculated

If not done, specify pre- and post-development watershed characteristics.

6/17/2021

GO TO WATERSHED CHARACTERISTICS



Total Required Treatment Efficiency:

Required Treatment Eff (**Nitrogen**):	81	%
Required Treatment Eff (**Phosphorus**):	81	%

Select one of the BMPs below to analyze efficiency or review the summary data.

RETENTION BASIN	WET DETENTION / MAP	EXFILTRATION TRENCH	RAIN GARDEN / depression storage	SWALE	USER DEFINED BMP
PERVIOUS PAVEMENT	STORMWATER HARVESTING	FILTRATION	View Media Mixes	NOTE !!!: All individual system must be sized prior to being analyzed in conjunction with other systems. Please read instructions in the CATCHMENT AND TREATMENT SUMMARY RESULTS tab for more information.	
GREENROOF	RAINWATER HARVESTING	LINED REUSE POND & UNDERDRAIN INPUT	GO TO COST ANALYSIS WORKSHEET		
VEGETATED NATURAL BUFFER	VEGETATED FILTER STRIP	TREE WELL	CATCHMENT AND TREATMENT SURFACE		

WET DETENTION / MANAGED AQUATIC PLANTS: 6/17/2021 V 8.6

Blue Numbers =	Input data
Red Numbers =	Calculated or Carryover

Also called: FLOATING ISLANDS and includes a wet detention pond:

Kanner CPUD

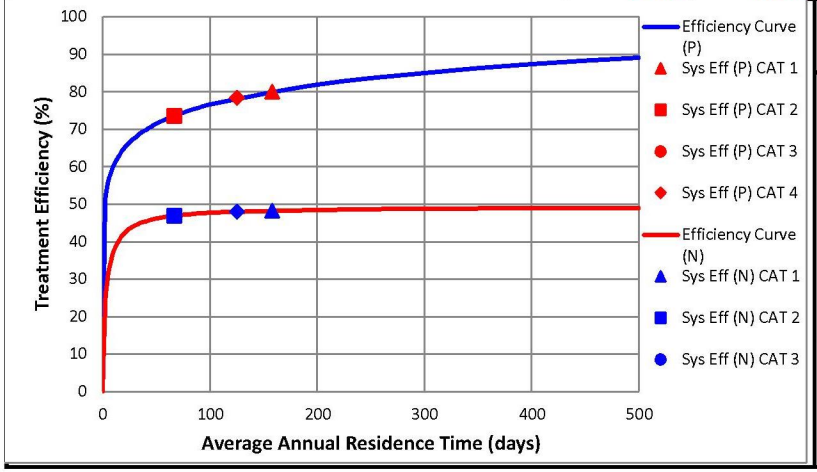
GO TO STORMWATER TREATMENT ANALYSIS

	POST DA A-2	POST DA A-3	st DA B-NWW	POST DA A-1	
Total pre-development catchment area:	11.910	27.130	9.386	9.950	ac
Total post-development catchment area:	9.190	24.270	9.386	7.700	ac
Average annual residence time (between 1 and 500 days)	158.00	66.65		125.21	days
Littoral Zone or other improvements used?*	YES	YES		YES	
Littoral Zone or other improvement efficiency credit:	10.00	10.00		10.00	%
Floating Wetland or Mats used in the design:	NO	NO		NO	
Floating Wetland or Mats credit:	0.00	0.00		0.00	%
Total **Nitrogen** removal required:	81.000	81.000	81.000	81.000	%
Total **Phosphorus** removal required:	81.000	81.000	81.000	81.000	%
Total **Nitrogen** removal efficiency:	48.313	46.947	0.000	48.044	%
Total **Phosphorous** removal efficiency:	80.063	73.580	0.000	78.288	%
Is the wet detention sufficient:	NO	NO		NO	
Average annual runoff volume:	28.460	85.491	30.674	23.846	ac-ft/yr

* pond coverage must follow Regulatory Requirements

Wet Detention Pond Characteristic:

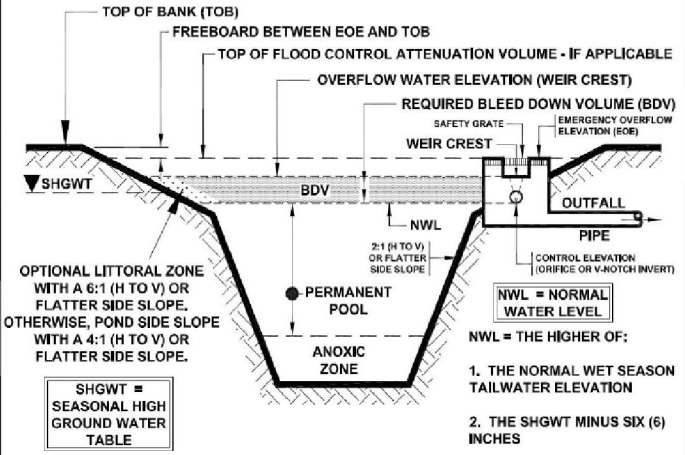
Minimum Pond Permanent Pool Volume:	12.320	15.610		8.180	ac-ft



NOTE FOR TREATMENT EFFICIENCY GRAPH:

The purpose of the treatment efficiency graphs is to help illustrate the treatment efficiency of the wet detention system as the function of average annual residence time (and permanent pool volume). The graph illustrates that there is a point of diminished return as the permanent pool volume is substantially increased. Therefore, to provide the most economical BMP treatment system, other alternatives such as "treatment trains" and compensatory treatment should be considered.

REQUIRED REMAINING TREATMENT EFFICIENCIES OF TREATMENT SYSTEM IN SERIES WITH FLOATING ISLANDS WITH WET DETENTION. USE FOR SIZING OF TREATMENT SYSTEM IN SERIES WITH FLOATING ISLANDS WITH WET DETENTION.



TYPICAL X-SECTION OF A WET DETENTION SYSTEM

Source of Graphic: draft **STORMWATER QUALITY APPLICANT'S HANDBOOK** dated March 2010, by the Department of Environmental Protection, available at: http://www.dep.state.fl.us/water/wetlands/erp/rules/stormwater, March 2010

RETENTION BASIN: 6/17/2021 V 8.6

Blue Numbers =	Input data
Red Numbers =	Calculated or Carryover

RETENTION BASIN SERVING: Kanner CPUD

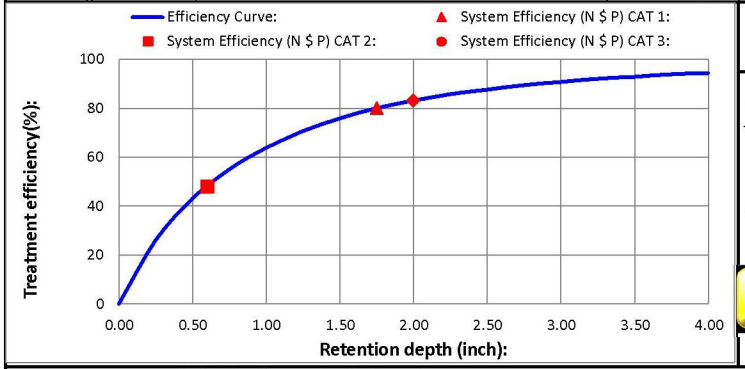
GO TO STORMWATER TREATMENT ANALYSIS

Loadings from BMP area are contained by the BMP, thus no BMP area load.

	POST DA A-2	POST DA A-3	ost DA B-NWW-4	POST DA A-1	
Watershed area cotributing to basin:	9.190	24.270	9.386	7.700	ac
Required Treatment Eff (**Nitrogen**):	81.000	81.000	81.000	81.000	%
Required Treatment Eff (**Phosphorus**):	81.000	81.000	81.000	81.000	%
Required retention depth over the watershed to meet required efficiency:	1.815	1.815	1.815	1.815	in
Required water quality retention volume:	1.390	3.672	1.420	1.165	ac-ft

RETENTION BASIN FOR MULTIPLE TREATMENT SYSTEMS (if there is a need for additional removal efficiencies in a series of BMPs):

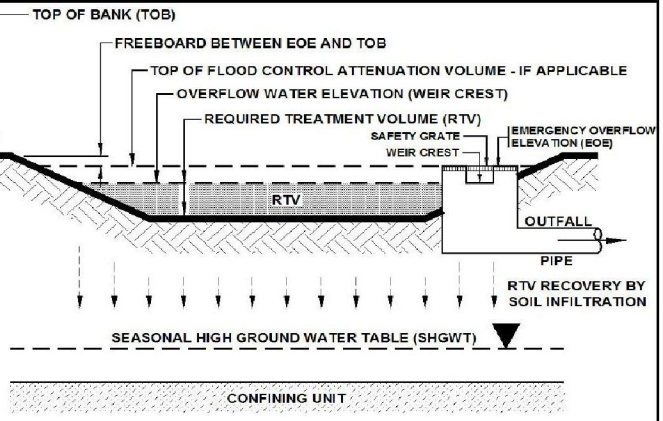
Retention volume based on retention depth and Total area - BMP area	1.340	1.214	0.000	1.283	ac-ft
Provided retention depth (0.1-3.99 inches over the watershed)	1.750	0.600		2.000	in
Provided treatment efficiency (**Nitrogen**):	80.178	48.022	0.000	83.323	%
Provided treatment efficiency (**Phosphorus**):	80.178	48.022	0.000	83.323	%
Remaining treatment efficiency (**Nitrogen**):	4.148	63.446	81.000	0.000	%
Remaining treatment efficiency (**Phosphorus**):	4.148	63.446	81.000	0.000	%
Remaining retention depth needed:	0.065	1.215	1.815	0.000	in



NOTE FOR TREATMENT EFFICIENCY GRAPH:

The purpose of this graph is to help illustrate the treatment efficiency of the retention system as the function of retention depth **for a single BMP and in a single catchment**. The graph illustrates that there is a diminished return as the retention depth is increased. Thus evaluations of other alternatives in "treatment trains" and compensatory treatment should be considered. **NOTE:** the retention volume can not exceed 3.99 inches to be within the range of data used to determine effectiveness.

HELP - EXAMPLE PROBLEM 3



TYPICAL CROSS SECTION OF A "DRY" RETENTION SYSTEM

View Media Mixes

Estimate of groundwater impacts	Catchment 1	Catchment 2	Catchment 3	Catchment 4
Use only down flow media mix before water enters the ground, specify type				
Nitrogen mass reduction in groundwater discharge (%)				
Phosphorus mass reduction in groundwater discharge (%)				

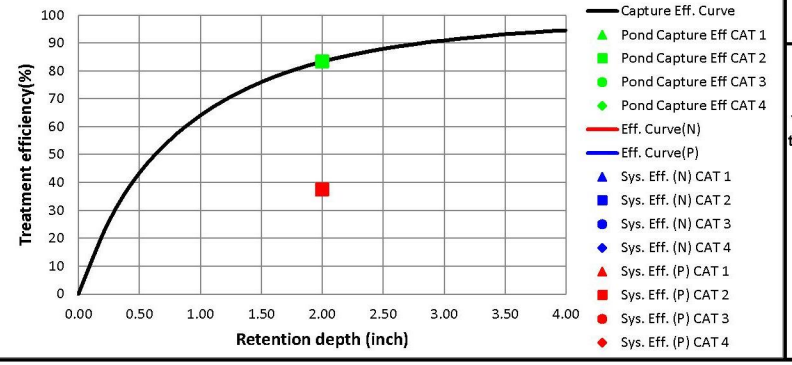
Source of Graphic: draft **STORMWATER QUALITY APPLICANT'S HANDBOOK** dated March 2010, by the Department of Environmental Protection, available at: http://www.dep.state.fl.us/water/wetlands/erp/rules/stormwater, March 2010.

FILTRATION (Underdrained Dry Basin or Upflow Filter after Wet Detention) 6/17/2021 V 8.6

FILTRATION SERVING EITHER WET POND OR DRY POND: Kanner CPUD

Notes: No loadings from this BMP area and media must match location.	POST DA A-2	POST DA A-3	ıst DA B-NWW-	POST DA A-1	
Contributing catchment area:	9.190	24.270	9.386	7.700	ac
Treatment depth (0.0-4.0 inches):		2.00			in
Treatment volume provided for treatment depth:	0.000	4.045	0.000	0.000	ac-ft
Provided water capture efficiency:	0.000	83.323	0.000	0.000	%
Required treatment efficiency (**Nitrogen**):		81.000			%
Required treatment efficiency (**Phosphorus**):		81.000			%
Type of media mixes: View Media Mixes		B&G ECT3			
Provided treatment efficiency (**Nitrogen**):		37.495			%
Provided treatment efficiency (**Phosphorus**):		37.495			%
Is this effluent filtration for a wet detention pond?		Yes			

ERROR MESSAGE WINDOW FOR FILTRATION INCLUDING BIOFILTRATION:



NOTE FOR TREATMENT EFFICIENCY GRAPH:

The purpose of this graph is to help illustrate the treatment efficiency of the system as the function of retention depth. The graph illustrates that there is a point of diminished return as the retention depth is substantially increased. Therefore, to provide the most economical BMP treatment system, other alternatives such as "treatment trains" and compensatory treatment should be considered.

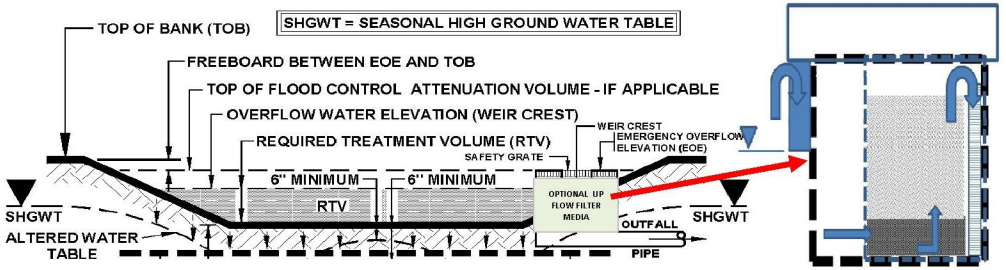
Blue Numbers =	Input data
Red Numbers =	Calculated or Carryover

GO TO STORMWATER TREATMENT ANALYSIS

FOR UNDERDRAINS GO TO LATTERAL SPACING CALCULATOR

REQUIRED REMAINING TREATMENT EFFICIENCIES.

	POST DA A-2	POST DA A-3	st DA B-NWW	POST DA A-1	
Remaining treatment efficiency needed (**Nitrogen**):		43.505			%
Remaining treatment efficiency needed (**Phosphorus**):		43.505			%



The use of a Biosorption Activated Media may be required.

Source of Graphic: Stormwater Management Academy, University of Central Florida

CATCHMENTS AND TREATMENT SURFACE DISCHARGE SUMMARY V 8.6

CALCULATION METHODS:

1. The effectiveness of each BMP in a single catchment is converted to an equivalent capture volume.
2. Certain BMP treatment train combinations have not been evaluated and in practice they are at this time not used, an example is a greenroof following a tree well.
3. Wet detention is last when used in a single catchment with other BMPs, except when followed by filtration

PROJECT TITLE	Kanner CPUD	Optional Identification	Kanner CPUD	
	POST DA A-2	POST DA A-3	Post DA B-NWW-4A	POST DA A-1
BMP Name	Retention Basin	Retention Basin		Retention Basin
BMP Name	Wet Detention/ MAPs	Filtration		Wet Detention/ MAPs
BMP Name		Wet Detention/ MAPs		

REVIEW, ONE OR MORE CATCHMENT HAS BEEN SPECIFIED WITHOUT A BMP

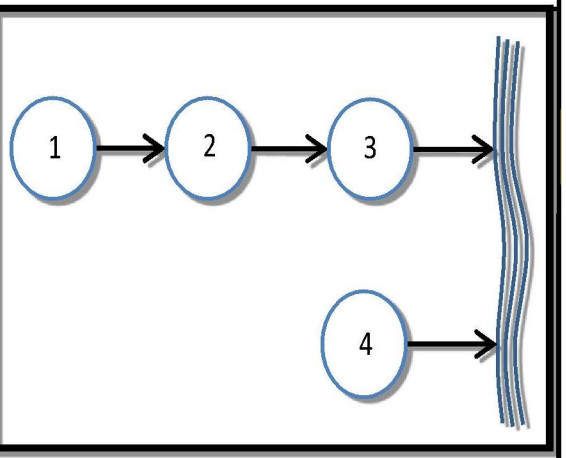
Surface Water Discharge Summary Performance of Entire Watershed

Catchment Configuration	J - Mixed-4 Catchment-3 Series-Parallel		6/17/2021
Nitrogen Pre Load (kg/yr)	110.61		BMPTRAINS MODEL
Phosphorus Pre Load (kg/yr)	10.53		
Nitrogen Post Load (kg/yr)	460.20		
Phosphorus Post Load (kg/yr)	77.48		
Target Load Reduction (N) %	81		
Target Load Reduction (P) %	81		
Target Discharge Load, N (kg/yr)	87.44		
Target Discharge Load, P (kg/yr)	14.72		
Provided Overall Efficiency, N (%):	81		
Provided Overall Efficiency, P (%):	89		
Discharged Load, N (kg/yr & lb/yr):	89.60	197.35	
Discharged Load, P (kg/yr & lb/yr):	8.37	18.44	
Load Removed, N (kg/yr & lb/yr):	370.60	816.28	
Load Removed, P (kg/yr & lb/yr):	69.11	152.23	

Treatment Objectives or Target for

TN MET

TP MET



Oldcastle Infrastructure™
A CRH COMPANY

BOLD & GOLD®

Biosorption Activated Media (BAM)



Bold & Gold® Removal Efficiencies up to:

- 75% Nitrogen
- 95% Phosphorous
- 95% TSS

**Varies based on sizing & site conditions*

Bold & Gold is a Biosorption Activated Media (BAM) used for pollution control to reduce nitrogen and phosphorus levels in stormwater. Bold and Gold creates sorbent surface bonds to establish a media nutrient cycle that actively captures and consumes nutrients, while promoting denitrification. High levels of phosphorus and nitrogen can compromise ecosystem integrity and human health. Bold & Gold Media is an ideal media for pre-treatment prior to rainwater harvesting or post treatment following detention prior to discharge into receiving waters.

Benefits:

- High Surface Area
- Biological Activity: Denitrification and Nutrient Consumption
- No Biological Toxic Effects
- Sustainable: Long Life Media Made from Recycled Material
- Economical (Lower Cost Media)
- Available in Various Blends
- Removes TN, TP, TSS and Metals
- Physical Filtration of Solids
- Sorbent Surface Bonding for Capture of Dissolved Pollutants

LEED Credit Eligible:

4.1;4.2	Materials & Resources Recycled Content
6.2	Stormwater Design / Quality Control

Suntree Technologies Inc.

ADVANCED BIOSORPTION FILTRATION

Bold & Gold Combined Stormwater Treatment Technologies



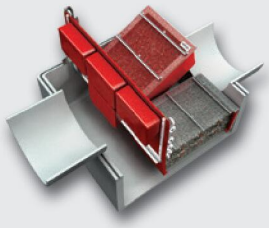
Nutrimax™

The only engineered wetland built to maximize the power of Bold & Gold Media for superior nutrient reduction. Nutrimax does not require a prefilter and averts typical clogging failures associated with other biofilters. The incorporation of Hydro-Variant Technology® allows for extensive treatment of lower flows, without compromising watershed hydrology during peak flows, affording an ideal solution for space restricted areas.



NRFS®

The NRFS uses an orifice flow control to maximize contact time with Bold & Gold media to remove nutrients and TSS prior to discharge. The optional addition of a SkimBoss MAX allows the NRFS to bolster detention time and removal potential through Hydro-Variant Technology. The NRFS is ideal for pretreatment of rainwater prior to harvesting, LID, water quality improvement or post treatment following detention.



SkimBoss® UpFlow Filter

Designed for online installation, as an option to the NSBB™, to boost nutrient and TSS removal without the associated headloss. Combining Bold & Gold media with Hydro-Variant Technology resists clogging and automatically adjusts to rising water levels during peak flows without compromising watershed hydrology.

Modeling available in BMPTRAINS
Bold & Gold Media for an unbeatable treatment train!



Use Bold & Gold in BMPs for nitrogen and phosphorus reduction credits:

- ERP (Environmental Resource Permit)
- TMDL (Total Maximum Daily Load)
- MS4 (Municipal Separate Storm Sewer System)
- BMAP (Basin Management Action Plans)
- Net Improvement

Pervious Concrete

When it Rains, it Drains.

Naturally...

Reduces Runoff

Cleans Stormwater

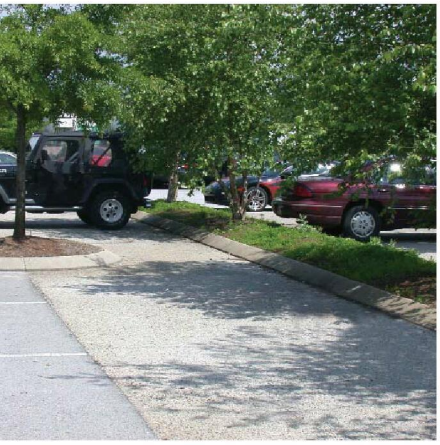
Replenishes Aquifers

Conserves Water

Protects Streams

ADA Friendly









Pervious Concrete: The Natural Choice

It's tough to balance the demand for development with the need to preserve our natural resources. However, this balance becomes easy to achieve when you construct parking lots using pervious concrete.

Pervious concrete is a mix of coarse aggregate, cement, water, and little to no sand. Also known as "no-fines" or porous concrete, this mixture creates an open-cell structure, allowing rainwater to filter through to underlying soil. By modeling natural ground cover, pervious concrete is an excellent choice for stormwater management.

Pervious Concrete: The Environmentally Sound Choice

According to the United States Environmental Protection Agency (EPA), stormwater runoff can send as much as 90% of the pollutants—such as oil and other hydrocarbon liquids found on the surface of traditional parking lots—directly into our rivers and streams. The EPA now requires state and local governments to implement measures to reduce and improve the overall quality of stormwater runoff in an effort to address this important pollution problem. Pervious concrete has been recognized by the EPA as a best management practice (BMP) to address this most vital environmental concern. The open-cell structure of pervious concrete provides a medium for aerobic bacteria that break down many of the pollutants that seep from parked cars.

Pervious concrete also contributes to enhanced air quality by lowering atmospheric heating through lighter color and lower density, decreasing the impact of heat island effects. The heat island effect occurs when tree-covered areas are replaced with dark pavement surfaces, and is characterized by up to a 12-degree average temperature increase between an urban area and its surrounding countryside. This heat island effect increases ground level ozone production by as much as 30%.

Concrete surfaces, both pervious and conventional, have a much higher albedo—a measure of reflectance—than competitive paving materials. Specifications requiring a minimum surface albedo are becoming increasingly popular. The inherently light color of concrete naturally reflects heat and light. Studies have shown as much as a 30% savings in lighting costs over other pavement types due to concrete pavement's reflectivity.

Pervious Concrete: The Smart Business Choice

Using pervious concrete pavement in your parking lot can reduce the need for large detention ponds because the pavement acts as a detention area. Lot owners will spend fewer dollars on labor, construction and maintenance of detention ponds, skimmers, pumps, drainage pipes, and other stormwater management systems. Expensive irrigation systems can also be downsized or eliminated.

A pervious concrete parking lot will help reduce demands upon sewer systems. Today, many government agencies are now implementing stormwater impact fees for all impervious areas. Pervious concrete can reduce these fees for the property owner.

Developers are using pervious concrete for parking lots to increase utilization of commercial properties. The land ordinarily devoted to costly stormwater management practices or compliance with maximum impervious area ordinances can now be developed or preserved, enhancing the bottom line.

Pervious concrete is a durable material—parking areas properly designed and constructed will last 20-40 years with little or no maintenance. Thus concrete, conventional or pervious, is widely recognized as the lowest life cycle cost option available for paving.

Benefits of Pervious Concrete

Reduces stormwater runoff

Eliminates need for detention ponds and other costly stormwater management practices

Replenishes water tables and aquifers

Allows for more efficient land development

Minimizes flash flooding and standing water

Prevents warm and polluted water from entering our streams

Mitigates surface pollutants



The best application for pervious concrete is parking lots.

When it Rains, it Drains.

Stormwater runoff occurs when rain falls. This runoff causes increased pollution in rivers and streams, flash floods, and loss of rainwater that could otherwise replenish water tables and aquifers. Pervious concrete has a 15-25% void structure and allows 3–8 gallons of water per minute to pass through each square foot—accounting for far more than is generated during most rain events. Pervious concrete puts rainwater back in the ground where it belongs.

Pervious Concrete
Frequently Asked Questions

Q: What about drainage issues in soils with high clay content?

A: Typically if a soil type has sufficient percolation to support a septic tank system it will be allowable for pervious concrete. If a soil is truly impervious, the pervious concrete system will still be useful for detention pond requirements. Soil percolation rates are most important if you must meet stormwater quality requirements. A typical parking lot design may have 5"–8" of pervious pavement on top of a 6"–12" sub-base of #57 stone (40% voids) on a geotextile fabric. In sandy areas pervious is placed directly above the sand.

Q: What about freeze-thaw issues?

A: Pervious concrete has been in place as far north as Raleigh, N.C., for over 12 years with no freeze thaw problems. Only a few installations exist in extreme wet freeze-thaw regions. There are many studies underway. Visit our Web site to find current information about this topic.

Q: What about clogging?

A: Clogging problems are mainly an issue of design. If a natural area with grass or exposed soil is allowed to drain stormwater across a pervious concrete pavement, fine material can be introduced into the system causing localized clogging. Vegetative matter can collect on the surface of the pervious concrete causing some clogging, but routine sweeping or vacuuming will restore porosity. Studies have been conducted that indicate pressure washing will restore most of the porosity of clogged pervious concrete to nearly new conditions.

Q: What other uses are there for pervious concrete?

A: Pervious concrete has been successfully used for low volume streets, driveways, sidewalks, golf cart paths, retaining walls, and French drains. Pervious concrete can be utilized in a variety of paving applications to provide hardscape without altering hydrology of the land.

For more information and contacts on pervious concrete go to:

www.pervious.info

Concrete Thinking for a sustainable world

Southeast Cement Association

www.secement.org









FLORIDA WATERWAYS INC.

Benefits of Littoral Plants

The littoral zone of a pond or lake is the shallow, transitional area between dry land and open water. With the low depth of water, as well as plenty of light and nutrients, this zone provides the ideal conditions for plants and animals to thrive. As an essential part of the aquatic ecosystem, littoral plants can even provide added benefits to pond and lake managers.

When it comes to adding pond plants, you should always remember that there is a lot more than meets the eye. Knowing what benefits to expect from littoral zone plants and how to find the right choice for your needs can often be overwhelming. To help you get started, here's a look at everything you need to know about littoral zone planting.







Blog Posts

- Nutrient Pollution and Digestive Bacteria
- Importance of Carp Containment Barriers
- Benefits of Littoral Plants
- Solutions for Aquatic Midges
- Are Grass Carp Right For My Pond?
- Pond Aeration 101

4 Benefits to Littoral Zone Planting

- **Aesthetics**

  Aquatic plants in the littoral zone are lush and healthful, providing an enhanced appearance to any pond or lake. To achieve a beautiful look, common options often

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and enhanced depth and color. Typically, plants will offer significant visual impact when planted in clusters throughout the body of water. They should be evenly spaced carefully to ensure there is no unintended spread of invasive plant species within the planting.

- **Reduced Erosion**

  Planting flora in a pond's littoral zone can also help control and prevent erosion. Plants closer to the shore typically referred to as emergent plants (those with root systems in submerged soils but which extend above the water) and shoreline plants (those with root systems along the shoreline), are often the best at providing erosion control. With their large root structures, they are able to reduce waves and stabilize the soil, effectively preventing erosion.

- **Increased Wildlife Habitat**

  Plants often provide ideal and attractive habitats for birds and other animals, often bringing the pond to life. Fish receive shade, which is the perfect spot to hide from predators. Aquatic plants are also often used as food for a variety of wildlife, including turtles, ducks, fish, insects, and wading birds. They also attract insects, which are a food source for frogs.

- **Nutrient Absorption**

  Littoral zone plants further maintain the balance of the aquatic ecosystem by enhancing water quality and absorbing excess nutrients from the environment. Waste

Learn

Pond Aeration 101

Nutrient Pollution and Digestive Bacteria

Solutions for Aquatic Midges

Are Grass Carp Right For My Pond?

Benefits of Littoral Plants

Importance of Carp Barriers

Glossary

Contact

Client Portal

ponds. Thankfully, plants can absorb these contaminants, maintaining great water quality, and preventing potential problems for wildlife or concentrations.

What Should You Plant?

Because of these benefits, littoral zone planting is common practice for Florida lakes and ponds. With a wide variety of native plants to choose from, a great place to start is by checking out our recommendations in this guide.

SHORELINE PLANTING RECOMMENDATIONS FOR PONDS AND LAKES

Pickerelweed, bulrush, duck potato, blue flags, cattails, and golden canna are all plants covered in the guide and can be beneficial to just about any water body.

Download The Guide

Keep in mind, however, that this list is far from exhaustive. *Juncus*, a genus of plant species typically referred to as rushes, are reliable and hold up well in areas where water conditions often vary. They are stylistic in appearance and offer a wide variety, as some have straight stems and others are cultivated with curly or twisting stems. And *Spartina bakeri*, also known as sand cordgrass and Baker's cordgrass, is a popular species often used in transitions from pond banks to upland landscapes.

Choosing the right species for your pond or lake is crucial to a successful and well-balanced aquatic ecosystem. At Florida Waterways, we have the foundational knowledge and skills necessary to set your pond up for success through careful planning and installation, as well

Interested in learning more? Check out these resources:

- https://edis.ifas.ufl.edu/pdffiles/EP/EP47600.pdf
- https://www.pinellascounty.org/environment/watershed/pdf/adoptapond/Lakefront_Revegetation.pdf

When you're ready to start customizing a lakefront vegetation plan, contact us to get started!

About the Author: Sheri Schwartz



Sheri Schwartz is a Marine Biologist and Marine Scientist. As a Florida native, she holds a Master of Science degree in Marine Science and Marine Biology from Nova Southeastern University, a Bachelor of Science degree in Biological Sciences from Florida State University, and she is a PADI SCUBA-certified diver, wildlife observer, and published science writer. Since completing her graduate program, she has worked in the marine and environmental sectors, including government contracts and private industry, and has developed a breadth of knowledge in the fields of biological and environmental science, water sampling, water quality testing and monitoring, benthic and pelagic habitat monitoring, and quantitative data analysis. Florida Waterways, Inc. is a State-wide environmental firm specializing in pond and lake management using solution-focused, science-based approaches. Florida Waterways has a team of environmental professionals who specialize in multiple disciplines including: aquatic biology and ecology, limnology, entomology, soils, chemistry, sampling, and landscape sciences.

Florida Waterways, Inc. | All Rights Reserved

Revised June 16, 2021 *Via: Electronic Mail*

City of Stuart Planning Department
121 SW Flagler Avenue
Stuart, FL 34994

Re: Costco Kanner PUD – Site Plan, Revisions for 2nd Commission Hearing
Drainage and Utility Statements

To Whom it May Concern:

Please find below the proposed drainage and utility statements for the above reference PUD application. This information is reflect on the preliminary engineering plans and site plan (from Lucido and Associates) that is being submitted concurrently with this letter.

DRAINAGE STATEMENT:

THE PROPOSED PROJECT WILL CONSTRUCT A MASTER STORWATER MANAGEMENT SYSTEM CONSISTING OF A SERIES OF INTERCONNECTED WET DETENTION LAKES AND DRY RETENTION PONDS. THE SYSTEM WILL BE DESIGNED TO SATISFY THE APPLICABLE CRITERIA OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), CITY OF STUART, FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), AND MARTIN COUNTY. THE PROJECT WILL PROVIDE THE REQUIRED 0.50" OF DRY PRE-TREATMENT FOR THE COMMERCIAL USE AREAS BY UTILIZING A MIX OF DRY RETENTION PONDS AND UNDERGROUND EXFILTRATION TRENCH. THE PROJECT WILL BE DESIGNED TO MEET THE ALLOWABLE DISCHARGE RATE FOR THE EXISTING DRAINAGE CONNECTIONS DOWNSTREAM TO THE KANNER HIGHWAY DRAINAGE SYSTEM. THIS INCLUDE CONSTRUCTING A DRAINAGE BYPASS SYSTEM TO PROVIDE CONVEYANCE OF OFF-SITE FLOWS THAT CURRENTLY DRAIN WEST THROUGH THE PROPERTY FROM THE SURROUNDING DRAINAGE BASIN AND WILLOUGHBY BLVD TO THE EAST. THE PROPOSED SYSTEM WILL ALSO EXPAND AN EXISTING FDOT LAKE ON-SITE THAT CURRENTLY SERVES KANNER HWY. THE EXPANDED LAKE WILL CONTINUE TO SERVE KANNER HWY IN ADDITION TO THE ON-SITE DEVELOPMENT. THE DEVELOPER SHALL FILE ALL REQUIRED PERMITS AND AGREEMENTS TO CONSTRUCT OR MODIFY THE PROPOSED INFRASTRUCTURE CURRENTLY SERVING OFF-SITE AREAS. THE PROJECT WILL REQUIRE A MODIFICATION TO EXISTING SFWMD ERP CONEPTUAL PERMIT 43-103195-P.

UTILITY STATEMENT:

WATER, SEWER, AND FIRE PROTECTION SERVICE WILL BE PROVIDED BY THE CITY OF STUART UTILITIES DEPARTMENT VIA CONNECTIONS TO EXISTING MAINS LOCATED ON THE SOUTHERN AND EASTERN PROPERTY BOUNDARIES. THE PROPOSED PROJECT WILL CONSTRUCT ON-SITE UTILITY INFRASTRUCTURE THROUGHOUT THE PUD TO SERVE THE MULTIPLE USES WITHIN THE DEVELOPMENT. ALL UTILITY DESIGN AND CONSTRUCTION WILL BE IN CONFORMANCE WITH THE LATEST STANDARDS OF THE CITY OF STUART AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECITON (FDEP). THE ON-SITE UTILITY SYSTEM FOR WATER, SEWER, AND FIRE PROTECTION

WILL BE PRIVATELY OWNED, OPERATED, AND MAINTAINED BY THE DEVELOPER OR A DESIGNATED PROPERTY OWNERS ASSOCIATION UPON PROPER LEGAL ESTABLISHMENT. THE PRIVATE ON-SITE UTILITY INFRASTURCTURE WILL CONSIST OF A GRAVITY SEWER SYSTEM, SEWER AND WATER SERVICES TO THE BUILDINGS, GREASE TRAPS (WHERE REQUIRED), A PRIVATE FIRE PROTECTION MAIN, AND THE ASSOCIATED APPURTENANCES. ALL POINTS OF SERVICE FOR WATER AND SEWER SHALL BE LOCATED WITHIN AN EXISTING RIGHT-OF-WAY OR CITY OF STUART UTILITY EASEMENT. THE ONLY PUBLIC UTILITY TO BE CONSTRUCTED ON-SITE SHALL BE A NEW CITY OF STUART WASTEWATER LIFT STATION. THE LIFT STATION WILL BE DESIGNED TO SERVE THE ENTIRE PUD AND SHALL BE CONSTRUCTED ADJACENT TO THE KANNER HIGHWAY RIGHT-OF-WAY AS SHOWN ON THE SITE PLAN. THE DEVLEOPER SHALL EXTEND AN EXISTING CITY OF STUART WATER MAIN ACROSS THE PROPERTY FRONTAGE ON KANNER HIGHWAY. THE PROPOSED GRAVITY SEWER WILL COLLECT WASTEWATER FROM THE VARIOUS USES AND CONVEY IT TO THE PROPOSED CITY OF STUART LIFT STATION. THE LIFT STATION WILL DISCHARGE TO AN EXISTING CITY OF STUART FORCE MAIN LOCATED AT THE SOUTHERN PROPERTY BOUNDARY.
A PRIVATE FIRE PROTECTION MAIN SHALL BE CONSTRUCTED THROUGH THE PUD WITH CONNECTIONS TO BUILDINGS SPRINKLER SYSTEMS, HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS (FDC'S). THE DEVELOPER SHALL FILE ALL REQUIRED PERMITS AND AGREEMENTS PRIOR TO CONSTRUCTING OR MODIFYING ANY PORTION OF UTILITY INFRASTRUCTURE ASSOCIATED WITH THE APPROVED SITE PLAN. THE DEVELOPMENT WILL RECIEVE ELECTRICAL AND COMMUNICATION SERVICE FROM LOCAL PROVIDER SYSTEMS THAT EXIST ON KANNER HIGHWAY AND WILLOUGHBY BOULEVARD. PRIOR TO CONSTRUCTION COMPLETION THE DEVELOPER SHALL PROVIDE EASEMENTS FOR ON-SITE PRIVATE ELECTRICAL AND COMMUNICATION UTILITIES WHERE REQUIRED.

We feel the above statement accurately reflects the intent of the proposed development design as presented on the PUD site plan.

Respectfully,
ENGINEERING DESIGN & CONSTRUCTION, INC.



David C. Baggett, P.E.
Professional Engineer

Cc: Doug Fitzwater – Lucido and Associates

Z:\EDC-2020\20-313 - Costco Stuart - Kanner Highway\ENGINEERING\Documents\Submittal Documents\Applications\2021-06-XX_CoS_Commission_Resubmittal\2021-06-16_Revised_Drainage_and_Utility_Statement_Letter.docx

O'ROURKE
ENGINEERING & PLANNING

TRAFFIC ANALYSIS

FOR

KANNER CPUD

Prepared for:

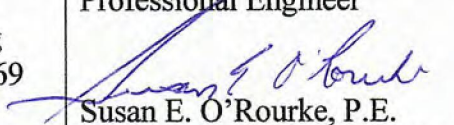
Mr. Joe Marino
M & M Retail Partners, LLC.
Lodi, NJ 07644
973-779-7466

Prepared by

O'Rourke Engineering & Planning
22 SE Seminole Street
Stuart, Florida 34994
772-781-7918

December 16, 2020
Revised March 16, 2021
Revised April 21, 2021
Revised June 25, 2021

MR18031.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 (772) 781-7918	Professional Engineer  Susan E. O'Rourke, P.E. Date signed and sealed: 6/25/2021 License #: 42684

O'ROURKE
ENGINEERING & PLANNING

December 16, 2020

Mr. Joe Marino
M & M Retail Partners, LLC.
Lodi, NJ 07644

Re: Kanner CPUD

Dear Mr. Marino:

O'Rourke Engineering & Planning has completed the traffic analysis for the proposed development including 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 378 units of Multifamily Housing (Mid-Rise) to be located east of Kanner Highway and approximately 2,000 feet north of Indian Street in Stuart, FL. The steps in the analysis and the ensuing results are presented herein.

It has been a pleasure working with you. If you have any questions or comments, please give me a call.

Respectfully submitted,
O'ROURKE ENGINEERING & PLANNING

Susan E. O'Rourke, P.E.
Registered Civil Engineer - Traffic

Traffic Analysis Report – M&M Retail – 6.25.21

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APPENDICES

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APPENDIX B: Non-Motorized Features
APPENDIX C: Internal Capture
APPENDIX D: Martin County 2019 Roadway Level of Service Inventory Report
APPENDIX E: Driveway Data and Analyses

INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for the proposed development including 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 378 units of Multifamily Housing (Mid-Rise) to be located east of Kanner Highway and approximately 2,000 feet north on Indian Street in Stuart, Florida. The purpose of this analysis is to determine the impact of the development on the roadway.

PROJECT DESCRIPTION

The approximately 48.97-acre parcel is proposed to be developed with 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 378 units of Multifamily Housing (Mid-Rise). **Figure 1** shows the project location. The project site plan is included in **Appendix A.**

EXISTING CONDITIONS

The study area is defined as the roadways upon which the project has an impact of 5% of the level of service capacity of the roadway. Once the project traffic was assigned, the study area was refined based on the impact percentages.

The study area roadways were defined in terms of existing lane geometrics and existing traffic volumes. The non-motorized transportation components are included in **Appendix B.**

Existing Lane Geometrics

The study area was reviewed to determine the existing number and type of lanes and the traffic control along the roadway. Each roadway is described below.

Kanner Highway is a six-lane divided arterial with a north/south alignment.

Willoughby Boulevard is a four-lane divided arterial with a north/south alignment.

Indian Street is a four-lane divided collector with an east/west alignment.

Monterey Road is a four-lane divided arterial with an east/west alignment.

PROJECT TRAFFIC

To estimate traffic generated by the land uses defined in the scope of this project, the ITE Trip Generation, 10th Edition trip rates for land use codes 221-Multifamily Housing (Mid-Rise), 820-Retail Shopping Center, 932-High-Turnover (Sit-Down) Restaurant, 934 Fast Food (w/ Drive-Thru), and 857-Discount Club were applied. These calculations provide an estimate of the typical generation for the proposed use. Trip generation for the project in the Daily, AM and PM Peak Hours is shown in **Table 1.** The details of the internal capture and pass-by are included in **Appendix C.**

As shown, the project will generate 7,325 daily trips, 336 in the AM peak hour, and 664 in the PM peak hour.

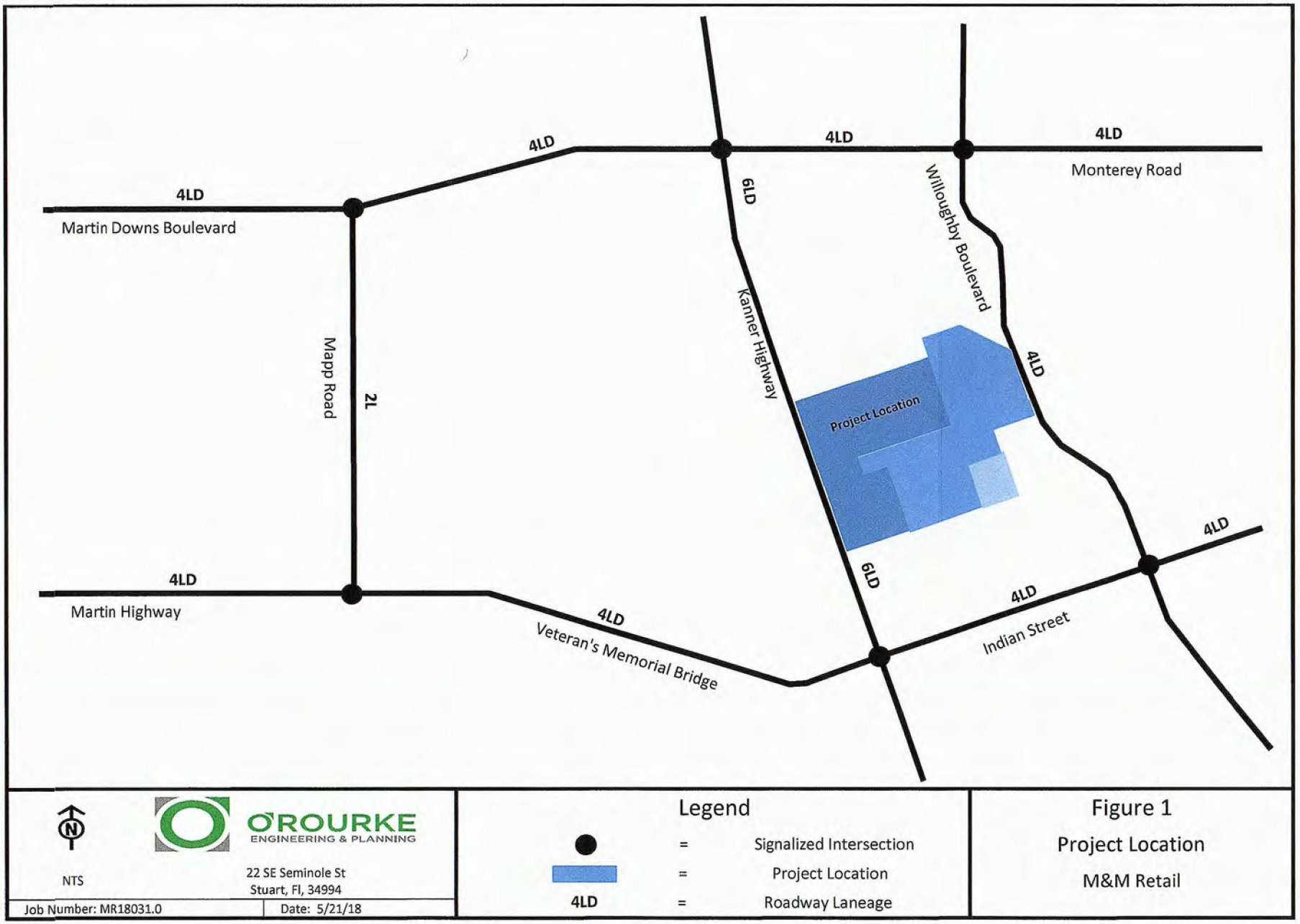


Figure 1 & 2 - location and assignment (1)

Table 1 - Trip Generation

Table 1a: Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	378	DU	T = 5.45(X) - 1.75	50%	50%	1,029	1,029	2,058	72	216	288	14.0%	957	813	1,770	-	-	-	0.0%	957	813	1,770
Shopping Center	820	16,750	Sft	Ln(T) = 0.68Ln(X) + 5.57	50%	50%	892	892	1,784	47	120	167	9.4%	845	772	1,617	388	388	776	48.0%	457	384	841
Discount Club	857	157,531	Sft	T = 41.80(X)	50%	50%	3,293	3,292	6,585	173	445	618	9.4%	3,120	2,847	5,967	1,164	1,163	2,327	39.0%	1,956	1,684	3,640
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 470.95(X)	50%	50%	589	588	1,177	294	102	396	33.6%	295	486	781	192	191	383	49.0%	103	295	398
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 112.18(X)	50%	50%	911	911	1,822	456	159	615	33.8%	455	752	1,207	266	265	531	44.0%	189	487	676
Retail Sub Total							**5,685**	**5,683**	**11,368**	**970**	**826**	**1,796**	**15.8%**	**4,715**	**4,857**	**9,572**	**2,010**	**2,007**	**4,017**	**42.0%**	**2,705**	**2,850**	**5,555**
TOTALS		**193,021**					**6,714**	**6,712**	**13,426**	**1,042**	**1,042**	**2,084**	**15.5%**	**5,672**	**5,670**	**11,342**	**2,010**	**2,007**	**4,017**	**35.4%**	**3,662**	**3,663**	**7,325**

Source: ITE 10th Edition Trip Generation Rates
Total 162,020 w/ OutdoorVestibule 4,489

Table 1b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	378	DU	Ln(T) = 0.98Ln(X) - 0.98	26%	74%	33	93	126	3	20	23	18.3%	30	73	103	-	-	-	0.0%	30	73	103
Shopping Center	820	16,750	Sft	T = 0.50(X) + 151.78	62%	38%	99	61	160	9	8	17	10.6%	90	53	143	35	34	69	48.0%	55	19	74
Discount Club	857	157,531	Sft	T = 0.49(X)	70%	30%	54	23	77	4	4	8	10.4%	50	19	69	14	13	27	39.0%	36	6	42
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 40.19(X)	51%	49%	51	49	100	11	5	16	16.0%	40	44	84	21	20	41	49.0%	19	24	43
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 9.94(X)	55%	45%	89	72	161	19	9	28	17.4%	70	63	133	30	29	59	44.0%	40	34	74
Retail Sub Total							**293**	**205**	**498**	**43**	**26**	**69**	**13.9%**	**250**	**179**	**429**	**100**	**96**	**196**	**45.7%**	**150**	**83**	**233**
TOTALS		**193,021**					**326**	**298**	**624**	**46**	**46**	**92**	**14.7%**	**280**	**252**	**532**	**100**	**96**	**196**	**36.8%**	**180**	**156**	**336**

Source: ITE 10th Edition Trip Generation Rates

Table 1c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips (1)				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	378	DU	Ln(T)=0.96Ln(X)-0.63	61%	39%	97	62	159	25	18	43	27.0%	72	44	116	-	-	-	0.0%	72	44	116
Shopping Center	820	16,750	Sft	Ln(T) = 0.74Ln(X) + 2.89	48%	52%	70	75	145	4	7	11	7.6%	66	68	134	32	33	65	48.0%	34	35	69
Discount Club	857	157,531	Sft	T = 4.18(X)	50%	50%	329	329	658	18	29	47	7.1%	311	300	611	119	119	238	39.0%	192	181	373
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 32.67(X)	52%	48%	43	39	82	9	7	16	19.5%	34	32	66	16	16	32	49.0%	18	16	34
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 9.77(X)	62%	38%	99	60	159	18	13	31	19.5%	81	47	128	28	28	56	44.0%	53	19	72
Retail Sub Total							**541**	**503**	**1,044**	**49**	**56**	**105**	**10.1%**	**492**	**447**	**939**	**195**	**196**	**391**	**41.6%**	**297**	**251**	**548**
TOTALS		**193,021**					**638**	**565**	**1,203**	**74**	**74**	**148**	**12.3%**	**564**	**491**	**1,055**	**195**	**196**	**391**	**37.1%**	**369**	**295**	**664**

Source: ITE 10th Edition Trip Generation Rates

PROJECT DISTRIBUTION/ ASSIGNMENT/ IMPACT

The project traffic was distributed by general geographic direction and then assigned to the roadway network. Two different traffic assignments were made for the retail use and the residential use.

Distribution/Assignment – The distributions led to an assignment of trips based on the anticipated ultimate destinations and the roadway paths used to reach those destinations. **Figure 2a and 2b** shows the project assignment for both retail and residential land uses.

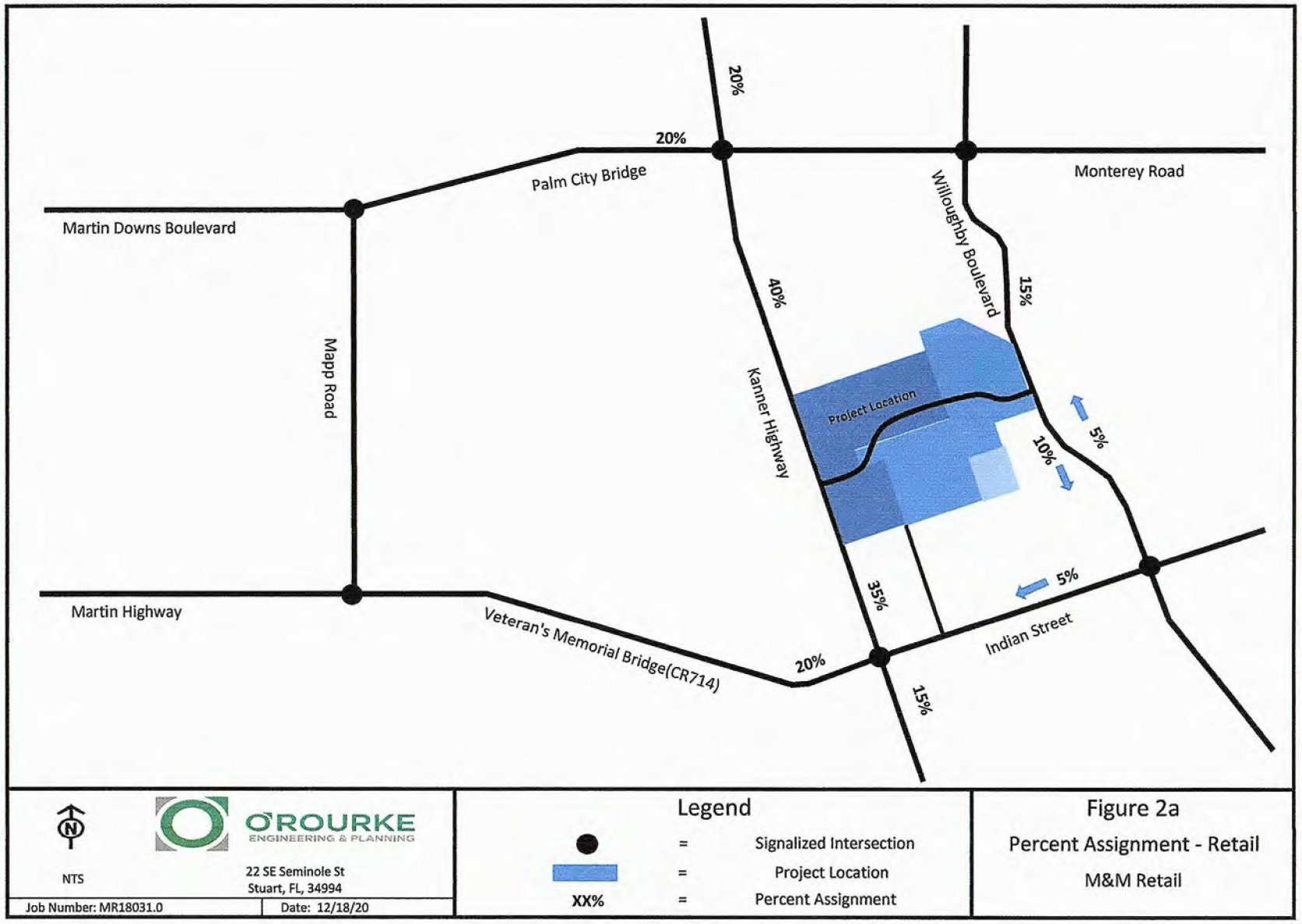
Table 2 summarizes the resultant AM and PM peak hour trips assigned to the network and the project % of capacity.

Impact – As seen in Table 2, there are no links with a 5% or greater impact. Therefore, the directly accessed links on Kanner Highway and Willoughby Boulevard were analyzed.

FUTURE TRAFFIC

Since the project traffic is not significant, the adjacent links were analyzed for future traffic volumes. **Table 3** shows that the total traffic on the adjacent links of Kanner Highway and Willoughby Boulevard will operate at acceptable levels of service at project buildout of 2024. To estimate future 2024 volumes on Kanner Highway and Willoughby Boulevard, the existing (2019) traffic volumes were increased by a growth rate found in the Martin County 2019 Roadway Level of Service Inventory Report. The growth rate was then applied for three years to estimate the 2024 peak hour directional volumes. The project traffic was then added to estimate the 2024 Total Traffic volumes with project traffic added. The total traffic volumes were then compared to the acceptable threshold.

The Martin County 2019 Roadway Level of Service Inventory Report is included in the **Appendix D**.


20%
20%
Palm City Bridge
Monterey Road
Willoughby Boulevard
15%
Martin Downs Boulevard
40%
Mapp Road
Kanner Highway
Project Location
10%
5%
5%
35%
Martin Highway
Veteran's Memorial Bridge(CR714)
20%
Indian Street
15%
NTS
O'ROURKE
ENGINEERING & PLANNING
22 SE Seminole St
Stuart, FL, 34994
Job Number: MR18031.0
Date: 12/18/20
Legend
= Signalized Intersection
= Project Location
XX% = Percent Assignment
Figure 2a
Percent Assignment - Retail
M&M Retail

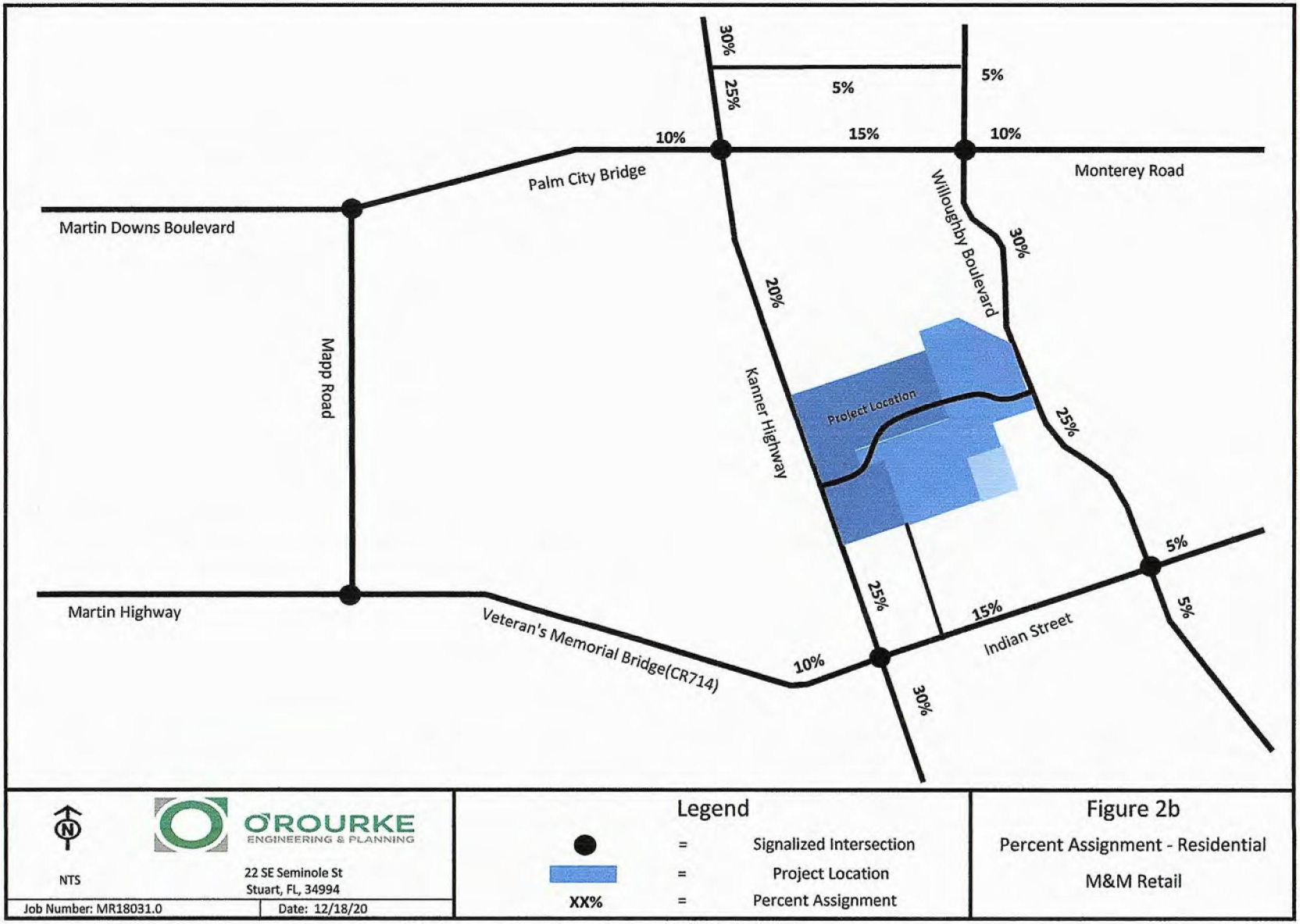

30%
25%
5%
5%
10%
15%
10%
Palm City Bridge
Monterey Road
Martin Downs Boulevard
Willoughby Boulevard
30%
20%
Mapp Road
Kanner Highway
Project Location
25%
5%
25%
15%
5%
Martin Highway
Veteran's Memorial Bridge(CR714)
10%
Indian Street
30%
NTS
O'ROURKE
ENGINEERING & PLANNING
22 SE Seminole St
Stuart, FL, 34994
Job Number: MR18031.0
Date: 12/18/20
Legend
= Signalized Intersection
= Project Location
XX% = Percent Assignment
Figure 2b
Percent Assignment - Residential
M&M Retail

Table 2a: Percent Impact - AM Peak Hour

								Retail		Residential			
Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Project Percent Assignment	Directional Peak Project Volume	Project Percent Assignment	Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity
Kanner Highway (SR-76)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	15%	23	30%	9	32	1.06%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	15%	12	30%	22	34	1.13%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	35%	53	25%	8	61	2.02%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	35%	29	25%	18	47	1.56%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	40%	33	20%	15	48	1.59%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	40%	60	20%	6	66	2.19%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	20%	17	30%	22	39	1.29%
	SR-714	SR-5	SB	IN	6LD	no	3,020	20%	30	30%	9	39	1.29%
Willoughby Blvd	Salerno Rd	Pomeroy St	NB	IN	2L	no	880	5%	8	5%	2	10	1.14%
	Salerno Rd	Pomeroy St	SB	OUT	2L	no	880	5%	4	5%	4	8	0.91%
	Pomeroy St	Indian St	NB	IN	4LD	no	2,000	5%	8	5%	2	10	0.50%
	Pomeroy St	Indian St	SB	OUT	4LD	no	2,000	5%	4	5%	4	8	0.40%
	Indian St	Project Entrance	NB	IN	4LD	no	2,000	5%	8	25%	8	16	0.80%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	10%	8	25%	18	26	1.30%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	15%	12	30%	22	34	1.70%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	15%	23	30%	9	32	1.60%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	10%	7	7	0.35%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	0%	0	10%	3	3	0.15%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	11	11	0.55%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	5%	8	15%	5	13	0.65%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	20%	30	10%	3	33	1.65%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	20%	17	10%	7	24	1.20%

Source: Martin County 2019 Roadway Level of Service Inventory Report

	IN	OUT
Retail	150	83
Residential	30	73

Table 2b Percent Impact - PM Peak Hour

								Retail		Residential			
Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Project Percent Assignment	Directional Peak Project Volume	Project Percent Assignment	Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity
Kanner Highway (SR-76)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	15%	45	30%	22	67	2.22%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	15%	38	30%	13	51	1.69%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	35%	104	25%	18	122	4.04%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	35%	88	25%	11	99	3.28%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	40%	100	20%	9	109	3.61%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	40%	119	20%	14	133	4.40%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	20%	50	30%	13	63	2.09%
	SR-714	SR-5	SB	IN	6LD	no	3,020	20%	59	30%	22	81	2.68%
Willoughby Blvd	Salerno Rd	Pomeroy St	NB	IN	2L	no	880	5%	8	5%	4	12	1.36%
	Salerno Rd	Pomeroy St	SB	OUT	2L	no	880	5%	13	5%	2	15	1.70%
	Pomeroy St	Indian St	NB	IN	4LD	no	2,000	5%	8	5%	4	12	0.60%
	Pomeroy St	Indian St	SB	OUT	4LD	no	2,000	5%	4	5%	2	6	0.30%
	Indian St	Project Entrance	NB	IN	4LD	no	2,000	5%	8	25%	18	26	1.30%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	10%	8	25%	11	19	0.95%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	15%	12	30%	13	25	1.25%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	15%	23	30%	22	45	2.25%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	7	7	0.35%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	0%	0	15%	11	11	0.55%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	7	7	0.35%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	5%	15	15%	11	26	1.30%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	20%	59	10%	7	66	3.30%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	20%	50	10%	4	54	2.70%

Source: Martin County 2019 Roadway Level of Service Inventory Report

	IN	OUT
Retail	297	251
Residential	72	44

Table 3a: Link Analysis - AM Peak Hour

													Retail		Residential					
Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2019 AADT	D Factor (1)	2019 Volume Peak Hour Peak Direction	Growth Rate	2024 Volume Peak Hour Directional	LOS D Directional Peak Hour	Project Percent Assignment	Directional Peak Project Volume	Project Percent Assignment	Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	Indian St	Project Entrance	NB	IN	6LD	no	21,116	0.376	598	1.005	613	3020	35%	53	25%	8	61	2.02%	674	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	21,116	0.624	993	1.005	1018	3020	35%	29	25%	18	47	1.56%	1065	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	21,116	0.376	598	1.005	613	3020	40%	33	20%	15	48	1.59%	661	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	21,116	0.624	993	1.005	1018	3020	40%	60	20%	6	66	2.19%	1084	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	11,100	0.376	401	1.037	481	2000	5%	8	25%	8	16	0.80%	497	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	11,100	0.624	666	1.037	799	2000	10%	12	25%	18	30	1.30%	829	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	11,100	0.376	401	1.037	481	2000	15%	12	30%	22	34	1.70%	515	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	11,100	0.624	666	1.037	799	2000	15%	23	30%	9	32	1.60%	831	Yes

Source: Martin County 2019 Roadway Level of Service Inventory Report

(1) FDOT Florida Traffic Online

	IN	OUT
Retail	150	83
Residential	30	73

Years Grown: 5

Table 3b: Link Analysis - PM Peak Hour

													Retail		Residential					
Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2019 AADT	D Factor (1)	2019 Volume Peak Hour Peak Direction	Growth Rate	2024 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour	Project Percent Assignment	Directional Peak Project Volume	Project Percent Assignment	Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	Indian St	Project Entrance	NB	IN	6LD	no	21,116	0.624	993	1.005	1018	3020	35%	104	25%	18	122	4.04%	1140	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	21,116	0.376	598	1.005	613	3020	35%	88	25%	11	99	3.28%	712	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	21,116	0.624	993	1.005	1018	3020	40%	100	20%	9	109	3.61%	1127	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	21,116	0.376	598	1.005	613	3020	40%	119	20%	14	133	4.40%	746	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	11,100	0.624	666	1.037	799	2000	5%	8	25%	18	26	1.30%	825	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	11,100	0.376	401	1.037	481	2000	10%	8	25%	11	19	0.95%	500	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	11,100	0.624	666	1.037	799	2000	15%	12	30%	13	25	1.25%	824	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	11,100	0.376	401	1.037	481	2000	15%	23	30%	22	45	2.25%	526	Yes

Source: Martin County 2019 Roadway Level of Service Inventory Report

(1) FDOT Florida Traffic Online

	IN	OUT
Retail	297	251
Residential	72	44

Years Grown: 5

INTERSECTIONS / DRIVEWAYS

The intersection analysis was limited to the intersections of the driveways with Kanner and the driveway with Willoughby. Since the project is not significant on any link, additional intersection analysis was not required.

The project has proposed four driveways.

- Driveway 1 will be a full access signalized intersection to Kanner Highway with two westbound left-turn lanes leaving the project.
- Driveway 2 will have access to Kanner Highway and will be a directional median with a left-in, right-in, right-out only.
- Driveway 3 will have full access onto Willoughby Boulevard.
- Driveway 4 will be a right-in/right-out driveway on Kanner Highway.

The project will also have a cross-access to Indian Street and other driveways on Kanner Highway. For purposes of this study, we have shown traffic at project driveways 1, 2, 3, and 4 and at the cross-access driveway on Indian Street.

Figures 3a and 3b show the driveway percent assignments for the retail and residential portions, respectively. **Figure 3c** illustrates the total of the retail and residential project volumes in the AM and PM peak hour. The proposed driveway lanes are summarized below:

Driveway 1/ Kanner Highway (Full Access)

Northbound
- 1 – U-turn lane
- 3 - through lanes
- 1 – right turn lane

Southbound
- 1 – left turn lane
- 2 – through lanes
- 1 – through/right lane

Eastbound
- 1 – left turn lane
- 1 – one through/right lane

Westbound
- 1 – right turn lane
- 1 – left turn lane
- 1 – through/left turn lane*

*could be two left turn lanes, and a through/right turn lane

Driveway 3/ Willoughby Boulevard (Full Access)

Northbound
- 1 – left turn lane
- 2 – through lanes

Southbound
- 1 – U-turn lane
- 2 – through lanes
- 1 – right turn lane

Eastbound
- 1 – left turn lane
- 1 – right turn lane

Westbound
- Future Sailfish Access

Driveway 2/ Kanner Highway (Directional Access)

Northbound
- 1 – U-turn lane
- 3 – through lanes
- 1 – right turn lane

Southbound
- 1 – left turn lane
- 3 – through lanes

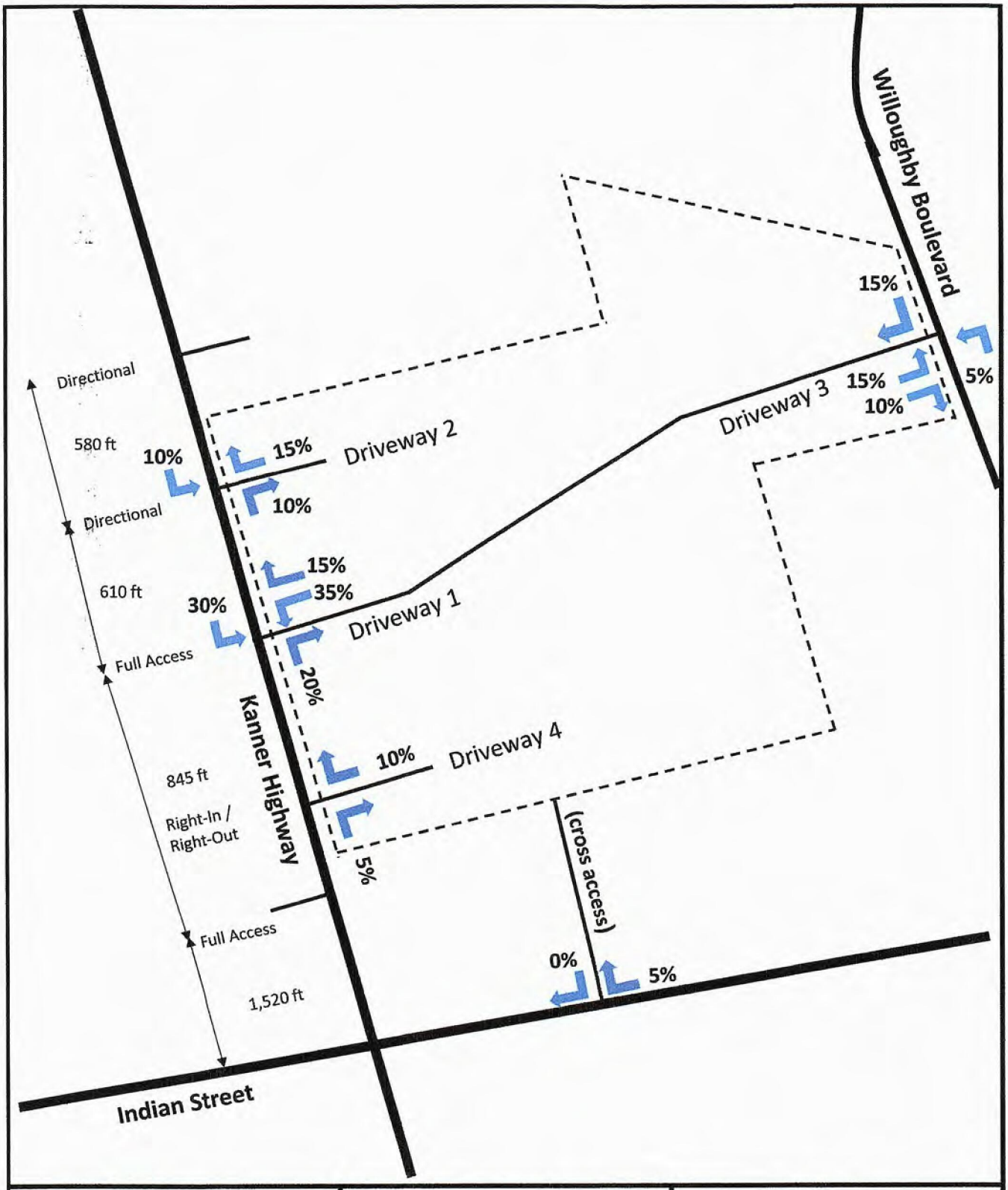
Westbound
- 1 – right turn

Driveway 4/ Kanner Highway (Right-in/Right out)

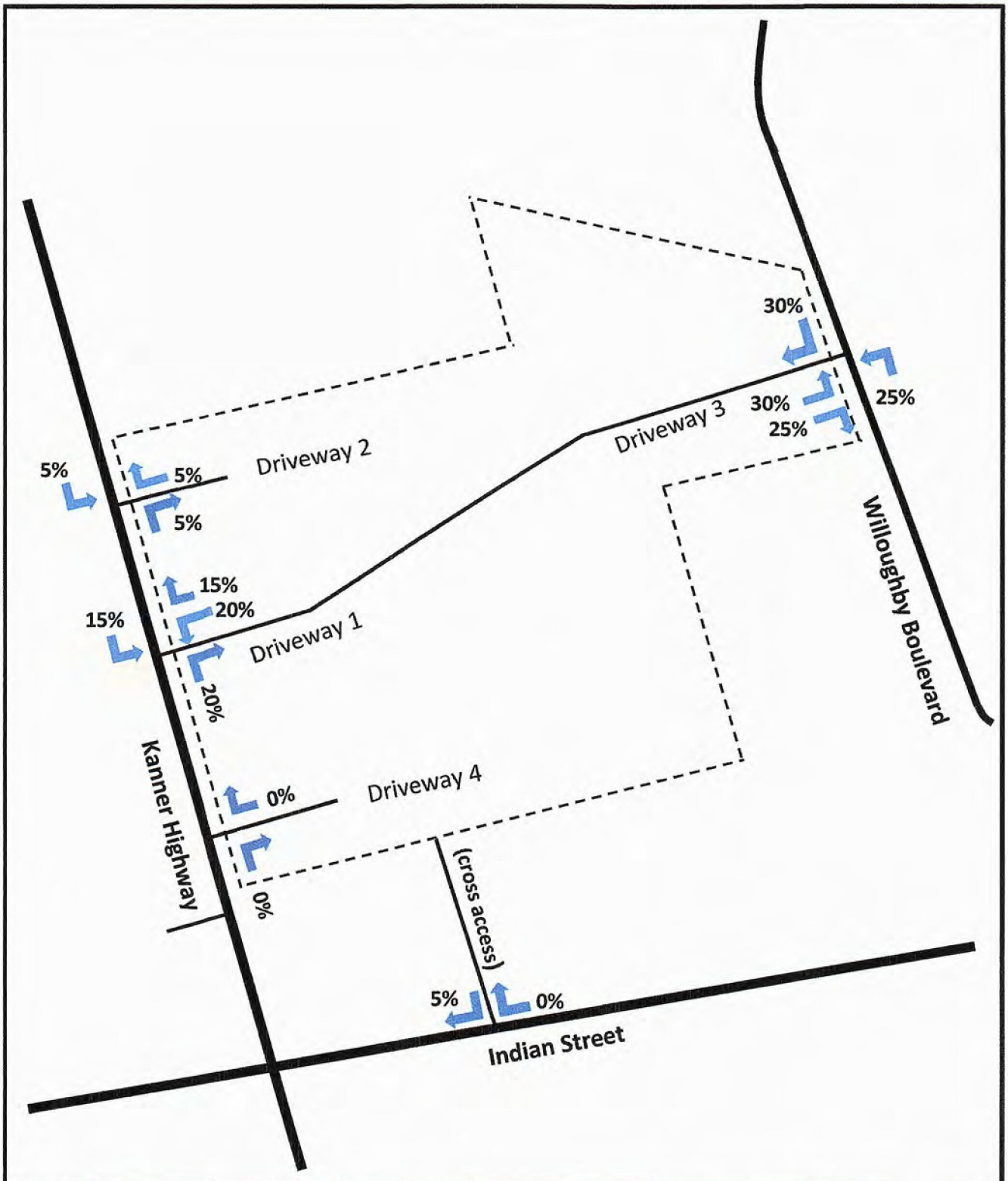
Northbound
- 3 – through lanes
- 1 – right turn lane

Southbound
- 3 – through lanes

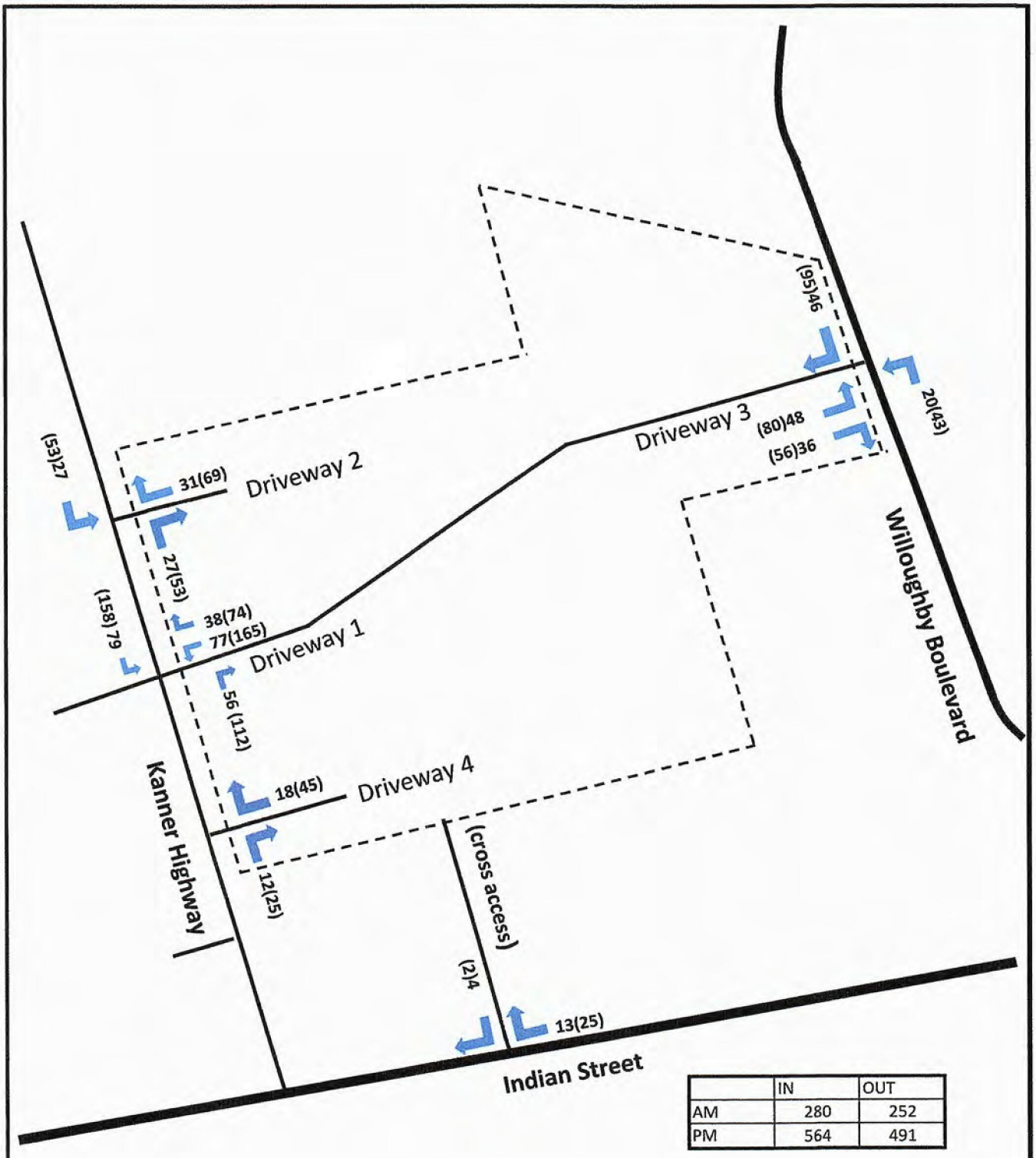
Westbound
- 1 – right turn lane



O'ROURKE ENGINEERING & PLANNING NTS 22 SE Seminole St Stuart, Fl, 34994 Job #: MR18031.0 | 6.25.21	Legend = Project Location = Direction 15% = Percent Project Traffic xx ft. = Driveway Spacing	Figure 3a Driveway Assignment - Retail M & M Retail



N O'ROURKE ENGINEERING & PLANNING NTS 22 SE Seminole St Stuart, Fl, 34994 Job #: MR18031.0 Date: 3/12/21	Legend = Project Location = Direction 15% = Percent Project Traffic	Figure 3b Driveway Assignment - Residential M & M Retail



	IN	OUT
AM	280	252
PM	564	491

O'ROURKE ENGINEERING & PLANNING

NTS

22 SE Seminole St
Stuart, Fl, 34994

Job #: MR18031.0 | 6.26.21

Legend

XX(XX) = AM(PM)
= Project Location
= Direction
15% = Percent Project Traffic

Figure 3c

Total Driveway Volumes

M & M Retail

As shown, ingress turn lanes are proposed for driveways 1, 2, and 3.

A turn lane analysis was conducted for driveway 4 using the FDOT Access Management Guidebook November 2019. For roadways with a posted speed limit of 45 MPH or less, the lower threshold of 80 right-turn vehicles per hour would be most used for higher volume (greater than 600 vehicles per hour, per lane in one direction on the major roadway) or two-lane roads where lateral movement is restricted. The 125 right-turn vehicles per hour upper threshold would be most appropriate on lower volume roadways, multilane highways, or driveways with a large entry radius (50 feet or greater).

Table 4: Right Turn Lane Analysis - Driveway 4

Major Road Speed Limit (MPH)	Number of Lanes (Directional)	Thru Volume (Veh/hr)	Thru Volume (Veh/hr/ln)	Right Turn Volume	Threshold Volume	Right Turn Warranted?
45	3	~~1263~~ 1018 (1266)	~~422~~ 339	25	125	No

Roadway Posted Speed Limit	Number of Right Turns Per Hour(1)
45 MPH or Less	80-125
Over 45 MPH	35-55

(1) FDOT Access Management Guidebook November 2019, Table 27

As shown, an ingress right-turn lane is not warranted at driveway 4. However, a right-turn lane is proposed.

The three driveways on Kanner Highway and the driveway on Willoughby Boulevard were analyzed using HCS.

Existing through volumes on Kanner Highway were obtained from the 2019 FDOT 24-hour count on Kanner Highway and the peak hour volumes were calculated and grown to 2024 using the growth rate contained in the Martin County 2019 Roadway Level of Service Inventory Report. Project traffic was then added to obtain the total traffic at the driveways.

The existing peak hour peak direction volume for Willoughby Boulevard was taken from the Martin County 2019 Roadway Level of Service Inventory Report, the FDOT D Factor was then used to convert the existing peak hour peak direction volume into the peak hour off-peak direction volume. These volumes were then grown to 2024 using the growth rate contained in the Martin County 2019 Roadway Level of Service Inventory Report and project traffic was then added.

Table 5 summarizes the results of the driveway analysis. As shown, all driveways will operate at acceptable levels of service at project buildout. **Table 6** summarizes the turn lane lengths and the projected queue for each turn lane.

Table 5: Driveway Results Summary

Intersection	AM Peak Hour			PM Peak Hour		
	Delay	V/C	LOS	Delay	V/C	LOS
Driveway 1 & Kanner Hwy	22.0	0.32	C	34.4	0.34	C
Driveway 2 & Kanner Hwy	9.6	0.04	A	9.9	0.09	A
Driveway 3 & Willoughby Blvd	16.7	0.05	C	15.5	0.08	C
Driveway 4 & Kanner Hwy	13.9	0.04	B	15.7	0.12	C

Table 6: Turn Lane Queue Analysis

Turn Lane Direction	Turn Lane Length (3)	Queue Length
Driveway 1		
NBR	350	71.2
NBL	400	25 (1)
SBL	335	97.7
Driveway 2		
NBR	270	0
NBL	315	25 (1)
SBL	270	25 (1)
Driveway 3		
NBL	265	25 (1)
SBR	240	0
Driveway 4		
NBR	195	25 (1)

(1) Less than 1 vehicle queue, 25' used instead
(2) Based on higher of AM or PM queue
(3) Includes 50 foot taper

The driveway HCS, the retail and residential driveway volumes, and existing FDOT data are included in **Appendix E.**

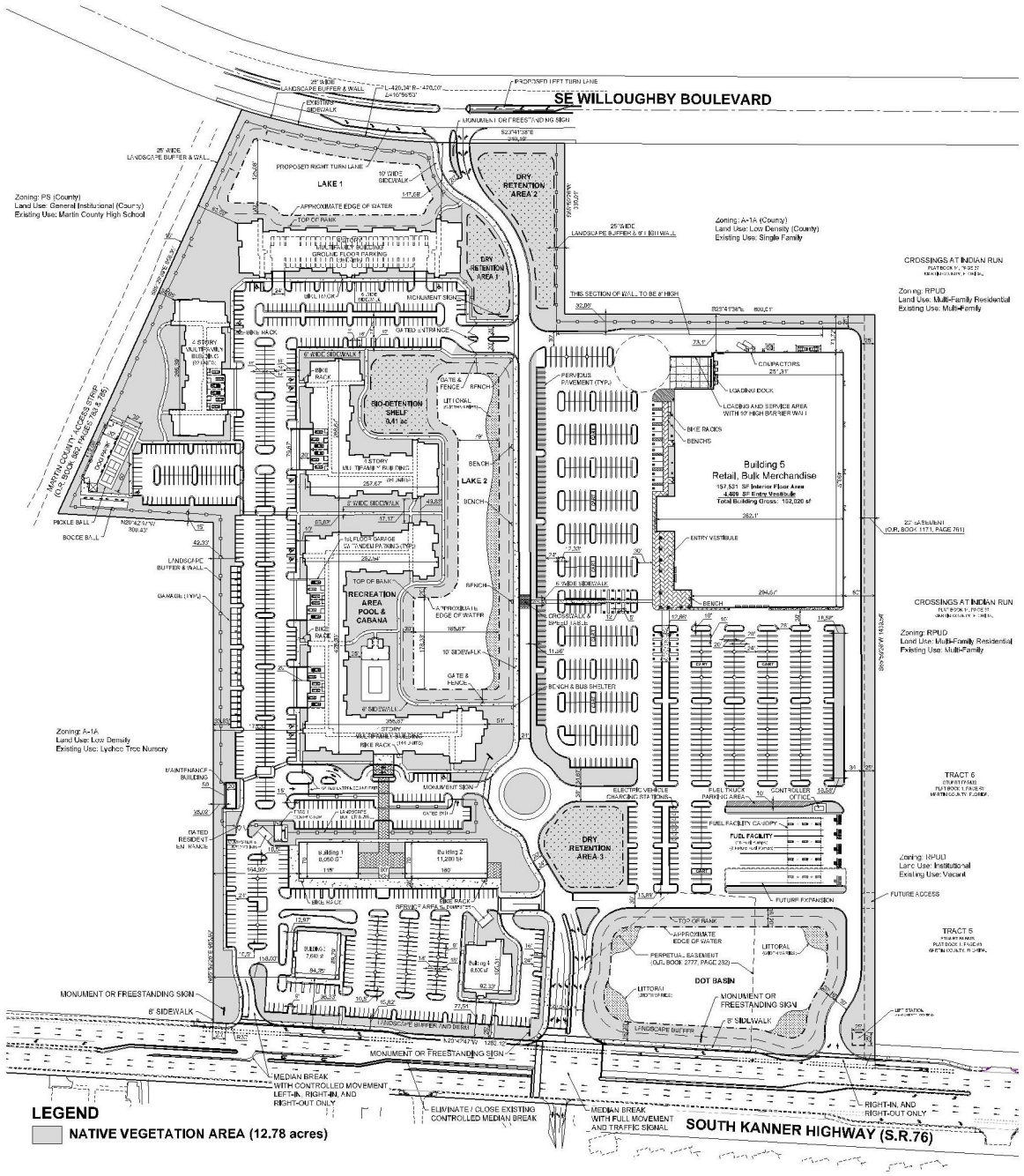
A pre-app meeting was held with FDOT to discuss the driveways. The results of the pre-app will be included in Appendix E when the FDOT finalizes their review. A signal warrant analysis will be required when the applicant applies for a construction permit. Based on the projected volumes at the full-access driveway, it is anticipated that a signal will be warranted. The full warrant analysis was provided to the FDOT under separate cover.

CONCURRENCY REVIEW/ CONCLUSION

The 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 398 units of apartment will have a traffic impact of 7,410 Daily trips, 341 AM peak hour trips and 668 PM peak hour trips. With the projects proposed signalization, turn lanes, and inclusion of Costco Boulevard, these project trips will be mitigated.

APPENDIX A

SITE PLAN



080802021 CCM

Site Data

Total Site Area:	2,133,967 sf	(48.99 ac)	100%
Future Land Use Designation (Proposed):	Neighborhood Special District		
Proposed Zoning:	CPUD		
Building Height (max):	45'		
Total Building Area:	361,572 sf	(8.30 ac)	16.9%

Pervious / Impervious Calculations

Impervious Area:	1,512,215 sf	(34.72 ac)	70.9%
Buildings:	361,572 sf	(8.30 ac)	16.9%
Pavement & Curb:	857,054 sf	(19.68 ac)	40.2%
Sidewalks, Patios & Pool:	105,909 sf	(2.42 ac)	5.0%
Lakes:	109,465 sf	(2.51 ac)	5.1%
DOT Basin:	78,815 sf	(1.81 ac)	3.7%
Pervious Area:	621,772 sf	(14.27 ac)	29.1%
Landscape:	518,757 sf	(12.59 ac)	26.7%
Dry Retention Areas:	55,155 sf	(1.27 ac)	2.6%
Bio Detention Area:	17,860 sf	(0.41 ac)	0.8%
Open Space			
Required: (25% of 48.99 ac)		(12.25 ac)	25.0%
Provided*:		(12.78 ac)	26.1%
* Includes Landscape with Native Vegetation Areas, Dry Retention Areas & Bio Detention Area. Excludes Parking Area Interior Landscape Areas.			
Interior Landscape Areas:		(1.49 ac)	3.0%

Parking Requirements

Parking Required (per Kanner CPUD):

Retail, bulk merchandise (1 space / 250 sf):	155,986 sf / 250 sf = 624 Spaces
Fuel Facility (1 space / 250 sf + 2 / bay + 1/vacuum):	20 Spaces
Retail (1 space / 250 sf):	19,250 sf / 250 sf = 77 Spaces
Building 3 (1 space per 100 sf + 1 per each employee): 7,640 sf / 100 = 77 spaces + 13 employees	90 Spaces
Building 4 (1 space per 3 Seats + 1 per each employee): @ 300 seats + 18 employees:	118 Spaces
Multi-Family	692 Spaces
One Bedroom Units (126) @ 1.5 per unit: 192 Spaces	
Two Bedroom Units (240) @ 2.0 per unit: 480 Spaces	
Three Bedroom Units (10) @ 2.0 per unit: 20 Spaces	
Total Parking Required:	**1,621 Spaces**

Parking Provided:

Retail, bulk merchandise (per Kanner CPUD):	720 Spaces
Standard:	692 Spaces
Handicap:	28 Spaces
Fuel Facility:	20 Spaces
Retail:	77 Spaces
Standard:	73 Spaces
Handicap:	4 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Multi-Family (per Kanner CPUD 1.71 spaces / unit):	647 Spaces
Standard:	630 Spaces
Handicap:	17 Spaces
Total Parking Provided:	**1,672 Spaces**

Bicycle Parking

Retail, Bulk Merchandise		**Buildings 3 & 4**	
Required:	20 Spaces	Required:	8 Spaces
Provided:	20 Spaces	Provided:	8 Spaces
Buildings 1 & 2		**Multifamily**	
Required:	6 Spaces	Required:	20 Spaces
Provided:	6 Spaces	Provided:	20 Spaces

Neighborhood Special District

Residential Density		
Maximum UPA (Non-CRA):		15.0
Provided UPA:	7.7 UPA (378 units / 48.99 ac)	
Site Area	48.99 ac	
Residential		
Provided Area:	14.70 ac	30.0%
Non-Residential		
Provided Area:	34.29 ac	70.0%
Commercial Areas:	22.80 ac	46.5%
Stormwater Tracts:	8.95 ac	18.3%
Right of Way:	2.51 ac	5.1%
Non-Residential Floor Area Ratio		
Maximum Allowable Area:	4,267,974 sf	2.0 FAR
Provided Area:	193,146 sf	0.09 FAR

Building Data

Building Coverage:	361,572 sf
Retail, Bulk Merchandise:	157,531 sf
Fuel Facility Office:	125 sf
Retail:	19,250 sf
Restaurant:	16,240 sf
Multi-Family (includes Garages, Cabana & Maintenance):	168,426 sf

Native Vegetation Requirement

Total Site Area:	**48.99 acres**
Wetlands:	6.50 acres
Surface Waters:	4.10 acres
Upland Area:	38.39 acres
Required Native Vegetation Area (25.0%):	9.60 acres
Provided Native Vegetation Area (33.3%):	12.78 acres

Land Use Site Data

Total Site Area:	48.99 ac	
Right of Way:	2.51 ac	5.1%
Residential	14.70 ac	30.0%
Commercial	22.80 ac	46.5%
Retail, Bulk Merchandise:	17.24 ac	
Kanner Highway Parcel:	5.59 ac	
Stormwater Tracts:	8.95 ac	18.3%
Lake 1:	1.77 ac	
Lake 2:	2.85 ac	
Dry Retention Area 1:	0.32 ac	
Dry Retention Area 2:	0.78 ac	
Dry Retention Area 3:	0.48 ac	
DOT Basin:	2.75 ac	

Density & Floor Area Ratio

Residential		
Residential Units:		378
Dens by Overall Site:	7.7 UPA (378 units / 48.99 ac)	
Commercial		
Project Site Area:	2,133,967 sf	
Total Commercial Building Area:	193,146 sf	
Floor Area Ratio:	0.09 FAR	

General Notes:

- All building, parking and access areas shall document compliance with the requirements of the American Disabilities Act prior to the issuance of a building permit.
- Refer to Landscape Plan for landscape details and specifications.
- All exotic plant species shall be removed and all required landscaping shall be installed prior to the issuance of a Certificate of Occupancy.
- The applicant will request in writing, prior to any land clearing, that the City of Stuart Development Dept. Perform a field inspection to determine if barricades have been properly installed on the site.
- All signs will comply with the sign regulations at the time of permitting.
- "No Trespass" signs to be posted during construction and displayed at all entrances and exits.
- All building numbers to be no less than four (4) inches tall, illuminated, and not blocked by landscaping.
- Building numbers shall be placed at front and rear entrances.
- Sediment control measures shall be maintained in working order at all times.
- Provisions shall be made to minimize the deposit of sediment by transport vehicles onto public paved surfaces.
- Sediment basin and traps, per meter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land activity and shall be made functional before land disturbance takes place.
- All public sidewalks are to be a minimum of 6' in width.
- A crime watch contact shall be established on site, to include all residents and businesses.
- Any sidewalk damaged during construction shall be repaired or replaced.
- A/C Units, trash receptacles, back flow preventer, and other above ground utilities shall be screened with landscape per City of Stuart LDR.
- Knox Box key vaults shall be provided as required.
- No permanent trailers shall be permitted on site. A temporary construction trailer shall be allowed during the course construction activities.
- Detectable warning surfaces shall be provided at all sidewalk ramps and crosswalks.
- Buildings 1, 2, 3, 4 & 5 may include any use allowed in the CPUD Agreement and any additional additional parking required shall be debited against the excess parking provided.

lucido & associates
701 E Ocean Blvd, Stuart Florida 34994 (772) 220-2100, Fax (772) 223-2220

Key / Location:



Project Team:

Applicant:
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Piscataway, NJ 08701
703-678-3776

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Exton, PA 19341
610-524-0440

Engineer:
CDC Engineering
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Port St Lucie, Florida, 34987

Surveyor:
CDC Engineering
Eric Kennedy
10250 SW Village Pkwy, Suite 201
Port St Lucie, Florida, 34987

Landscape Architect/Land Planner:
Lucido & Associates
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Stuart, FL 34994
772-220-2100

Environmental
EW Consultants
Ed Wolfarth
1800 SE Monterey Commons Blvd #208
Stuart, Florida 34996

KANNER CPUD

City of Stuart, Martin County, Florida

Master Site Plan

Date	By	Description
8.21.2020	SLS	Initial Submittal
12.18.2020	SLS	1st Resubmittal
03.16.2021	SLS	2nd Resubmittal
04.21.2021	SLS	3rd Resubmittal
05.13.2021	SLS	LPA Comments
06.16.2021	SLS	Reduced Residential Units

NORTH

SCALE: 1" = 100'

0 50' 100' 200'

REG. # 6018
Thomas P. Lucido

Designer –
Manager –
Project Number –
Municipal Number –
Computer File 19-035 • Costco Master Site Plan.dwg

Sheet:
1 of 1

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APPENDIX B

NON-MOTORIZED FEATURES



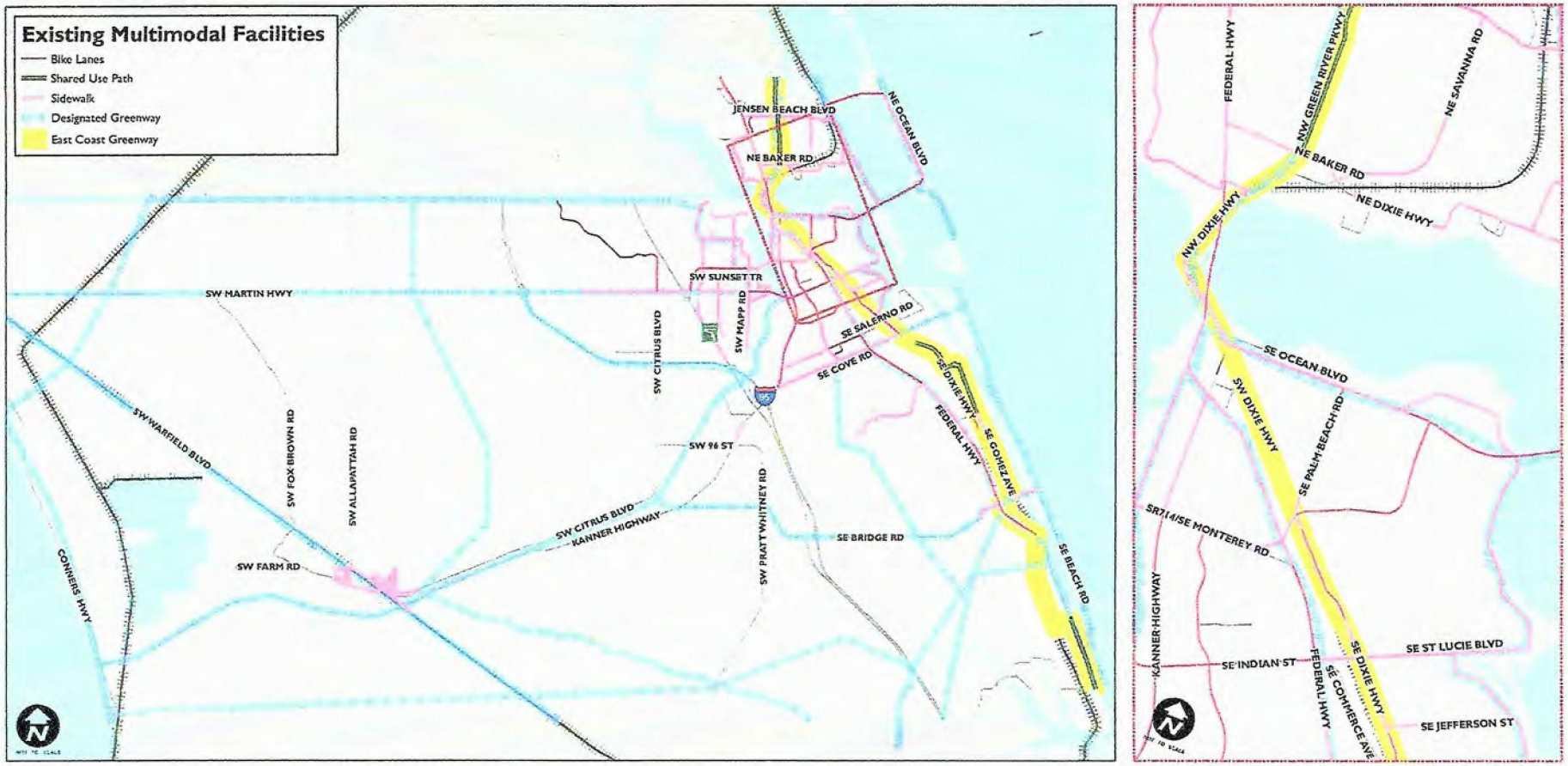


Figure 2-2. Existing Multimodal Facilities

Figure 2-2 provides an overview of existing and designated bicycle and pedestrian facilities. This includes roadways with existing bike lanes, shared use paths, and sidewalks along major roadways. As illustrated, nearly all the existing bike lanes and shared use paths are located within the eastern portion of the County and serve to connect the urbanized areas. Included in Figure 2-2 is the proposed East Coast Greenways (ECG), which are trails of regional and statewide significance and connect to Palm Beach and St. Lucie Counties. The light-green network represents the Designated Greenways – these greenways do not necessarily represent existing bike facilities, rather they identify corridors along which to provide a facility.

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R-1
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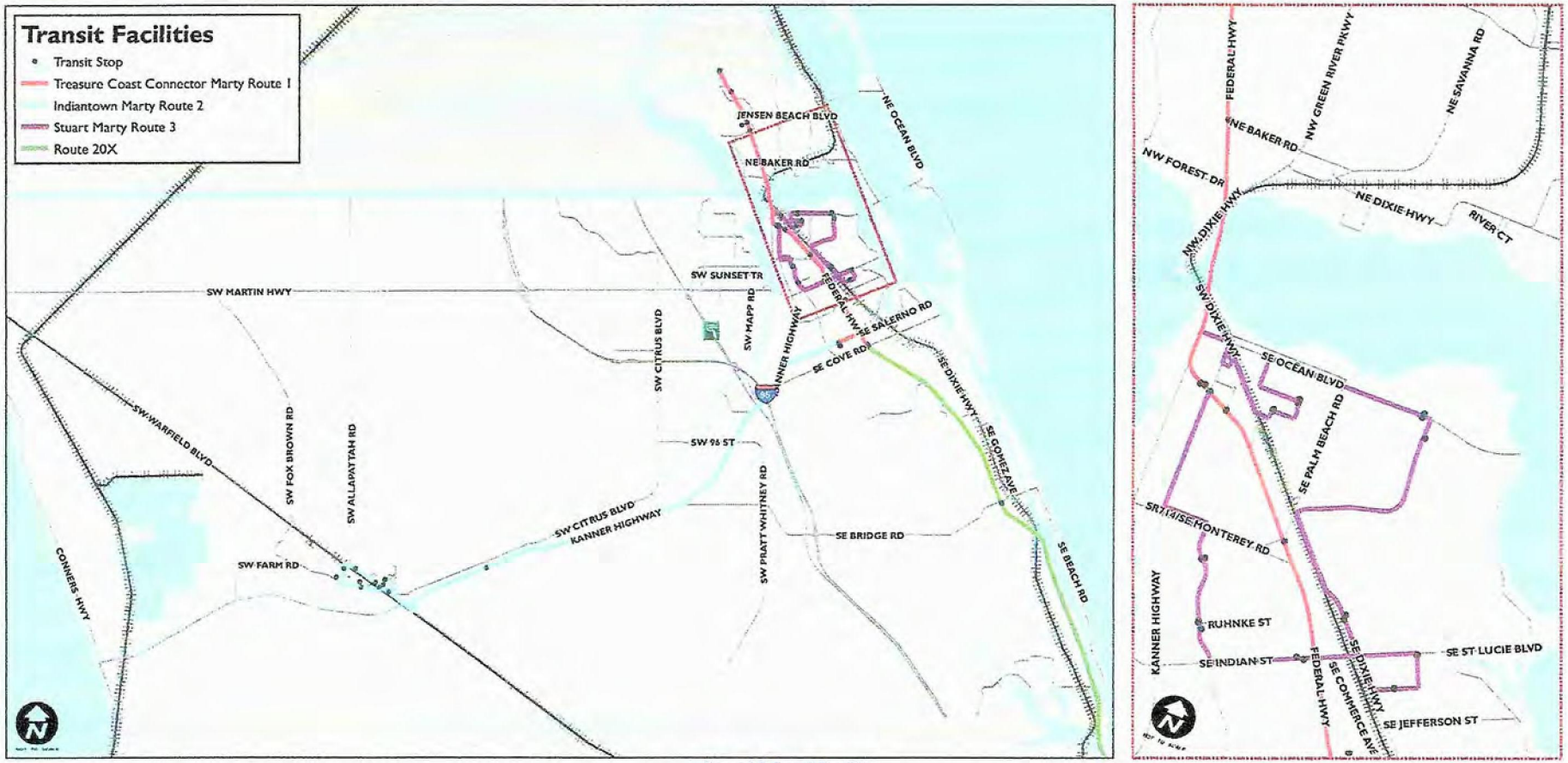


Figure 2-3. Transit Facilities

Figure 2-3 illustrates the locations of the transit routes and stops in Martin County. Four bus routes serve Martin County: Route 1/US 1 Corridor, Route 2/Indiantown, Route 3/Stuart, and Route 20X. Route 1/US 1 Corridor provides service from Port Salerno north to St. Lucie County while Route 20X provides commuter service south to Palm Beach County. Route 2/Indiantown serves as a connector between Indiantown and the urbanized east coast of Martin County while Route 3/Stuart provides a circulator service within the Stuart urbanized area.

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APPENDIX C

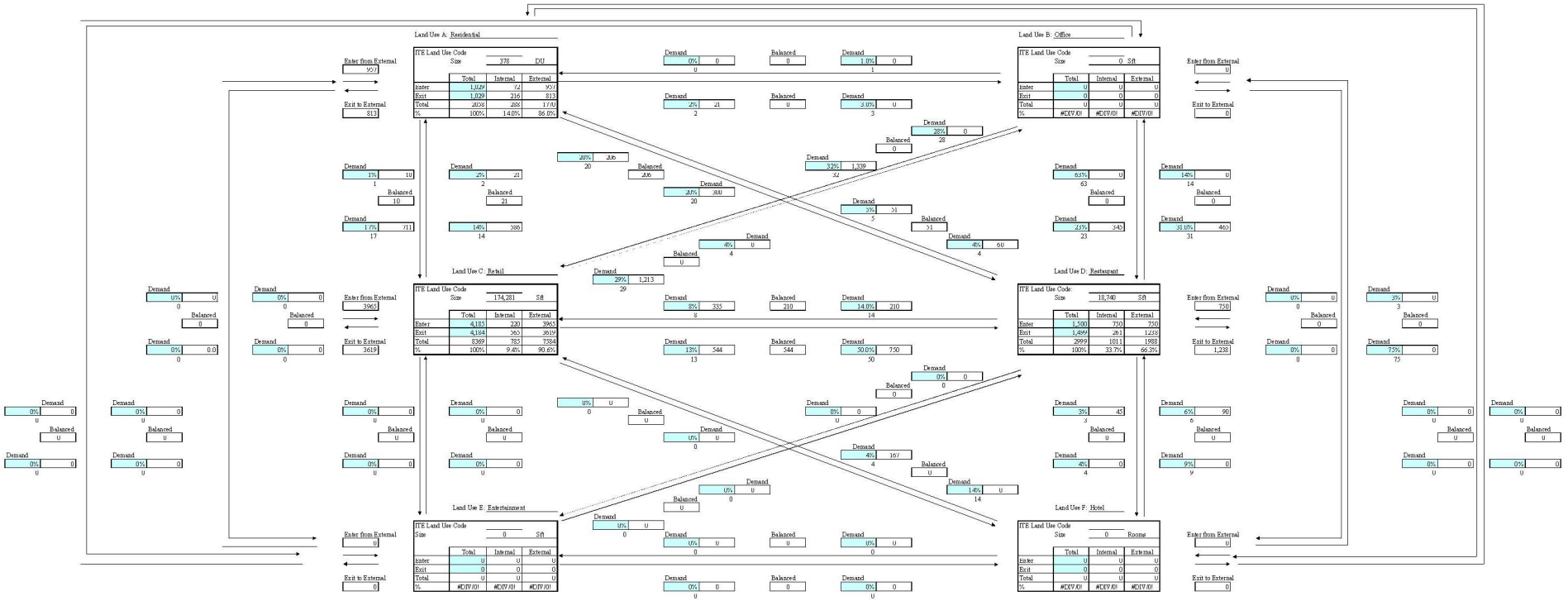
INTERNAL CAPTURE

TABLE 1: Daily Internal Traffic

PROJECT
TRIP INTERNALIZATION - Daily

Analyst
Date

Name of Devlpt PROJECT
Time Period Daily



Net External Trips for Multi-Use Development

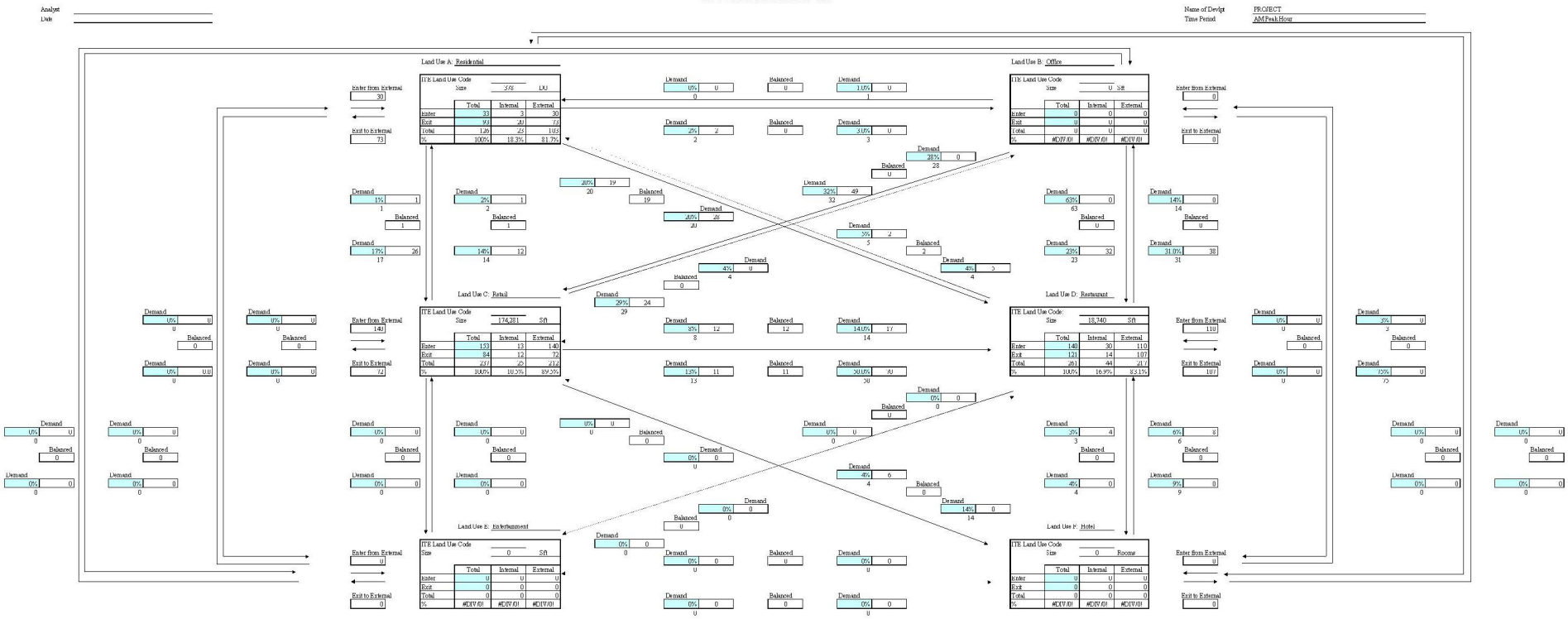
	Land Use A		Land Use B		Land Use C		Land Use D		Land Use E		Land Use F		Total	
Enter	957		0		3965		750		0		0		5672	
Exit	813		0		3619		1238		0		0		5670	Internal
Total	1770		0		7584		1988		0		0		11342	Capture
Single-Use Trip Gen Estimate	2058		0		8369		2999		0		0		13426	15.5%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

TABLE 1: AM Internal Traffic - Phase 1

PROJECT
TRIP INTERNALIZATION - AM



Net External Trips for Multi-Use Development

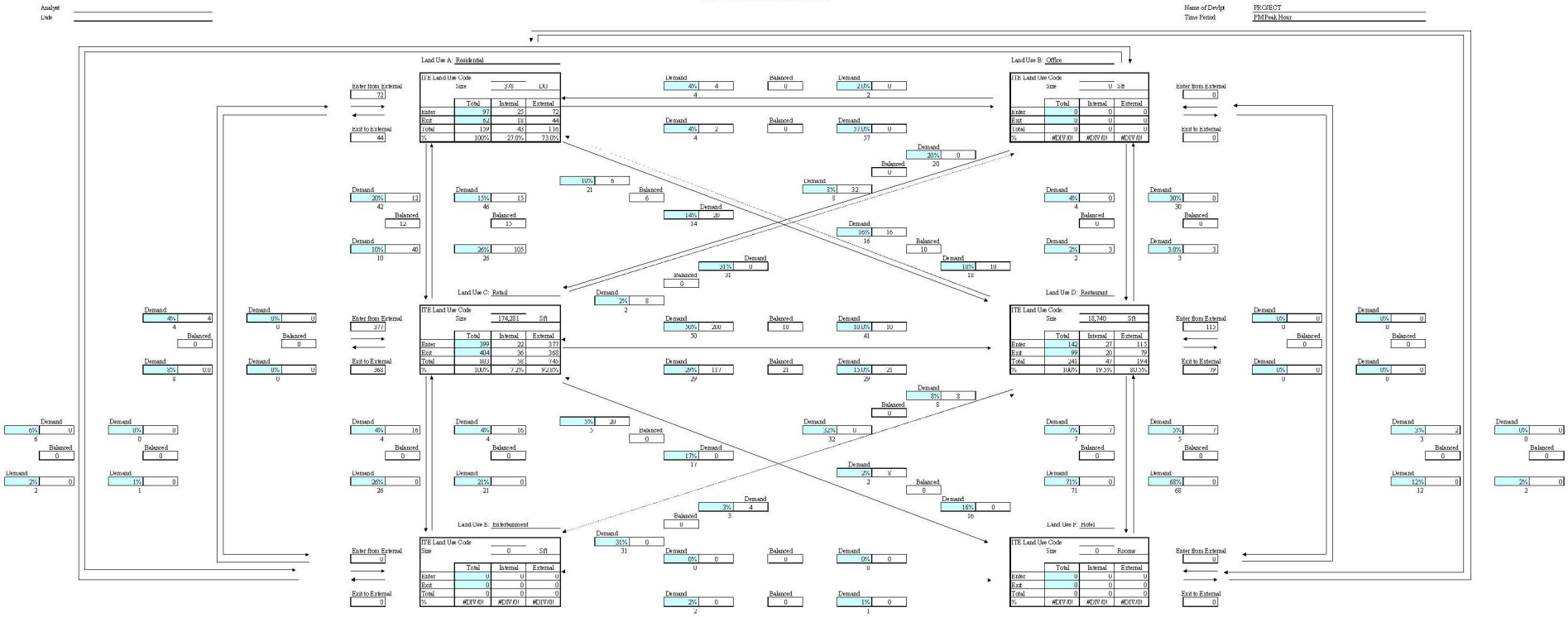
	Land Use A		Land Use B		Land Use C		Land Use D		Land Use E		Land Use F		Total	
Enter	30		0		140		110		0		0		280	
Exit	73		0		72		107		0		0		252	Internal
Total	103		0		212		217		0		0		532	Capture
Single-Use Trip Gen Estimate	126		0		237		261		0		0		624	14.7%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

TABLE 1: PM Internal Traffic

PROJECT
TRIP INTERNALIZATION - PM



Net External Trips for Multi-Use Development

	Land Use A		Land Use B		Land Use C		Land Use D		Land Use E		Land Use F		Total	
Enter	72		0		377		115		0		0		564	
Exit	44		0		368		79		0		0		491	Internal
Total	116		0		745		194		0		0		1055	Capture
Single-Use Trip Gen Estimate	159		0		803		241		0		0		1203	12.3%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

Table 13 – Road Improvement Needs by Land Use Type

Land Use	Unit	Trips	Trip Length	% New	Adj %	VMT	New Rds (Ln Ft)
Residential:							
800 FT² & Under	Dwelling	5.34	5.63	100%	35%	10.66	6.13
801 to 1,100	Dwelling	5.40	5.63	100%	35%	10.78	6.19
1,101 to 2,300	Dwelling	6.63	5.63	100%	35%	13.23	7.60
2,301 & Over	Dwelling	9.57	5.63	100%	35%	19.10	10.98
Non-Residential:							
Hotel/Motel	Room	8.17	5.57	90%	35%	14.52	8.34
RV Park	Per Lot	4.00	5.57	90%	35%	7.11	4.09
Nursing Home	1000 s.f.	7.58	3.46	100%	35%	9.30	5.34
ACLF	1000 s.f.	2.66	3.46	100%	35%	3.26	1.88
Medical Office	1000 s.f.	36.13	3.46	90%	35%	39.88	22.92
Bank Walk In	1000 s.f.	69.60	3.46	53%	35%	45.25	26.00
Bank w/Drive In	1000 s.f.	148.15	3.46	53%	35%	96.31	55.35
Office Under 100,000 FT²	1000 s.f.	13.34	5.63	90%	35%	23.96	13.77
Office 100,000 to 199,999 FT²	1000 s.f.	11.38	5.63	90%	35%	20.44	11.75
Office 200,000 to 399,999 FT²	1000 s.f.	11.44	5.63	90%	35%	20.55	11.81
Office 400,000 TO 599,999 FT²	1000 s.f.	11.10	5.63	90%	35%	19.94	11.46
Office 600,000 TO 799,999 FT²	1000 s.f.	10.93	5.63	90%	35%	19.63	11.28
Office 800,000 TO 999,999 FT²	1000 s.f.	10.83	5.63	90%	35%	19.45	11.18
Office 1,000,000 Ft² or Larger	1000 s.f.	10.75	5.63	90%	35%	19.31	11.10
Manufacturing	1000 s.f.	3.82	5.63	90%	35%	6.86	3.94
Warehouse	1000 s.f.	3.56	5.63	90%	35%	6.40	3.68
Mini-Warehouse	1000 s.f.	2.50	5.63	90%	35%	4.49	2.58
Gen. Industrial	1000 s.f.	6.97	5.63	90%	35%	12.52	7.20
Retail Under 50,000 FT²	1000 s.f.	84.76	1.50	52%	35%	23.44	13.47
Retail 50,000 to 99,999 FT²	1000 s.f.	67.92	2.50	52%	35%	31.30	17.99
Retail 100,000 to 199,999 FT²	1000 s.f.	53.28	3.00	61%	35%	34.57	19.87
Retail 200,000 to 399,999 FT²	1000 s.f.	41.80	4.00	74%	35%	43.86	25.21
Retail 400,000 TO 599,999 FT²	1000 s.f.	36.27	5.73	77%	35%	56.73	32.60
Retail 600,000 TO 799,999 FT²	1000 s.f.	32.80	6.87	79%	35%	63.11	36.27
Retail 800,000 TO 999,999 FT²	1000 s.f.	30.33	8.00	80%	35%	68.81	39.55
Retail 1,000,000 Ft² or Larger	1000 s.f.	28.06	8.00	81%	35%	64.46	37.05
Gasoline/Service Station	Fuel Pstn	168.56	1.50	50%	35%	44.82	25.76
Auto Sales & Repair	1000 s.f.	33.34	3.46	85%	35%	34.76	19.98
Restaurant	1000 s.f.	89.95	3.29	56%	35%	58.75	33.76
Fast Food Restaurant	1000 s.f.	496.12	1.50	51%	35%	134.54	77.33
Car Wash	1000 s.f.	108.00	3.46	100%	35%	132.47	76.13
Convenience Store w/o Gas	1000 s.f.	737.99	1.50	39%	35%	153.05	87.96
Convenience Store w/Gas	1000 s.f.	845.60	1.50	39%	35%	175.36	100.79
Pharmacy w/Drive Thru	1000 s.f.	88.16	3.46	50%	35%	54.07	31.07
Golf Course	Hole	35.74	3.21	95%	35%	38.64	22.21
Racquet Club	1000 s.f.	14.03	3.21	95%	35%	15.17	8.72
Parks	Acre	2.28	3.21	95%	35%	2.47	1.42
Tennis Court	Court	31.04	3.21	95%	35%	33.56	19.29
Marina	Slip	2.96	3.37	95%	35%	3.36	1.93
Boat Storage	Slip	2.96	3.37	95%	35%	3.36	1.93
Post Office	1000 s.f.	108.19	3.21	90%	35%	110.80	63.68
Library	1000 s.f.	56.24	5.63	90%	35%	101.02	58.06
Day Care Center	1000 s.f.	79.26	3.46	50%	35%	48.61	27.94
Hospital	1000 s.f.	16.50	5.63	90%	35%	29.64	17.03
House of Worship	1000 s.f.	9.11	5.36	95%	35%	16.45	9.45
Movie Theatre	1000 s.f.	78.06	3.21	95%	35%	84.39	48.50
Elem School	1000 s.f.	15.43	5.36	100%	35%	29.32	16.85
Middle School	1000 s.f.	13.78	5.36	100%	35%	26.18	15.05
High School	1000 s.f.	12.89	5.36	100%	35%	24.49	14.08
Fitness Center	1000 s.f.	32.93	3.46	95%	35%	38.37	22.05

Source: Institute of Transporation Engineers Trip Generation - 8th Edition
Palm Beach County Trip Generation Rates - September 1, 2011
Walter H. Keller, Inc.

Allowable Pass-By Calculation

Segment	From	To	Existing 2019 AADT	Existing 2019 2-Way Peak Hour Trips	Growth Rate	2024 Daily Trips	Daily Pass-By Allowed	2024 2-Way Peak Hour Trips	Peak Hour Pass-By Allowed
Kanner Hwy	Indian St	Monterey Rd	21116	1631	1.005	21649	2164.9	1672	167.2
Willoughby Blvd	Indian St	Monterey Rd	11100	1280	1.037	13311	1331.1	1535	153.5
Indian St	Kanner Hwy	Willoughby Blvd	29306	2771	1.047	36871	3687.1	3486	348.6
						Total:	7183		669

APPENDIX D

MARTIN COUNTY 2019 ROADWAY LEVEL OF SERVICE INVENTORY REPORT

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	Class I: 4-Ln Divided	2000	23,957	1,622	C	6.1%
CR-723 (Savanna Rd)	CR-707	NE 24th St	Class I: 2-Ln Undivided	880	9,135	384	C	0.5%
CR-723 (Savanna Rd)	NE 24th St	CR-707A (Jensen Beach Blvd.)	Class I: 2-Ln Undivided	880	9,631	471	C	1.0%
CR-726 (Citrus Blvd)	SR-710	Greenridge Ln	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,783	126	A/B	0.5%
CR-726 (Citrus Blvd)	Greenridge Ln	CR-76A	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,488	137	A/B	0.5%
CR-76A (Citrus Blvd.)	CR-726	SR-714	Transitional 2-Ln Uninter /Undivided Flow	1200	4,269	283	A/B	8.0%
CR-76A (SW 96th St)	CR-726	Pennsylvania Ave	Transitional 2-Ln Uninter /Undivided Flow	1200	3,845	195	A/B	8.0%
CR-76A (SW 96th St)	Pennsylvania Ave	SR-76	Class I: Transitional 2-Ln Undivided	800	8,086	492	C	2.5%
CR-A1A (Dixie Hwy)	SR-5	CR-708	Class II: 2-Ln Undivided	750	3,416	192	C	4.7%
CR-A1A (Dixie Hwy)	CR-708	Osprey St	Class I: 2-Ln Undivided	880	7,552	477	C	3.7%
CR-A1A (Dixie Hwy)	Osprey St	Heritage Blvd	2-Ln Uninter /Undivided Flow	1190	6,595	393	A/B	3.1%
CR-A1A (Dixie Hwy)	Heritage Blvd	Cove Rd	2-Ln Uninter /Undivided Flow	1190	7,147	346	A/B	2.9%
CR-A1A (Dixie Hwy)	Cove Rd	Salerno Rd	Class II: 2-Ln Divided	790	12,131	617	D	3.1%
CR-A1A (Dixie Hwy)	Salerno Rd	St. Lucie Blvd	Class II: 2-Ln Undivided	750	17,261	835	F	3.3%
CR-A1A (Dixie Hwy)	St Lucie Blvd	Jefferson St	Class II: 2-Ln Undivided	750	14,108	748	D	2.9%
CR-A1A (Dixie Hwy)	Jefferson St	Indian St	Class II: 4-Ln Divided	1630	18,389	848	D	2.2%
CR-A1A (Dixie Hwy)	Indian St	SR-714	Class I: 4-Ln Divided	2000	17,161	824	C	3.1%
CR-A1A (Dixie Hwy)	SR-714	SE Fifth St	2-Ln Undivided Non-State	675	6,710	346	D	1.6%
Farm Rd	Dr Martin Luther King Jr Dr	Palm Wy	Class II: 2-Ln Undivided	750	2,817	124	C	3.2%
Fox Brown Rd	SR-710	CR-714	Uninterrupted Rural Hwy: 2-Ln Undivided	740	347	16	A/B	0.0%
Goldenrod Rd	Britt Rd	SR-732	Class II: 4-Ln Divided	1630	4,810	278	A/B	0.5%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
Goldenrod Rd	SR-732	SR-5	Class II: 2-Ln Undivided	750	6,877	402	D	1.9%
Goldenrod Rd	SR-5	Westmoreland Blvd	Class II: 2-Ln Undivided	750	4,635	295	C	3.0%
Gomez Ave	CR-708	Crossrip St	Class II: 2-Ln Undivided	750	3,732	199	C	1.4%
Gomez Ave	Crossrip St	Osprey St	Class II: 2-Ln Undivided	750	1,065	61	C	0.5%
Green River Parkway	Dixie Hwy	Baker Rd	Class II: 2-Ln Undivided	750	6,833	351	C	3.1%
Green River Parkway	Baker Rd	SR-732	Class I: 2-Ln Undivided	880	8,341	596	C	4.3%
Green River Parkway	SR-732	St. Lucie County	2-Ln Uninter /Undivided Flow	1190	8,667	576	C	1.8%
Horseshoe Point Rd	CR-A1A	Kubin Ave	2-Ln Undivided Non-State	675	5,647	285	C	0.5%
Indian St	SR-76	Willoughby Blvd	Class I: 4-Ln Divided	2000	29,306	1,729	C	4.7%
Indian St	Willoughby Blvd	SR-5	Class I: 4-Ln Divided	2000	27,852	1,236	C	2.8%
Indian St	SR-5	Commerce Ave	Class I: 4-Ln Divided	2000	22,368	995	C	0.5%
Indian St	Commerce Ave	CR-A1A	Class I: 4-Ln Divided	2000	25,515	1,199	C	2.5%
Indian St	CR-A1A	St Lucie Blvd	2-Ln Undivided Non-State	675	7,051	346	D	1.1%
Indian River Dr	Palmer St	CR-707	Class II: 2-Ln Undivided	750	7,509	374	D	3.7%
Island Way	Palm Beach County	Jupiter Road	Transitional 2-Ln Uninter /Undivided Flow	1200	4,493	302	A/B	3.4%
Island Way	Jupiter Road	Country Club Dr	Class II: 2-Ln Undivided	750	4,855	213	C	0.5%
Jack James Rd	SR-76	Blue Water Wy	Class II: 2-Ln Undivided	750	3,132	294	C	0.5%
Lares St	CR-708	CR-A1A	2-Ln Undivided Non-State	675	3,349	235	C	0.6%
Little Club Wy	Country Club Dr	Wooden Bridge Wy	2-Ln Undivided Non-State	675	2,273	103	C	0.5%
Locks Rd	Canal St	SR-76	2-Ln Undivided Non-State	675	3,667	232	C	2.0%
MacArthur Blvd	Sailfish Point	SR-A1A	2-Ln Undivided Non-State	675	5,989	368	D	6.8%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
SR-5 (US-1)	Britt Rd	SR-732	Class I: 7-Ln Divided	3530	55,878	2,898	C	0.8%
SR-5 (US-1)	SR-732	Westmoreland Blvd	Class I: 8-Ln Divided	4040	64,147	3,522	C	0.5%
SR-5 (US-1)	Westmoreland Blvd	St Lucie County	Class I: 8-Ln Divided	4040	60,343	2,721	C	0.5%
SR-710 (Warfield Blvd)	Okeechobee County	Fox Brown Rd	Uninterrupted Rural Hwy: 2-Ln Undivided	670	6,348	257	C	4.8%
SR-710 (Warfield Blvd)	Fox Brown Rd	CR-609 (Allapattah)	2-Ln Uninter /Undivided Flow	840	7,419	310	A/B	3.0%
SR-710 (Warfield Blvd)	CR-609 (Allapattah)	Van Buren	Class I: 2-Ln Undivided	870	12,335	694	C	4.0%
SR-710 (Warfield Blvd)	Van Buren	CR-726 (Citrus)	Class II: 4-Ln Divided	1710	12,335	694	A/B	4.0%
SR-710 (Warfield Blvd)	CR-726	SR-76 (Kanner)	Transitional 4-Ln Uninter /Divided Flow	2450	11,001	431	A/B	3.4%
SR-710 (Warfield Blvd)	SR-76	Palm Beach County	Transitional 4-Ln Uninter /Divided Flow	2450	6,959	258	A/B	1.4%
SR-714 (Martin Hwy)	I-95	CR-76A (Citrus)	Transitional 2-Ln Uninter /Undivided Flow	1200	13,786	735	C	5.1%
SR-714 (Martin Hwy)	CR-76A (Citrus)	Florida's Turnpike	Class I: 4-Ln Divided	2000	21,291	1,136	C	4.9%
SR-714 (Martin Downs Blvd)	Florida's Turnpike	CR-713	Class I: 4-Ln Divided	2000	20,695	1,038	C	1.7%
SR-714 (Martin Downs Blvd)	CR-713	Matheson Ave	Class I: 4-Ln Divided	2000	27,291	1,267	C	0.5%
SR-714 (Martin Downs Blvd)	Matheson Ave	Mapp Rd	Class I: 4-Ln Divided	2000	32,789	1,738	C	0.5%
SR-714 (Palm City Bridge)	Mapp Rd	SR-76	Class I: 4-Ln Divided	2000	34,751	1,989	D	0.5%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	Class I: 4-Ln Divided	2000	22,465	1,274	C	0.5%
SR-714 (Monterey Rd)	Willoughby Blvd	Monterey Extension	Class I: 4-Ln Divided	2000	24,716	1,186	C	0.6%
SR-714 (Monterey Rd)	Monterey Extension	SR-5	Class I: 4-Ln Divided	2000	18,136	926	C	0.8%
SR-714 (Monterey Rd)	SR-5	CR-A1A	Class II: 4-Ln Divided	1630	21,333	1,099	D	0.5%
SR-714 (Monterey Rd)	CR-A1A	SR-A1A	Class I: 4-Ln Divided	1910	19,430	1,031	C	1.1%
SR-732 (Causeway Blvd)	CR-707	SR-A1A	2-Ln Uninter /Undivided Flow	1190	12,645	786	C	0.5%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
SR-732 (Jensen Beach Blvd)	SR-5	Green River Pkwy	Class I: 4-Ln Divided	2000	25,949	1,349	C	0.5%
SR-732 (Jensen Beach Blvd)	Green River Pkwy	CR-723	Class I: 4-Ln Divided	2000	23,804	1,154	C	0.5%
SR-76 (Kanner Hwy)	SR-15	SR-710	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,134	111	A/B	6.1%
SR-76 (Kanner Hwy)	SR-710	CR-708	Uninterrupted Rural Hwy: 2-Ln Undivided	740	3,412	151	A/B	0.9%
SR-76 (Kanner Hwy)	CR-708	CR-711/CR-76A	Transitional 2-Ln Uninter /Undivided Flow	1200	2,889	168	A/B	0.5%
SR-76 (Kanner Hwy)	CR-711/CR76A	Locks Rd	Class I: 4-Ln Divided	2000	13,401	831	C	1.7%
SR-76 (Kanner Hwy)	Locks Rd	Jack James	Class I: 4-Ln Divided	2000	19,231	920	C	0.5%
SR-76 (Kanner Hwy)	Jack James	Cove Rd	Class I: 6-Ln Divided	3020	43,880	2,372	C	0.6%
SR-76 (Kanner Hwy)	Cove Rd	Salerno Rd	Class I: 6-Ln Divided	3020	34,493	1,495	C	1.0%
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	Class I: 6-Ln Divided	3020	30,912	1,293	C	2.6%
SR-76 (Kanner Hwy)	Indian St	SR-714	Class I: 6-Ln Divided	3020	21,116	993	C	0.5%
SR-76 (Kanner Hwy)	SR-714	SR-5	Class I: 6-Ln Divided	3020	25,158	1,006	C	0.5%
SR-A1A (Ocean Blvd)	SR-714	St Lucie Blvd	Class II: 4-Ln Divided	1630	19,437	1,081	D	0.6%
SR-A1A (Ocean Blvd)	St Lucie Blvd	Sewalls Point Rd	Class I: 4-Ln Divided	2000	23,060	1,127	C	1.0%
SR-A1A (Ocean Blvd)	Sewalls Point Rd	Macarthur Blvd	Class I: 2-Ln Divided	925	13,597	845	C	0.5%
SR-A1A (Ocean Blvd)	MacArthur Blvd	SR-732	2-Ln Uninter /Undivided Flow	1190	8,532	407	A/B	3.1%
SR-A1A (Ocean Blvd)	SR-732	St Lucie County	2-Ln Uninter /Undivided Flow	1190	14,752	870	D	1.8%
St Lucie Blvd	CR-A1A	Indian St	2-Ln Undivided Non-State	675	3,305	172	C	0.5%
St Lucie Blvd	Indian St	SR-A1A	2-Ln Undivided Non-State	675	7,524	429	D	3.3%
Westmoreland Blvd	St Lucie County	SR-5	Class II: 2-Ln Divided	790	12,271	601	D	1.0%
Willoughby Blvd	Cove Rd	Salerno Rd	Class I: 2-Ln Undivided	880	4,332	214	C	8.0%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

08092021 CCM

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
Willoughby Blvd	Salerno Rd	Pomeroy St	Class I: 2-Ln Undivided	880	9,007	544	C	5.4%
Willoughby Blvd	Pomeroy St	Indian St	Class I: 4-Ln Divided	2000	11,709	597	C	8.0%
Willoughby Blvd	Indian St	SR-714	Class I: 4-Ln Divided	2000	11,100	666	C	3.7%
Wright Blvd	SR-5	Dixie Highway	Class II: 2-Ln Undivided	750	10,460	555	D	4.3%

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Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2019 HISTORICAL AADT REPORT

COUNTY: 89 - MARTIN

SITE: 0114 - SR 76/COLORADO AVE - SW OF MONTEREY RD(COUNTY LINK: 132)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2019	26000 C	N 13500	S 12500	9.00	62.40	5.50
2018	27500 C	N 13500	S 14000	9.00	61.40	5.50
2017	25500 C	N 13000	S 12500	9.00	61.80	5.50
2016	26000 C	N 13000	S 13000	9.00	62.10	4.90
2015	26000 C	N 13000	S 13000	9.00	62.30	4.90
2014	23000 C	N 12000	S 11000	9.00	62.60	5.30
2013	26500 C	N 13500	S 13000	9.00	62.40	5.90
2012	25000 C	N 12500	S 12500	9.00	60.30	5.90
2011	27500 C	N 14000	S 13500	9.00	59.50	3.40
2010	27500 C	N 14000	S 13500	9.38	58.28	3.40
2009	28000 C	N 15000	S 13000	9.15	62.05	3.40
2007	28000 C	N 14000	S 14000	9.15	59.55	4.90
2006	27000 C	N 14000	S 13000	9.10	57.64	8.50
2005	26000 C	N 13500	S 12500	9.00	59.00	6.10
2004	28000 C	N 14500	S 13500	8.90	61.20	6.10

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2019 HISTORICAL AADT REPORT

08/09/2021 CCM

COUNTY: 89 - MARTIN

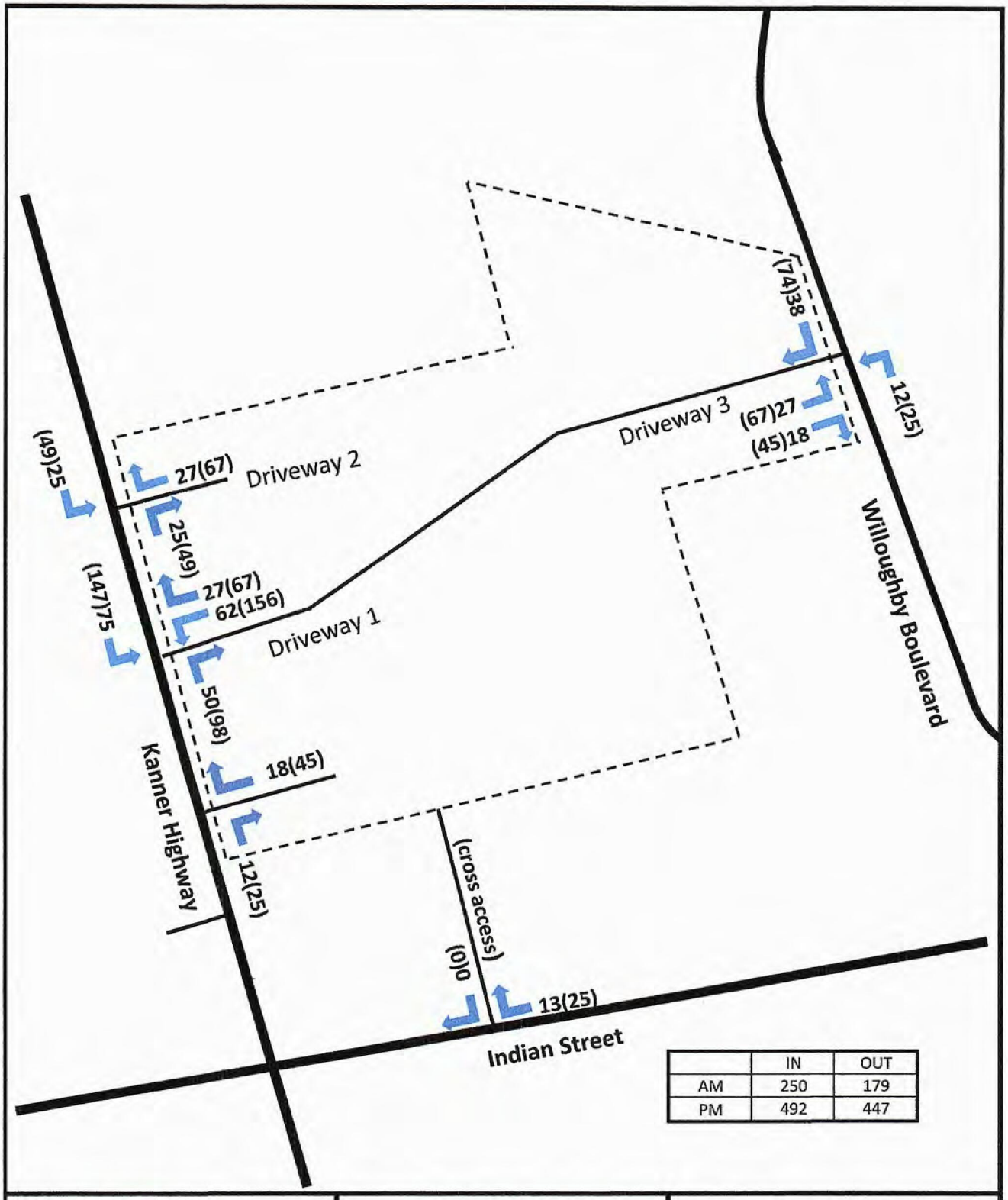
SITE: 0063 - SE WILLOUGHBY BLVD SOUTN FO INDIAN ST(COUNTY LINK: 160)

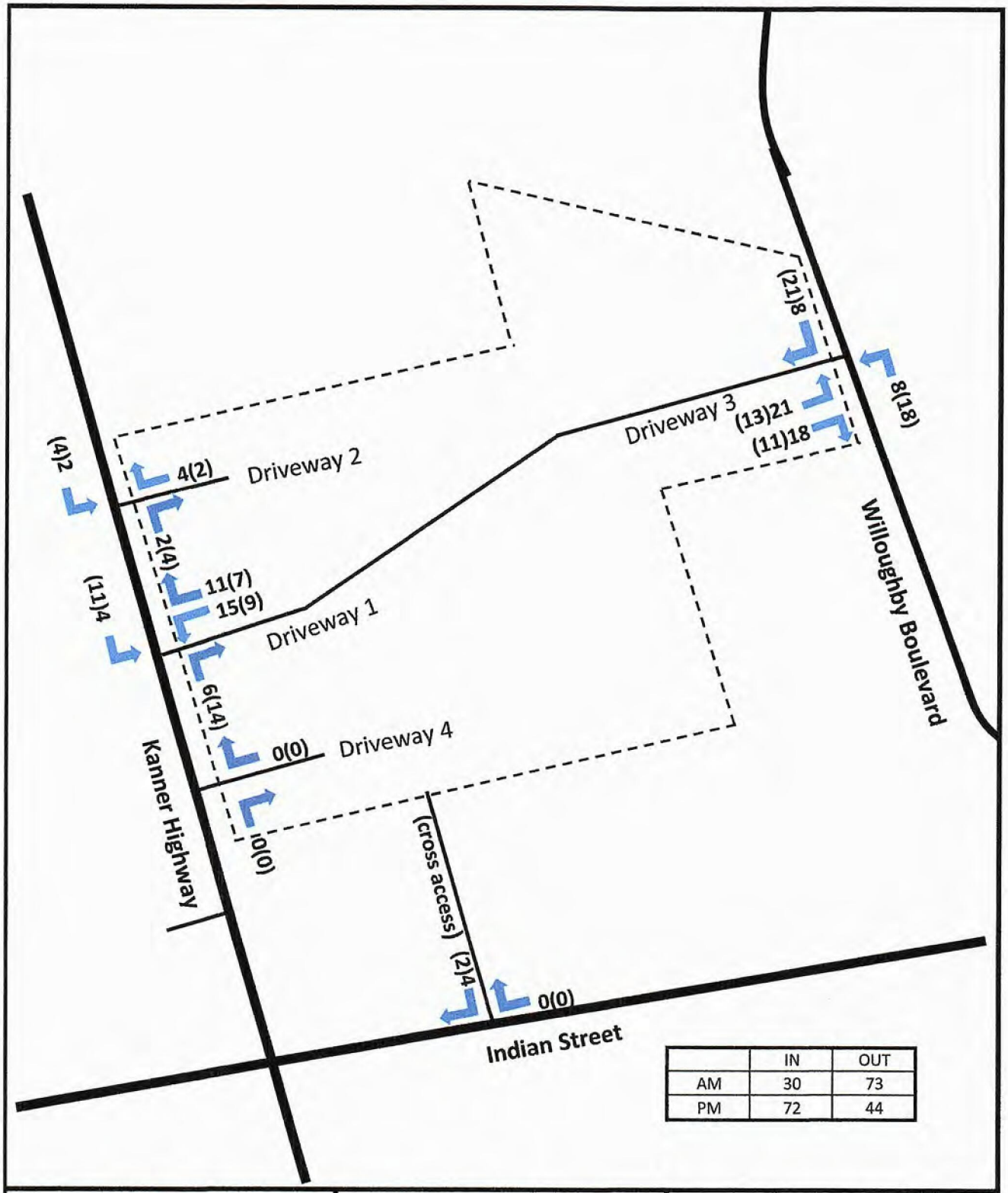
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2019	14900 F	N 7400	S 7500	9.00	62.40	13.80
2018	14700 C	N 7300	S 7400	9.00	61.40	6.10
2017	9900 V	N 4900	S 5000	9.00	61.80	3.90
2016	9700 R	N 4800	S 4900	9.00	62.10	3.80
2015	9300 T	N 4600	S 4700	9.00	62.30	6.50
2014	9100 S	N 4500	S 4600	9.00	62.60	10.10
2013	8900 F	N 4400	S 4500	9.00	62.40	11.00
2012	8700 C	N 4300	S 4400	9.00	60.30	10.50

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

APPENDIX E

DRIVEWAY DATA AND ANALYSES


(74)38
12(25)
(67)27
(45)18
Driveway 3
Willoughby Boulevard
(49)25
27(67)
Driveway 2
25(49)
27(67)
62(156)
(147)75
Driveway 1
50(98)
18(45)
Kanner Highway
12(25)
(cross access)
0(0)
13(25)
Indian Street
IN OUT
AM 250 179
PM 492 447
Legend
XX(XX) = AM(PM)
= Project Location
= Direction
O'ROURKE ENGINEERING & PLANNING
NTS
22 SE Seminole St
Stuart, Fl, 34994
Job #: MR18031.0
Date: 6/25/20
Appendix E
Retail Driveway Volumes
M & M Retail



	IN	OUT
AM	30	73
PM	72	44

O'ROURKE ENGINEERING & PLANNING

NTS

22 SE Seminole St
Stuart, Fl, 34994

Job #: MR18031.0 | Date: 6/25/20

Legend

XX(XX) = AM(PM)
= Project Location
= Direction

Appendix E

Residential Driveway Volumes

M & M Retail

COUNTY: 89
STATION: 0114
DESCRIPTION: SR 76/COLORADO AVE - SW OF MONTEREY RD(COUNTY LINK
START DATE: 03/20/2019
START TIME: 0000

TIME	DIRECTION: N 1ST	2ND	3RD	4TH	TOTAL	DIRECTION: S 1ST	2ND	3RD	4TH	TOTAL	COMBINED TOTAL
0000	36	36	28	16	116	19	12	20	19	70	186
0100	28	20	19	20	87	7	11	7	11	36	123
0200	14	11	4	7	36	19	16	4	11	50	86
0300	6	10	17	16	49	14	19	19	31	83	132
0400	17	20	25	25	87	30	37	43	50	160	247
0500	23	38	37	74	172	74	98	85	139	396	568
0600	72	95	148	134	449	150	172	175	206	703	1152
0700	163	230	254	298	945	277	296	253	269	1095	2040
0800	284	329	256	218	1087	265	186	240	198	889	1976
0900	230	218	224	229	901	172	188	184	212	756	1657
1000	245	224	214	224	907	215	197	224	191	827	1734
1100	241	234	229	284	988	210	203	229	218	860	1848
1200	245	270	259	275	1049	212	203	194	188	797	1846
1300	209	202	238	217	866	203	234	198	179	814	1680
1400	256	287	228	241	1012	187	248	218	202	855	1867
1500	270	250	254	276	1050	208	239	206	222	875	1925
1600	317	281	287	240	1125	226	203	212	244	885	2010
1700	275	260	271	292	1098	251	215	222	215	903	2001
1800	260	234	208	184	886	168	157	160	145	630	1516
1900	198	175	160	124	657	176	142	120	125	563	1220
2000	156	134	110	88	488	106	115	131	94	446	934
2100	79	85	82	70	316	108	101	85	77	371	687
2200	72	68	54	54	248	62	52	41	46	201	449
2300	22	52	59	52	185	32	37	23	20	112	297
24-HOUR TOTALS:					14804					13377	28181

PEAK VOLUME INFORMATION

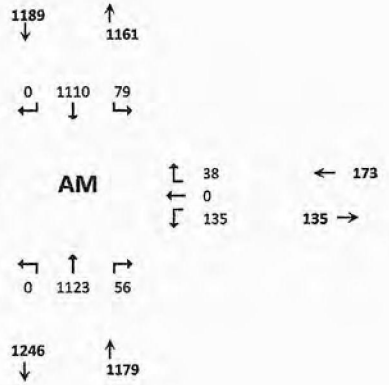
	DIRECTION: N HOUR	VOLUME	DIRECTION: S HOUR	VOLUME	COMBINED DIRECTIONS HOUR	VOLUME
A.M.	745	1167	700	1095	715	2149
P.M.	1545	1161	1645	932	1545	2024
DAILY	745	1167	700	1095	715	2149

GENERATED BY SPS 5.0.53P

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Kanner Hwy **E/W STREET:** Driveway 1 **CONTROL:**
FILENAME:
COUNT DATE: 3/20/2019 **DAY:** Wednesday **CITY:** Stuart **INTERSECTION:**
REPORT DATE: 12/16/2020 **ANALYSIS YEAR:** 2024

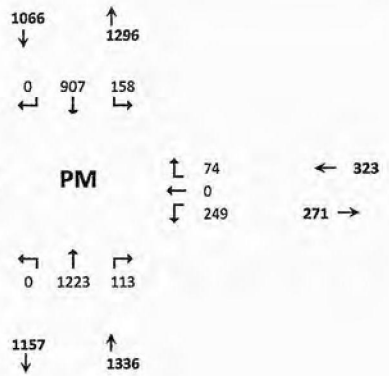
15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203	
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-	
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%	
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%	
PROJECT	0	30	56	79	0	0	0	0	0	77	0	38	**0**	
MMHS										7				
Kanner ALF										51				
Total	0	1123	56	79	1110	0	0	0	0	135	0	38	2542	



Seasonal Factor: 1

	Retail	Residential
Trips In	250	30
Trips Out	179	73
Growth Rate:	1.005	
Years Grown:	5	

15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	
PM PEAK HOUR IS FROM:			4:00PM TO 5:00PM											
Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061	
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-	
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%	
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%	
Project	0	69	113	158	0	0	0	0	0	165	0	74		
MMHS										38				
Kanner ALF										46				
Total	0	1223	113	158	907	0	0	0	0	249	0	74	2724	

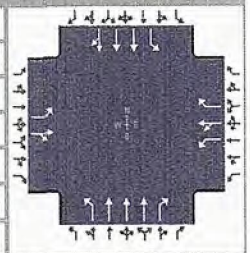


Seasonal Factor: 1

	Retail	Residential
Trips In:	492	72
Trips Out:	447	44
Growth Rate:	1.005	
Years Grown:	5	

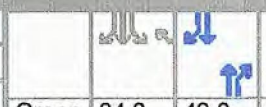
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.250
Analyst	Nolan Comm	Analysis Date	Jun 25, 2021	Area Type	Other
Jurisdiction	Martin County	Time Period	AM	PHF	0.95
Urban Street	Kanner Highway	Analysis Year	2024	Analysis Period	1> 7:00
Intersection	Kanner & Driveway 1	File Name	Kanner and Driveway 1 - AM - Costco - 4.21.21.xus		
Project Description	Costco				

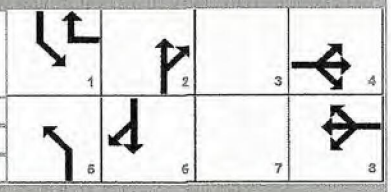


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	0	0	135	0	38	0	1123	56	79	1110	0

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	34.0	42.0	26.0	0.0	0.0	0.0					
Yellow	4.0	4.0	4.0	0.0	0.0	0.0					
Red	2.0	2.0	2.0	0.0	0.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		10.0		9.0	2.0	3.0	2.0	4.0
Phase Duration, s		0.0		32.0	0.0	48.0	40.0	88.0
Change Period, (*Y+R c*), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s		0.0		3.2	0.0	0.0	3.0	0.0
Queue Clearance Time (*g s*), s				6.1			6.1	
Green Extension Time (*g e*), s		0.0		0.3	0.0	0.0	0.1	0.0
Phase Call Probability				1.00			1.00	
Max Out Probability				0.00			0.00	

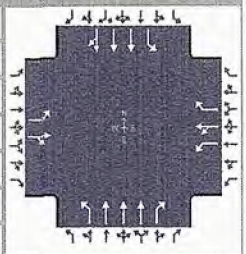
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	0	0		71	0	111	0	1182	59	83	1168	0
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	0		1810	1900	1738	1810	1725	1610	1810	1900	0
Queue Service Time (*g s*), s	0.0	0.0		3.8	0.0	4.1	0.0	23.1	3.0	4.1	9.8	0.0
Cycle Queue Clearance Time (*g c*), s	0.0	0.0		3.8	0.0	4.1	0.0	23.1	3.0	4.1	9.8	0.0
Green Ratio (*g/C*)				0.22	0.22	0.50		0.35	0.35	0.28	0.68	
Capacity (*c*), veh/h	2			392	411	833	2	1809	563	514	3895	
Volume-to-Capacity Ratio (*X*)	0.000	0.000		0.181	0.000	0.133	0.000	0.653	0.105	0.162	0.300	0.000
Back of Queue (Q), ft/ln (95 th percentile)	0	0		75.4	0	70.1	0	365.8	52.4	80	157.1	0
Back of Queue (Q), veh/ln (95 th percentile)	0.0	0.0		3.0	0.0	2.8	0.0	14.6	2.1	3.2	6.3	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (*d 1*), s/veh	0.0			38.3	0.0	16.0	0.0	32.9	26.4	32.3	7.6	
Incremental Delay (*d 2*), s/veh	0.0	0.0		0.1	0.0	0.0	0.0	1.9	0.4	0.1	0.2	0.0
Initial Queue Delay (*d 3*), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	0.0			38.4	0.0	16.0	0.0	34.8	26.7	32.3	7.8	
Level of Service (LOS)				D		B		C	C	C	A	
Approach Delay, s/veh / LOS	0.0			24.8		C	34.4		C	9.4		A
Intersection Delay, s/veh / LOS	22.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.73	C	2.62	C	2.12	B	1.87	B
Bicycle LOS Score / LOS	0.49	A	0.79	A	1.17	A	1.18	A

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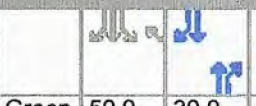
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.250
Analyst	Nolan Comm	Analysis Date	Jun 25, 2021	Area Type	Other
Jurisdiction	Martin County	Time Period	PM	PHF	0.95
Urban Street	Kanner Highway	Analysis Year	2024	Analysis Period	1> 7:00
Intersection	Kanner & Driveway 1	File Name	Kanner and Driveway 1 - PM - Costco - 4.21.21.xus		
Project Description	Costco				

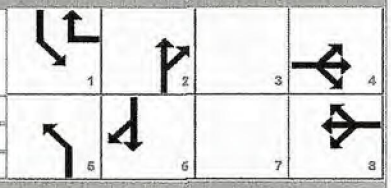


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	0	0	0	249	0	74	0	1223	113	158	907	0

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	50.0	30.0	22.0	0.0	0.0	0.0					
Yellow	4.0	4.0	4.0	0.0	0.0	0.0					
Red	2.0	2.0	2.0	0.0	0.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		10.0		9.0	2.0	3.0	2.0	4.0
Phase Duration, s		0.0		28.0	0.0	36.0	56.0	92.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s		0.0		3.2	0.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s				9.7			7.6	
Green Extension Time (g_e), s		0.0		0.5	0.0	0.0	0.3	0.0
Phase Call Probability				1.00			1.00	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	0	0		131	0	209	0	1287	66	166	955	0
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	0		1810	1900	1735	1810	1725	1610	1810	1900	0
Queue Service Time (g_s), s	0.0	0.0		7.7	0.0	6.6	0.0	29.8	3.9	5.6	1.1	0.0
Cycle Queue Clearance Time (g_c), s	0.0	0.0		7.7	0.0	6.6	0.0	29.8	3.9	5.6	1.1	0.0
Green Ratio (*g/C*)				0.18	0.18	0.60		0.25	0.25	0.42	0.72	
Capacity (*c*), veh/h	2			332	348	990	2	1292	402	755	4085	
Volume-to-Capacity Ratio (*X*)	0.000	0.000		0.395	0.000	0.211	0.000	0.997	0.165	0.220	0.234	0.000
Back of Queue (Q), ft/ln (95 th percentile)	0	0		151.6	0	104.7	0	507.1	71.2	97.7	15.7	0
Back of Queue (Q), veh/ln (95 th percentile)	0.0	0.0		6.1	0.0	4.2	0.0	20.3	2.8	3.9	0.6	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	0.0			43.1	0.0	10.9	0.0	40.0	35.2	16.8	0.8	
Incremental Delay (d_2), s/veh	0.0	0.0		0.3	0.0	0.0	0.0	24.2	0.9	0.1	0.1	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	0.0			43.4	0.0	10.9	0.0	64.2	36.1	16.8	0.9	
Level of Service (LOS)				D		B		E	D	B	A	
Approach Delay, s/veh / LOS	0.0			23.5		C	62.8		E	3.3		A
Intersection Delay, s/veh / LOS	34.4						C					

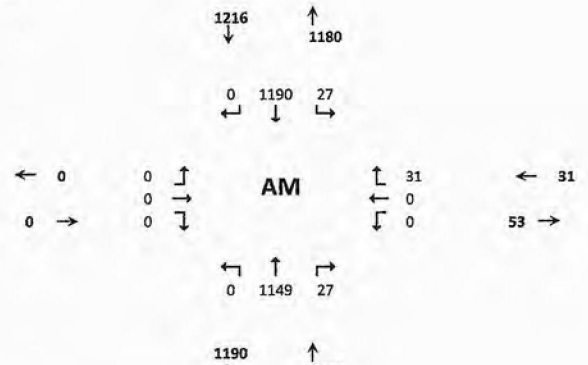
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.80	C	2.62	C	2.13	B	1.86	B
Bicycle LOS Score / LOS	0.49	A	1.05	A	1.23	A	1.10	A

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TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Kanner Hwy **E/W STREET:** Driveway 2 **CONTROL:**
FILENAME:
COUNT DATE: 4/27/2017 **DAY:** Thursday **CITY:** Stuart **INTERSECTION:**
REPORT DATE: 5/2/2017 **ANALYSIS YEAR:** 2024

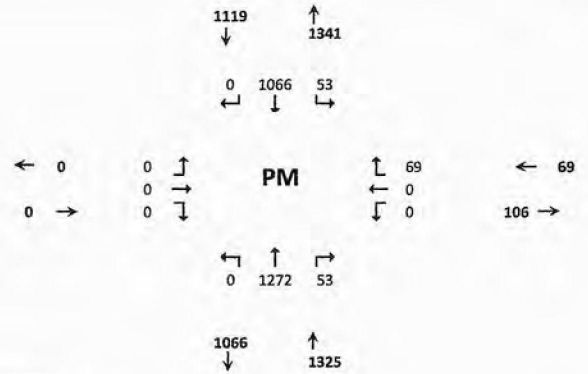
15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203	
In/Out	-	OUT	IN	IN	IN	-	-	-	-	-	-	OUT	-	
Res Percentage	0%	15%	5%	5%	15%	0%	0%	0%	0%	0%	0%	5%	0%	
Retail Percentage	0%	25%	10%	10%	30%	0%	0%	0%	0%	0%	0%	15%	0%	
PROJECT	0	56	27	27	80	0	0	0	0	0	0	31	0	
Total	0	1149	27	27	1190	0	0	0	0	0	0	31	2422	



Seasonal Factor: 1

	Retail	Residential
Trips In	250	30
Trips Out	179	73
Growth Rate:	1.005	
Years Grown:	5	

15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	
PM PEAK HOUR IS FROM:			4:00PM TO 5:00PM											
Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061	
In/Out	-	OUT	IN	IN	IN	-	-	-	-	-	-	OUT	-	
Res Percentage	0%	15%	5%	5%	15%	0%	0%	0%	0%	0%	0%	5%	0%	
Retail Percentage	0%	25%	10%	10%	30%	0%	0%	0%	0%	0%	0%	15%	0%	
Project	0	118	53	53	158	0	0	0	0	0	0	69		
Total	0	1272	53	53	1066	0	0	0	0	0	0	69	2512	



Seasonal Factor: 1

	Retail	Residential
Trips In:	492	72
Trips Out:	447	44
Growth Rate:	1.005	
Years Grown:	5	

HCS7 Two-Way Stop-Control Report

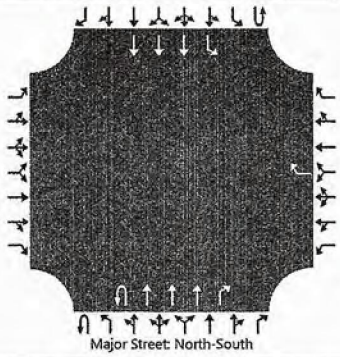
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/21/2021 6/25/21
Analysis Year	2024
Time Analyzed	AM
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Kanner Hwy & Driveway 2
Jurisdiction	Martin County
East/West Street	Driveway 2
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	1	0	3	1	0	1	3	0
Configuration								R	U		T	R		L	T	
Volume (veh/h)								31	0		1149	27	0	27	1190	
Percent Heavy Vehicles (%)								3	3				3	3		
Proportion Time Blocked								0.250						0.250		
Percent Grade (%)						0										
Right Turn Channelized						Yes					No					
Median Type | Storage						Left Only					1					

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1	5.6					5.3		
Critical Headway (sec)								7.16	5.66					5.36		
Base Follow-Up Headway (sec)								3.3	2.3					3.1		
Follow-Up Headway (sec)								3.33	2.33					3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								33	0					28		
Capacity, c (veh/h)								811	486					736		
v/c Ratio								0.04	0.00					0.04		
95% Queue Length, Q_{95} (veh)								0.1	0.0					0.1		
Control Delay (s/veh)								9.6	12.4					10.1		
Level of Service (LOS)								A	B					B		
Approach Delay (s/veh)						9.6				0.0				0.2		
Approach LOS						A										

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HCS7 Two-Way Stop-Control Report

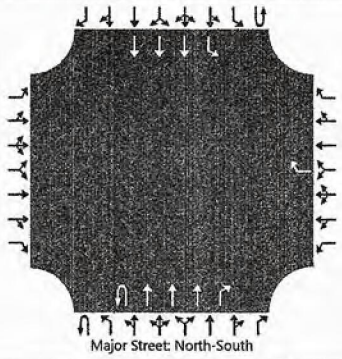
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	3/16/2021 6/25/21
Analysis Year	2024
Time Analyzed	PM
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Kanner Hwy & Driveway 2
Jurisdiction	Martin County
East/West Street	Driveway 2
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	1	0	3	1	0	1	3	0
Configuration								R	U		T	R		L	T	
Volume (veh/h)								69	0		1272	53	0	53	1066	
Percent Heavy Vehicles (%)								3	3				3	3		
Proportion Time Blocked								0.250						0.250		
Percent Grade (%)						0										
Right Turn Channelized						No					No					
Median Type | Storage				Left Only								1				

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1	5.6					5.3		
Critical Headway (sec)								7.16	5.66					5.36		
Base Follow-Up Headway (sec)								3.3	2.3					3.1		
Follow-Up Headway (sec)								3.33	2.33					3.13		

Delay, Queue Length, and Level of Service

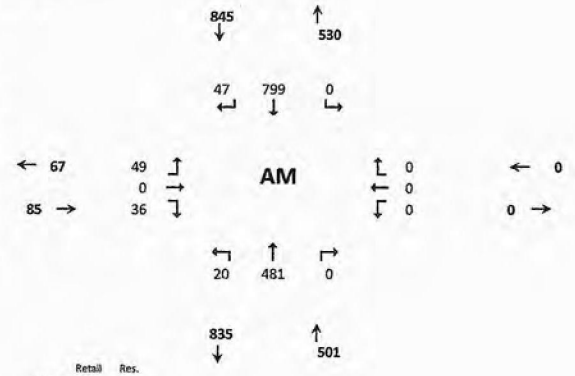
Flow Rate, v (veh/h)								73	0					56		
Capacity, c (veh/h)								811	549					588		
v/c Ratio								0.09	0.00					0.09		
95% Queue Length, Q_{95} (veh)								0.3	0.0					0.3		
Control Delay (s/veh)								9.9	11.6					11.8		
Level of Service (LOS)								A	B					B		
Approach Delay (s/veh)						9.9					0.0				0.6	
Approach LOS						A										

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TURNING MOVEMENT VOLUME COUNTS

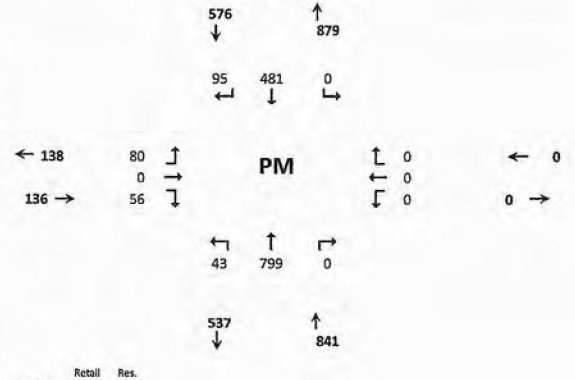
N/S STREET: Willoughby Blvd **E/W STREET:** Driveway 3 **CONTROL:** TWSC
FILENAME:
COUNT DATE: 2019 **DAY:** Thursday **CITY:** Stuart **INTERSECTION:**
REPORT DATE: 1/15/2020 **ANALYSIS YEAR:** 2024

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	
AM PEAK HOUR IS FROM:			7:00AM TO 8:00AM											
Volumes	0	401	0	0	666	0	0	0	0	0	0	0	0	
Season Factor	0	401	0	0	666	0	0	0	0	0	0	0	1067	
Growth	0	481	0	0	799	0	0	0	0	0	0	0	1280	
In/Out	IN	-	-	-	-	IN	OUT	-	OUT	-	-	-	-	
Retail Percent	5%	0%	0%	0%	0%	15%	15%	0%	10%	0%	0%	0%	0%	
Res. Percent	25%	0%	0%	0%	0%	30%	30%	0%	25%	0%	0%	0%	0%	
Retail Trips	13	0	0	0	0	38	27	0	18	0	0	0	0	
Res. Trips	8	0	0	0	0	9	22	0	18	0	0	0	0	
Total	20	481	0	0	799	47	49	0	36	0	0	0	1431	



	Retail	Res.
Trips In	250	30
Trips Out	179	73
Seasonal Factor:	1	
Growth Rate:	1.037	
Years Grown:	5	

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15-4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30-4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00-5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15-5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45-6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM PEAK HOUR IS FROM:			4:00PM TO 5:00PM											
Volumes	0	666	0	0	401	0	0	0	0	0	0	0	0	
Season Factor	0	666	0	0	401	0	0	0	0	0	0	0	1067	
Growth	0	799	0	0	481	0	0	0	0	0	0	0	1280	
In/Out	IN	-	-	-	-	IN	OUT	-	OUT	-	-	-	-	
Retail Percent	5%	0%	0%	0%	0%	15%	15%	0%	10%	0%	0%	0%	0%	
Res. Percent	25%	0%	0%	0%	0%	30%	30%	0%	25%	0%	0%	0%	0%	
Retail Trips	25	0	0	0	0	74	67	0	45	0	0	0	0	
Res. Trips	18	0	0	0	0	22	13	0	11	0	0	0	0	
Total	43	799	0	0	481	95	80	0	56	0	0	0	1554	



	Retail	Res.
Trips In:	492	72
Trips Out:	447	44
Seasonal Factor:	1	
Growth Rate:	1.037	
Years Grown:	5	

HCS7 Two-Way Stop-Control Report

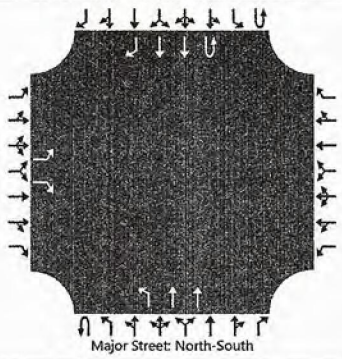
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/21/2021 6/25/21
Analysis Year	2024
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Driveway 3 & Willoughby
Jurisdiction	Martin County
East/West Street	Driveway 3
North/South Street	Willoughby Blvd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	2	0	1	0	2	1
Configuration		L		R						L	T		U		T	R
Volume (veh/h)		49		36					0	20	481		0		799	47
Percent Heavy Vehicles (%)		3		3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No												No		
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1			6.4			
Critical Headway (sec)		6.86		6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5		3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53		3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		53		39						22			0			
Capacity, c (veh/h)		290		567						732			665			
v/c Ratio		0.18		0.07						0.03			0.00			
95% Queue Length, Q_{95} (veh)		0.7		0.2						0.1			0.0			
Control Delay (s/veh)		20.2		11.8						10.1			10.4			
Level of Service (LOS)		C		B						B			B			
Approach Delay (s/veh)		16.7								0.4				0.0		
Approach LOS		C														

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HCS7 Two-Way Stop-Control Report

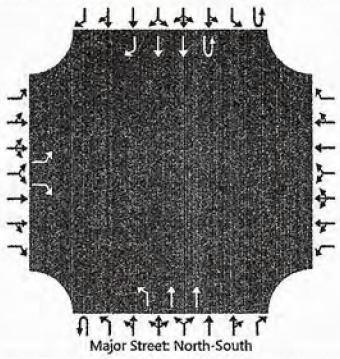
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	3/16/2021 6/25/21
Analysis Year	2024
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Driveway 3 & Willoughby
Jurisdiction	Martin County
East/West Street	Driveway 3
North/South Street	Willoughby Blvd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	2	0	1	0	2	1
Configuration		L		R						L	T		U		T	R
Volume (veh/h)		80		56					0	43	799		0		481	95
Percent Heavy Vehicles (%)		3		3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No												No		
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1			6.4			
Critical Headway (sec)		6.86		6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5		3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53		3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

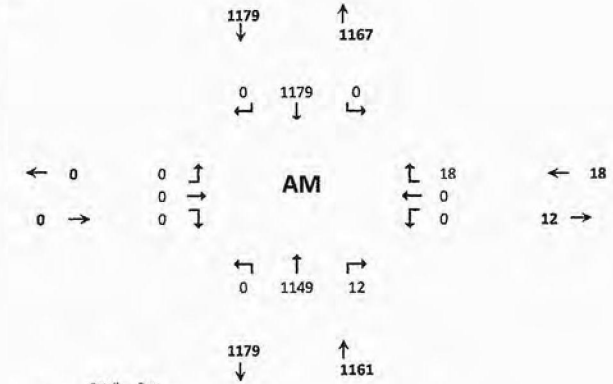
Flow Rate, v (veh/h)		87		61						47			0			
Capacity, c (veh/h)		342		734						945			400			
v/c Ratio		0.25		0.08						0.05			0.00			
95% Queue Length, Q_{95} (veh)		1.0		0.3						0.2			0.0			
Control Delay (s/veh)		19.1		10.3						9.0			14.0			
Level of Service (LOS)		C		B						A			B			
Approach Delay (s/veh)		15.5								0.5				0.0		
Approach LOS		C														

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TURNING MOVEMENT VOLUME COUNTS

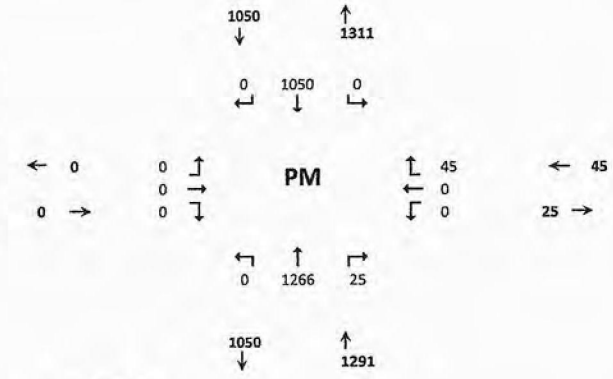
N/S STREET: Kanner Hwy
E/W STREET: Driveway 4
CONTROL:
FILENAME:
COUNT DATE: 3/20/2019
DAY: Wednesday
CITY: Stuart
INTERSECTION:
REPORT DATE: 12/16/2020
ANALYSIS YEAR: 2024

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	
AM PEAK HOUR IS FROM:		7:15AM TO 8:15AM												
Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203	
In/Out	-	IN	IN	-	OUT	-	-	-	-	-	-	OUT	-	
Retail Percent	0%	20%	5%	0%	30%	0%	0%	0%	0%	0%	0%	10%	0%	
Res. Percent	0%	20%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	
Retail Trips	0	50	12	0	54	0	0	0	0	0	0	18	0	
Res. Trips	0	6	0	0	15	0	0	0	0	0	0	0	0	
Total	0	1149	12	0	1179	0	0	0	0	0	0	18	2358	



	Retail	Res.
Trips In	250	30
Trips Out	179	73
Seasonal Factor:	1	
Growth Rate:	1.005	
Years Grown:	5	

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	
PM PEAK HOUR IS FROM:		4:00PM TO 5:00PM												
Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061	
In/Out	-	IN	IN	-	OUT	-	-	-	-	-	-	OUT	-	
Retail Percent	0%	20%	5%	0%	30%	0%	0%	0%	0%	0%	0%	10%	0%	
Res. Percent	0%	20%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	
Retail Trips	0	98	25	0	134	0	0	0	0	0	0	45	0	
Res. Trips	0	14	0	0	9	0	0	0	0	0	0	0	0	
Total	0	1266	25	0	1050	0	0	0	0	0	0	45	2386	



	Retail	Res.
Trips In:	492	72
Trips Out:	447	44
Seasonal Factor:	1	
Growth Rate:	1.005	
Years Grown:	5	

HCS7 Two-Way Stop-Control Report

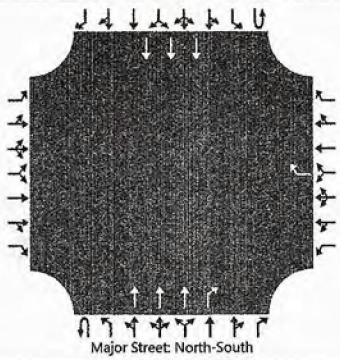
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	6/25/21
Analysis Year	2024
Time Analyzed	AM
Intersection Orientation	North-South
Project Description	M&M Retail

Site Information

Intersection	Kanner Hwy & Driveway 4
Jurisdiction	Martin County
East/West Street	Driveway 4
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	3	1	0	0	3	0
Configuration								R			T	R			T	
Volume (veh/h)								18			1149	12			1179	
Percent Heavy Vehicles (%)								3								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						Yes					No					
Median Type | Storage						Left Only					1					

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1								
Critical Headway (sec)								7.16								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.33								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								19								
Capacity, c (veh/h)								424								
v/c Ratio								0.04								
95% Queue Length, Q_{95} (veh)								0.1								
Control Delay (s/veh)								13.9								
Level of Service (LOS)								B								
Approach Delay (s/veh)						13.9										
Approach LOS						B										

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HCS7 Two-Way Stop-Control Report

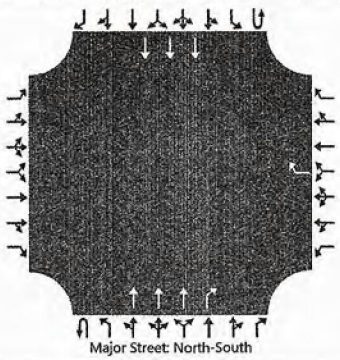
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	6/25/21
Analysis Year	2024
Time Analyzed	PM
Intersection Orientation	North-South
Project Description	M&M Retail

Site Information

Intersection	Kanner Hwy & Driveway 4
Jurisdiction	Martin County
East/West Street	Driveway 4
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	3	1	0	0	3	0
Configuration								R			T	R			T	
Volume (veh/h)								45			1266	25			1050	
Percent Heavy Vehicles (%)								3								
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No					No					
Median Type | Storage						Left Only					1					

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1								
Critical Headway (sec)								7.16								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.33								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								47								
Capacity, c (veh/h)								385								
v/c Ratio								0.12								
95% Queue Length, Q_{95} (veh)								0.4								
Control Delay (s/veh)								15.7								
Level of Service (LOS)								C								
Approach Delay (s/veh)						15.7										
Approach LOS						C										

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O'ROURKE
ENGINEERING & PLANNING

SIGNAL WARRANT ANALYSIS

FOR

KANNER CPUD
Kanner Highway and Proposed Signalized Driveway

Prepared for:

Mr. Joe Marino
M & M Retail Partners, LLC.
Lodi, NJ 07644
973-779-7466

Prepared by:
O'Rourke Engineering & Planning
22 SE Seminole Street
Stuart, Florida 34994
(772) 781-7918

June 26, 2020
Revised February 18, 2021
Revised March 16, 2021
Revised April 22, 2021
Revised June 25, 2021

MR18031.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 772-781-7918	Professional Engineer Susan E. O'Rourke Susan E. O'Rourke, P.E. Date signed and sealed: 6/25/2021 License #: 42684

Introduction

O'Rourke Engineering & Planning prepared the signal warrant analysis of the proposed full access driveway (Driveway 1) to be referred to as Costco Boulevard, located approximately 2,400 feet north of Indian Street on Kanner Highway. **Figure 1** shows the general project location and the relative location of the proposed full access driveway which is the subject of this analysis.

Attachment A includes the project site plan.

This signal warrant analysis uses existing hourly count data on Kanner Highway and estimated hourly volumes on the minor approach, Costco Boulevard. Each component of the analysis is discussed below.

Trip Generation

Three major developments will have access to Costco Boulevard; the subject property, M&M Retail, Certus ALF and out parcel, and Cleveland Clinic Medical Office. M&M Retail will consist of 157,531 square feet of Discount Warehouse, 16,750 square feet of Shopping Center, 2,500 square feet of fast-food w/ drive-thru, 16,240 square feet of restaurant and 378 apartment units.

The minor street traffic was estimated from the future developments: M&M Retail and Cleveland Clinic Medical Office. The traffic from the Certus ALF and outparcel were not included in the analysis, as the construction of this development could occur after the development of M&M Retail. The volumes were then used to evaluate the signal warrants. Each step is discussed below.

Table 1 includes the daily trip generation for each development referenced above.

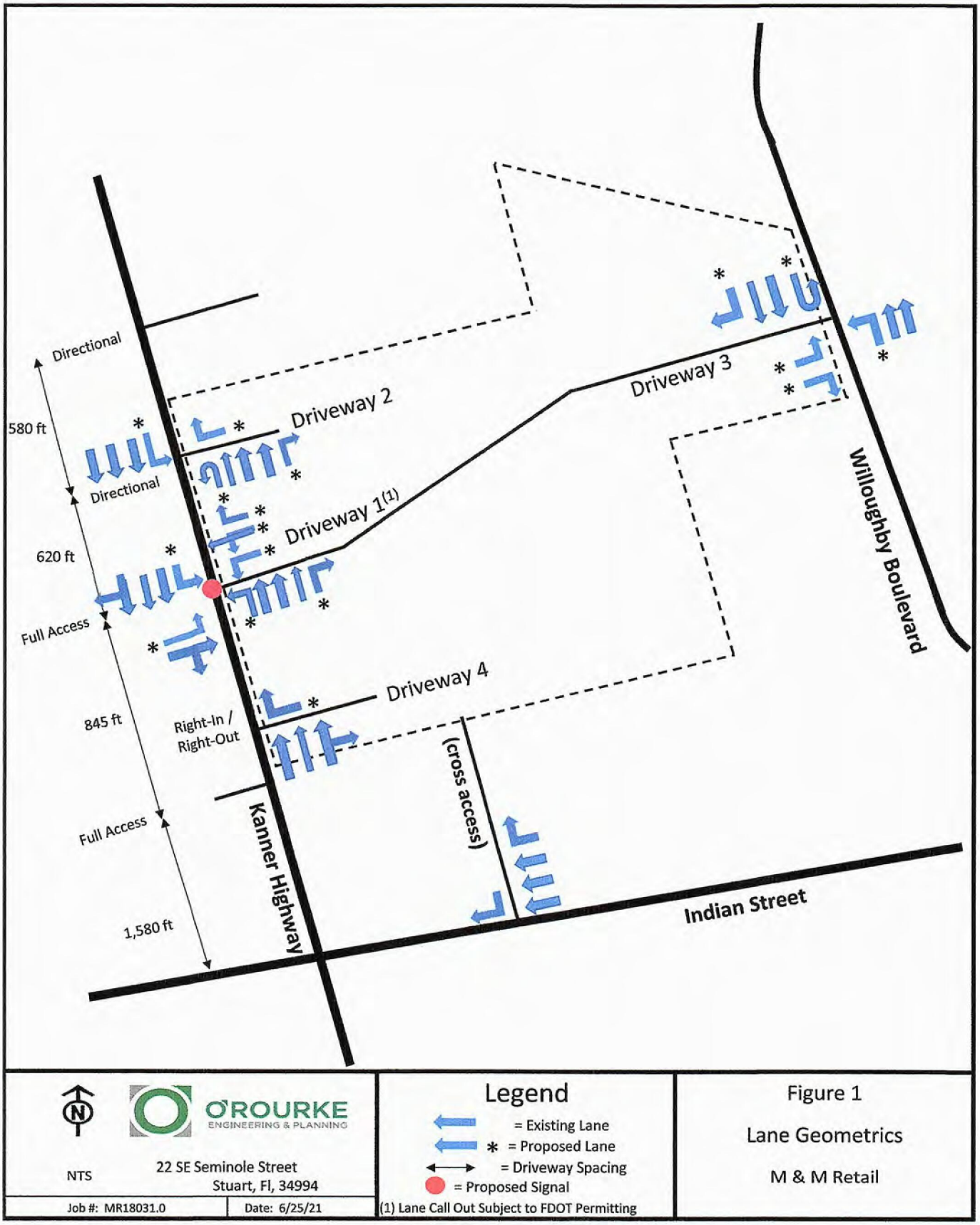
Major Street Traffic

Hourly directional traffic volumes were obtained from the FDOT website for the "Major Street": SR-76 (Kanner Highway). **Table 2** summarizes the existing hourly traffic volumes (2019) on Kanner Highway directly from the FDOT Peak Season 2019 count. The Kanner Highway volumes were compared to the Major Street thresholds. The existing major street volumes far exceed the maximum volume for several hours of the day. Given that the major street traffic is already so high before growth and before other project traffic was added, the existing traffic was used for the major street traffic.

Minor Street Traffic

The estimated movements from Costco Boulevard (minor approach) were developed based on the project traffic assigned to Costco Boulevard. **Attachment B** includes the percent assignment for each development included in the signal warrant.

The development traffic assigned to Costco Boulevard was distributed over the hours in the day based on ITE hourly distribution percentages. The percentages reflect the project traffic during that hour as it relates to daily traffic. The daily trips calculated above were applied to the hourly distribution. **Table 3** summarizes the hourly minor approach volumes. These distribution values are also included in Attachment B.



N NTS O'ROURKE ENGINEERING & PLANNING 22 SE Seminole Street Stuart, Fl, 34994 Job #: MR18031.0 Date: 6/25/21	Legend = Existing Lane * = Proposed Lane = Driveway Spacing = Proposed Signal (1) Lane Call Out Subject to FDOT Permitting	Figure 1 Lane Geometrics M & M Retail

Table 1: Daily Trip Generation

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total
Medical Office (Cleveland Clinic)	**720**	**155,080**	**Sft**	**T = 38.42(X) - 87.62**	**50%**	**50%**	**2,936**	**2,935**	**5,871**	**0**	**0**	**0**	**0.0%**	**2,936**	**2,935**	**5,871**
M&M Retail - Residential Land Use	**221**	**398**	**DU**	**T = 5.45(X) - 1.75**	**50%**	**50%**	**1,084**	**1,083**	**2,167**	**72**	**216**	**288**	**14.0%**	**957**	**813**	**1,770**
M&M Retail - Total Retail Land Use		**193,021**	**Sft**		**50%**	**50%**	**5,685**	**5,683**	**11,368**	**970**	**826**	**1,796**	**15.8%**	**4,715**	**4,857**	**9,572**
Shopping Center	820	16,750	Sft	Ln(T) = 0.68Ln(X) + 5.57	50%	50%	892	892	1,784	47	120	167	9.4%	845	772	1,617
Discount Club	850	157,531	Sft	T = 41.80(X)	50%	50%	3,293	3,292	6,585	173	445	618	9.4%	3,120	2,847	5,967
Fast Food (w/ Drive Thru)	857	2,500	Sft	T = 470.95(X)	50%	50%	589	588	1,177	294	102	396	33.6%	295	486	781
High-Turnover (Sit-Down) Restaurant	934	16,240	Sft	T = 112.18(X)	50%	50%	911	911	1,822	456	159	615	33.8%	455	752	1,207
TOTALS							**9,705**	**9,701**	**19,406**	**1,042**	**1,042**	**2,084**		**8,608**	**8,605**	**17,213**

Source: ITE 10th Edition Trip Generation Rates

COUNTY: 89
STATION: 0114
DESCRIPTION: SR 76/COLORADO AVE - SW OF MONTEREY RD(COUNTY LINK
START DATE: 03/20/2019
START TIME: 0000

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	36	36	28	16	116	19	12	20	19	70	186
0100	28	20	19	20	87	7	11	7	11	36	123
0200	14	11	4	7	36	19	16	4	11	50	86
0300	6	10	17	16	49	14	19	19	31	83	132
0400	17	20	25	25	87	30	37	43	50	160	247
0500	23	38	37	74	172	74	98	85	139	396	568
0600	72	95	148	134	449	150	172	175	206	703	1152
0700	163	230	254	298	945	277	296	253	269	1095	2040
0800	284	329	256	218	1087	265	186	240	198	889	1976
0900	230	218	224	229	901	172	188	184	212	756	1657
1000	245	224	214	224	907	215	197	224	191	827	1734
1100	241	234	229	284	988	210	203	229	218	860	1848
1200	245	270	259	275	1049	212	203	194	188	797	1846
1300	209	202	238	217	866	203	234	198	179	814	1680
1400	256	287	228	241	1012	187	248	218	202	855	1867
1500	270	250	254	276	1050	208	239	206	222	875	1925
1600	317	281	287	240	1125	226	203	212	244	885	2010
1700	275	260	271	292	1098	251	215	222	215	903	2001
1800	260	234	208	184	886	168	157	160	145	630	1516
1900	198	175	160	124	657	176	142	120	125	563	1220
2000	156	134	110	88	488	106	115	131	94	446	934
2100	79	85	82	70	316	108	101	85	77	371	687
2200	72	68	54	54	248	62	52	41	46	201	449
2300	22	52	59	52	185	32	37	23	20	112	297
24-HOUR TOTALS:					14804					13377	28181

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	745	1167	700	1095	715	2149
P.M.	1545	1161	1645	932	1545	2024
DAILY	745	1167	700	1095	715	2149

GENERATED BY SPS 5.0.53P

08092021 CCW

Table 2: Major Street Traffic

Table 3: Minor Approach Volumes

Hourly	Hourly Distribution			External Volumes			Percent Assignment to Costco Blvd						
							M&M Lefts		M&M Rights				
	M&M		Cleveland Clinic	M&M		Cleveland Clinic	Retail	Residential	Retail	Residential	Cleveland Clinic Lefts	Cleveland Clinic Rights	Minor Approach Volume
				4,857	813	2,935							
	Retail	Residential	Medical Office	Retail	Residential	Medical Office	35%	20%	15.0%	15.0%	15%	0%	
6-7 AM	0.2%	4.0%	1.4%	10	33	41	4	7	2	5	6	0	21
7-8 AM	1.1%	7.5%	5.4%	53	61	158	19	12	8	9	24	0	64
8-9 AM	2.0%	6.2%	8.9%	97	50	261	34	10	15	8	39	0	95
9-10 AM	3.6%	4.3%	10.4%	175	35	305	61	7	26	5	46	0	130
10-11 AM	5.6%	3.7%	10.1%	272	30	296	95	6	41	5	44	0	168
11-12 PM	8.3%	4.5%	9.1%	403	37	267	141	7	60	6	40	0	221
12-1 PM	10.0%	4.7%	7.9%	486	38	232	170	8	73	6	35	0	253
1-2 PM	9.3%	4.4%	8.8%	452	36	258	158	7	68	5	39	0	241
2-3 PM	9.0%	5.4%	9.1%	437	44	267	153	9	66	7	40	0	239
3-4 PM	8.8%	5.8%	9.2%	427	47	270	149	9	64	7	41	0	235
4-5 PM	9.2%	8.3%	7.8%	447	67	229	156	13	67	10	34	0	242
5-6 PM	9.3%	10.1%	5.6%	452	82	164	158	16	68	12	25	0	239
6-7 PM	8.0%	7.9%	2.2%	389	64	65	136	13	58	10	10	0	193
7-8 PM	6.1%	6.3%	1.3%	296	51	38	104	10	44	8	6	0	146
8-9 PM	4.4%	5.1%	0.7%	214	41	21	75	8	32	6	3	0	105
9-10 PM	2.9%	3.9%	0.3%	141	32	9	49	6	21	5	1	0	69

Signal Warrants

Using the resultant volumes shown in Tables 2 and 3, the warrants with the exception of the pedestrian, accident, and school warrants were analyzed. The minor approach of the full access driveway is the westbound approach. The left-turn volumes and 50% of the right-turn volumes will be considered for triggering the need for the signal. There will be two left-turn lanes and one right-turn lane. The speed limit on Kanner Highway is 45 MPH. The thresholds will be based on two or more lanes for the major street and two or more lanes for the minor street.

Attachment C provides the Traffic signal warrant summary of the Costco Boulevard/Kanner Highway intersection at buildout of the development.

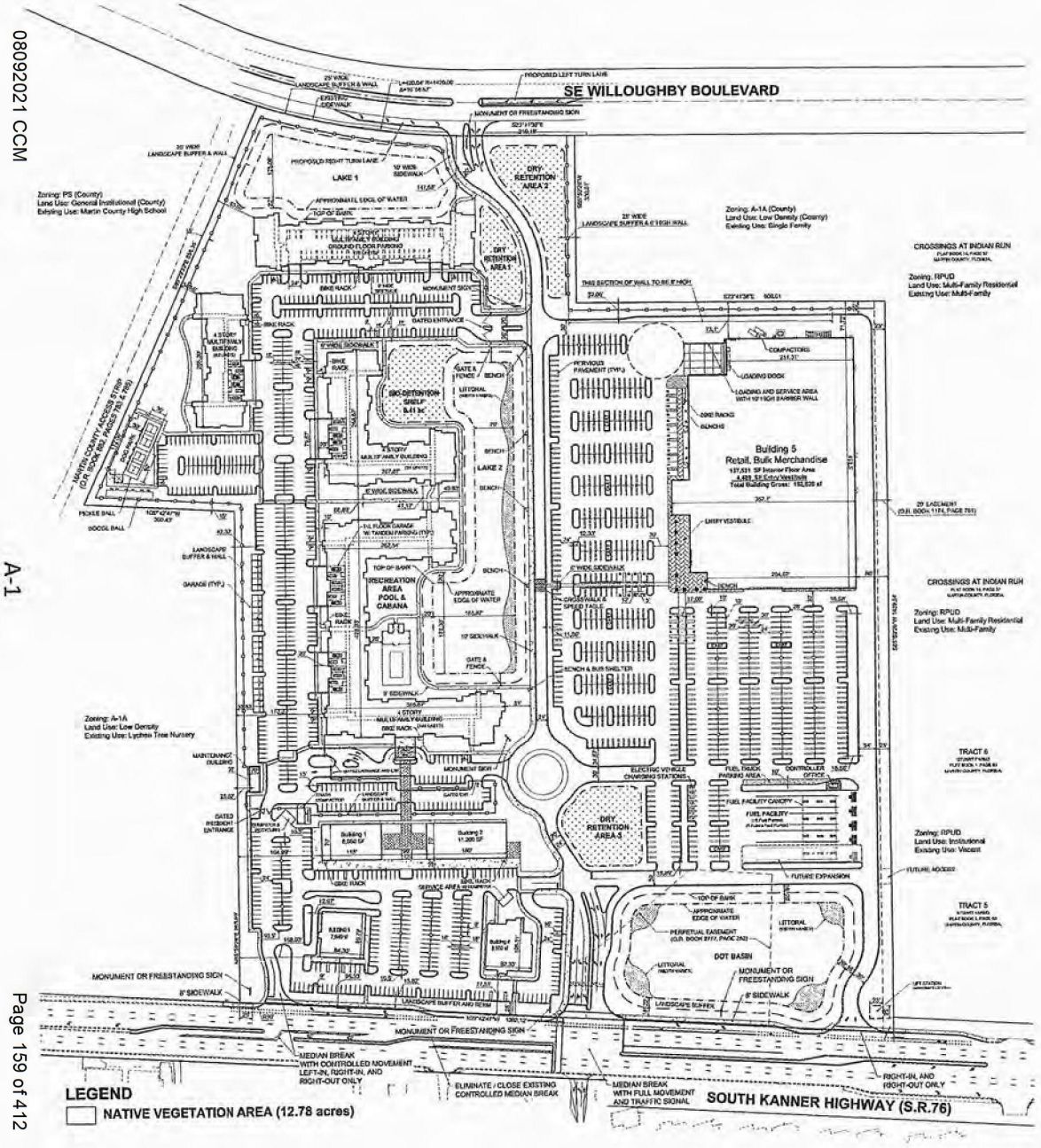
As shown, all warrants will be satisfied at 100% thresholds by completion of M&M Retail.

Conclusion

The M&M Retail development will be commencing construction once approvals are in hand. The Kanner Highway and full access driveway intersection will be constructed as part of the Discount Club site plan construction. Due to the high volumes already on Kanner, the high speed of travel and the concentration of the development in the southbound left turn lane, a signal will meet monitored warrants within days of the intersection being operational. Therefore, we request that the signal be permitted for installation during the initial construction of the Kanner Highway and full access driveway intersection improvements.

ATTACHMENT A

Site Plan



Site Data

Total Site Area:	2,133,987 sf	(48.99 ac)	100%
Future Land Use Designation (Proposed):	Neighborhood Special District		
Proposed Zoning:	CPUD		
Building Height (max):	45'		
Total Building Area:	361,572 sf	(8.30 ac)	16.9%

Pervious / Impervious Calculations

Impervious Area:	1,512,215 sf	(34.72 ac)	70.9%
Buildings:	361,572 sf	(8.30 ac)	16.9%
Pavement & Curb:	857,054 sf	(19.68 ac)	40.2%
Sidewalks, Patios & Pool:	105,309 sf	(2.42 ac)	5.0%
Lakes:	109,465 sf	(2.51 ac)	5.1%
DOT Basin:	78,815 sf	(1.81 ac)	3.7%
Pervious Area:	621,772 sf	(14.27 ac)	29.1%
Landscape:	548,757 sf	(12.59 ac)	25.7%
Dry Retention Areas:	53,159 sf	(1.27 ac)	2.5%
Bio Detention Area:	17,860 sf	(0.41 ac)	0.8%
Open Space			
Required (25% of 48.99 ac)		(12.25 ac)	25.0%
Provided*:		(12.78 ac)	26.1%
* Includes Landscape with Native Vegetation Areas, Dry Retention Areas & Bio Detention Area; Excludes Parking Area Interior Landscape Areas.			
Interior Landscape Areas:		(1.49 ac)	3.0%

Parking Requirements

Parking Required (per Kanner CPUD):

Retail, bulk merchandise: (1 space / 250 sf):	155,905 sf / 250 sf = 624 Spaces
Fuel Facility (1 space / 250 sf + 2 / bay + 1/vacuum):	20 Spaces
Retail (1 space / 250 sf):	19,250 sf / 250 sf = 77 Spaces
Building 3 (1 space per 100 sf + 1 per each employee): 7,540 sf / 100 = 77 spaces + 13 employees	90 Spaces
Building 4 (1 space per 3 Seats + 1 per each employee): @ 300 seats + 18 employees:	118 Spaces
Multi-Family:	692 Spaces
One Bedroom Units (128) @ 1.5 per unit:	192 Spaces
Two Bedroom Units (240) @ 2.0 per unit:	480 Spaces
Three Bedroom Units (90) @ 2.0 per unit:	36 Spaces
Total Parking Required:	**1,621 Spaces**

Parking Provided:

Retail, bulk merchandise (per Kanner CPUD):	720 Spaces
Standard:	632 Spaces
Handicap:	28 Spaces
Fuel Facility:	20 Spaces
Retail:	77 Spaces
Standard:	73 Spaces
Handicap:	4 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Multi-Family (per Kanner CPUD 1.71 spaces / unit):	647 Spaces
Standard:	630 Spaces
Handicap:	17 Spaces
Total Parking Provided:	**1,672 Spaces**

Bicycle Parking

Retail, Bulk Merchandise		Buildings 3 & 4	
Required:	20 Spaces	Required:	8 Spaces
Provided:	20 Spaces	Provided:	8 Spaces
Buildings 1 & 2		Multi-Family	
Required:	6 Spaces	Required:	20 Spaces
Provided:	6 Spaces	Provided:	20 Spaces

Neighborhood Special District

Residential Density		
Maximum UPA (Non- CRA):		15.0
Provided UPA:	7.7 UPA (379 units / 48.99 ac)	
Site Area	48.99 ac	
Residential		
Provided Area:	14.70 ac	30.0%
Non-Residential		
Provided Area:	34.29 ac	70.0%
Commercial Area:	22.80 ac	46.6%
Stormwater Tracts:	8.95 ac	18.3%
Right-of-Way:	2.51 ac	5.1%
Non-Residential Floor Area Ratio		
Maximum Allowable Area:	4,267,974 sf	2.0 FAR
Provided Area:	193,140 sf	0.09 FAR

Building Data

Building Coverage:	361,572 sf
Retail, Bulk Merchandise:	137,234 sf
Fuel Facility Office:	125 sf
Retail:	19,250 sf
Restaurant:	16,249 sf
Multi-Family (Indoor Garages, Cabana & Maintenance)	188,426 sf

Native Vegetation Requirement

Total Site Area:	**48.99 acres**
Wetlands:	6.50 acres
Surface Waters:	4.10 acres
Upland Area:	38.39 acres

Required Native Vegetation Area (25.0%): 9.80 acres
Provided Native Vegetation Area (33.3%): 12.78 acres

General Notes:

- All building, parking and access areas shall document compliance with the requirements of the American Disabilities Act prior to the issuance of a building permit.
- Refer to Landscape Plan for landscape details and specifications.
- All exotic plant species shall be removed and all required landscaping shall be installed prior to the issuance of a Certificate of Occupancy.
- The applicant will request in writing, prior to any land clearing, that the City of Stuart Development Dept. Perform a field inspection to determine if barricades have been properly installed on the site.
- All signs will comply with the sign regulations at the time of permitting.
- "No Trespass" signs to be posted during construction and displayed at all entrances and exits.
- All building numbers to be no less than four (4) inches tall, illuminated, and not blocked by landscaping.
- Building numbers shall be placed at front and rear entrances.
- Sediment control measures shall be maintained in working order at all times.
- Provisions shall be made to minimize the deposit of sediment by transport vehicles onto public paved surfaces.
- Sediment basin and traps, perimeter dikes, sediment barriers and other measures intended to stop sediment shall be constructed as a first step in any land activity and shall be made functional before land disturbance takes place.
- All public sidewalks are to be a minimum of 6' in width.
- A crime watch contact shall be established on site, to include all residents and businesses.
- Any sidewalk damaged during construction shall be repaired or replaced.
- MC Units, trash receptacles, back flow preventor, and other above ground utilities shall be screened with landscape per City of Stuart LDR.
- Knox Box key vaults shall be provided as required.
- No permanent trailers shall be permitted on site. A temporary construction trailer shall be allowed during the course construction activities.
- Detectable warning surfaces shall be provided at all sidewalk ramps and crosswalks.
- Buildings 1, 2, 3, 4 & 5 may include any use allowed in the CPUD Agreement and any additional additional parking required shall be debited against the excess parking provided.

Land Use Site Data

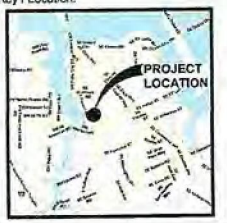
Total Site Area:	48.99 ac	
Right of Way:	2.51 ac	5.1%
Residential:	14.70 ac	30.0%
Commercial:	22.80 ac	46.6%
Retail, Bulk Merchandise:	17.24 ac	
Kanner Highway Parcel:	5.59 ac	
Stormwater Tracts:	8.95 ac	18.3%
Lake 1:	1.77 ac	
Lake 2:	2.85 ac	
Dry Retention Area 1:	0.37 ac	
Dry Retention Area 2.	0.78 ac	
Dry Retention Area 3.	0.48 ac	
DOT Basin:	2.75 ac	

Density & Floor Area Ratio

Residential	
Residential Units:	379
Density Overall Site:	7.7 UPA (379 units / 48.99 ac)
Commercial	
Project Site Area:	2,133,987 sf
Total Commercial Building Area:	193,140 sf
Floor Area Ratio:	0.09 FAR

lucido & associates
701 E Ocean Blvd, Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220

Key / Location:



Project Team:

Applicant:
MAM Realty Partners
1360 Shelton Rd
Philadelphia, PA 19124
724-834-3776

Engineer:
Mower Consulting
410 Fieldstone Blvd, Suite 104
Exton, PA 19341
610-2544140

Engineer:
EDC Engineering
Rod Kennedy
10250 SW Village Pkwy, Suite 201
Port St Lucie, Florida, 34987

Surveyor
EDC Engineering
Rod Kennedy
10250 SW Village Pkwy, Suite 201
Port St Lucie, Florida, 34987

Landscape Architect and Planner:
Lucido & Associates
701 E Ocean Blvd
Stuart, FL 34994
772-220-2100

Environmental
ESI Consultants
Ed Vosbeurg
1900 SE Monterey Commons Blvd #208
Stuart, Florida 34996

KANNER CPUD

City of Stuart, Martin County, Florida

Master Site Plan

Date	By	Description
8.21.2020	SLS	Initial Submittal
12.18.2020	SLS	1st Resubmittal
03.16.2021	SLS	2nd Resubmittal
04.21.2021	SLS	3rd Resubmittal
05.13.2021	SLS	LPA Comments
06.16.2021	SLS	Reduced Residential Units

NORTH

SCALE: 1" = 100'

0 50' 100' 200'

REG. # 1018
Thomas P. Lucido

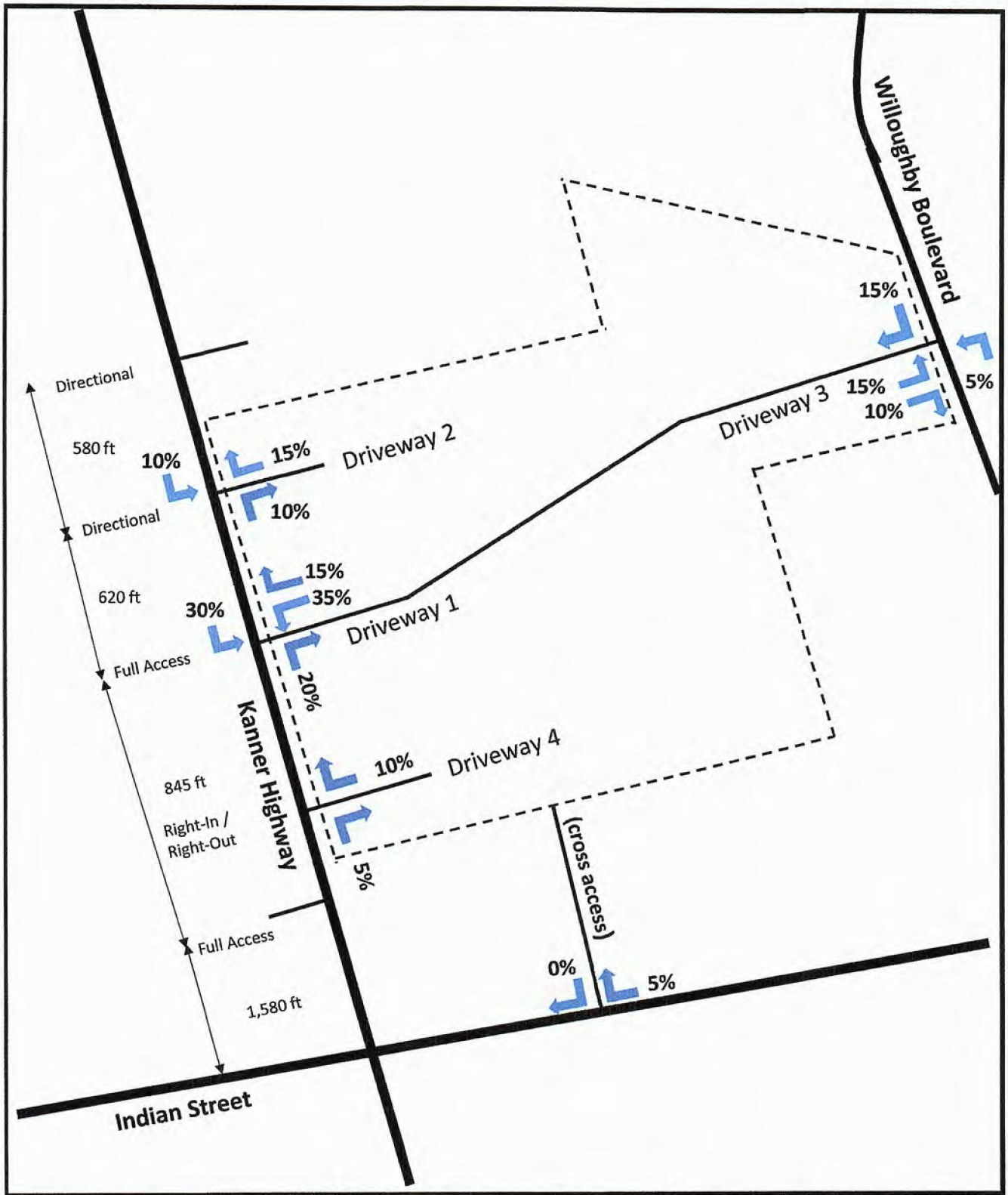
Designer	—
Manager	—
Project Number	—
Municipal Number	—
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Sheet
1 of 1

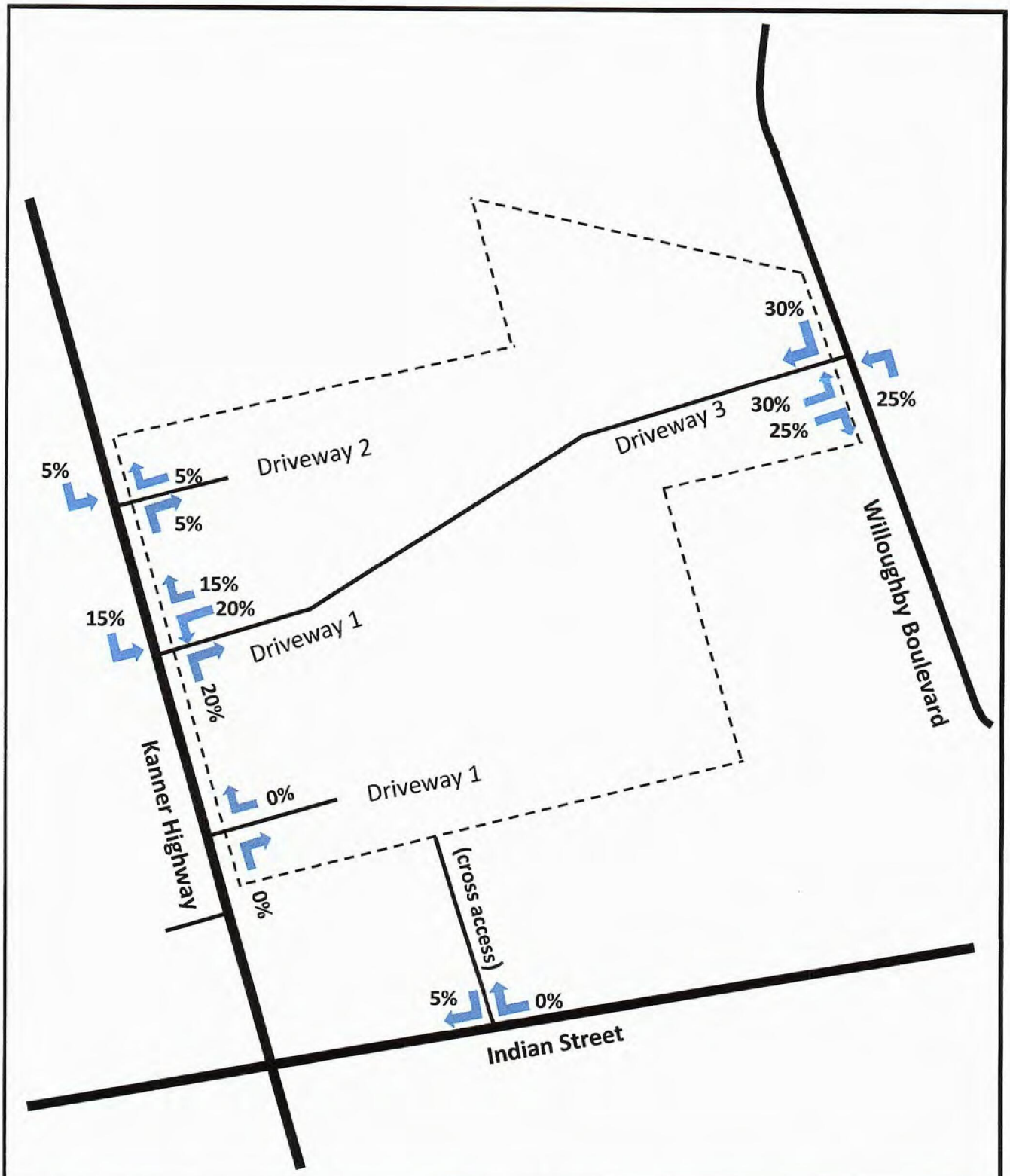
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ATTACHMENT B

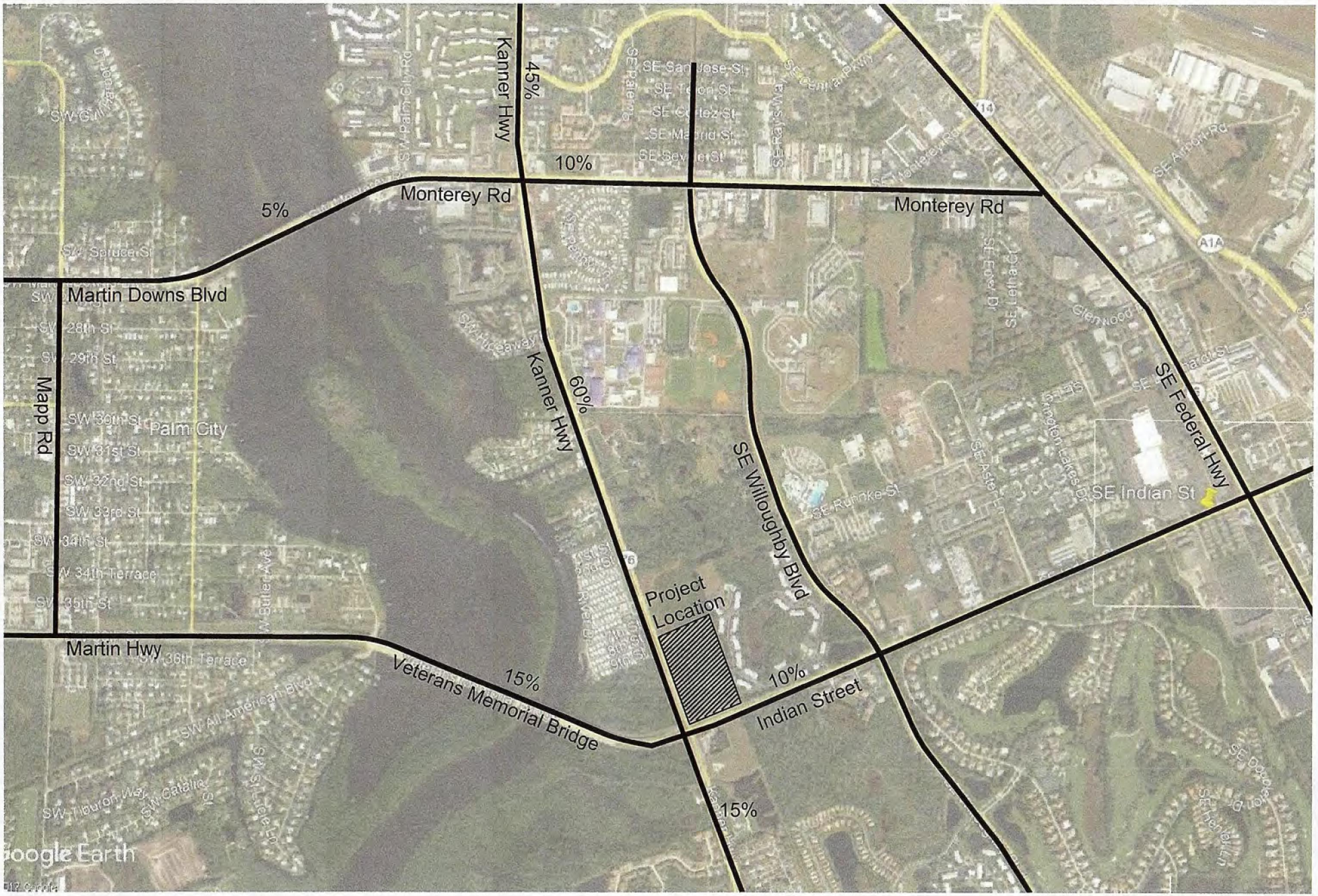
Percent Assignment
and
Distribution Percentage



N · O'ROURKE ENGINEERING & PLANNING NTS · 22 SE Seminole St, Stuart, Fl, 34994 Job #: MR18031.0 · 6.25.21	Legend = Project Location = Direction 15% = Percent Project Traffic xx ft. = Driveway Spacing	Figure 2a Driveway Assignment - Retail M & M Retail



N O'ROURKE ENGINEERING & PLANNING NTS 22 SE Seminole St Stuart, Fl, 34994 Job #: MR18031.0 Date: 8/31/18	Legend = Project Location = Direction 15% = Percent Project Traffic xx ft. = Driveway Spacing	Figure 2b Driveway Assignment - Residential M & M Retail



N NTS O'ROURKE ENGINEERING & PLANNING	LEGEND % = Project Percent Assignment	FIGURE - 2 Project Percent Assignment MMHS - SB 10
JOB#: MR17034.0 | FILE: C4.SB10_Figure 2_12.08.17 | DATE: December 8, 2017		

08092021 CCM

Land Use	221 Multifamily Housing (Mid-Rise)						222 Multifamily Housing (High-Rise)											
Setting	General Urban/ Suburban		Dense Multi-Use Urban		Center City Core		Dense Multi-Use Urban						Center City Core					
Time Period	Weekday		Weekday		Weekday		Weekday		Saturday		Sunday		Weekday		Saturday		Sunday	
Trip Type	Vehicle		Vehicle		Vehicle		Person		Person		Person		Person		Person		Person	
# Data Sites	8		4		3		8		8		8		6		6		5	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0.5	4.7	0.5	5.0	1.3	3.5	1.6	4.2	3.1	6.2	2.4	6.4	0.8	6.1	1.9	7.6	2.4	6.8
12:15	0.4	4.6	0.7	5.0	1.3	4.4	1.3	4.4	2.8	6.0	2.1	6.1	0.8	5.8	1.8	7.5	2.0	6.6
12:30	0.3	4.3	0.5	5.3	0.7	4.6	1.1	4.3	2.5	5.9	1.9	6.0	0.7	5.9	1.3	7.2	1.8	6.6
12:45	0.3	4.5	0.7	4.8	0.4	4.4	0.8	4.5	2.2	5.9	1.6	5.9	0.4	5.4	1.1	7.4	1.6	6.8
1:00	0.3	4.4	0.7	4.5	0.2	5.3	0.7	4.7	1.8	5.8	1.4	6.1	0.3	5.3	1.0	6.6	1.5	6.6
1:15	0.3	4.5	0.5	4.4	0.2	4.6	0.5	4.5	1.4	6.1	1.4	6.3	0.2	5.3	0.9	6.3	1.3	7.1
1:30	0.3	5.0	0.7	3.8	0.7	4.6	0.4	4.9	1.2	6.1	1.3	6.8	0.2	5.3	0.8	6.2	1.0	7.0
1:45	0.3	5.2	0.5	4.7	0.7	4.2	0.4	5.2	1.0	6.3	1.2	7.2	0.2	5.3	0.7	6.2	0.9	6.9
2:00	0.2	5.4	0.6	4.6	0.9	4.4	0.3	5.4	0.9	6.3	1.2	7.0	0.2	4.7	0.9	6.2	0.8	6.8
2:15	0.2	5.4	0.7	4.4	0.9	4.9	0.4	5.7	0.9	6.0	0.9	6.9	0.1	4.7	0.9	6.1	0.6	6.7
2:30	0.2	5.3	0.7	5.2	0.7	4.6	0.4	5.9	0.7	6.3	0.7	6.4	0.2	5.2	0.8	6.1	0.7	6.7
2:45	0.3	5.2	0.6	5.2	0.4	5.3	0.4	5.8	0.8	6.5	0.8	6.3	0.3	5.5	0.8	6.1	0.5	6.7
3:00	0.3	5.8	0.5	5.3	0.2	5.1	0.3	5.6	0.7	6.6	0.6	6.4	0.3	6.1	0.6	6.5	0.4	6.6
3:15	0.4	6.5	0.2	5.8	0.2	4.6	0.3	6.1	0.7	6.5	0.6	6.4	0.3	6.3	0.4	6.8	0.5	6.4
3:30	0.4	7.1	0.2	6.0	0.2	5.7	0.3	5.9	0.7	6.4	0.6	6.6	0.4	6.1	0.4	6.8	0.4	6.4
3:45	0.5	7.9	0.3	7.2	1.1	4.9	0.4	6.0	0.7	6.4	0.5	6.4	0.3	6.0	0.4	6.8	0.4	6.0
4:00	0.5	8.3	0.3	7.4	1.1	5.3	0.6	6.5	0.7	6.5	0.6	7.0	0.4	5.8	0.5	7.0	0.4	6.0
4:15	0.8	9.4	0.5	8.2	1.3	6.8	0.7	6.1	0.6	7.0	0.5	7.4	0.5	5.7	0.4	6.7	0.3	6.1
4:30	1.1	9.8	1.1	8.0	1.5	6.6	0.9	6.6	0.6	7.4	0.5	7.8	0.6	6.0	0.4	7.0	0.3	6.5
4:45	1.5	10.1	1.4	7.0	1.3	7.3	1.0	7.0	0.5	7.3	0.5	8.1	0.8	6.4	0.4	6.6	0.2	7.0
5:00	1.7	10.1	1.9	6.5	1.8	7.9	1.2	7.0	0.6	7.6	0.6	7.7	0.9	6.6	0.4	6.9	0.3	7.3
5:15	1.8	9.5	2.2	6.3	2.0	6.0	1.4	7.5	0.6	7.3	0.7	7.6	1.0	7.2	0.5	7.1	0.3	7.3
5:30	2.3	9.0	2.8	6.5	2.2	6.2	1.7	8.1	0.7	7.1	0.8	7.3	1.2	7.2	0.6	6.5	0.4	6.5
5:45	3.0	8.5	3.4	6.3	2.6	7.5	2.0	7.9	0.8	7.1	0.9	6.8	1.5	7.5	0.6	6.5	0.6	7.2
6:00	4.0	7.9	4.1	7.7	4.9	6.4	2.6	7.9	1.0	6.8	1.0	7.0	2.0	7.9	0.7	6.1	0.7	7.3
6:15	5.1	7.2	5.2	7.1	6.8	7.1	3.5	7.7	1.2	6.6	1.0	6.5	2.7	7.8	1.1	6.1	1.0	7.1
6:30	6.0	6.7	6.0	7.0	7.7	7.1	4.2	7.2	1.5	6.5	1.0	7.0	3.4	7.7	1.3	6.6	1.2	7.6
6:45	6.8	6.3	9.2	6.5	9.3	5.5	5.5	6.9	1.8	6.3	1.2	7.3	4.2	7.8	1.6	6.8	1.4	6.9
7:00	7.5	6.3	10.9	5.5	8.6	6.2	6.8	6.7	2.1	6.0	1.3	7.0	4.7	7.6	2.1	6.6	1.7	6.6
7:15	7.5	6.1	12.0	5.3	7.5	6.4	7.8	6.5	2.5	5.8	1.6	6.8	5.8	7.1	2.1	6.6	2.1	6.6
7:30	7.5	6.1	11.8	5.0	7.9	5.7	8.8	6.2	2.7	5.6	2.0	6.2	7.1	6.7	2.7	6.1	2.4	6.4
7:45	6.9	5.9	9.0	5.1	7.7	5.3	8.5	6.0	3.1	5.5	2.4	5.7	7.8	5.9	3.1	5.6	2.8	6.2
8:00	6.2	5.1	7.2	4.7	7.5	4.6	8.0	5.7	3.6	5.5	2.8	5.6	8.1	5.9	3.3	5.4	3.2	6.0
8:15	5.7	4.7	5.8	4.2	7.1	4.9	6.8	5.5	4.1	5.5	3.3	5.5	7.8	5.5	3.9	4.7	3.7	5.6
8:30	4.9	4.4	4.7	4.3	6.4	4.9	6.1	5.1	4.5	5.3	3.7	5.0	7.2	5.3	4.1	4.4	4.1	5.1
8:45	4.6	4.1	4.8	4.0	5.7	5.7	5.8	4.7	4.9	5.1	3.7	4.8	7.0	5.3	5.1	4.4	4.7	5.0
9:00	4.3	3.9	4.0	3.8	5.3	5.1	5.1	4.4	5.0	4.9	4.1	4.5	6.7	4.7	5.6	4.1	5.0	4.7
9:15	4.1	3.6	3.9	4.1	4.9	4.4	5.1	3.8	4.7	4.8	4.5	4.8	6.1	4.5	5.9	4.4	5.2	4.4
9:30	4.0	3.3	3.7	3.7	5.1	5.3	4.7	3.5	4.6	4.5	4.8	4.9	5.4	4.4	6.3	4.3	5.3	4.1
9:45	3.8	2.8	3.6	3.7	4.2	4.9	4.3	3.4	4.6	4.3	5.3	5.3	4.9	3.8	6.1	4.1	5.7	3.5
10:00	3.7	2.7	4.1	3.6	3.5	5.1	4.3	3.1	4.8	4.2	5.6	5.1	4.6	3.5	6.4	4.1	6.2	3.3
10:15	3.8	2.5	4.3	3.4	3.3	4.6	4.4	3.4	5.2	4.1	5.6	4.6	4.2	3.3	6.4	3.4	6.8	3.1
10:30	4.0	2.2	4.2	3.0	2.4	3.3	4.3	3.1	5.8	4.0	5.5	4.1	4.4	2.7	6.3	3.4	7.5	2.5
10:45	4.3	1.9	3.8	2.5	2.9	2.4	4.2	2.9	5.7	3.9	5.6	3.4	4.6	2.4	6.6	3.3	7.5	2.3
11:00	4.5	1.5	4.4	2.3	3.3	2.4	4.5	2.8	5.6	3.6	5.8	3.0	4.9	2.1	6.6	2.9	7.5	2.0
11:15	4.7	1.2	4.3	1.6	4.0	1.8	4.4	2.3	6.0	3.5	6.2	2.8	5.5	1.6	7.2	2.6	7.1	2.2
11:30	4.9	0.9	4.6	1.2	4.0	1.8	4.4	2.1	5.8	3.4	6.3	2.5	5.4	1.2	7.7	2.5	6.9	2.5
11:45	4.6	0.6	4.8	0.9	4.4	1.8	4.3	1.9	6.0	3.2	6.5	2.5	5.8	1.1	7.3	2.2	6.9	2.5

Percent of Daily Traffic During the 60-Minute Period Beginning at Displayed Time

Land Use	820 Shopping Center		840 Automobile Sales (New)		841 Automobile Sales (Used)		842 Recreational Vehicle Sales		843 Automobile Parts Sales		848 Tire Store	
Setting	General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban	
Time Period	Weekday		Weekday		Weekday		Weekday		Weekday		Weekday	
Trip Type	Vehicle		Vehicle		Vehicle		Vehicle		Vehicle		Vehicle	
# Data Sites	10		6		14		5		7		6	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0.2	10.0	0.0	9.4	0.0	9.1	0.0	10.9	0.0	8.6	0.0	7.4
12:15	0.1	10.1	0.0	8.7	0.0	9.9	0.0	10.5	0.0	8.9	0.0	8.7
12:30	0.2	9.8	0.0	9.0	0.0	9.9	0.0	10.7	0.0	9.2	0.0	9.4
12:45	0.1	9.6	0.0	8.9	0.0	9.4	0.0	8.7	0.0	9.8	0.0	11.3
1:00	0.1	9.3	0.0	9.5	0.0	8.3	0.0	8.3	0.0	8.6	0.0	11.8
1:15	0.1	9.2	0.0	9.8	0.0	7.5	0.0	8.5	0.0	7.8	0.0	11.9
1:30	0.0	9.2	0.0	10.2	0.0	7.1	0.0	7.7	0.0	7.4	0.0	12.9
1:45	0.0	9.2	0.0	10.2	0.0	6.3	0.0	8.2	0.0	6.7	0.0	11.0
2:00	0.0	9.0	0.0	10.0	0.0	7.7	0.0	8.2	0.0	7.0	0.0	10.4
2:15	0.0	8.8	0.0	9.8	0.0	8.5	0.0	9.0	0.0	7.8	0.0	9.1
2:30	0.0	8.8	0.0	9.1	0.0	8.5	0.0	8.0	0.0	8.4	0.0	8.3
2:45	0.0	8.8	0.0	8.9	0.0	8.6	0.0	7.8	0.0	9.0	0.0	9.3
3:00	0.0	8.8	0.0	8.3	0.0	8.4	0.0	7.8	0.0	8.7	0.0	10.1
3:15	0.0	8.9	0.0	8.1	0.0	8.9	0.0	7.0	0.0	8.7	0.0	10.0
3:30	0.0	9.0	0.0	8.1	0.0	9.8	0.0	9.2	0.0	8.4	0.0	9.4
3:45	0.0	9.0	0.0	7.7	0.0	10.9	0.0	9.0	0.0	8.2	0.0	9.5
4:00	0.0	9.2	0.0	7.4	0.0	11.0	0.0	10.0	0.0	8.8	0.0	9.4
4:15	0.0	9.2	0.0	7.5	0.0	11.1	0.0	9.3	0.0	8.5	0.0	9.1
4:30	0.1	9.3	0.0	8.0	0.0	11.4	0.0	8.0	0.0	8.2	0.2	8.4
4:45	0.1	9.4	0.0	8.1	0.0	10.8	0.0	8.8	0.0	7.6	0.2	8.3
5:00	0.1	9.3	0.0	8.2	0.0	10.2	0.0	6.7	0.0	7.5	0.4	6.9
5:15	0.1	9.1	0.0	8.1	0.0	9.6	0.0	5.8	0.0	7.3	0.5	6.1
5:30	0.2	8.7	0.1	6.8	0.0	7.7	0.0	4.3	0.0	7.0	0.5	5.4
5:45	0.2	8.3	0.2	5.9	0.0	6.3	0.0	2.0	0.1	6.7	0.5	3.8
6:00	0.2	8.0	0.7	5.0	0.0	4.5	0.0	1.3	0.3	6.6	0.4	3.0
6:15	0.4	7.6	1.7	4.1	0.0	3.2	0.3	0.8	0.8	5.5	0.7	2.3
6:30	0.6	7.1	2.9	3.6	0.2	2.4	0.3	0.7	1.0	5.3	1.0	1.9
6:45	0.8	6.7	4.3	3.0	0.7	1.8	2.3	0.5	1.5	5.5	1.8	1.4
7:00	1.1	6.1	5.7	2.9	1.9	1.9	5.5	0.2	2.1	5.0	2.9	1.2
7:15	1.4	5.8	6.6	1.7	3.7	1.7	6.5	0.0	2.5	5.4	3.4	0.7
7:30	1.6	5.5	7.8	1.2	4.3	1.6	8.5	0.0	4.3	5.5	4.9	0.3
7:45	1.8	4.9	8.2	0.7	4.9	1.6	7.0	0.0	4.8	5.2	6.6	0.5
8:00	2.0	4.4	8.3	0.0	5.0	1.1	6.3	0.0	5.5	4.3	7.2	0.5
8:15	2.3	4.2	8.4	0.0	7.2	0.4	9.3	0.0	6.6	3.5	7.7	0.3
8:30	2.6	3.8	7.9	0.0	7.7	0.2	9.5	0.0	6.7	2.7	7.8	0.3
8:45	3.1	3.4	8.2	0.0	9.0	0.0	12.5	0.0	7.6	1.9	8.3	0.0
9:00	3.6	2.9	7.5	0.0	11.0	0.0	14.0	0.0	8.2	1.7	9.4	0.0
9:15	4.1	2.3	7.8	0.0	9.7	0.0	12.2	0.0	8.1	1.3	10.9	0.0
9:30	4.7	1.7	7.6	0.0	10.4	0.0	12.7	0.0	7.8	0.8	11.3	0.0
9:45	5.1	1.4	7.8	0.0	11.0	0.0	12.4	0.0	8.0	0.5	10.9	0.0
10:00	5.6	1.1	8.2	0.0	10.2	0.0	12.4	0.0	8.4	0.1	10.7	0.0
10:15	6.3	0.8	8.4	0.0	9.7	0.0	12.5	0.0	8.0	0.0	9.9	0.0
10:30	6.9	0.7	8.7	0.0	10.4	0.0	11.2	0.0	8.5	0.0	9.2	0.0
10:45	7.6	0.5	8.5	0.0	9.7	0.0	11.7	0.0	8.5	0.0	8.9	0.0
11:00	8.3	0.5	8.8	0.0	9.8	0.0	8.3	0.0	8.6	0.0	8.3	0.0
11:15	8.9	0.4	9.4	0.0	9.0	0.0	8.0	0.0	9.3	0.0	8.5	0.0
11:30	9.5	0.3	9.1	0.0	8.5	0.0	9.2	0.0	8.8	0.0	8.6	0.0
11:45	9.8	0.3	9.4	0.0	9.0	0.0	9.0	0.0	8.4	0.0	7.7	0.0

Percent of Daily Traffic During the 60-Minute Period Beginning at Displayed Time

Land Use	720 Medical-Dental Office Building						730 Government Office Building		731 State Motor Vehicles Department	
Setting	General Urban/Suburban						General Urban/Suburban		General Urban/Suburban	
Time Period	Weekday		Saturday		Sunday		Weekday		Weekday	
Trip Type	Vehicle		Vehicle		Vehicle		Vehicle		Vehicle	
# Data Sites	19		1		1		7		1	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0.1	7.9	0.0	17.9	0.0	20.0	0.0	9.8	0.0	8.9
12:15	0.1	7.9	0.0	21.6	0.0	20.0	0.0	9.3	0.0	12.1
12:30	0.1	8.0	0.0	18.7	0.0	10.0	0.0	9.5	0.0	13.1
12:45	0.1	8.4	0.0	14.9	0.0	0.0	0.0	9.3	0.0	11.9
1:00	0.1	8.8	0.0	10.4	0.0	0.0	0.0	8.8	0.0	10.8
1:15	0.1	8.9	0.0	0.0	0.0	0.0	0.0	9.2	0.4	8.5
1:30	0.0	9.3	0.0	0.0	0.0	0.0	0.0	8.8	0.4	7.5
1:45	0.1	9.2	0.0	0.0	0.0	0.0	0.0	9.5	0.4	8.3
2:00	0.1	9.1	0.0	0.0	0.0	20.0	0.0	9.8	0.4	8.7
2:15	0.1	9.3	0.0	0.0	0.0	20.0	0.0	8.5	0.0	8.3
2:30	0.1	9.2	0.0	0.0	0.0	20.0	0.0	9.3	0.0	7.9
2:45	0.0	9.3	0.0	0.0	0.0	20.0	0.0	8.8	0.0	7.9
3:00	0.1	9.2	0.0	0.0	0.0	0.0	0.0	8.2	0.0	7.9
3:15	0.2	8.7	0.0	0.0	0.0	0.0	0.0	8.8	0.4	6.0
3:30	0.4	8.6	0.0	0.0	0.0	0.0	0.0	7.3	0.4	5.0
3:45	0.5	8.1	0.0	0.0	0.0	0.0	0.0	6.3	0.8	9.4
4:00	0.6	7.8	0.0	0.0	0.0	0.0	0.0	6.3	1.2	8.7
4:15	0.6	8.3	0.0	0.0	0.0	0.0	0.0	8.9	0.8	10.2
4:30	0.5	7.4	0.0	0.0	0.0	0.0	0.0	8.2	0.8	10.0
4:45	0.4	6.7	0.0	0.0	0.0	0.0	0.0	6.9	0.4	5.6
5:00	0.4	5.6	0.0	0.0	0.0	0.0	0.0	5.5	0.0	5.2
5:15	0.5	4.2	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.6
5:30	0.7	3.5	0.0	0.0	20.0	0.0	0.0	0.4	0.0	5.8
5:45	0.9	2.7	0.0	0.0	20.0	0.0	0.0	0.3	0.0	5.8
6:00	1.4	2.2	3.7	0.0	30.0	0.0	0.2	0.0	0.8	8.9
6:15	2.0	1.7	4.5	0.0	30.0	0.0	1.3	0.0	1.2	7.5
6:30	2.8	1.5	4.5	0.0	10.0	0.0	1.8	0.0	1.2	6.2
6:45	4.0	1.4	4.5	0.0	10.0	0.0	3.3	0.0	2.7	5.6
7:00	5.4	1.3	3.0	0.0	0.0	0.0	7.1	0.0	5.2	2.5
7:15	6.7	1.1	5.2	0.0	0.0	0.0	9.3	0.0	8.1	3.3
7:30	7.6	1.1	6.7	0.0	0.0	0.0	12.0	0.0	10.0	3.7
7:45	8.2	1.0	8.2	0.0	0.0	0.0	13.8	0.0	9.8	2.9
8:00	8.9	0.7	9.0	0.0	0.0	0.0	12.4	0.0	8.7	2.5
8:15	9.3	0.6	9.7	0.0	0.0	0.0	11.8	0.0	7.3	1.7
8:30	9.7	0.5	11.2	0.0	0.0	0.0	10.7	0.0	7.3	0.4
8:45	10.3	0.4	11.9	0.0	0.0	0.0	9.5	0.0	8.9	0.0
9:00	10.4	0.3	11.2	0.0	10.0	0.0	8.5	0.0	7.5	0.0
9:15	10.7	0.2	12.7	0.0	10.0	0.0	8.5	0.0	7.1	0.0
9:30	10.7	0.2	17.9	0.0	20.0	0.0	8.1	0.0	6.7	0.0
9:45	10.5	0.2	21.6	0.0	30.0	0.0	8.8	0.0	5.0	0.0
10:00	10.1	0.2	25.4	0.0	20.0	0.0	10.1	0.0	5.4	0.0
10:15	9.9	0.1	23.9	0.0	20.0	0.0	10.2	0.0	5.2	0.0
10:30	9.7	0.1	21.6	0.0	10.0	0.0	12.5	0.0	4.8	0.0
10:45	9.5	0.2	20.1	0.0	0.0	0.0	12.9	0.0	6.2	0.0
11:00	9.1	0.1	19.4	0.0	0.0	0.0	13.4	0.0	6.4	0.0
11:15	8.8	0.2	22.4	0.0	0.0	0.0	13.2	0.0	7.3	0.0
11:30	8.3	0.1	19.4	0.0	10.0	0.0	11.4	0.0	8.7	0.0
11:45	8.0	0.0	18.7	0.0	20.0	0.0	10.6	0.0	8.3	0.0

Percent of Daily Traffic During the 60-Minute Period Beginning at Displayed Time

ATTACHMENT C

Traffic Signal Warrant Summary

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Stuart** Engineer: **James Kemp**
County: **89 – Martin** Date: **June 25, 2021**
District: **Four**

Major Street: **Kanner Highway** Lanes: **3** Major Approach Speed: **45**
Minor Street: **M&M Full Access Dwy (Costco Blvd)** Lanes: **3** Minor Approach Speed: **35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied for eight hours. ☑ Yes ☐ No

Warrant 1 is also satisfied if both Condition A and Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems). ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

100% Satisfied: ☐ Yes ☑ No
80% Satisfied: ☑ Yes ☐ No
70% Satisfied: ☑ Yes ☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
Major	1,848	1,846	1,680	1,867	1,925	2,010	2,001	1,516
Minor	221	253	241	239	235	242	239	193

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable: ☑ Yes ☐ No
100% Satisfied: ☑ Yes ☐ No
80% Satisfied: ☑ Yes ☐ No
70% Satisfied: ☑ Yes ☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
Major	1,848	1,846	1,680	1,867	1,925	2,010	2,001	1,516
Minor	221	253	241	239	235	242	239	193

Existing Volumes

Form 750-020-01
TRAFFIC ENGINEERING
10/15

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Stuart**
County: **89 – Martin**
District: **Four**

Engineer: **James Kemp**
Date: **June 25, 2021**

Major Street: **Kanner Highway** Lanes: **3** Major Approach Speed: **45**
Minor Street: **M&M Full Access Dwy (Costco Blvd)** Lanes: **3** Minor Approach Speed: **35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ Yes ☐ No

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

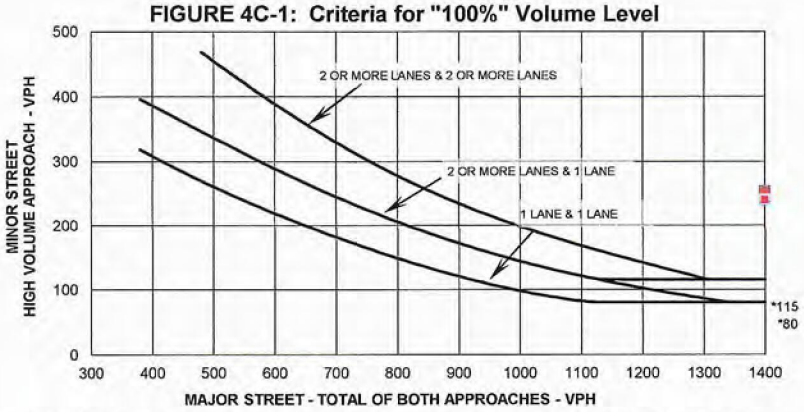
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
12:00 PM	1846	253
1:00 PM	1680	241
4:00 PM	2010	242
5:00 PM	2001	239

Plot four volume combinations on the applicable figure below.

FIGURE 4C-1: Criteria for "100%" Volume Level



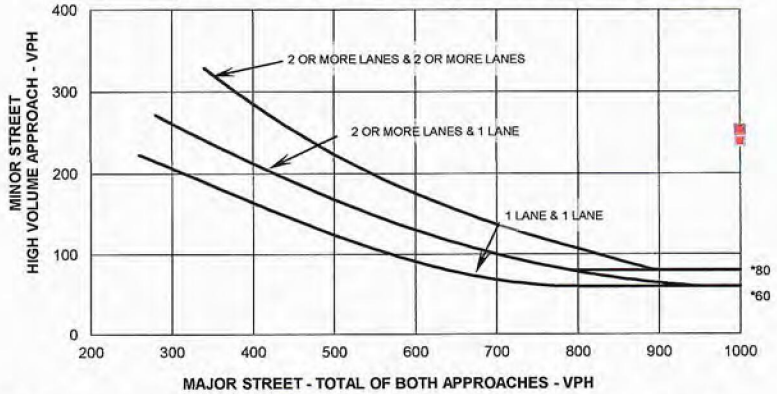
** Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
12:00 PM	1846	253
1:00 PM	1680	241
4:00 PM	2010	242
5:00 PM	2001	239

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Form 750-020-01
TRAFFIC ENGINEERING
10/15

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Stuart** | Engineer: **James Kemp**
County: **89 – Martin** | Date: **June 25, 2021**
District: **Four**

Major Street: **Kanner Highway** | Lanes: **3** | Major Approach Speed: **45**
Minor Street: **M&M Full Access Dwy (Costco Blvd)** | Lanes: **3** | Minor Approach Speed: **35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
12:00 PM	1846	253

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
12:00 PM	1846	253

Criteria

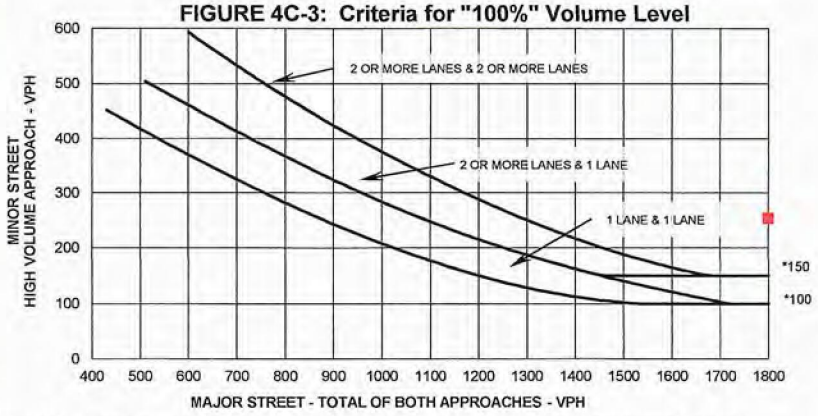
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		84.4
Fulfilled?: ☑ Yes ☐ No		

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		253
Fulfilled?: ☑ Yes ☐ No		

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*	2,099	
Fulfilled?: ☑ Yes ☐ No		

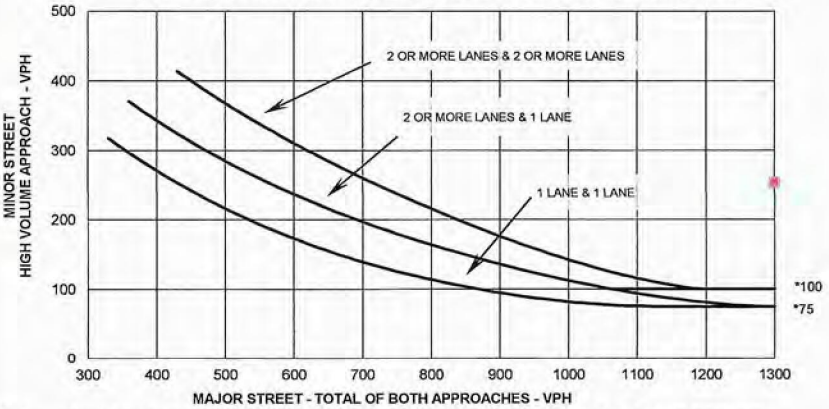
Plot volume combination on the applicable figure below.

FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level
(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)

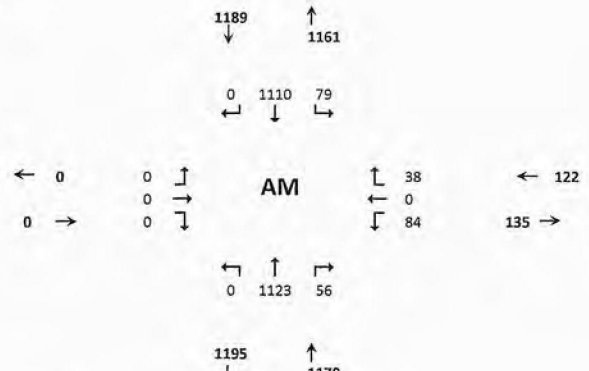


** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Kanner Hwy
E/W STREET: Driveway 1
CONTROL:
FILENAME:
COUNT DATE: 3/20/2019
DAY: Wednesday
CITY: Stuart
INTERSECTION:
REPORT DATE: 12/16/2020
ANALYSIS YEAR: 2024

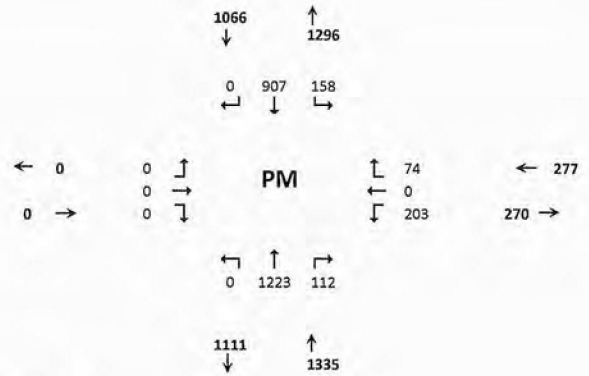
15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	
AM PEAK HOUR IS FROM:			7:15AM TO 8:15AM											
Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149	
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203	
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-	
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%	
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%	
PROJECT	0	30	56	79	0	0	0	0	0	77	0	38	0	
MMHS										7				
Total	0	1123	56	79	1110	0	0	0	0	84	0	38	2490	



Seasonal Factor: 1

	Retail	Residential
Trips In	250	30
Trips Out	179	73
Growth Rate:	1.005	
Years Grown:	5	

15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	
PM PEAK HOUR IS FROM:			4:00PM TO 5:00PM											
Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010	
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061	
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-	
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%	
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%	
Project	0	69	112	158	0	0	0	0	0	165	0	74		
MMHS										38				
Total	0	1223	112	158	907	0	0	0	0	203	0	74	2677	



Seasonal Factor: 1

	Retail	Residential
Trips In:	492	72
Trips Out:	447	44
Growth Rate:	1.005	
Years Grown:	5	

HCS7 Two-Way Stop-Control Report

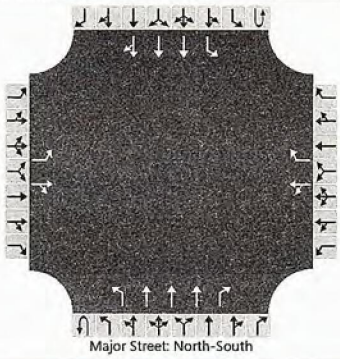
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	6/25/2021
Analysis Year	2024
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	M & M Retail

Site Information

Intersection	Kanner Hwy and Driveway 1
Jurisdiction	City of Stuart
East/West Street	Driveway 1
North/South Street	Kanner Hwy
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	1	0	1	3	1	0	1	3	0
Configuration		L		TR		LT		R		L	T	R		L	T	TR
Volume (veh/h)		2	1	2		203	1	74	0	1	1223	112	0	158	907	1
Percent Heavy Vehicles (%)		3	3	3		0	3	0	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized						No				No						
Median Type | Storage		Left + Thru								1						

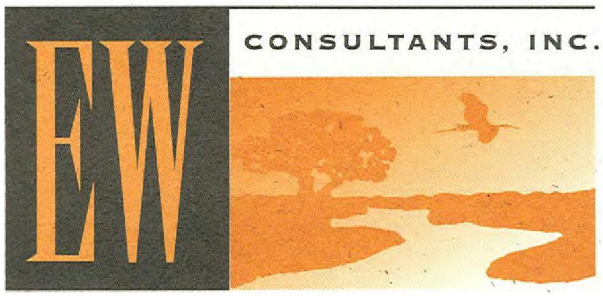
Critical and Follow-up Headways

Base Critical Headway (sec)		6.4	6.5	7.1		6.4	6.5	7.1		5.3				5.3		
Critical Headway (sec)		6.46	6.56	7.16		6.40	6.56	7.10		5.36				5.36		
Base Follow-Up Headway (sec)		3.8	4.0	3.9		3.8	4.0	3.9		3.1				3.1		
Follow-Up Headway (sec)		3.83	4.03	3.93		3.80	4.03	3.90		3.13				3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2		3		222		80		1				172		
Capacity, c (veh/h)		28		42		56		349		394				233		
v/c Ratio		0.08		0.08		3.97		0.23		0.00				0.74		
95% Queue Length, Q_{95} (veh)		0.2		0.2		24.2		0.9		0.0				5.1		
Control Delay (s/veh)		146.4		98.3		1488.8		18.4		14.2				54.0		
Level of Service (LOS)		F		F		F		C		B				F		
Approach Delay (s/veh)		117.5				1097.4				0.0				8.0		
Approach LOS		F				F										

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KANNER CPUD/RPUD

ENVIRONMENTAL ASSESSMENT REPORT

Prepared for:

M&M REALTY PARTNERS

Prepared by:

EW CONSULTANTS, INC.

March 2021

INTRODUCTION

The 48.6+/- acre Kanner CPUD/RPUD property covered by this Environmental Assessment is located in the City of Stuart within Section 16 and Hanson Grant, Township 38S, and Range 41E. The property is located approximately one-half mile north of Indian Street and approximately one-half mile south of Monterey Road, between Kanner Highway (SR76) and Willoughby Boulevard. Please refer to Figure 1 Location Map and Figure 2 Quad Map, provided in the Appendix.

The property is adjacent to and bounded to the west by Kanner Highway, to the north by a landscape nursery, to the east by SE Willoughby Boulevard, and undeveloped lands to the south. Figure 3 in the Appendix provides a 2020 aerial photo of the subject property and immediate surroundings.

The Kanner CPUD/RPUD property has been disturbed to varying degrees by historic activities on the site and on surrounding properties. There are multiple structures (residential and agricultural) found throughout the site and much of the property has been cleared and/or altered for agricultural purposes and other uses over time. Aside from relic areas of pine flatwoods, the majority of the vegetative cover on the site is comprised of invasive non-native species that have taken over after previous disturbances.

SOILS

A U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report was generated for the subject property and is provided in the Appendix. This report contains a soils map with the boundary of the property depicted as well as additional information and descriptions of soil resources for the subject property. According to the soil survey data, four soil types are found on the subject property, with an additional area classified as open water.

It is important to note that the description of these soils, in their natural state, according to the NRCS, was generated in the early 1970s, and therefore predates the more recent land management activities or alterations that have occurred since publication of the Soil Survey.

NATURAL COMMUNITIES AND LAND COVER

The natural communities and land covertypes on the subject property have been classified in accordance with the Florida Land Use, Cover and Forms Classification System (FLUCFCS, January 1999) published by the Florida Department of Transportation. A description of the observed land cover types is provided below and a FLUCFCS Map is provided in the Appendix as Figure 4. All acreage figures are estimates based on aerial photo interpretation and multiple field assessments conducted on the property from July 2018 through September 2020.

#191 - Undeveloped Land in Urban Areas -

The majority of the site has been converted into a mosaic of disturbed non-native open herbaceous areas and areas dominated by invasive exotic vegetation with several residential homes and accessory structures (barns and sheds). The property is surrounded by urban development including a County high school, regional medical facilities, office development and existing residential development. As such, this portion of the property has been categorized as Undeveloped Land in Urban Areas.

Where tree canopy is present, invasive non-native species are dominant including java plum, Indian laurel, royal poinciana, eucalyptus, neem, Australian pine, seaside mahoe, and melaleuca. Scattered native trees remain, including slash pines and laurel oaks. The understory is typically sparse or dominated by invasive non-native vegetation such as Brazilian pepper. Old world climbing fern and air potato (also invasive non-native species) are draping most trees in this land cover.

In areas that are regularly mowed, the ground cover is comprised of non-native pasture grasses (bahia grass) and other ruderal weeds (torpedo grass, flatsedges, creeping ox-eye). Open areas that are not regularly mowed are dominated by a dense, monotypic cover of invasive non-native napier grass and guineagrass.

#411 - Pine Flatwoods -

There are relic areas in the southern portion of the property that exhibit the typical characteristics of pine flatwoods. The vegetative composition of this land cover type is predominantly native with the canopy dominated by slash pine, cabbage palm, and laurel oak. Invasive non-native species are also present including java plum, Indian laurel and Brazilian pepper. The sub-canopy is generally dense and dominated by native species such as saw palmetto, myrsine, wax myrtle, and gallberry along with invasive non-native species including strawberry guava and Brazilian pepper. The native vegetative ground cover, when present, is comprised of love grass, swamp fern, broomsedge, and road grass.

Native species of vines include greenbrier, blackberry, and wild grape which are also found in this area. Invasive non-native species including old-world-climbing-fern and air potato have encroached into this habitat with some areas exhibiting near-dominance of the native tree and shrubs species.

#436 – Upland Scrub, Pine and Hardwoods -

There is an area in the south eastern portion of the property that exhibit the typical characteristics of an upland scrub habitat. The vegetative composition of this land cover type is predominantly native with the canopy dominated by sand pine, scrub oak, myrtle oak, and sand live oak. The sub-canopy is generally dense and dominated by native species such as saw palmetto, and rusty staggerbush. Native species of vines include greenbrier, blackberry, and wild grape which are also found in this area. Due to the dense canopy and sub-canopy, groundcover vegetation is sparse.

#510 – Ditches -

The site exhibits several linear man-made ditches. Portions of the ditches are currently under a dense Brazilian pepper tree cover. A ditch that spans east-west, from Willoughby Boulevard to Kanner Highway, across the southern portion of the site serves as a drainage conveyance system for offsite lands. This feature has been partially relocated and re-constructed as a result of the recent completion of the onsite FDOT surface water management pond.

#534 – Reservoirs less than 10 acres -

There are several excavated ponds that are scattered throughout the site. These man-made water bodies have generally been in place for an extended period of time and are surrounded by seaside mahoe and Australian pine, both invasive non-native species. This category also includes an FDOT surface water management pond in the southwestern portion of the property, serving as drainage for Kanner Highway.

#618 – Willow and elderberry -

This wetland area exhibits deep water habitats that are likely the result of historic excavation that created an upland island in the northern portion of this wetland. The predominant vegetation is Carolina willow within the central area of the wetland. The deeper excavated fringe areas exhibit invasive species including Peruvian primrose willow and wild taro, along with native species such as giant leather fern and swamp mallow.

#619 – Exotic Hardwood Wetland -

There is a wetland located in the northern portion of the site that has a tree canopy dominated by melaleuca. The ground cover is comprised of swamp fern and day flowers. The eastern portion of this wetland has been encroached by seaside mahoe, an invasive non-native species.

#641 – Freshwater marsh -

There are several freshwater marshes are found scattered throughout the property. The two freshwater marshes located in the northern portion of the site have been degraded by surrounding land uses and off-road vehicle usage. The other wetlands found in the southern portion of the site exhibit native vegetation comprised of grasses, sedges, spike rush and water lilies. Invasive exotic vegetation including torpedo grass and melaleuca trees are present as well.

#643 – Wet prairies -

There are several shallow wet prairie wetlands on the property. As a result of surrounding land uses, most of these wetlands do not exhibit a natural plant composition. The wet prairie located along the northwestern property boundary is comprised of native day flowers and swamp fern

along with invasive non-native species including guinea grass, napier grass, and seaside mahoe. Another wet prairie exists in the central portion of the northern portion of the property. It is dominated by flatsedges, roadgrass, and swamp mallow, along with invasive non-native species including torpedo grass, Peruvian primrose willow, wild taro, and napier grass. A third wet prairie exhibits a natural plant composition and is found in the southeastern portion of the site.

#740 – Disturbed Lands -

Several areas of the property are categorized as the "disturbed lands" cover type based on past land disturbances. The primary area in this category is the southern fringe of the property that has become dominated by napier grass. An additional area occurs immediately west of the FDOT pond at the southwest corner of the property as well as the associated drainage improvements in this area.

WETLAND DETERMINATION

The limits of state jurisdictional wetlands have been field-flagged and field-verified by the South Florida Water Management District (SFWMD). Please refer to the Informal Wetland Determination issued on November 19, 2018, a copy of which is provided in the Appendix of this document.

A Conceptual Environmental Resource Permit (ERP) was recently issued based on this SFWMD wetland delineation and jurisdictional determination. Please refer to the Conceptual ERP issued on August 26, 2020, a copy of which is provided in the Appendix of this document.

The remainder of the property received an Informal Wetland Determination (IWD) from the SFWMD. Please refer to the IWD issued on November 3, 2020, a copy of which is provided in the Appendix of this document.

Based on these verified wetland determinations from SFWMD,, the property contains 6.5 +/- acres of wetlands and 4.1 +/- acres of "other surface waters", of which, 3.7 +/- acres are a "Permitted Surface Water Management Facility" for DOT drainage along Kanner Highway.

According to the definition of Outstanding Resource Wetland in Chapter XII of the City of Stuart Land Development Code, there are no Outstanding Resource Wetlands present on site as none of the wetlands are naturally connected to the St. Lucie River.

WILDLIFE EVALUATION

During the field assessment of the property, observations were made to evaluate the presence or potential presence of wildlife. In particular, observations were made for species listed by Florida Fish and Wildlife Conservation Commission (FFWCC) and/or the U.S. Fish and Wildlife Service (USFWS) as endangered, threatened or of special concern.

The site reconnaissance conducted between July 2018 and September 2020 included observations of the following non-listed species on the subject property:

Bird species including boat-tail grackle, blue jay, cardinal, and mockingbird. Mammals including grey squirrels and raccoons were observed in the tree canopy along with indicators of the presence of rabbits in the form of scat found throughout the property.

Given the surrounding urban development and activity as well as the historic and ongoing agricultural and residential activities, the property provides significantly reduced foraging and/or nesting habitat for state and/or federally listed wildlife species.

Gopher tortoises are listed as a Threatened species by the State of Florida. Based on the findings of a preliminary survey, gopher tortoise burrows were found in several locations within the property. As such, in advance of any land development activity, a 100% survey of potential habitat areas will be required and any gopher tortoises present will be relocated in accordance with FFWCC permitting requirements.

Wading birds are the only other listed species that may potentially utilize portions of the property for foraging. Any such use by these species would be transient in nature and no roosting or nesting areas have been observed on the site.

PRESERVE AREA AND UPLAND BUFFER EVALUATION

The subject property is approximately 48.6 acres. The wetland determination indicates that there are 6.5 +/- acres of wetlands and 4.1 +/- acres of other surface waters within the property.. The remaining 38 +/- acres comprise the upland acreage of the site. In accordance with City Code, 25% of the upland acreage is used to calculate the projected upland preserve requirement at 9.5 +/- acres.

SUMMARY

Overall, the wetlands found on the property are isolated and no longer exhibit a natural or native plant composition. The isolation of the wetlands and the surrounding urban development act to reduce their interaction with regional landscape features as well as wildlife support. These wetlands are degraded by historic hydrologic alterations and invasive species encroachment and thus offer minimal ecological functions for fish and wildlife.

Similarly, the upland pine flatwoods found on site are considered native upland habitat but have been encroached by invasive non-native vegetation and are isolated from larger natural areas by the surrounding urban development.

The uplands on the site provide varying quality suitable habitat for gopher tortoises.Gopher tortoise burrows identified during preliminary surveys were concentrated in the upland scrub portion of the property with sparse occurrences in the undeveloped uplands on the property. No other listed wildlife species were observed on site. Wading birds are the only likely listed species that could potentially utilize some portions of the property however, any such use is likely to be transient.

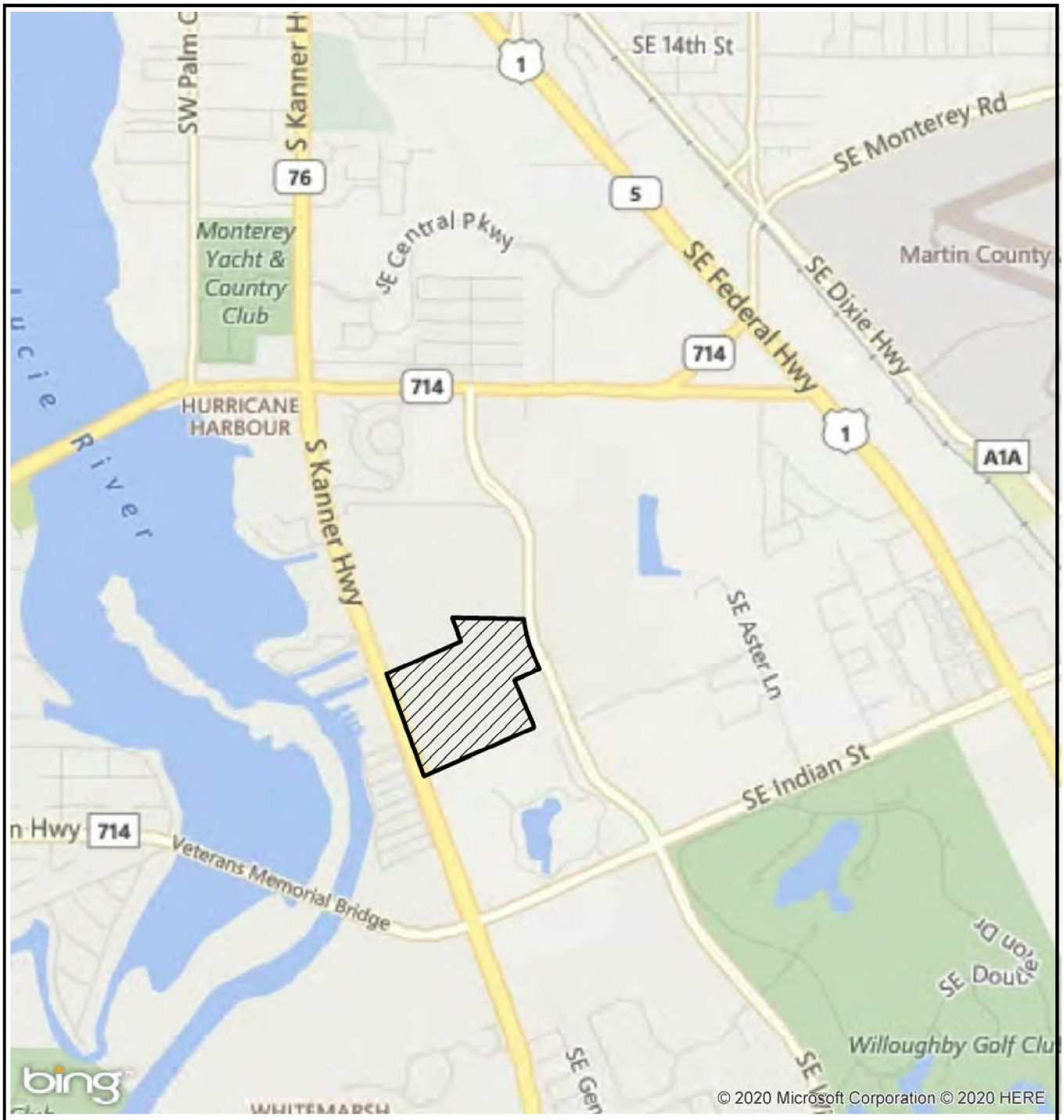
APPENDIX

Maps and Figures:

Figure 1: Location Map
Figure 2: Quad Map
Figure 3: Aerial Photograph
Figure 4: FLUCFCS Map

SFWMD Conceptual Environmental Resouce Permit
SFWMD Informal Wetland Determination

USDA Custom Soil Resource Report



LEGEND

▨ - SITE (48.6+/- AC)

0 2,000 Feet

N

KANNER CPUD/RPUD
LOCATION MAP

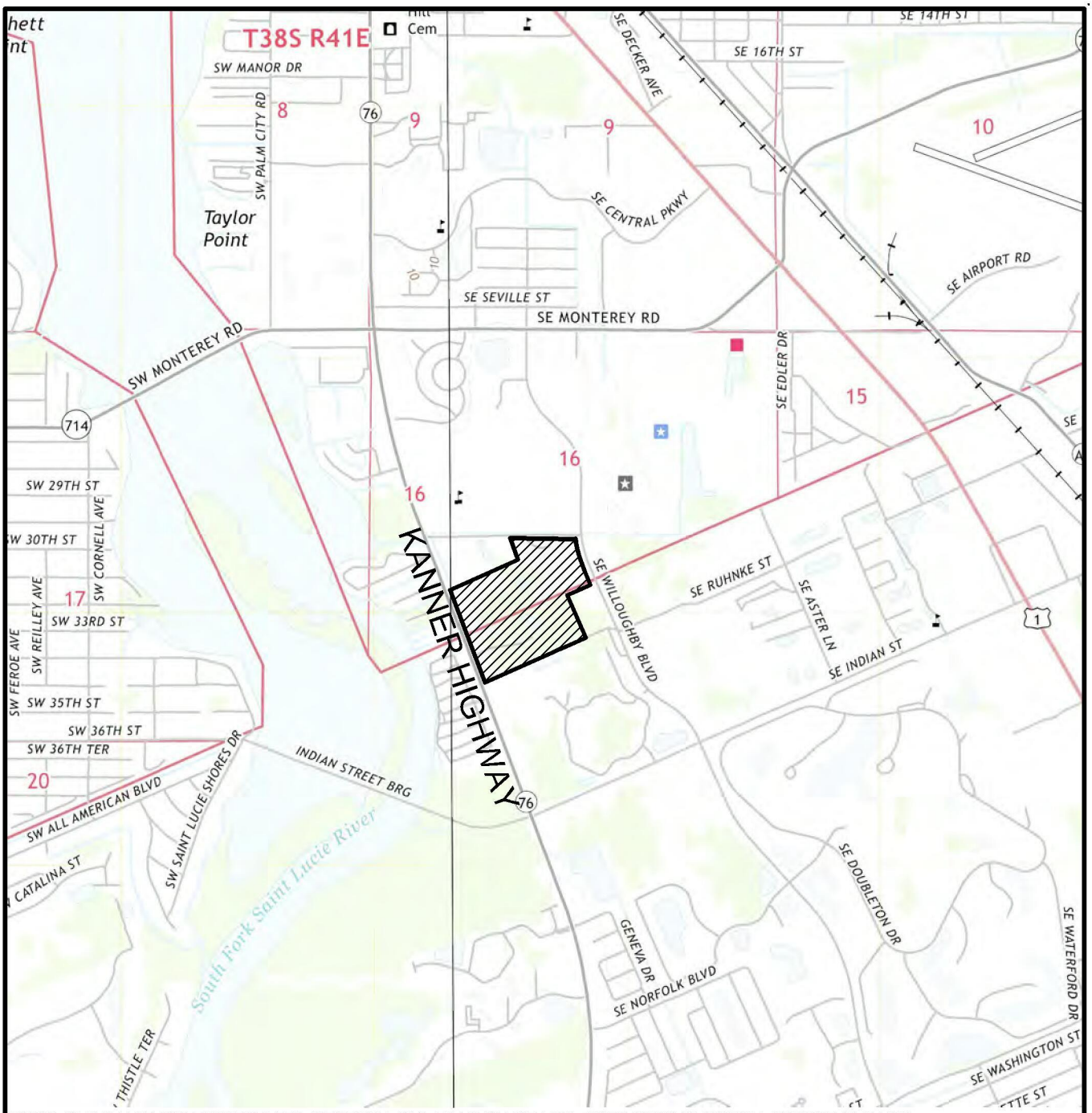
EW CONSULTANTS, INC.

1000 SE MONTEREY COMMONS BLVD., SUITE 208
STUART, FL 34996
772-287-8771 FAX 772-287-2988
WWW.EWCONSULTANTS.COM

OCT 2020

FIGURE

1



USGS QUAD MAP "ST LUCIE INLET", SECTION 16 & HANSON GRANT, TOWNSHIP 38 SOUTH, RANGE 41 EAST, CITY OF STUART, MARTIN COUNTY, FLORIDA, LATITUDE 27°09'56" LONGITUDE -80°14'52"

LEGEND

▨ - SITE (48.6± AC)

0 2000

SCALE IN FEET

KANNER CPUD/RPUD

QUAD

CONSULTANTS, INC.

EW CONSULTANTS, INC.

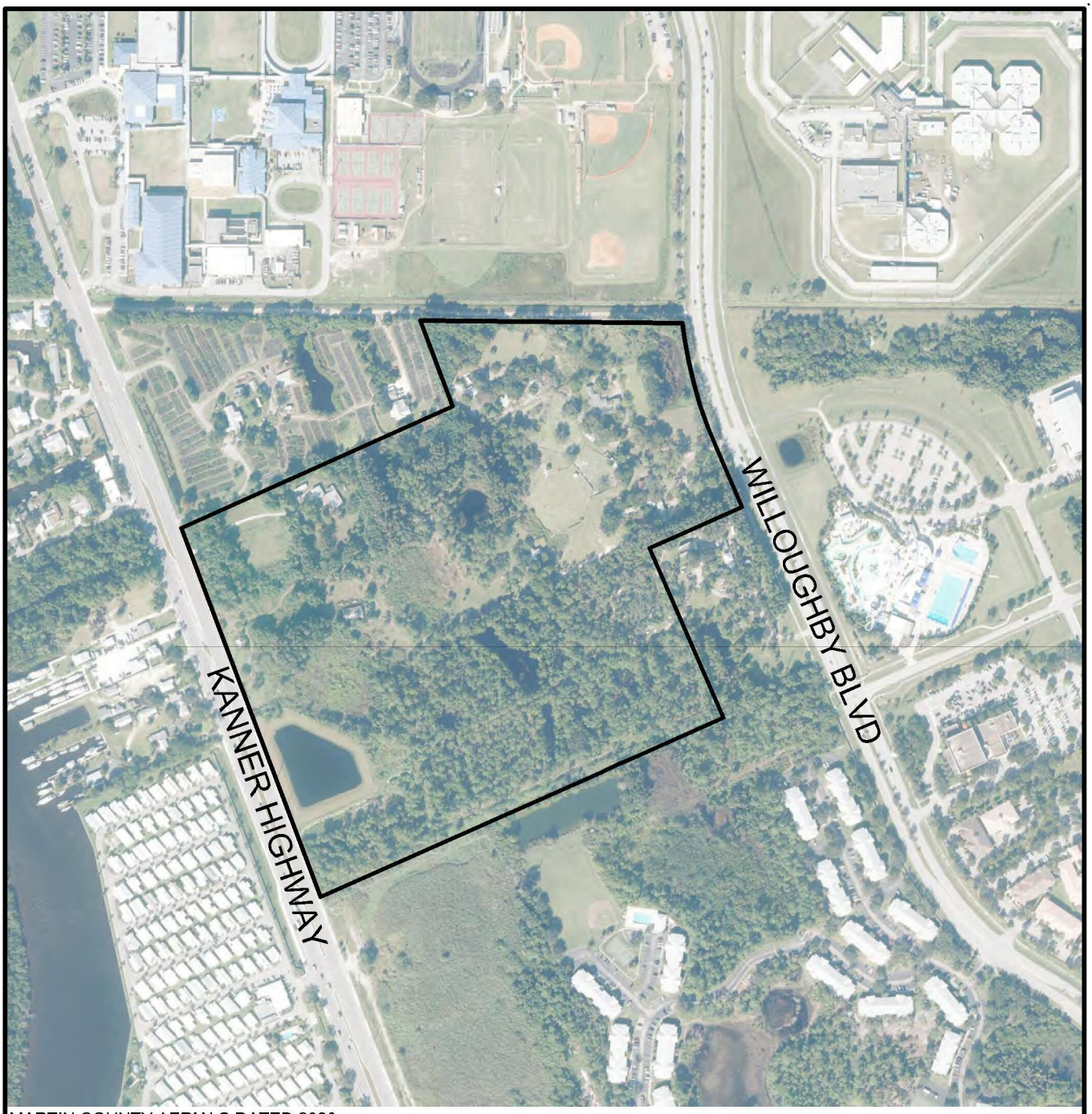
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STUART, FL 34996
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OCT 2020

FIGURE

2

'Kanner CPUD RPUD.dwg QUAD



MARTIN COUNTY AERIALS DATED 2020

0 500
SCALE IN FEET

KANNER CPUD/RPUD

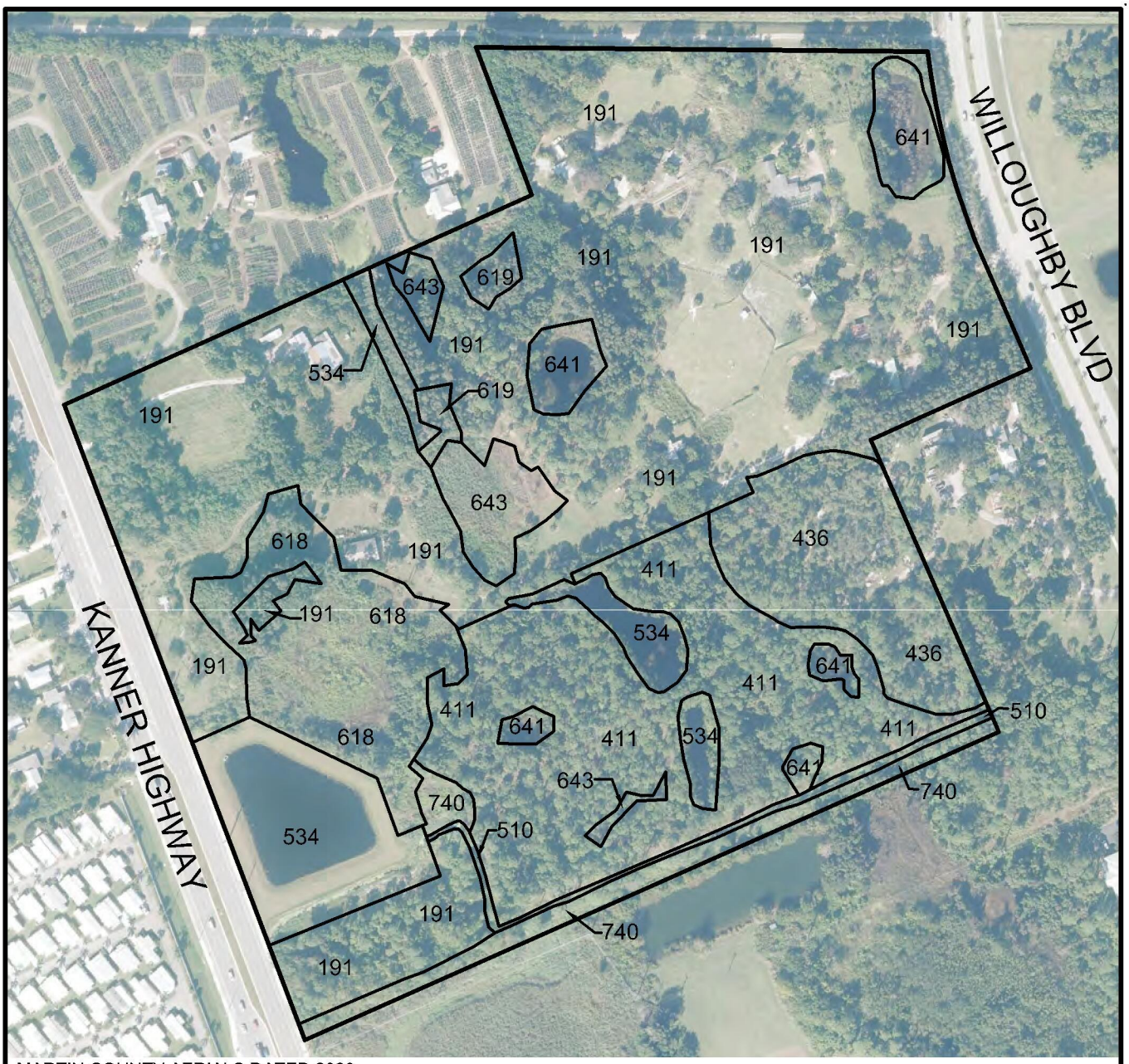
AERIAL

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FIGURE
3

'Kanner CPUD RPUD.dwg AERIAL



MARTIN COUNTY AERIALS DATED 2020

LEGEND

0 300

SCALE IN FEET

191 - UNDEVELOPED LANDS WITHIN URBAN AREAS (25.8± AC)
411 - PINE FLATWOODS (7.8± AC)
436 - UPLAND SCRUB, PINE, HARDWOODS (3.1±AC)
510 - DITCHES (0.4± AC)
534 - RESERVOIRS LESS THAN 10 ACS (3.7± AC)
618 - WILLOW & ELDERBERRY (3.5± AC)
619 - EXOTIC WETLAND HARDWOODS (0.3± AC)
641 - FRESHWATER MARSHES (1.5± AC)
643 - WET PRAIRIES (1.2± AC)
740 - DISTURBED LANDS (1.3± AC)
TOTAL SITE (48.6± AC)

KANNER CPUD/RPUD

FLUCFCS

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STUART, FL 34996
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FIGURE

4

'Kanner CPUD RPUD.dwg FLUCFCS

KANNER CPUD

SFWMD Conceptual ERP

Application No. 200323-3070

Conceptual Permit No. 43-103195-P

Date Issued: August 26, 2020

South Florida Water Management District
Conceptual Permit No. 43-103195-P
Date Issued: August 26, 2020

Permittee: M&M Stuart, LLC
1260 Stelton Road
Piscataway, NJ 08854

Project: Kanner CPUD

Application No. 200323-3070

Location: Martin County, See Exhibit 1

Your application for a Conceptual Permit is approved. This action is taken based on Chapter 373, Part IV, of Florida Statutes (F.S.) and the rules in Chapter 62-330, Florida Administrative Code (F.A.C.). Unless otherwise stated, this permit constitutes certification of compliance with state water quality standards under section 401 of the Clean Water Act, 33 U.S.C. 1341, and a finding of consistency with the Florida Coastal Management Program. Please read this entire agency action thoroughly and understand its contents.

This permit is subject to:

- Not receiving a filed request for a Chapter 120, F.S., administrative hearing.
- The attached General Conditions for Environmental Resource Permits.
- The attached Special Conditions.
- All referenced Exhibits.

All documents are available online through the District's ePermitting site at www.sfwmd.gov/ePermitting.

If you object to these conditions, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the "Notice of Rights", we will assume that you concur with the District's action.

The District does not publish notices of action. If you wish to limit the time within which a person may request an administrative hearing regarding this action, you are encouraged to publish, at your own expense, a notice of agency action in the legal advertisement section of a newspaper of general circulation in the county or counties where the activity will occur. Legal requirements and instructions for publishing a notice of agency action, as well as a noticing format that can be used, are available upon request. If you publish a notice of agency action, please send a copy of the affidavit of publication provided by the newspaper to the District's West Palm Beach office for retention in this file.

If you have any questions regarding your permit or need any other information, please call us at 1-800-432-2045 or email ERP@sfwmd.gov.

Ricardo A. Valera, P.E.
Bureau Chief, Environmental Resource Bureau

South Florida Water Management District
Conceptual Permit No. 43-103195-P

Date Issued: August 26, 2020	**Expiration Date:** August 26, 2040
Project Name:	Kanner CPUD
Permittee:	M&M Stuart, LLC 1260 Stelton Road Piscataway, NJ 08854
Operating Entity:	M&M Stuart, LLC 1260 Stelton Road Piscataway, NJ 08854
Location:	Martin County
Permit Acres:	32.61 acres
Project Land Use:	Commercial Residential
Special Drainage District:	N/A
Water Body Classification:	CLASS III
FDEP Water Body ID:	3210
Wetland and Surface Water Impacts:	6.45 acres
Sovereign Submerged Lands:	No

Project Summary
This permit authorizes Conceptual Approval of a stormwater management (SWM) system serving 32.61-acres of mixed use developement known as Kanner CPUD.

The project includes a commercial shopping center, refueling station, residential units, supporting infrastructure, and SWM systems.

The project will include relocation of the existing Florida Department of Transportation (FDOT) SWM facilities serving Basin 8 of Kanner Highway that are located on the site. The project will include three driveway connections and turn lanes within South Kanner Highway for ingress and egress.

The project site receives offsite runoff from the north, south, and east that will be routed through the project.

Please refer to SWM plans Exhibit No. 2.0 and the SWM Maps Exhibit No. 2.2 for additional details.

Issuance of this permit constitutes certification of compliance with state water quality standards in accordance with Rule 62-330.062, F.A.C.

Site Description
The site is located in Martin County. Please refer to Exhibit No. 1.0 for a location map.

The site includes a SWM system serving a portion of Kanner Highway pursuant to Permit No. 43-00785-S. The site includes a ditch system that conveys off site flows from Willoughby Boulevard and areas to the east through the site to the St. Luice River via cross culverts under Kanner Highway.

The site is primarily undeveloped with native uplands, wetlands and other surface waters. For information on wetland and surface water impacts, please see the Wetlands and Other Surface Water section of this permit.

Ownership, Operation and Maintenance
Perpetual operation and maintenance of the stormwater management system is the responsibility of M&M Stuart, LLC. Upon conveyance or division of ownership or control of the property or the system, the permittee must notify the Agency in writing within 30 days, and the new owner must request transfer of the permit.

The project area is currently under contract for puchase by M&M Stuart, LLC who will be the sole owner of the project area and who has indicated that the perpetual operating entity for this project will be M&M Stuart, LLC. If the subject property is subdivided in the future, a permit modification will be required to address the need for an appropriate operating entity, such as a property owners association, in accordance with Section 12.3, Vol I.

M&M Stuart, LLC submitted two purchase agreements as demonstration of real property interest for the project area. Prior to commencement of any phase of construction, documentation of ownership must be submitted to the Agency. If the property is conveyed to an entity other than the permittee, a permit transfer will be required.

Prior to commencement of any phase of construction, authorization for works proposed on FDOT property must be submitted to the Agency.

Engineering Evaluation:

Land Use
Please refer to the data tables and Exhibit No. 2.1 for additional land use details.

Water Quality
The project will provide the required water quality treatment volume based on 2.5 inches over the imperviousness of the controlled basin areas. Commercial parcels will be required to provide half of one inch of dry pre-treatment prior to discharge to the wet detention systems.

The project is located within the St. Lucie Basin, which is impaired pursuant to 62-304.705 F.A.C. In order to provide reasonable assurance that the proposed project will not contribute to the existing impairment, an additional 50% water quality treatment volume is provided. A site specific pre vs. post development nutrient analysis has been provided demonstrating that the proposed system will not increase the annual nutrient loading over existing conditions

Water Quantity
The proposed SWM design is based on the pre- vs post-development analysis of the existing drainage patterns of a 107.42-acre watershed that includes the site. The three basins discharging through the site are mapped and identified on the system maps within Exhibit No. 2.2 as points of interest (POI) A, B, and C.

The three systems are further described below and, for simplicity, will be referred to as Basin A, Basin B and Basin C. Within each Basin the various sub-basins are also identified based on their associated sub-basin letter and number.

The Basin A system includes offsite runoff from approximately 66.41 acres east of the proposed project including portions of Willoughby Boulevard and areas east of Willoughby Boulevard, and

approximately 25.72 acres within the developed sub basins of the project: A-NWW-6, A-NWW 6-A, A-NWW 6-B, A-NWW-6C, A-NWW-6D. The onsite Basin A sub-basins are collectively referred to as Basin A-6 in the data tables.

Within the developed portions of the site, the existing ditch system that conveys offsite runoff from properties to the east will be replaced with a swale and box culvert collection system. The sub-basin 6 control structure will discharge to the offsite bypass box culvert system. Basin A also receives offsite runoff from sub-basin A-1 from the South. The Basin A system discharges to an existing pair of 24-inch cross culverts within Kanner Highway and ultimately to the St. Lucie River through the FDOT outfall. The pre-developed discharge rate for Basin A was determined to be 46.23 cfs. The post-development discharge rate for Basin A was determined to be 42.82 cfs.

The site conditions are not conducive to recovery of retention volumes by infiltration. Pursuant to Section 4.2.1 (a) (3) Vol. II., in order to provide reasonable assurance of the long-term flood protection capacity of the system, minimum flood protection levels were established based on the initial stage of the system starting at the retained elevation of 4.33-ft. NAVD.

Basin B is primarily the existing Florida Department of Transportation (FDOT) pond located on the site that serves Basin 8 of Kanner Highway and includes sub-basins B-NWW-4, B-NWW-4A, B-NWW-4.1. The Basin B pond will continue to serve Kanner Highway and a portion of the site along Kanner Highway as well as some offsite area to the north of the property. The pre-developed discharge rate for Basin B was determined to be 10.52 cfs. The post-development discharge rate for Basin B was determined to be 9.98 cfs.

Basin B-NWW-4 includes the existing pond serving Basin 8 of Kanner Highway. The pond will be enlarged from 1.10 acres to 1.45 acres, and relocated on the site.

Basin B-NWW-4.1 includes a small portion of the site along the northern property line as well as some offsite areas. The Basins 4.1 system also includes a dry detention system to attenuate the existing offsite flows. The basin will discharge to the existing FDOT basin control structure which discharges via the existing 18-in. pipe within the FDOT Kanner Highway system at POI B.

The existing FDOT basin 8 control structure will be maintained, and a 12-ft x12-ft concrete box will be constructed around the existing structure to allow the relocated pond to be hydraulically connected to the control structure via an 18-in. pipe to maintain its existing functionality. The Basin B system will discharge via the existing FDOT Kanner Highway system at POI B.

Basin C is a small portion of the site along the northern boundary that will continue to follow its historic pattern of sheet flow to an existing offsite pond on the Lychee Tree Farm that discharges to the ditch system adjacent to the Martin County High School.

Please see the land use data tables Exhibit No. 2.1 and system maps Exhibit No. 2.2 for additional details.

Discharge
The proposed discharge rate is based on a pre- vs post-development analysis of the existing drainage patterns of a 107.42-acre water shed including the project.

Parking Lot Design
As found in Water Quantity Data Table minimum parking lot elevations have been set at or above the calculated design storm flood elevation.

Finished Floors
As found in Water Quantity Data Table minimum finished floor elevations have been set at or above the calculated design storm flood elevation.

Offsite Flows
The project receives offsite runoff from the adjacent areas to the north, south and east.

The portion of the existing drainage ditch that conveys offsite flows of 24.24 cfs from the east through the site will be replaced with a box culvert as a result of the proposed development. A proposed swale system will be extended north along the eastern boundary to collect and convey offsite runoff from areas draining to the site from the east. A box culvert will be constructed through the developed portion of the site to convey stormwater to the existing twin 24-inch cross-culverts under Kanner Highway as part of the FDOT system. Please refer to location POI A within the system maps Exhibit No. 2.2 for additional details.

Certification, Operation, and Maintenance:
Pursuant to Chapter 62-330.310, F.A.C., Individual Permits will not be converted from the construction phase to the operation phase until construction completion certification of the project is submitted to and accepted by the District. This includes compliance with all permit conditions, except for any long term maintenance and monitoring requirements. It is suggested that the permittee retain the services of an appropriate professional registered in the State of Florida for periodic observation of construction of the project.

For projects permitted with an operating entity that is different from the permittee, it should be noted that until the construction completion certification is accepted by the District and the permit is transferred to an acceptable operating entity pursuant to Sections 12.1-12.3 of the Applicant's Handbook Volume I and Section 62-330.310, F.A.C., the permittee is liable for operation and maintenance in compliance with the terms and conditions of this permit.

In accordance with Section 373.416(2), F.S., unless revoked or abandoned, all SWM systems and works permitted under Part IV of Chapter 373, F.S., must be operated and maintained in perpetuity.

The efficiency of SWM systems, dams, impoundments, and most other project components will decrease over time without periodic maintenance. The operation and maintenance entity must perform periodic inspections to identify if there are any deficiencies in structural integrity, degradation due to insufficient maintenance, or improper operation of projects that may endanger public health, safety, or welfare, or the water resources. If deficiencies are found, the operation and maintenance entity is responsible for correcting the deficiencies in a timely manner to prevent compromises to flood protection and water quality. See Section 12.4 of the Applicant's Handbook Volume I for Minimum Operation and Maintenance Standards.

Engineering Evaluation Tables:

Land Use

Basin	Land Type	Area (ac)	% of Total Basin
A-6	Building Cover New	5.15	20.02
	Impervious	15.89	61.78
	Lake	1.68	6.53
	Pervious	3.00	11.66
	Total:	25.72	100%
B-4	Pavement	6.75	49.82
	Lake	1.45	10.70
	Pervious	5.35	39.48
	Total:	13.55	100%
C-1	Pervious	1.72	100.00
	Total:	1.72	100%

Water Quality

Basin	Treatment Type	Treatment System	Volume Required (ac-ft)	Volume Provided (ac-ft)	Length Required (ft)	Length Provided (ft)	Overflow Elevation (ft NAVD88)
A-6	Treatment	WET RETENTION	2.70	2.70	N/A	N/A	4.33
	Treatment	EXFILTRATION TRENCH	0.78	0.78	2860.00	2860.00	5.75
B-4	Treatment	WET DETENTION	2.10	2.10	N/A	N/A	4.18

Water Quantity

Basin	Elevation Type	Storm Event (Yr/Day)	Precipitation Depth (in)	Peak Stage (ft NAVD88)	Min. EL (ft NAVD88)	Peak Discharge Rate (cfs)	Allowable Discharge Rate (cfs)
A-6	Finished Floor	100Y3D	14.00	10.70	10.75	N/A	N/A
	Perimeter Berm/ Discharge	25YR3D	11.50	7.50	7.50	27.76	27.76
	Parking Lot	25YR3D	11.50	7.50	7.50	N/A	N/A
B-4	Discharge	25YR3D	11.50	5.85	5.85	9.98	10.52
C-1	Discharge	25YR3D	11.50	5.62	5.62	8.01	8.01

Bleeder

Basin	WSWT EL (ft NAVD88)	Structure #	Structure Type	Count	Type	Dia.(in)	Invert EL (ft NAVD88)	Receiving Body
B-4	3.00	FDOT OCS	Water Quality	1	Circular Orifice	3.00	3.00	St Lucie River

Inlets

Basin	WSWT EL (ft NAVD88)	Structure #	Structure Type	Count	Length (in)	Width (in)	Crest EL (ft NAVD88)	Receiving Body
A-6	3.00	NWW6 OCS	Discharge	1	49.0	37.0	7.50	St Lucie River

Weir

Basin	WSWT EL (ft NAVD88)	Structure #	Structure Type	Count	Type	Width (in)	Height (in)	Crest EL (ft NAVD88)	Receiving Body
A-6	3.00	NWW6 OCS	Discharge	2	Rectangular Orifice	18.00	24.00	4.33	St Lucie River
				1	Rectangular Orifice	36.00	24.00	4.33	
B-4	3.00	FDOT OCS	Discharge	1	Rectangular Orifice	84.00	28.00	4.18	St Lucie River

Environmental Evaluation:

Wetlands and Other Surface Waters

The project site contains seven wetlands totaling 5.59 acres and four other surface waters totaling 0.86 acres. An informal wetland determination was conducted on August 21, 2018 (Application No. 180814-761) and District staff conducted a follow up site visit on January 13, 2020 to complete functional assessments of the wetlands in anticipation of an ERP application submittal for development. Please see Exhibit No. 3.0 for wetland and other surface water locations. The wetlands can generally be described as freshwater marsh, wet prairie, and mixed wetland hardwoods. All wetlands have some melaleuca trees present. Additional wetland descriptions are available in the ePermitting file.

The applicant evaluated several design modifications of the project; however, impacts to wetlands and other surface waters could not be reduced or eliminated in any scenario due to the large size of the proposed warehouse-style retail store (150,000 sf) and connected fueling station. Additionally, requirements associated with the number of parking spaces for a retail store of this size limit the options for alternative designs. Consequently, the applicant has demonstrated compliance with elimination or reduction of impacts criteria described in Section 10.2.1 of the Applicant's Handbook Volume I. The analysis can be found in the ePermitting file.

The project will result in 5.59 acres of wetland impacts and work in 0.86 acres of other surface waters as described in the table below. Exhibit No. 3.1 (Sheet 2 of 7 of the conceptual plan set) identifies the locations of the wetlands and other surface waters being impacted.

Impact to five of the wetland areas, totaling 1.06 acres, does not require compensatory mitigation because all of these wetlands meet the qualifying criteria described in Section 10.2.2.1 of the Applicant's Handbook Volume I. Cumulatively, wetlands numbered 2 through 6 represent a functional loss of 0.41 units. To mitigate for the remaining 4.53 acres of impacts to Wetland 1 and Wetland 7, the applicant proposes to purchase 1.97 mitigation bank credits from Bluefield Ranch Mitigation Bank. The amount of required mitigation was determined using the Wetland Rapid Assessment Procedure. The final scores can be found in the ePermitting file.

The project also includes work in 0.66 acres of existing ponds and 0.20 acres of existing ditches. These ponds and ditches are classified as other surface waters constructed in uplands and mitigation for these impacts is not required pursuant to Section 10.2.2.2 of the Applicant's Handbook Volume I.

The proposed mitigation is not physically located within the same basin as the impacts; however, the applicant demonstrated compliance with Section 10.2.8 of the Applicant's Handbook Volume I. The proposed mitigation fully offsets the adverse impacts within the impacted basin based on factors such as connectivity of waters, hydrology, habitat range of affected species, and water quality. Therefore, the project (as currently envisioned) will not result in unacceptable cumulative impacts upon wetlands and other surface waters within the St. Lucie Basin. The analysis can be found in the ePermitting file.

Fish, Wildlife, and Listed Species

The wetlands and other surface waters to be impacted do not provide significant habitat for wetland-dependent endangered or threatened wildlife species, or species of special concern. No aquatic or wetland-dependent listed species or species having special protection were observed to be using the uplands within the project for nesting or denning. Submitted information indicates that potential use of the site by such species is minimal.

This permit does not relieve the applicant from complying with all applicable rules and any other agencies' requirements if, in the future, endangered or threatened species or species of special concern are discovered on the site.

Environmental Evaluation Tables:
Summary

Wetlands and Other Surface Waters:	6.45	acres
Direct Impacts:	6.45	acres
Secondary impacts:	0	acres
Net UMAM Functional Loss/ Gain:	0	units
Total Onsite Mitigation Area:	0	acres
Total Offsite Mitigation Area:	0	acres

Total Mitigation Bank Credits Provided

Mitigation Bank	Type	Total Credits
Bluefield Ranch	FH	1.97
Total:		1.97

Kanner CPUD Conceptual

Activities in Wetlands or Other Surface Waters, Not Including Mitigation at a Bank

ID	Acres	Action	Community Description	Current Score	With Project Score	UMAM Loss
2	0.19	Direct Impact	Mixed Wetland Hardwoods	0	0	0.000
3	0.45	Direct Impact	Freshwater Marshes	0	0	0.000
4	0.2	Direct Impact	Wet Prairies	0	0	0.000
5	0.09	Direct Impact	Wet Prairies	0	0	0.000
6	0.13	Direct Impact	Freshwater Marshes	0	0	0.000
1	0.28	Works in Surface Waters	Ponds	0	0	0.000
2	0.3	Works in Surface Waters	Ponds	0	0	0.000
3	0.2	Works in Surface Waters	Ditches and Canals	0	0	0.000
5	0.08	Works in Surface Waters	Ponds	0	0	0.000
Total:	**1.92**					**0.000**

Activities in Wetlands or Other Surface Waters, With Mitigation at a Bank

ID	Acres	Community Description	Bank Name	Method	Current Score	With Score	Ratio or Add'l factor	Minimum Credits Needed
1	1.04	Wet Prairies	Bluefield Ranch	WRAP	0.41	0	1	0.43
7	3.49	Freshwater Marshes	Bluefield Ranch	WRAP	0.44	0	1	1.54
Total:	**4.53**							

Related Concerns:

Water and Wastewater Service
CIty of Stuart

Historical/ Archeological Resources
The District has received correspondence from the Florida Department of State, Division of Historical Resources indicating that no significant archaeological or historical resources are recorded on the project site; therefore the project is unlikely to have an effect upon any such resoures.

This permit does not release the permittee from complying with any other agencies' requirements in the event that historical and/or archaeological resources are found on the site.

General Conditions for Conceptual Permits

1. This permit does not authorize any construction, alteration, maintenance, operation, removal, or abandonment, except where such activities are specifically authorized as the first phase of an individual permit or are authorized to occur in accordance with a general permit or exemption under Chapter 62-330, F.A.C.

2. This permit does not:
   (a) Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;
   (b) Convey to the permittee or create in the permittee any interest in real property;
   (c) Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or
   (d) Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.

3. The permittee shall notify the Agency in writing:
   (a) Immediately if any previously submitted information is discovered to be inaccurate; and
   (b) Within 30 days of any conveyance or division of ownership or control of the property or the system, the name and contact information for the new owner.

4. Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample, and test the project site to ensure conformity with the permit.

5. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 62-330.201, F.A.C., provides otherwise.

6. This conceptual approval permit only authorizes design concepts for a master or future plan to construct, alter, operate, maintain, remove, or abandon projects that require a permit under Part IV of Chapter 373, F.S. It does not authorize any construction, alteration, operation, maintenance, removal, or abandonment, or the establishment and operation of a mitigation bank, or relieve the permit holder of any requirements to obtain such permits.

7. Subsequent applications to construct and operate activities shall be prepared and submitted using the applicable procedures in Rules 62-330.052, 62-330.054, 62-330.060, and 62-330.402 F.A.C., and sections 4.2.2, 4.2.3, 4.3, and 4.4 of Volume I. An application for conceptual approval for a mitigation bank shall also include the materials required by Chapter 62-342, F.A.C.

8. Issuance of this conceptual approval permit is a determination, within the level of detail provided in the application, that the activities approved in this permit are consistent with applicable rules at the time of issuance. This permit provides the conceptual approval permit holder with a rebuttable presumption, during the duration of this permit, that the engineering design and scientific principles upon which the conceptual approval permit approved herein are likely to meet applicable rule criteria for issuance of permits for subsequent phases of the project, provided all of the following are met at the time of receipt of a complete application to construct and operate the future phases:
   (a) The application to construct and operate the future phases remains consistent with the designs and conditions of this permit. Primary areas for consistency comparisons include the size, location, and extent of the activities proposed, the type and nature of the activities, percent imperviousness, allowable discharge and points of discharge, location and extent of wetland

and other surface water impacts, mitigation plans implemented or proposed, control elevations, extent of stormwater reuse, detention and retention volumes, and the extent of flood elevations.
If an application for construction of any portion of the land area covered by this permit is inconsistent with the design concepts and conditions approved herein, the application will be reviewed to determine the extent to which the inconsistency will affect the designs and conditions for the remainder of the lands contained in this permit. If the inconsistency will materially affect those designs and conditions, then the applicant must demonstrate that the holder of this permit agrees to that inconsistency. In such a case, the holder of the conceptual approval permit may:
1. Modify the conceptual approval permit to conform to the revised design;
2. Abandon reliance on the conceptual approval permit; or
3. Rely on those portions of the conceptual approval permit for only those areas that were not affected by the inconsistency.
(b) There are no changes to state water quality standards that would be affected by activities authorized in the conceptual approval permit that have not already been authorized for construction or operation.
(c) There have been no amendments to Florida law governing special basin criteria that would affect future activities authorized by the conceptual approval permit that have not already been authorized for construction.
(d) There are no substantive changes in the site characteristics that would affect whether the design concepts approved in the conceptual approval permit can continue to be reasonably expected to meet the conditions for authorizing construction of future phases. This shall include such things as changes in the designation of listed species, and changes to nesting, denning, and critical designation status of listed species that exist within the lands served by the project area.

9. If changes are proposed to the design of existing or future phases, or where there have been changes to state water quality standards, special basins, or site characteristics as described in conditions (3)(a) through (d), above, during the duration of this permit, the applicant must modify this permit if it wishes to continue to rely on this permit as a basis that reasonable assurance exists for the Agency to issue future construction or operation permits under the terms and conditions of this permit. If the permittee fails to do this, this conceptual approval permit can no longer be relied upon as a basis, in part or whole, under which permits to construct or operate future phases will be issued, and the Agency will reevaluate the terms and conditions of this permit at the time a permit application is received to construct the next phase of activities, or at the next requested extension of this permit's duration in accordance with subsection 62-330.056(11), F.A.C., whichever occurs first.

Special Conditions for Conceptual Permits

1. The Conceptual Approval shall expire on the date shown on page 2 of this permit, in accordance with Rules 62-330.056(9) and (10), F.A.C.

2. Operation and maintenance of the stormwater management system shall be the responsibility of M&M Stuart, LLC. The permittee shall notify the Agency in writing within 30 days of any conveyance or division of ownership or control of the property of the system, and the new owner must request transfer of the permit in accordance with Rule 62-330.340, F.A.C.

3. Pursuant to Section 4.2.3(d)(3) of Applicant's Handbook Volume I, prior to commencement of any phase of construction, documentation of ownership for the property subject to this conceptual approval must be submitted to the Agency. If the property is conveyed to an entity other than the permittee, a permit transfer will be required.

4. The delineation of the extent of wetlands and/or other surface waters located within the limits of the proposed development has been determined pursuant to Rule 62-340, F.A.C and shall be considered binding.

5. At the time of application for any phase of construction that includes wetland impacts, the permittee shall demonstrate that an adequate portion of the mitigation plan has been or shall be executed and completed in a timely manner (i.e., concurrent with the wetland impacts) and that the specified mitigation will adequately offset the wetland impacts associated with that phase.

6. This permit does not eliminate the need to obtain any and all necessary easements and rights of way prior to the start of any activity approved herein. This permit does not convey to the permittee, or create for the permittee, any property right, or any interest in real property; nor does it authorize any entrance upon, or activities on, property which is not owned or controlled by the permittee; or convey any rights or privileges other than those specified in the permit and Chapter 62-330, F.A.C.

7. The future construction of the SWM system serving Kanner highway (Basin B4) will require a joint application between the permitee and the Florida Department of Transportation.

Distribution List

Russell Mcfall, II, Maser Consulting PA

Eileen Nehme, Nehme Holdings LLC

Mahmoud Hadid, Willoughby Group LLC

Tim Voelker, City Of Stuart

James Poole, PE, Florida Department Of Transportation

US Army Corps of Engineers - Permit Section

Martin County Board of County Commissioners

Martin County Growth Management Department

Martin County Engineering Department

Exhibits

The following exhibits to this permit are incorporated by reference. The exhibits can be viewed by clicking on the links below or by visiting the District's ePermitting website at http://my.sfwmd.gov/ePermitting and searching under this application number 200323-3070 .

Exhibit No. 1.0 Location Map

Exhibit No. 2.0 SWM Plans

Exhibit No. 2.1 Landuse

Exhibit No. 2.2 SWM Maps

Exhibit No. 3.0 Wetland Location Map

Exhibit No. 3.1 Wetland and OSW Impact Map

NOTICE OF RIGHTS

As required by Chapter 120, Florida Statutes, the following provides notice of the opportunities which may be available for administrative hearing pursuant to Sections 120.569 and 120.57, Florida Statutes, or judicial review pursuant to Section 120.68, Florida Statutes, when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Some of the legal proceedings detailed below may not be applicable or appropriate for your situation. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Florida Statutes. Persons seeking a hearing on a District decision which affects or may affect their substantial interests shall file a petition for hearing in accordance with the filing instructions set forth herein within 21 days of receipt of written notice of the decision unless one of the following shorter time periods apply: (1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Florida Statutes; or (2) within 14 days of service of an Administrative Order pursuant to Section 373.119(1), Florida Statutes. "Receipt of written notice of agency decision" means receipt of written notice through mail, electronic mail, posting, or publication that the District has taken or intends to take final agency action. Any person who receives written notice of a District decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

If the District takes final agency action that materially differs from the noticed intended agency decision, persons who may be substantially affected shall, unless otherwise provided by law, have an additional point of entry pursuant to Rule 28-106.111, Florida Administrative Code.

Any person to whom an emergency order is directed pursuant to Section 373.119(2), Florida Statutes, shall comply therewith immediately, but on petition to the board shall be afforded a hearing as soon as possible.

A person may file a request for an extension of time for filing a petition. The District may grant the request for good cause. Requests for extension of time must be filed with the District prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and whether the District and any other parties agree to or oppose the extension. A timely request for an extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

FILING INSTRUCTIONS

A petition for administrative hearing must be filed with the Office of the District Clerk. Filings with the Office of the District Clerk may be made by mail, hand-delivery, or e-mail. Filings by facsimile will not be accepted. A petition for administrative hearing or other document is deemed filed upon receipt during normal business hours by the Office of the District Clerk at the District's headquarters in West Palm Beach, Florida. The District's normal business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Any document received by the Office of the District Clerk after 5:00 p.m. shall be deemed filed as of 8:00 a.m. on the next regular business day.

Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the District Clerk, 3301 Gun Club Road, West Palm Beach, Florida 33406.
- Filings by hand-delivery must be delivered to the Office of the District Clerk. Delivery of a petition to the District's security desk does not constitute filing. It will be necessary to request that the District's security officer contact the Office of the District Clerk. An employee of the District's Clerk's office will receive and process the petition.
- Filings by e-mail must be transmitted to the Office of the District Clerk at clerk@sfwmd.gov. The filing date for a document transmitted by electronic mail shall be the date the Office of the District Clerk receives the complete document.

INITIATION OF ADMINISTRATIVE HEARING

Pursuant to Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Rules 28-106.201 and 28-106.301, Florida Administrative Code, initiation of an administrative hearing shall be made by written petition to the District in legible form and on 8 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, District file number or any other District identification number, if known.
2. The name, address, any email address, any facsimile number, and telephone number of the petitioner, petitioner's attorney or qualified representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the District's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the District's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the District's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the District to take with respect to the District's proposed action.

MEDIATION

The procedures for pursuing mediation are set forth in Section 120.573, Florida Statutes, and Rules 28-106.111 and 28-106.401–.405, Florida Administrative Code. The District is not proposing mediation for this agency action under Section 120.573, Florida Statutes, at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Section 120.68, Florida Statutes, and in accordance with Florida Rule of Appellate Procedure 9.110, a party who is adversely affected by final District action may seek judicial review of the District's final decision by filing a notice of appeal with the Office of the District Clerk in accordance with the filing instructions set forth herein within 30 days of rendition of the order to be reviewed, and by filing a copy of the notice with the appropriate district court of appeals via the Florida Courts E-Filing Portal.

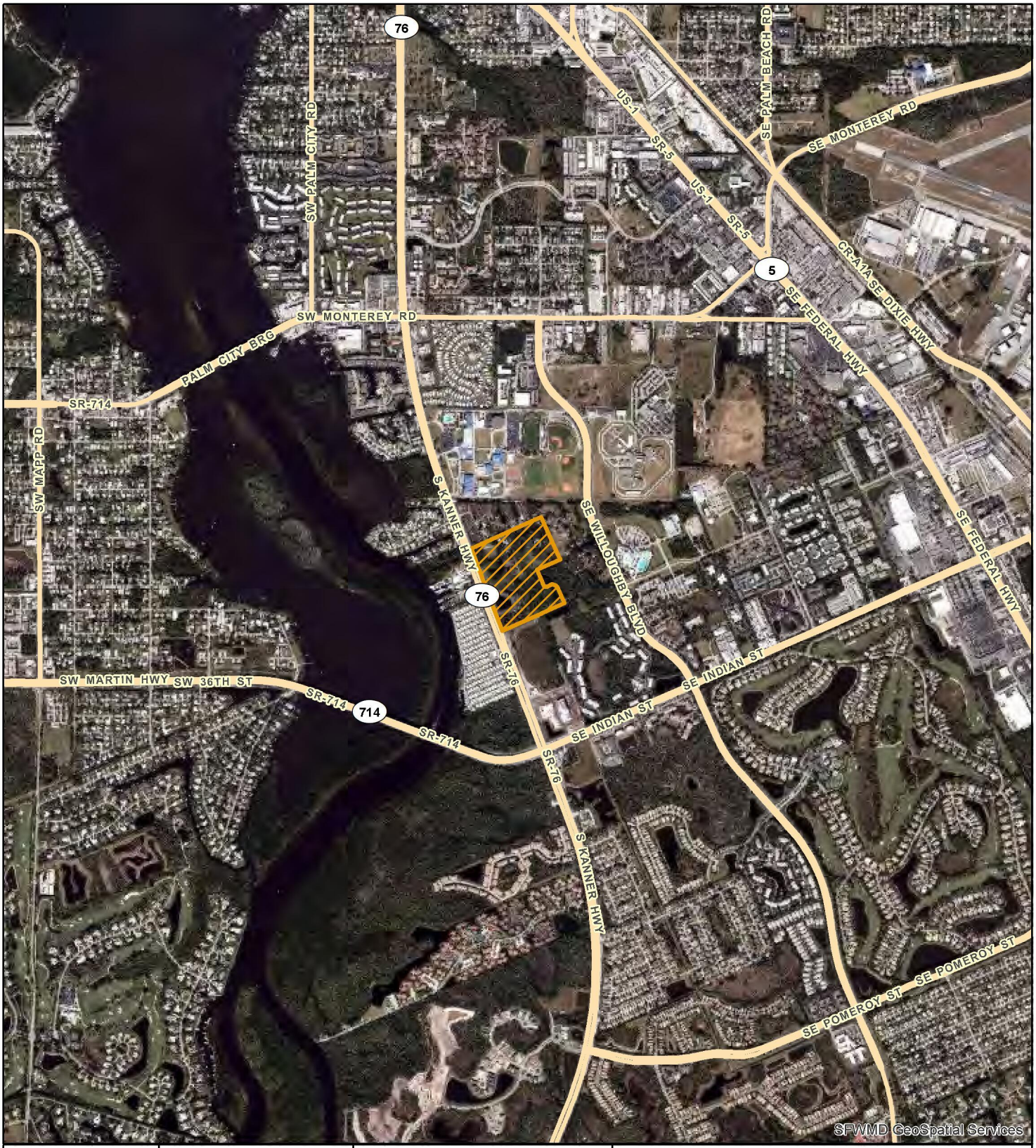


Exhibit No:1.0	Exhibit Created On: 2020-03-26	MARTIN COUNTY, FL

REGULATION DIVISION

Project Name: Kanner CPUD

Application

Permit No: 43-103195-P

Application Number: 200323-3070

0 1,750 3,500 Feet

N

08092021 CGM

sfwmd.gov

Created by IT GIS Section

South Florida Water Management District

EXHIBITS 2.0

EXHIBITS 2.1

EXHIBITS 2.2

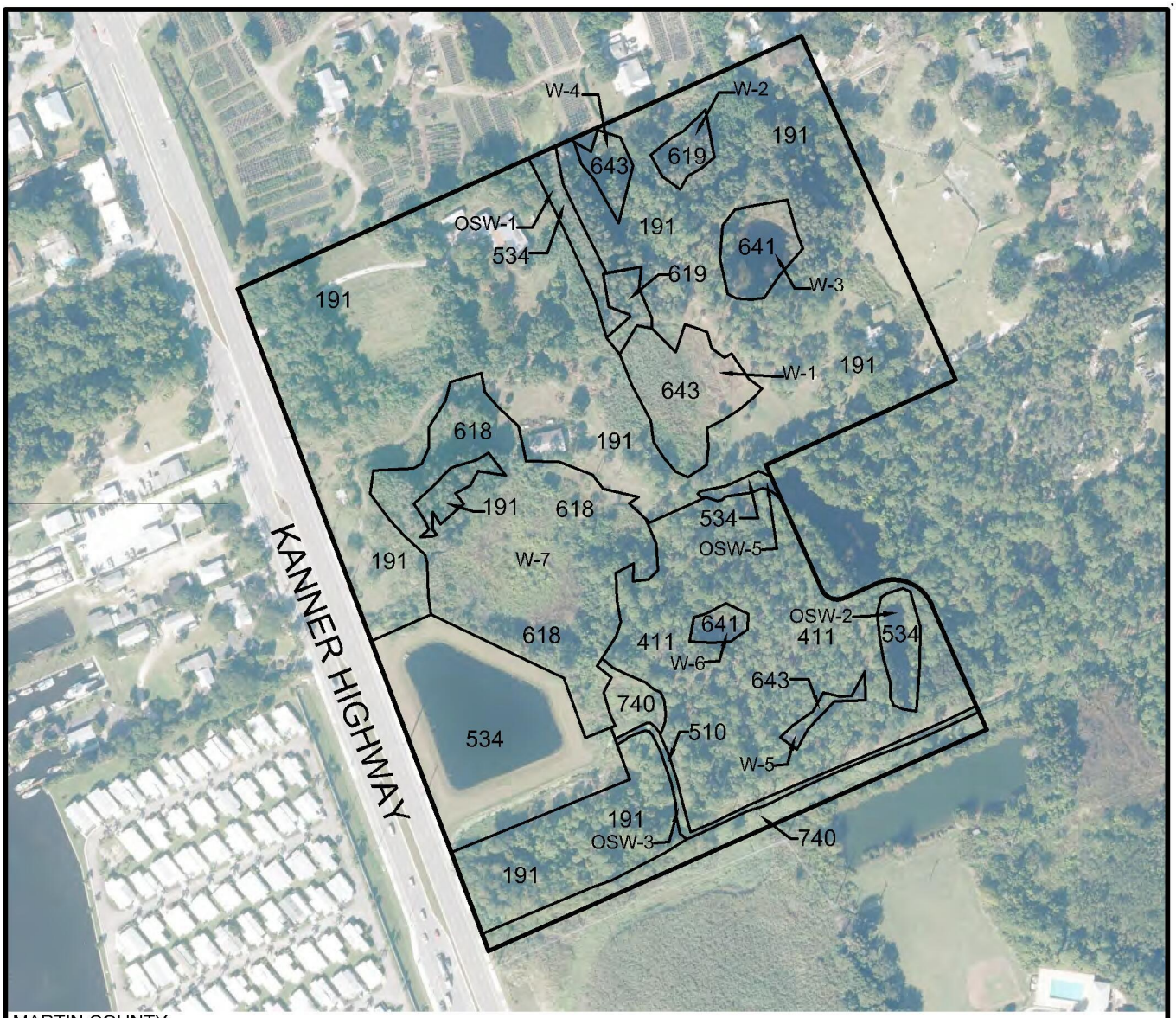
Omitted due to file size limitations

Exhibits available for download from the SFWMD ePermitting:

Exhibit No. 2.0 SWM Plans

Exhibit No. 2.1 Landuse

Exhibit No. 2.2 SWM Maps



MARTIN COUNTY
AERIALS DATED 2020

LEGEND

191 - UNDEVELOPED LANDS WITHIN URBAN AREAS (15.1± AC)
411 - PINE FLATWOODS (4.8± AC)
510 - DITCHES (0.2± AC)
534 - RESERVOIRS LESS THAN 10 ACS (3.2± AC)
618 - WILLOW & ELDERBERRY (3.5± AC)
619 - EXOTIC WETLAND HARDWOODS (0.3± AC)
641 - FRESHWATER MARSHES (0.6± AC)
643 - WET PRAIRIES (1.2± AC)
740 - DISTURBED LANDS (1.0± AC)
TOTAL SITE (29.9± AC)

0 300
SCALE IN FEET

M&M REALTY PARTNERS

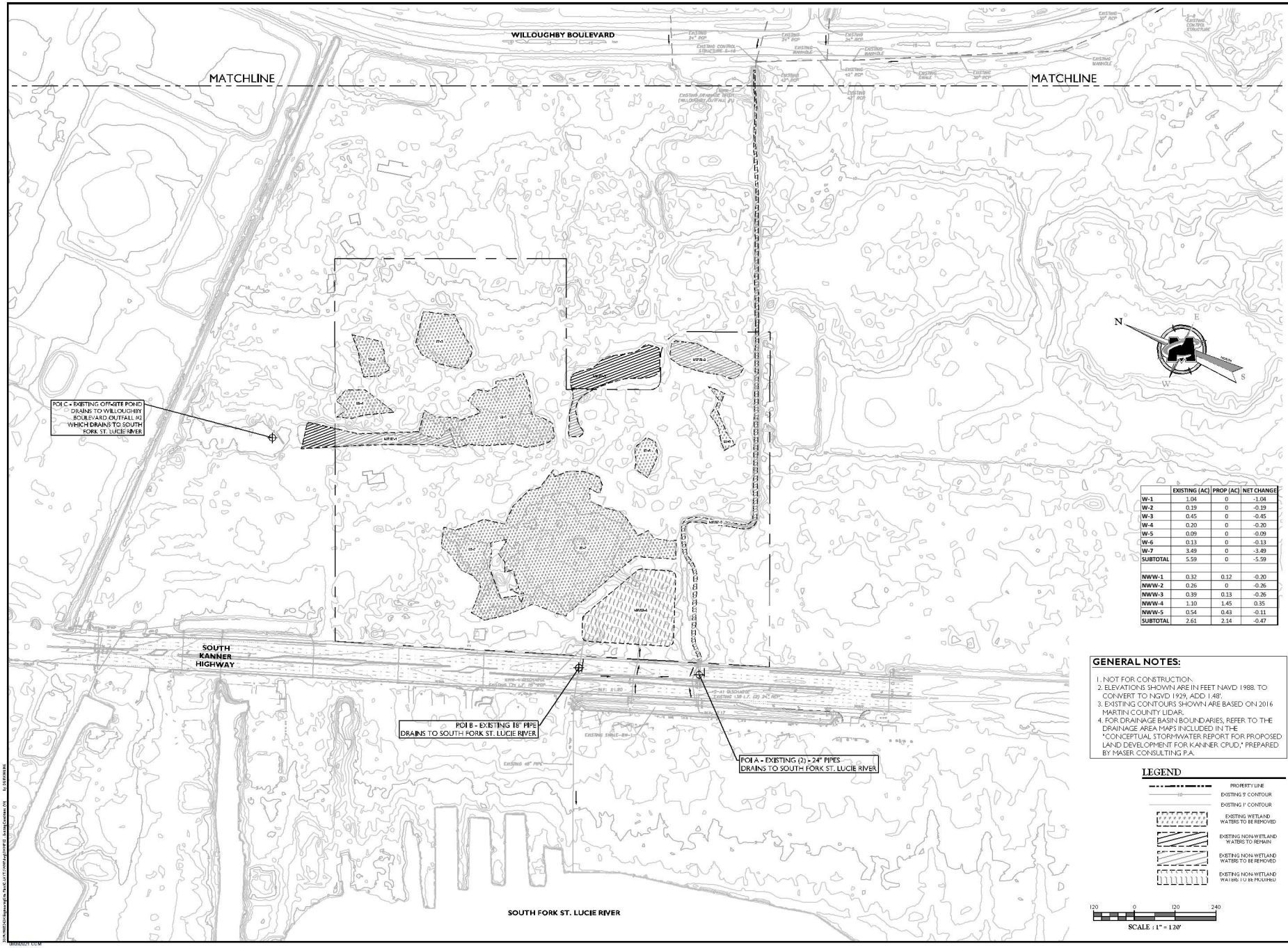
FLUCFCS

EW CONSULTANTS, INC.
1000 SE MONTEREY COMMONS BLVD., SUITE 208
STUART, FL 34996
772-287-8771 FAX 772-287-2988
WWW.EWCONSULTANTS.COM

MAY 2020

FIGURE
3

M&M Realty Partners.dwg FLUCFCS



	EXISTING (AC)	PROP (AC)	NET CHANGE
W-1	1.04	0	-1.04
W-2	0.19	0	-0.19
W-3	0.45	0	-0.45
W-4	0.20	0	-0.20
W-5	0.09	0	-0.09
W-6	0.13	0	-0.13
W-7	3.49	0	-3.49
SUBTOTAL	5.59	0	-5.59
NWW-1	0.32	0.12	-0.20
NWW-2	0.26	0	-0.26
NWW-3	0.39	0.13	-0.26
NWW-4	1.10	1.45	0.35
NWW-5	0.54	0.43	-0.11
SUBTOTAL	2.61	2.14	-0.47

GENERAL NOTES:

1. NOT FOR CONSTRUCTION.
2. ELEVATIONS SHOWN ARE IN FEET NAVD 1988. TO CONVERT TO NGVD 1929, ADD 1.48'.
3. EXISTING CONTOURS SHOWN ARE BASED ON 2016 MARTIN COUNTY LIDAR.
4. FOR DRAINAGE BASIN BOUNDARIES, REFER TO THE DRAINAGE AREA MAPS INCLUDED IN THE "CONCEPTUAL STORMWATER REPORT FOR PROPOSED LAND DEVELOPMENT FOR KANNER CPUD," PREPARED BY MASER CONSULTING P.A.

LEGEND

- PROPERTY LINE
- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING WETLAND WATERS TO BE REMOVED
- EXISTING NON-WETLAND WATERS TO REMAIN
- EXISTING NON-WETLAND WATERS TO BE REMOVED
- EXISTING NON-WETLAND WATERS TO BE PRESERVED

120 0 120 240

SCALE : 1" = 120'

MASER CONSULTING P.A.
Customer Loyalty through Client Satisfaction
www.maserconsulting.com
Engineers ■ Planners ■ Surveyors
Landscape Architects ■ Environmental Scientists
Office Locations:
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Cherry Hill, NJ
Hamilton, NJ
Egg Harbor, NJ
Montvale, NJ
Mt. Arlington, NJ
Mt. Laurel, NJ
Morristown, NJ
New Windsor, NY
Westchester, NY
Charlotte, NC
Raleigh, NC
Lehigh Valley, PA
Philadelphia, PA
Pittsburgh, PA
Tampa, FL
Orlando, FL
Miami, FL
Jacksonville, FL
Baltimore, MD
Norfolk, VA
Albuquerque, NM
Columbia, MD
FLORIDA CERTIFICATE OF AUTHORIZATION No. 31930

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811 PROTECT YOURSELF
ALL UTILITIES REQUIRED TO PERFORM SUBSURFACE INSTALLATIONS OR EXCAVATIONS IN THE STATE OF FLORIDA ARE REQUIRED BY LAW TO BE A MEMBER OF SUNSHINE ONE CALL OF FLORIDA, INC. AND MUST BE NOTIFIED AT LEAST TWO FULL BUSINESS DAYS BUT NOT MORE THAN FIVE CALENDAR DAYS BEFORE YOU DIG, EXCAVATE OR DEMOLISH. Know what's below. Call before you dig.
FOR STATES SPECIFIC DIRECT PHONE NUMBERS VISIT WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	02/22/21	BWG	SOUTH FLORIDA WATER MANAGEMENT DISTRICT REQUEST FOR ADDITIONAL INFORMATION

RUSSELL T. McFALL II
LICENSE No. 75736
STATE OF FLORIDA
PROFESSIONAL ENGINEER

RUSSELL T. McFALL II
FLORIDA PROFESSIONAL ENGINEER - LICENSE NUMBER: 75736

CONCEPTUAL STORMWATER MASTER PLAN PERMIT DRAWINGS
FOR
M & M STUART, LLC

CITY OF STUART
MARTIN COUNTY
FLORIDA

EXTON OFFICE
410 Eagleview Boulevard
Suite 104
Exton, PA 19341
Phone: 610.254.9140
Fax: 610.254.9141

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	02/05/2020	DH	RTM
PROJECT NUMBER	DRAWING NAME		
19005142A	CLAVTS.MXD		

SHEET TITLE
EXISTING CONDITIONS (WEST)

SHEET NUMBER
2 of 7

KANNER RPUD

SFWMD Informal Wetland Determination

Application No. 201015-4488

Conceptual Permit No. 43-104226-P

Date Issued: November 3, 2020

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

November 3, 2020

** Delivered via email*

Joe Marino *
M&M Realty Partners
160 Essex Street
Suite 200
Lodi, FL 07644

Subject: Kanner Rpud
Application No. 201015-4488
Informal Wetland Determination No. 43-104226-P
Martin County

Dear Mr. Marino:

The District reviewed your request for an informal determination of the jurisdictional wetland and other surface water boundaries within the subject property, which is located as shown on the attached Exhibit No. 1.0. A joint site inspection was conducted on October 22, 2020.

Based on the information provided and the results of the site inspection, jurisdictional wetlands and other surface waters as defined in Chapter 62-340, Florida Administrative Code, exist on the property. Exhibit No. 2.0, attached, identifies the boundaries of the property inspected and the approximate landward limits of the wetlands and other surface waters.

This correspondence is an informal jurisdictional wetland determination pursuant to Section 373.421(6), Florida Statutes, and Section 7.3 of Environmental Resource Permit Applicant's Handbook Volume I. It does not bind the District, its agents or employees, nor does it convey any legal rights, expressed or implied. Persons obtaining this informal jurisdictional determination are not entitled to rely upon it for purposes of compliance with provision of law or District rules.

Sincerely,

Barbara Conmy
Section Leader

c: Arnaud Roux, EW Consultants, Inc *

Exhibits

The following exhibits to this permit are incorporated by reference. The exhibits can be viewed by clicking on the links below or by visiting the District's ePermitting website (http://my.sfwmd.gov/ePermitting) and searching under this application number 201015-4488 .

Exhibit No. 1.0 Location Map

Exhibit No. 2.0 Wetland/OSW Map

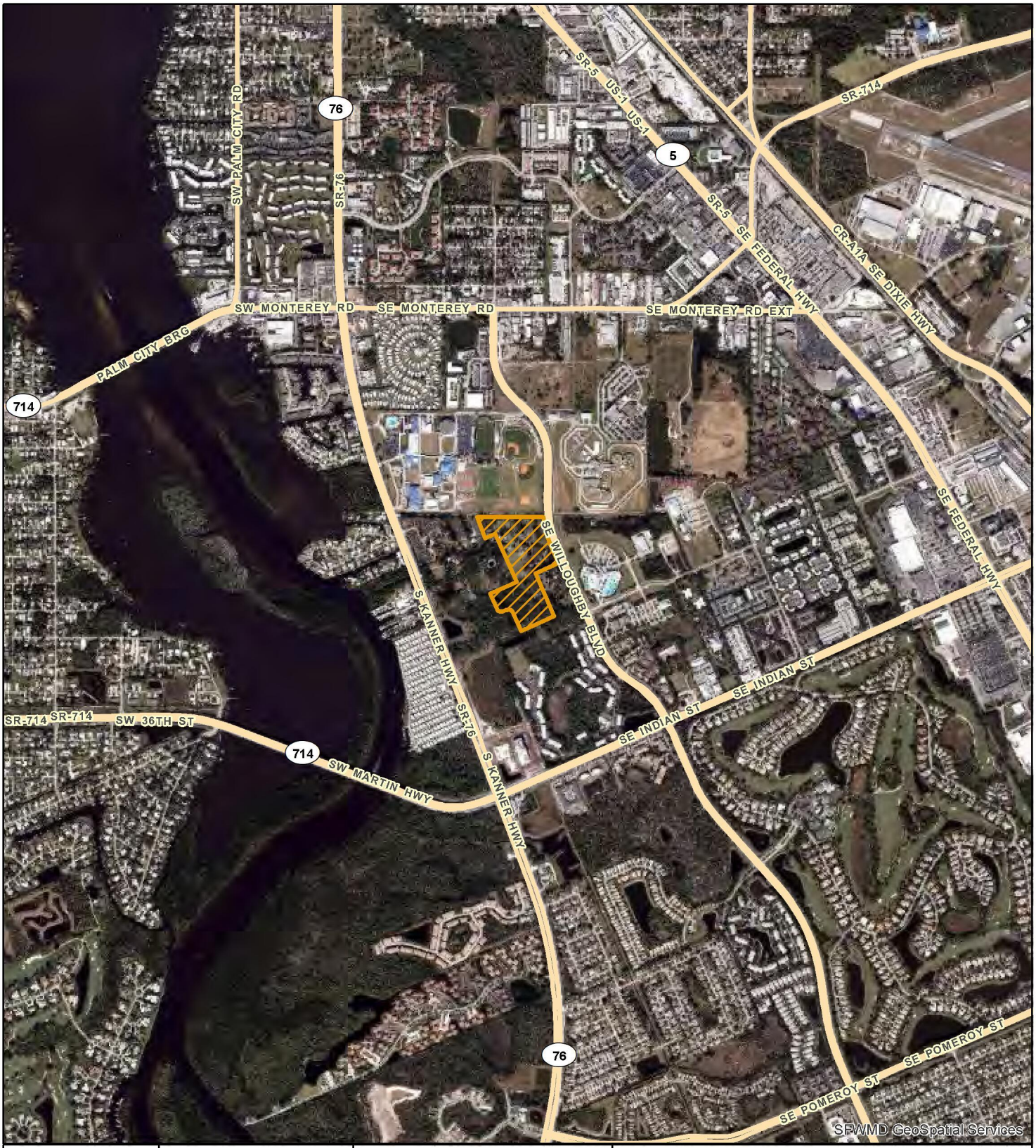


Exhibit No:1.0	Exhibit Created On: 2020-10-15	MARTIN COUNTY, FL

Application

REGULATION DIVISION

Project Name: Kanner Rpud

Application Number: 201015-4488

N

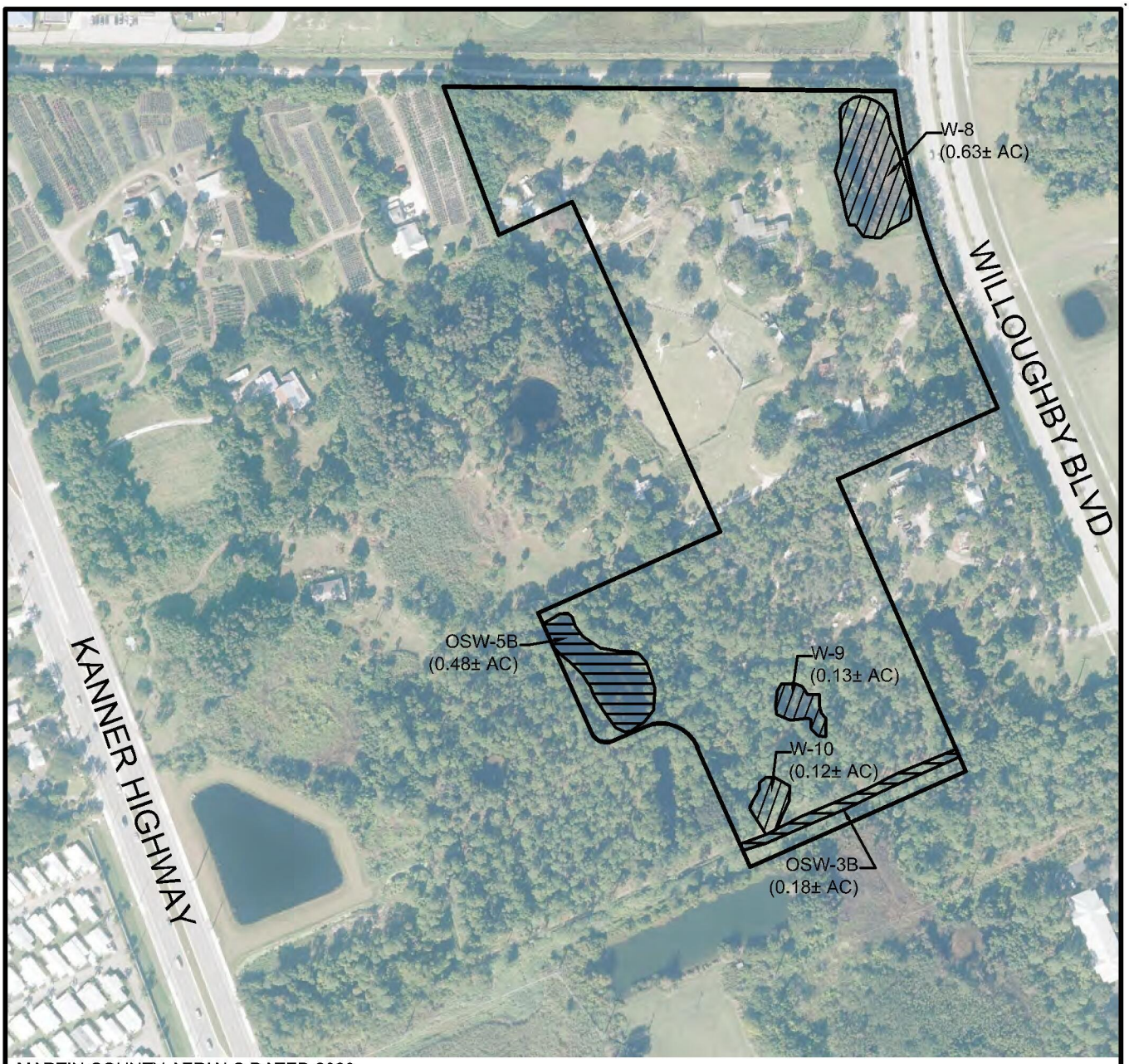
0 1,550 3,100 Feet

08092021 CGM

sfwmd.gov

Created by IT GIS Section

South Florida Water Management District



MARTIN COUNTY AERIALS DATED 2020

0 300
SCALE IN FEET

LEGEND

- WETLANDS (0.88± AC)
- OTHER SURFACE WATERS (0.66± AC)

KANNER RPUD

WETLAND & OSW MAP

EW CONSULTANTS, INC.
1000 SE MONTEREY COMMONS BLVD., SUITE 208
STUART, FL 34996
772-287-8771 FAX 772-287-2988
WWW.EWCONSULTANTS.COM

OCT 2020

FIGURE

4

'Kanner RPUD SFWMD.dwg WETLAND & OSW

Soil Map—Martin County, Florida
(KANNER CPUD/RPUD)



Map Scale: 1:4,290 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Martin County, Florida
Survey Area Data: Version 19, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

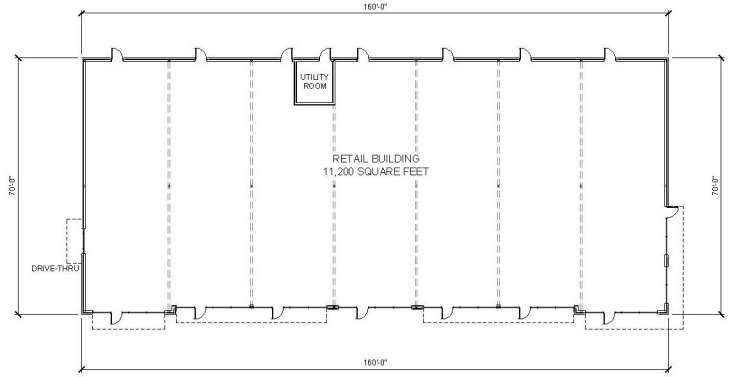
Date(s) aerial images were photographed: Mar 8, 2019—Mar 28, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4	Waveland and Immokalee fine sands	26.1	53.6%
5	Waveland and Lawnwood fine sands, depressional	2.3	4.8%
35	Salerno sand	6.1	12.5%
41	Jonathan sand, 0 to 5 percent slopes	13.2	27.1%
99	Water	1.0	2.0%
Totals for Area of Interest		**48.6**	**100.0%**

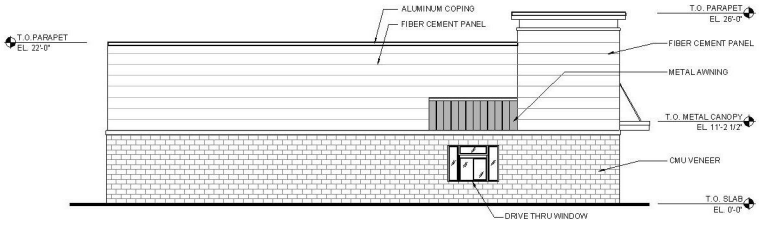
CONTRACTORS SHALL VERIFY EXISTING CONDITIONS AND CORRELATE DIMENSIONS PRIOR TO PROVIDING THE WORK DETAILED IN THESE DRAWINGS AND SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. COPYRIGHT EDWENDO PROPERTIES. UNAUTHORIZED REPRODUCTION OR OTHER USE OF THIS DRAWING IS PROHIBITED.
THIS DRAWING AND THE INFORMATION ON IT ARE CONFIDENTIAL AND ARE THE PROPERTY OF EP DESIGN SERVICES LLC AND EDWENDO PROPERTIES, INC. AND MAY NOT BE USED FOR ANY PURPOSE OR PROJECT OTHER THAN THE ONE IDENTIFIED HERE ON WITHOUT WRITTEN CONSENT FROM EP DESIGN SERVICES LLC



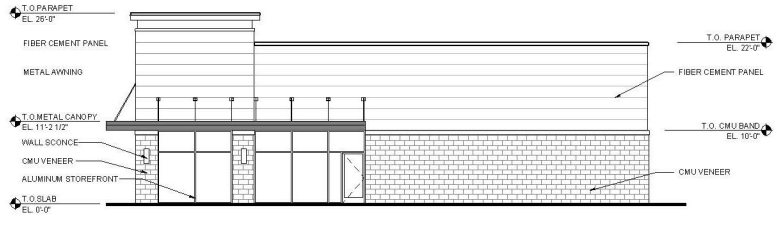
1 GROUND FLOOR PLAN
Scale: 1/16" = 1'-0"



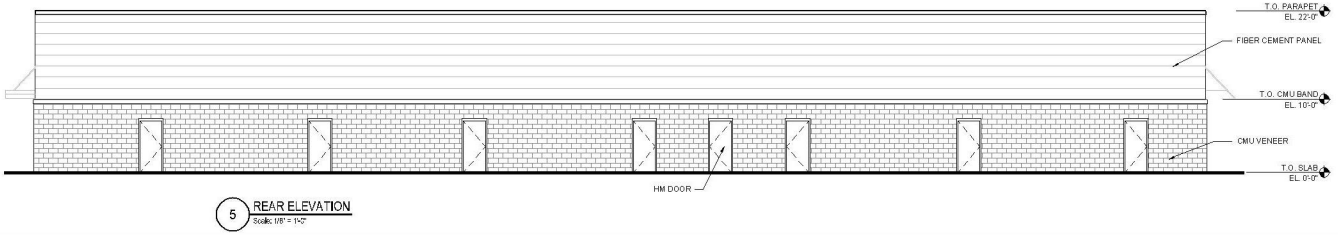
2 FRONT ELEVATION
Scale: 1/8" = 1'-0"



3 LEFT SIDE ELEVATION
Scale: 1/8" = 1'-0"



4 RIGHT SIDE ELEVATION
Scale: 1/8" = 1'-0"



5 REAR ELEVATION
Scale: 1/8" = 1'-0"

Rafael R. DaSilva AIA
NJ: 21AI01637200
Dir. Russell PA
NJ: 21AI01588100

EP DESIGN SERVICES
2801 HAMILTON BLVD. SOUTH PLAINFIELD, NJ 07080
T: 908-205-0443 F: 908-205-8371
CERT. OF AUTHORIZATION # 21AC00075900

PROPOSED RETAIL BUILDINGS:
STUART RETAIL CENTER
CITY OF STUART
MARTIN COUNTY, FLORIDA

PROPERTY OWNER:
M&M AT STUART, LLC
1260 STELTON ROAD
PISCATAWAY, NJ 08854

DISTRIBUTION	DATE
PLANNING BOARD	3/2/2021

DRAWING TITLE:
PROPOSED FLOOR PLAN
PROPOSED ELEVATIONS

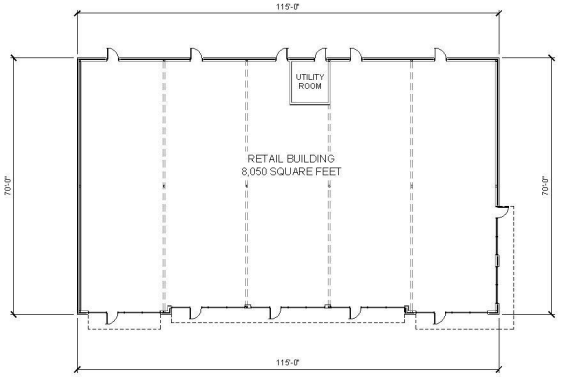
PROJECT #
DRAWN BY: JDA
CHECKED BY: RD

A-001

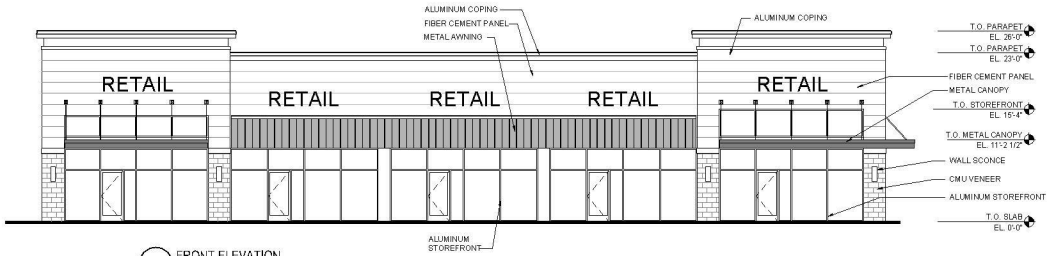
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080820021 CCM

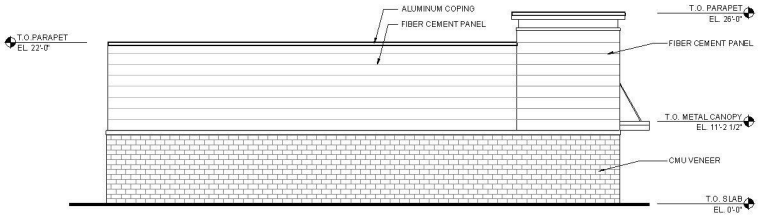
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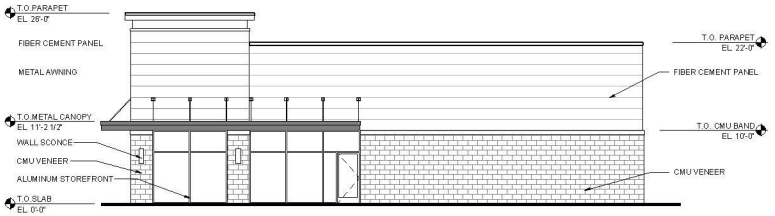
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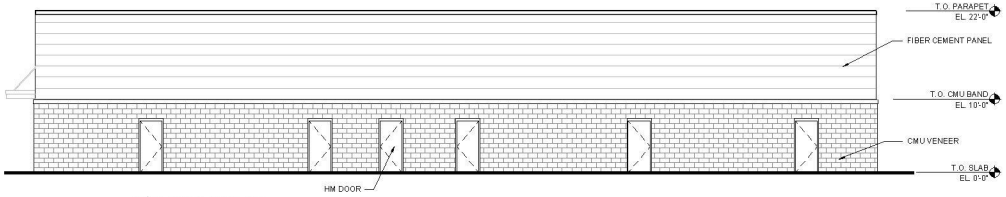
2 FRONT ELEVATION
Scale: 1/8" = 1'-0"



3 LEFT SIDE ELEVATION
Scale: 1/8" = 1'-0"



4 RIGHT SIDE ELEVATION
Scale: 1/8" = 1'-0"



5 REAR ELEVATION
Scale: 1/8" = 1'-0"

0 1/2" 1" 2" 3" 4" 5'

Rafael R. DaSilva AIA
NJ: 21AI01837200
Dir. Russell PA
NJ: 21AI01988100

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CERT. OF AUTHORIZATION # 21AC00075900

PROPOSED RETAIL BUILDINGS:
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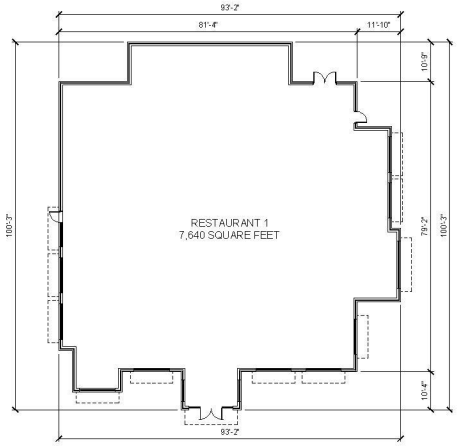
DISTRIBUTION	DATE
PLANNING BOARD	3/2/2021

DRAWING TITLE:
PROPOSED FLOOR PLAN
PROPOSED ELEVATIONS

PROJECT #
DRAWN BY JDA
CHECKED BY RD

A-002

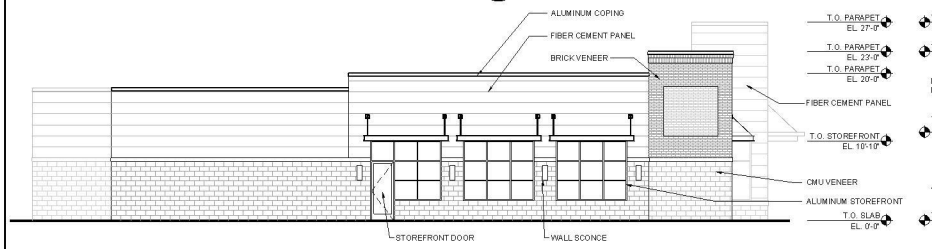
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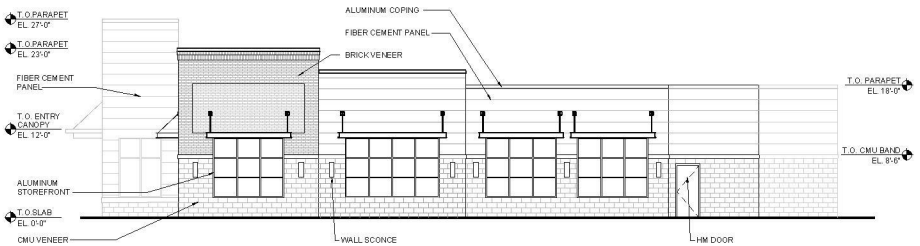
1 GROUND FLOOR PLAN
Scale: 1/8" = 1'-0"



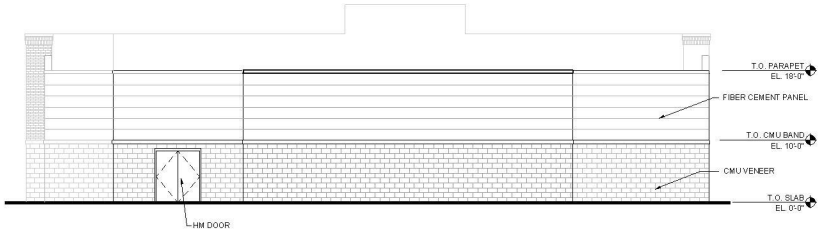
2 FRONT ELEVATION
Scale: 1/8" = 1'-0"



3 LEFT SIDE ELEVATION
Scale: 1/8" = 1'-0"



4 RIGHT SIDE ELEVATION
Scale: 1/8" = 1'-0"



5 REAR ELEVATION
Scale: 1/8" = 1'-0"

0 1/2" 1" 2" 3" 4" 5'

Rafael R. DeSousa AIA
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Ch. Russo RA
NJ: 21AI01988100

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CITY OF STUART
MARTIN COUNTY, FLORIDA

PROPERTY OWNER:
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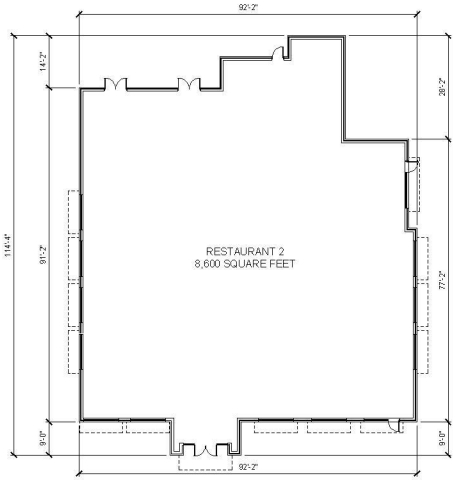
DISTRIBUTION	DATE
PLANNING BOARD	3/27/2021

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PROPOSED FLOOR PLAN
PROPOSED ELEVATIONS

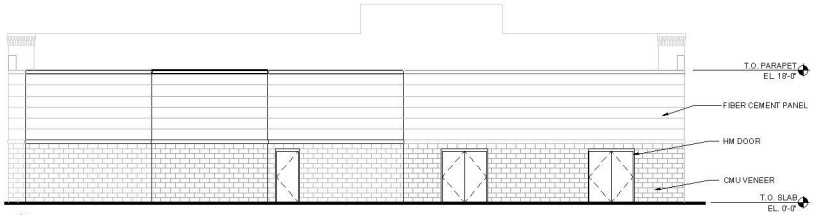
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DRAWN BY JDA
CHECKED BY RD

A-003

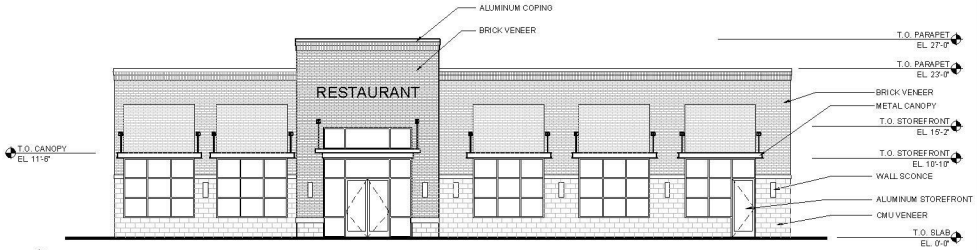
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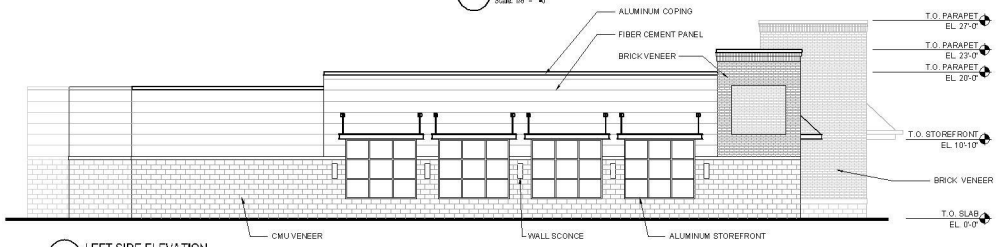
1 GROUND FLOOR PLAN
Scale: 1/8" = 1'-0"



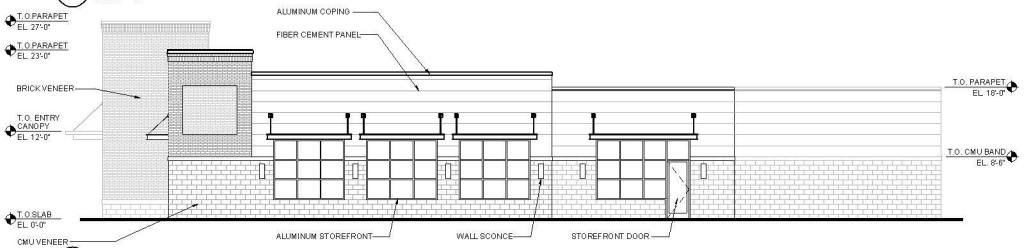
2 REAR ELEVATION
Scale: 1/8" = 1'-0"



3 FRONT ELEVATION
Scale: 1/8" = 1'-0"



4 LEFT SIDE ELEVATION
Scale: 1/8" = 1'-0"



5 LEFT SIDE ELEVATION
Scale: 1/8" = 1'-0"

0 1/2" 1" 2" 3" 4" 5"

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Ch. Russell RA
NJ: 21AI01988100

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PISCATAWAY, NJ 08854

DISTRIBUTION	DATE
PLANNING BOARD	3/2/2021

DRAWING TITLE:
PROPOSED FLOOR PLAN
PROPOSED ELEVATIONS

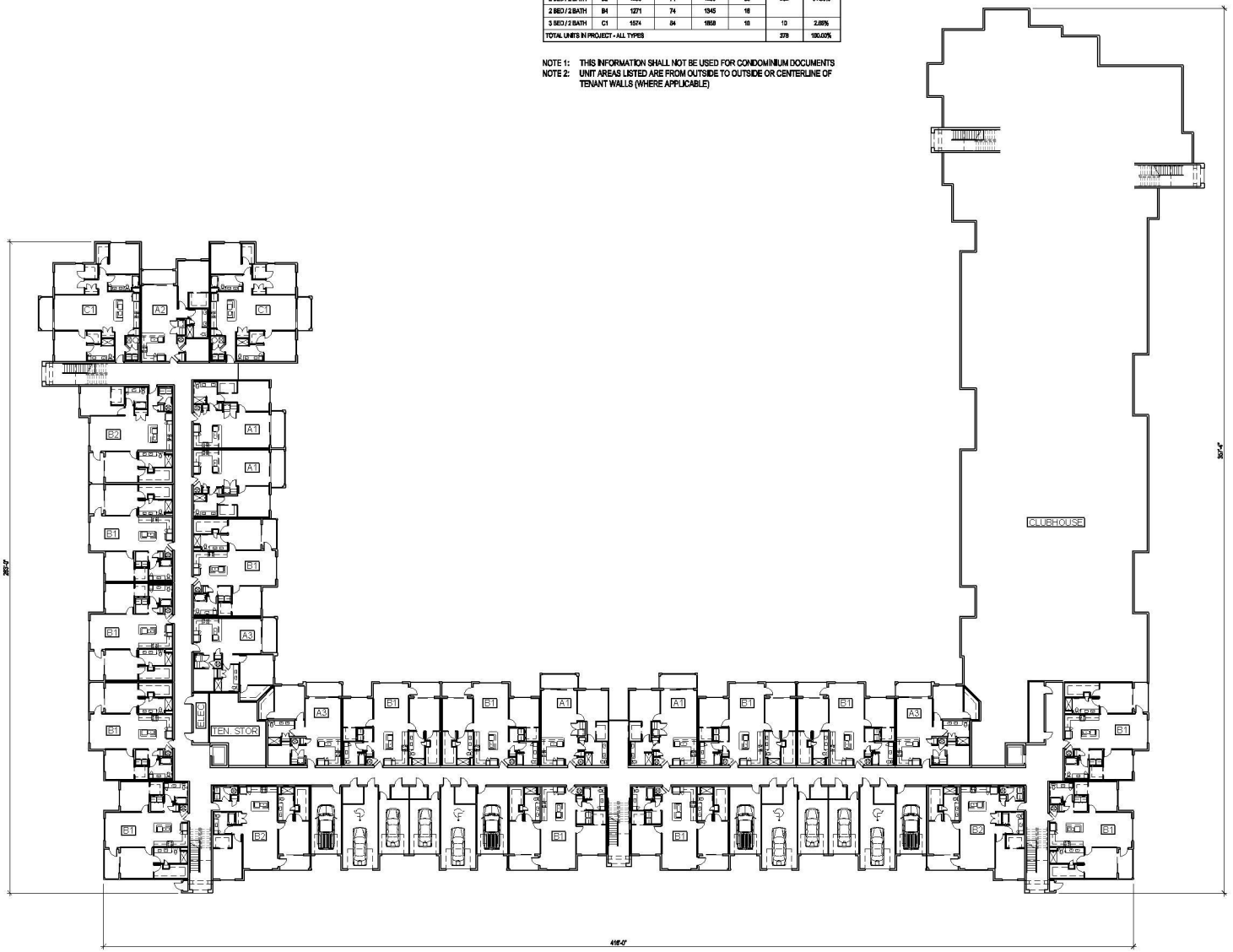
PROJECT #
DRAWN BY JDA
CHECKED BY RD

A-004

UNIT AREA TABLE

UNIT TYPE	UNIT NAME	UNIT AREA IN SF		TOTAL UNIT AREA IN SF	UNIT TOTAL BY NAME	UNIT TOTAL BY TYPE	% UNIT TYPE
		A/C	NON-A/C				
1 BED / 1 BATH	A1	963	94	957	36	136	35.98%
1 BED / 1 BATH	A2	960	84	1064	76		
1 BED / 1 BATH	A3	942	86	1028	22		
2 BED / 2 BATH	B1	1226	74	1299	128	232	61.38%
2 BED / 2 BATH	B2	1208	74	1280	86		
2 BED / 2 BATH	B4	1271	74	1345	18		
3 BED / 2 BATH	C1	1574	84	1658	10	10	2.65%
TOTAL UNITS IN PROJECT - ALL TYPES						378	100.00%

NOTE 1: THIS INFORMATION SHALL NOT BE USED FOR CONDOMINIUM DOCUMENTS
NOTE 2: UNIT AREAS LISTED ARE FROM OUTSIDE TO OUTSIDE OR CENTERLINE OF TENANT WALLS (WHERE APPLICABLE)



1 First Floor Plan

1" = 20'-0"

Scale: 1 = 240

08/02/2021 CC:M

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ARCHITECTURE & INTERIOR DESIGN, INC.
237 S. Westmonte Drive, Suite 22
Altamonte Springs, FL 3271
407.830.140
AR001122
www.forumarchitecture.cor

Stuart Apartments

Stuart, FL

07/14/2021
James B. Black
AR0011224

Preliminary - Not For Construction

SET DISTRIBUTIONS:	
12/14/20	Owner Review
12/18/20	Owner Review
05/13/21	Owner Review
05/13/21	Owner Review
07/13/21	Owner Review

△	SHEET REVISIONS:

PROJECT NO. 412

Building Type I

First Floor Plan

A5.11

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1 First Floor Plan

1" = 20'-0"

Scale: 1 = 240

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Building Type II

First Floor Plan

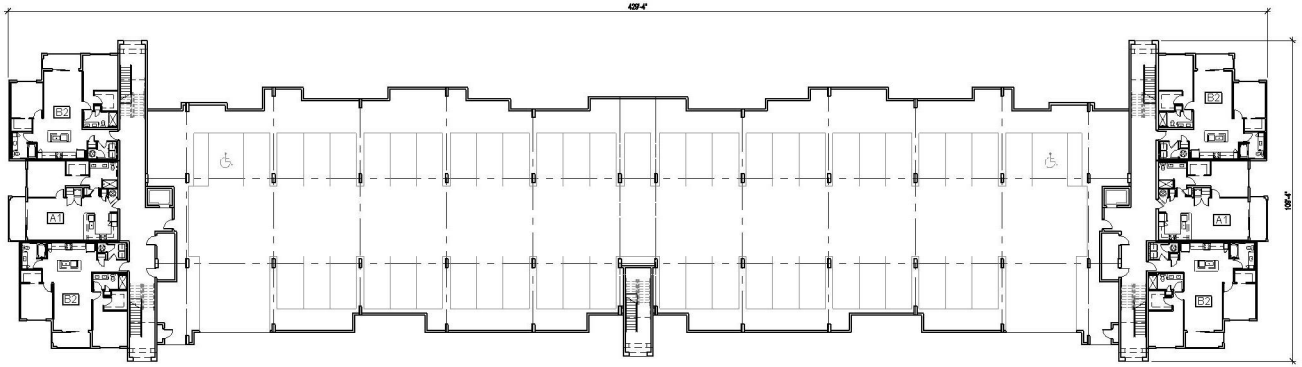
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2 Typical Upper Floor Plan

1" = 20'-0"



1 First Floor Plan

1" = 20'-0"

Scale: 1 = 240

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James B. Black
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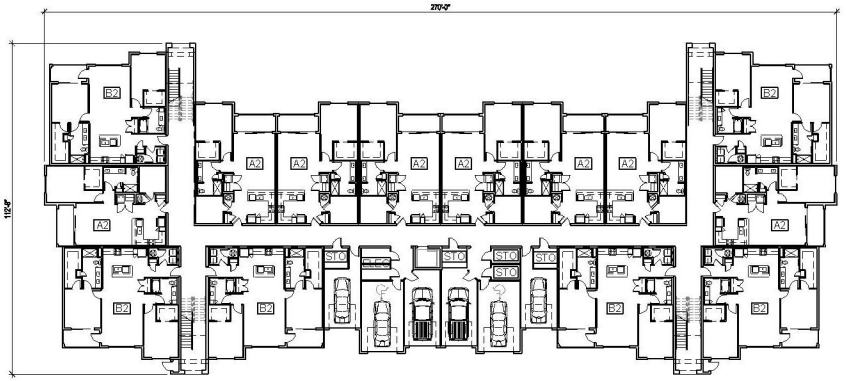
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Building Type III

First Floor Plan

A5.31

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1 First Floor Plan

1" = 20'-0"

Scale: 1 = 240

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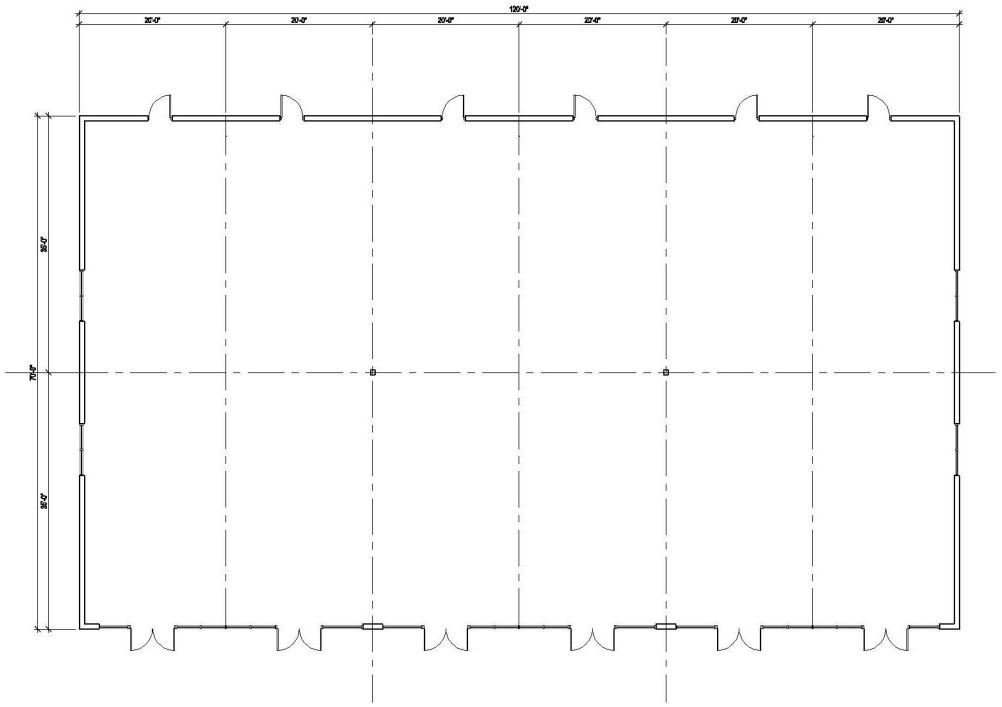
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Building Type IV

First Floor Plan

A5.41

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1 Floor Plan

1/8" = 1'-0"

Scale: 1 = 96

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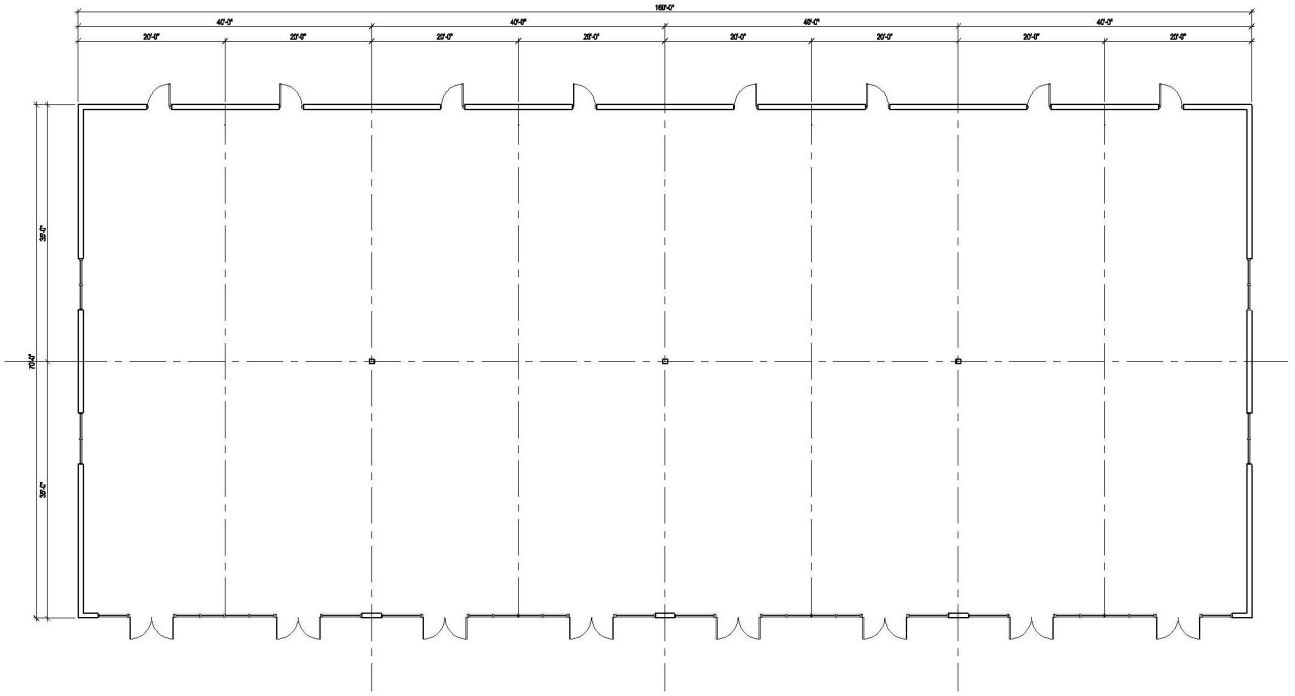
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PROJECT NO. 412

Retail Building I

Floor Plan

A5.51



1 Floor Plan

1/8" = 1'-0"

Scale: 1 = 96

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07/14/2021
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05/13/21	Owner Review
07/13/21	Owner Review

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Retail Building II

Floor Plan

A5.61



7 Pool Courtyard Side Elevation
Facing Southwest 1" = 20'-0"



6 Pool Courtyard Elevation
Facing Southeast 1" = 20'-0"



5 Rear Elevation
Facing Southeast 1" = 20'-0"



4 Right Side Elevation
Facing Southwest 1" = 20'-0"



3 Rear Elevation
Facing Southeast 1" = 20'-0"

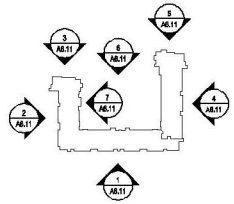


2 Left Side Elevation
Facing Northeast 1" = 20'-0"



1 Front Elevation
Facing Northwest 1" = 20'-0"

KEY PLAN



Scale: 1 = 240

08/02/2021 CC:M

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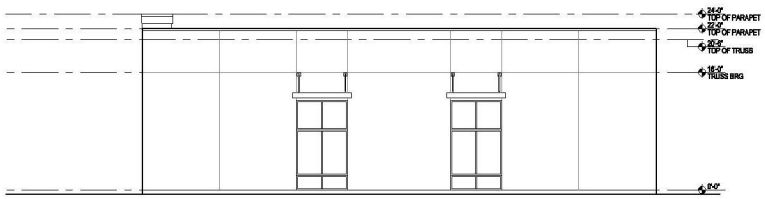
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Building Type I

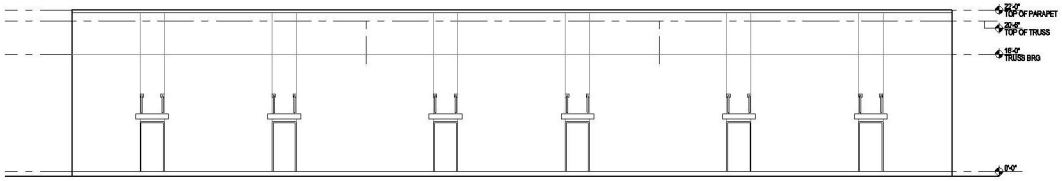
Exterior Elevations

A6.11

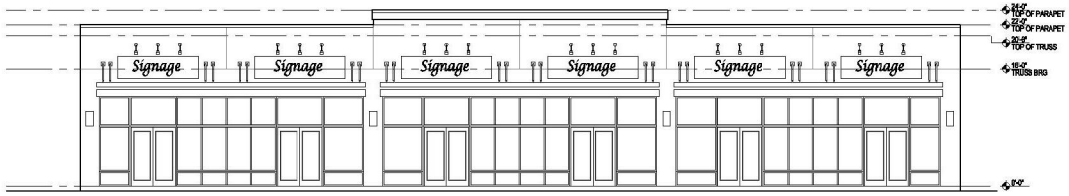
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3 Right Side Elevation
Left Side Mirrored
1/8" = 1'-0"



2 Rear Elevation
1/8" = 1'-0"



1 Front Elevation
1/8" = 1'-0"

Scale: 1 = 96

08/02/2021 CCM

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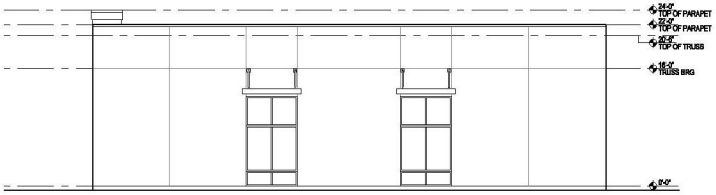
△	SHEET REVISIONS:

PROJECT NO. 412(

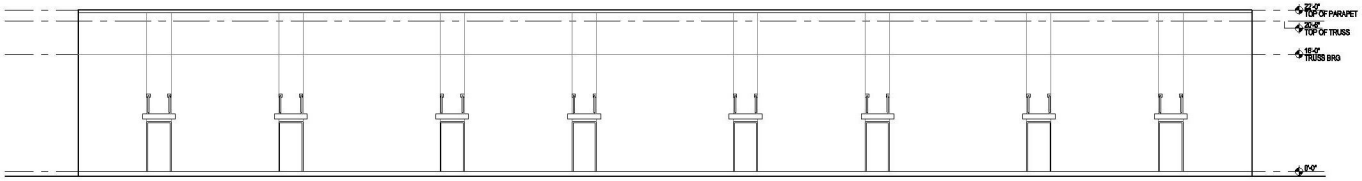
Retail Building I

Exterior Elevations

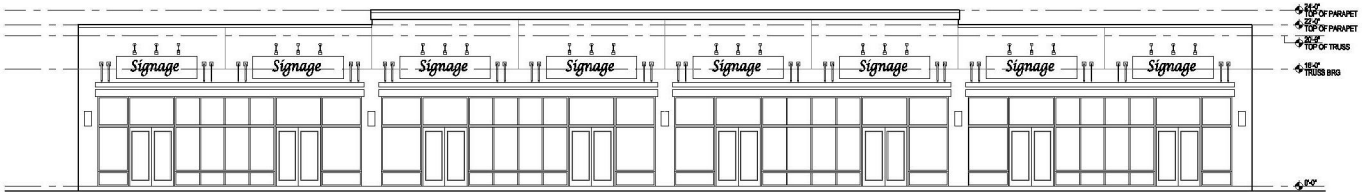
A6.51



3 Right Side Elevation
Left Side Mirrored
1/8" = 1'-0"



2 Rear Elevation
1/8" = 1'-0"



1 Front Elevation
1/8" = 1'-0"

Scale: 1 = 96

08/02/2021 CC:M

FORUM
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Altamonte Springs, FL 3271
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AR001122

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Stuart Apartments

Stuart, FL

07/14/2021
James B. Black
AR0011224

Preliminary - Not For Construction

SET DISTRIBUTIONS:	
12/14/20	Owner Review
12/18/20	Owner Review
05/13/21	Owner Review
05/13/21	Owner Review
07/13/21	Owner Review

△	SHEET REVISIONS:

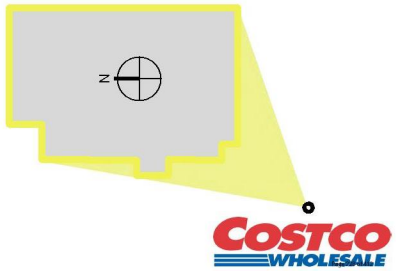
PROJECT NO. 412(

Retail Building II

Exterior Elevations

A6.61





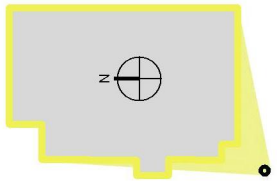
MG2

STUART, FL
DECEMBER 16, 2020

P1 - OVERALL

COSTCO WHOLESALE





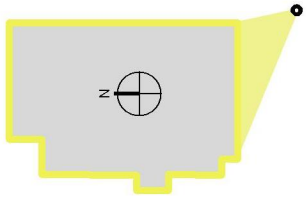
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STUART, FL
DECEMBER 16, 2020

P2 - ENTRANCE

COSTCO WHOLESALE





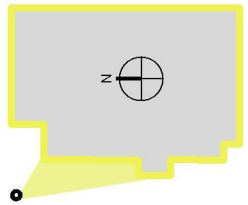
MG2

STUART, FL
DECEMBER 16, 2020

P3 - TIRE CENTER

COSTCO WHOLESALE





MG2

STUART, FL
DECEMBER 16, 2020

P4 - LIQUOR SALES

COSTCO WHOLESALE





1. COPING
Manufacturer: Butler Manufacturing
Color: ***"COOL HARVEST"***



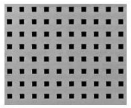
2. STEEL CHANNEL
Manufacturer: MBS
Color: Galvanized Steel



3. WALL SIDING
Manufacturer: McElroy Metal
□ □ □ □Horiz. - Mega Rib
Color: ***"Sandstone"***



4. STEM WALL - MASONRY
Manufacturer: Old Castle Coastal
□ □ □ □Split Face
Color: ***"SLATE GRAY"***



5. WALL - PERFORATED PANEL
27% OPEN AREA
Finish: □ □ □ □ □Aluminum



6. LED SIGN LIGHTING
Manufacturer: TECHLIGHT
Color: ***"BRONZE"***



7. COLUMN - MASONRY
Manufacturer: Old Castle Coastal
□ □ □ □Smooth Face
Color: ***"POTOMAC PLUM"***



8. WALL SIDING
Manufacturer: McElroy Metal
□ □ □ □Vertical - Butlerib II
Color: ***"METALLIC CHAMPAGNE"***



9. WALL SIDING
Manufacturer: McElroy Metal
□ □ □ □Vertical - Stylwall II
Color: ***"LIGHT STONE"***



10. WALL SIDING
Manufacturer: McElroy Metal
□ □ □ □Horiz. - Mega Rib
Color: ***"MISTIQUE PLUS"***

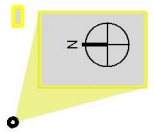
MG2

STUART, FL
DECEMBER 16, 2020

MATERIAL BOARD

COSTCO WHOLESALE





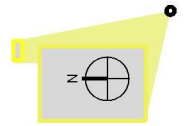
MG2

STUART, FL
DECEMBER 16, 2020

F1 - FUEL FACILITY

COSTCO WHOLESALE



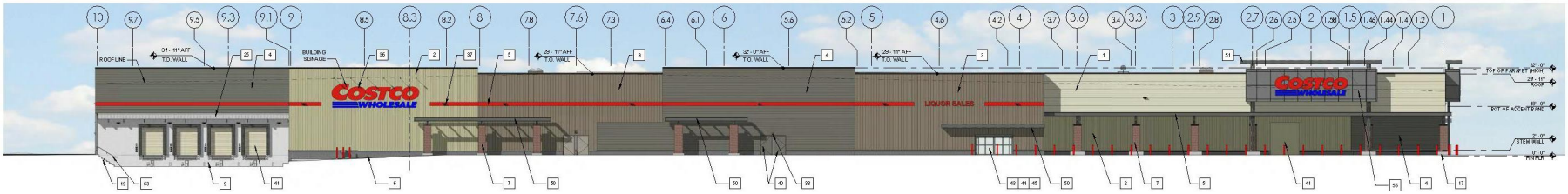


MG2

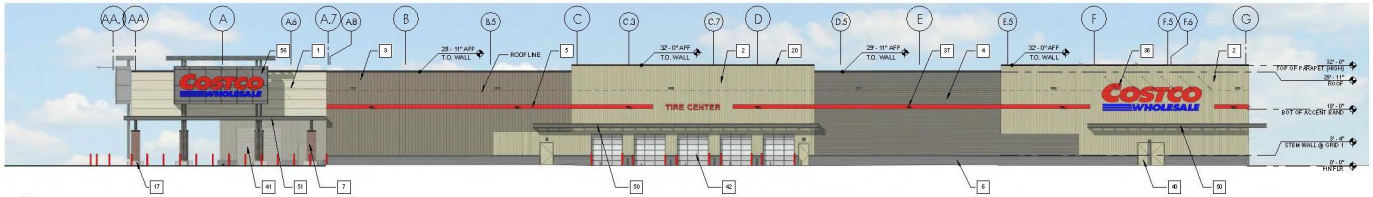
STUART, FL
DECEMBER 16, 2020

F2 - FUEL FACILITY

COSTCO WHOLESALE



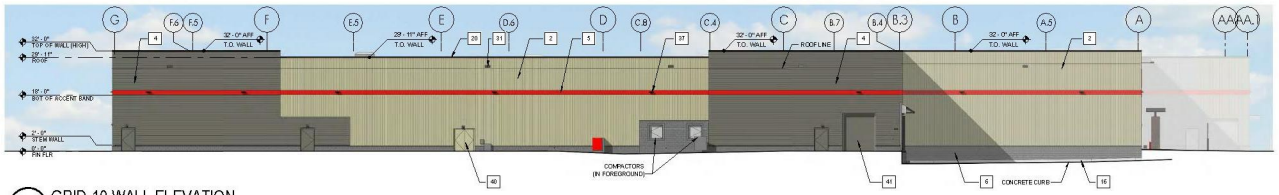
10 GRID-A WALL ELEVATION
SCALE: 1/16" = 1'-0"



8 GRID-1 WALL ELEVATION
SCALE: 1/16" = 1'-0"



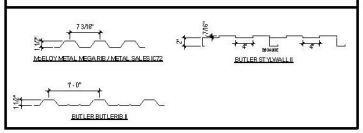
7 GRID-G WALL ELEVATION
SCALE: 1/16" = 1'-0"

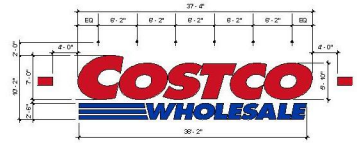


6 GRID-10 WALL ELEVATION
SCALE: 1/16" = 1'-0"

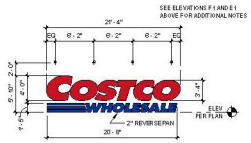
SIGNAGE AREA TABULATION (WALL SIGNS)				
QTY	SIGN	SIZE	AREA (SF) EA	TOTAL SF
2	COSTCO WHOLESALE	610" "C"	260 SF	520
1	TIRE CENTER	17'-4" X 1'-9"	31 SF	31
TOTAL SIGNAGE AREA				551

SIDING PROFILE

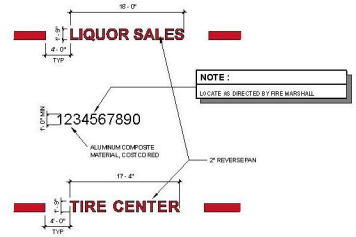




1 BUILDING SIGNAGE
SCALE: 1/8" = 1'-0" (SUPPLIED AND INSTALLED BY MBS) 1015



2 CANOPY SIGNAGE
SCALE: 1/8" = 1'-0" (SUPPLIED AND INSTALLED BY MBS) 1015



3 LOCATION SIGNAGE
SCALE: 1/8" = 1'-0" (SUPPLIED AND INSTALLED BY MBS) 1115

EXTERIOR FINISH SCHEDULE

	#	ITEM	MATERIAL	FINISH	COLOR	MFR'I NOTES
WALL MATERIALS	1	METAL PANELS - MEGA RIB	METAL	PRE-FINISHED	SANDSTONE	1
	2	METAL PANELS - STYLWALL II	METAL	PRE-FINISHED	LIGHT STONE	1
	3	METAL PANELS - BUTLERIB II	METAL	PRE-FINISHED	METALLIC CHAMPAGNE	1
	4	METAL PANELS - MEGA RIB	METAL	PRE-FINISHED	MISTIQUE PLUS	1
	5	ACCENT BAND	METAL	PRE-FINISHED		1
	6	MASONRY/SPLIT - FACE	CMU	PRE-FINISHED	SLATE GRAY	5
	7	MASONRY/SMOOTH-FACE	CMU	WATER REPELLENT	POTOMAC PLUM	5
	9	CONCRETE CAST-IN-PLACE	ARCHITECTURAL FINISH	WATER REPELLENT	NATURAL	
	10	CONCRETE PRECAST	ARCHITECTURAL FINISH	WATER REPELLENT	NATURAL	
MISC. WALL	16	WALL CURB	CONCRETE	WATER REPELLENT		
	17	COLUMN PLINTH PLINTH BENCH	CONCRETE	WATER REPELLENT		
	18	WALL REVEAL S/ CONTROL JOINT				SEE NKDH & STRUCT. DWGS
	19	STAIRS	CONCRETE	WATER REPELLENT		
COPINGS	20	COPING 1x4	SHEET METAL	PRE-FINISHED		1
ROOF	25	STANDING SEAM/VSR	METAL	PRE-FINISHED		1
ARCHITECTURAL SPECIALTIES	31	SCUPPER	SHEET METAL	PAINT BY GC		1,4
	33	JOINT COVER	SHEET METAL	PRE-FINISHED		1

	#	ITEM	MATERIAL	FINISH	COLOR	MFR'I NOTES
LIGHTING	36	SIGN LIGHTING FIXTURE	METAL	PRE-FINISHED	TECHLIGHT BRONZE	
	37	WALL PACK FIXTURE	METAL	PRE-FINISHED		
	38	EMERGENCY LIGHT FIXTURE	METAL	PRE-FINISHED		
OPENINGS	40	DOOR AND FRAME	STEEL	PAINT BY GC	MATCH WALL COLOR	2
	41	ROLLING SERVICE DOOR	STEEL	PRE-FINISHED	MATCH WALL COLOR	1
	42	GLAZED SECTIONAL DOOR	ALUMINUM	PRE-FINISHED	BRONZE	1
	44	TRANSOM FRAMING	ALUMINUM	PRE-FINISHED	BRONZE	
	45	GLAZING	INSULATED GLASS		CLEAR	
MISCELLANEOUS METALS	50	RELIEB	STEEL	PAINT BY GC		1
	51	ACCENT CHANNEL	STEEL	PAINT BY GC	SW7069 GRIZZLE GRAY	1
	52	STRUCTURAL FRAMING	STEEL	PAINT BY GC	SW7069 GRIZZLE GRAY	1
	53	HANDRAIL/GUARDRAIL	STEEL GALVANIZED	PAINT BY GC		2
	54	BOLLARD	STEEL PIPE CONCRETE FILL	PLASTIC SLEEVE	RED	2
	56	DECORATIVE SCREEN	METAL	PRE-FINISHED		

NOTES:
1. SUPPLIED AND INSTALLED BY MBS
2. SUPPLIED BY MBS, INSTALLED BY GC
3. GRATE LANDING AND TREADS WITH SAFETY NOSING
4. LOCATE SCUPPER PER SL 1/SA02.1
5. SEE A01.2 FOR LOCATIONS WHERE SMOOTH FACE IS REQUIRED.

COSTCO WHOLESALE
STUART, FLORIDA

8444 Westpark Dr, Ste 120
McLean, VA 22102
703 564 8484
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18-5324-01
DECEMBER 16 , 2020

BUILDING ELEVATIONS

DD31-01

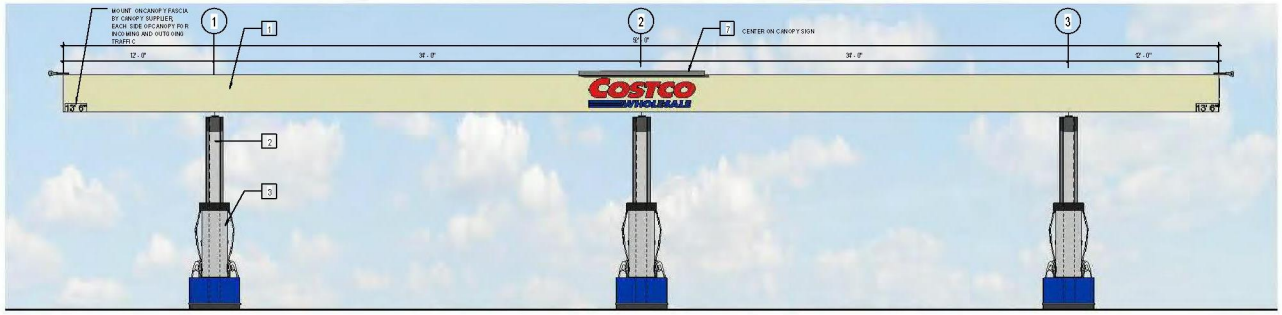
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COSTCO WHOLESALE

STUART, FLORIDA

BUILDING ELEVATIONS

DECEMBER 16 , 2020



1 CANOPY AND DISPENSER ISLANDS

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

0717

KEYNOTES

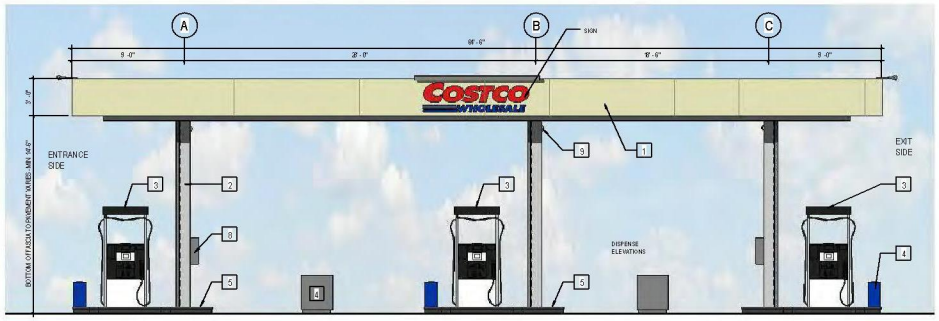
1	PRE-FINISHED METAL FASCIA PANEL - SUPPLIED AND INSTALLED BY CANOPY SUPPLIER UNDER SEPARATE CONTRACT
2	COLUMN - SEE STRUCT DWGS - SUPPLIED AND INSTALLED BY CANOPY'S SUPPLIER UNDER SEPARATE CONTRACT
3	ACCESSIBLE MULTIPRODUCT DISPENSER
4	CONCRETE-FILLED METAL FORMED GUARD AT ENDS OF ISLANDS - TOP OF GUARD AT 30" ABOVE TRAFFIC SURFACE - PAINT SIDES ONLY WITH GLOSS BLUE, REFER TO SPECIFICATION
5	RAISED CONCRETE ISLAND WITH METAL EDGE FORM - PAINT SIDES ONLY WITH GLOSS BLACK, REFER TO SPECIFICATION
6	MASTER RECEPTOR, BOLT DOWN, CENTER OF EACH ISLAND (5 OIC)
7	CANOPY FASCIA SIGN LIGHT FIXTURE (50XC) - REFER TO DETAIL
8	FIRE EXTINGUISHER AND CABINETS MOUNTED ON ENTRANCE SIDE OF COLUMNS - FIRE EXTINGUISHER CABINET TO BE: BROOKS MODEL #MARK II, RED CABINET WITH CLEAR COVER (OR EQUAL) - FIRE EXTINGUISHER AND CABINET, BY OGC
9	VIDEO CAMERA - VERIFY LOCATION WITH OWNER, CONSTRUCTION PROJECT MANAGER, GC SHALL RUN CONDUIT AND INSTALL 3" ROUND OR OCTAGONAL J-BOX FOR MOUNTING CAMERAS - SEE ELECTRICAL DRAWINGS
10	CAULK PERIMETER OF DISPENSER BASE WITH PETROLEUM RESISTANT SEALANT - SEE TDM05.7 TYPICAL

EXTERIOR FINISH SCHEDULE

#	ITEM	MATERIAL	FINISH	COLOR	MANUFACTURER/NOTES
1	FASCIA	METAL	POWDER COATED	DESIGNER BEIGE PCTT72644	TBD
2	CONTROLLER ENCLOSURE	METAL	POWDER COATED	DESIGNER BEIGE PCTT72644	TBD
3	CANOPY CEILING	METAL	POWDER COATED	YELLOW DEVOE #_7004	TBD
4	COLUMN	METAL	POWDER COATED	#5 IB SILVER PCTT72906	TBD

SIGNAGE AREA TABULATION (CANOPY SIGNS)

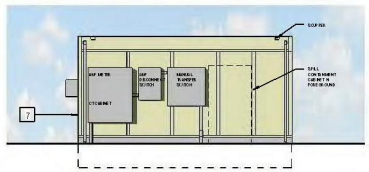
QTY	SIGN	SIZE	AREA/SF/EA	TOTAL SF
1	COSTCO WHOLESALE (EAST FACADE)	2'-0" x 210'-0"	140 4 SF	140 4 SF
1	COSTCO WHOLESALE (WEST FACADE)	2'-0" x 210'-0"	140 4 SF	140 4 SF
1	COSTCO WHOLESALE (NORTH FACADE)	2'-0" x 210'-0"	140 4 SF	140 4 SF
1	COSTCO WHOLESALE (SOUTH FACADE)	2'-0" x 210'-0"	140 4 SF	140 4 SF
4		TOTAL SIGNAGE AREA		5616 SF



2 CANOPY AND DISPENSER ISLANDS

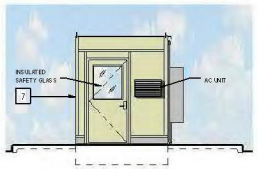
SCALE: 1/4" = 1'-0"

0717



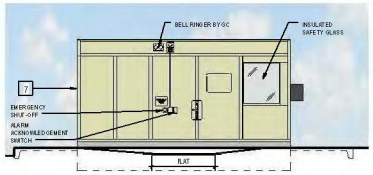
4 SIDE FACING AWAY FROM CANOPY

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



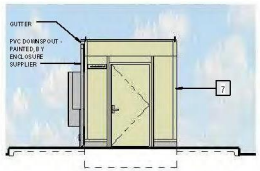
5 ENCLOSURE ENTRY

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



6 SIDE FACING CANOPY

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



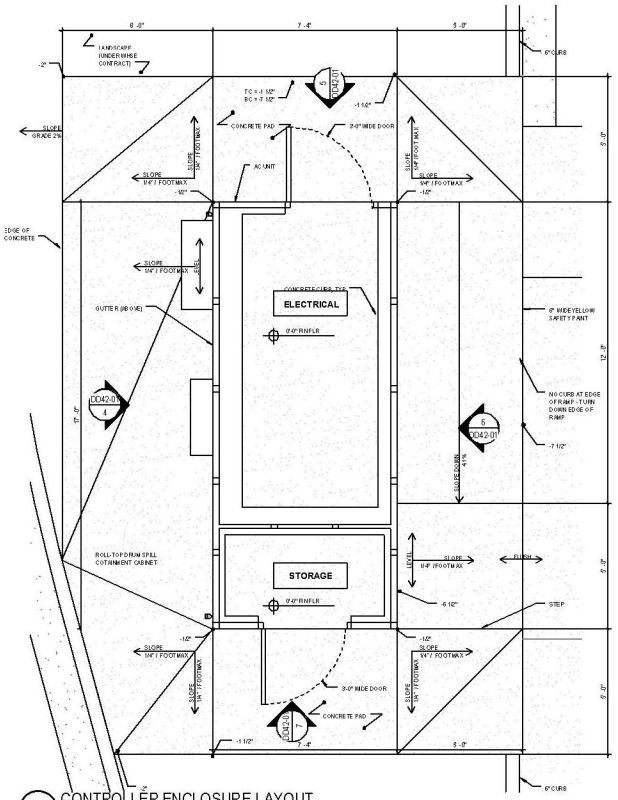
7 ELECTRICAL ENTRY

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



3 CANOPY SIGN

SCALE: 1/2" = 1'-0"



11 CONTROLLER ENCLOSURE LAYOUT

SCALE: 1/2" = 1'-0"

COSTCO WHOLESALE

STUART, FLORIDA

8444 Westpark Dr, Ste 120
McLean, VA 22102
703 564 8484
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18-5324-01
DECEMBER 16, 2020

FUEL FACILITY

DD42-01

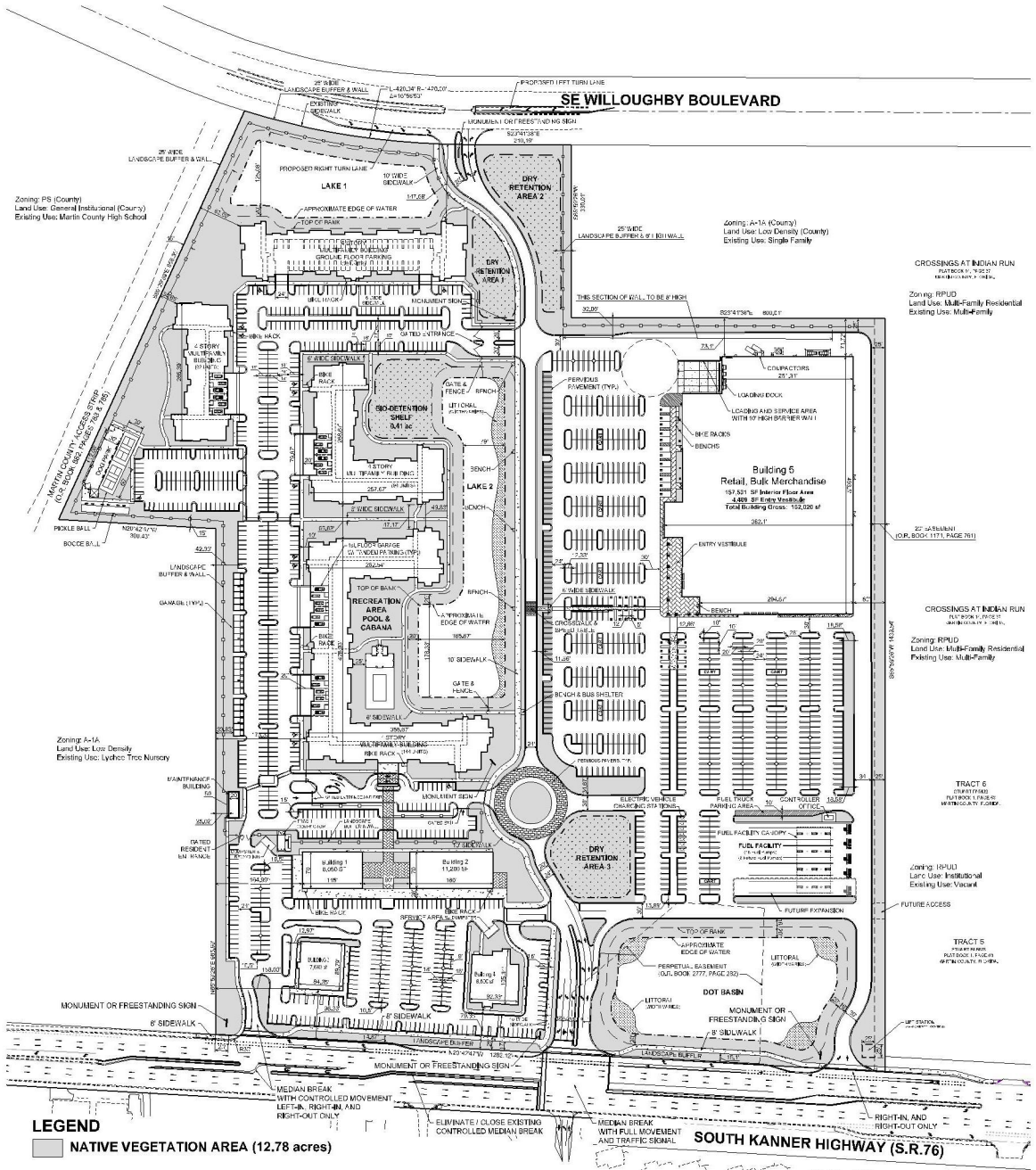
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COSTCO WHOLESALE

STUART, FLORIDA

FUEL FACILITY

DECEMBER 16, 2020



08/02/2021 CC:M

Site Data

Total Site Area:	2,133,987 sf	(48.99 ac)	100%
Future Land Use Designation (Proposed):	Neighborhood Special District		
Proposed Zoning:	CPUD		
Building Height (max):	45'		
Total Building Area:	361,572 sf	(8.30 ac)	16.9%

Pervious / Impervious Calculations

Impervious Area:	1,524,730 sf	(35.00 ac)	71.4%
Buildings:	361,572 sf	(8.30 ac)	16.9%
Pavement & Curb:	857,054 sf	(19.68 ac)	40.2%
Sidewalks, Patios & Pool:	117,824 sf	(2.70 ac)	5.5%
Lakes:	109,465 sf	(2.51 ac)	5.1%
DOT Basin:	78,815 sf	(1.81 ac)	3.7%
Pervious Area:	609,257 sf	(13.99 ac)	28.6%
Landscape:	536,242 sf	(12.31 ac)	25.2%
Dry Retention Areas:	55,155 sf	(1.27 ac)	2.6%
Bio Detention Area:	17,860 sf	(0.41 ac)	0.8%
Open Space			
Required: (25% of 48.99 ac)		(12.25 ac)	25.0%
Provided*:		(12.49 ac)	25.5%
* Includes Landscape with Native Vegetation Areas, Dry Retention Areas & Bio Detention Area, Excludes Park (e.g. Area Interior Landscape Areas,			
Interior Landscape Areas:		(1.50 ac)	3.1%

Parking Requirements

Parking Required (per Kanner CPUD):

Retail, bulk merchandise (1 space / 250 sf):	156,988 sf / 250 sf = 624 Spaces
Fuel Facility (1 space / 250 sf – 2 / bay + 1/vacuum):	20 Spaces
Retail (1 space / 250 sf):	19,250 sf / 250 sf = 77 Spaces
Building 3 (1 space per 100 sf +/- per each employee): 7,640 sf / 100 = 77 spaces + 13 employees	90 Spaces
Building 4 (1 space per 3 Seats + 1 per each employee): @ 300 seats + 18 employees.	118 Spaces
Multi-family	592 Spaces
One Bedroom Units (126) @ 1.5 per unit: 189 Spaces	
Two Bedroom Units (240) @ 2.2 per unit: 480 Spaces	
Three Bedroom Units (16) @ 2.0 per unit: 32 Spaces	
Total Parking Required:	**1,621 Spaces**

Parking Provided:

Retail, bulk merchandise (per Kanner CPUD):	720 Spaces
Standard:	692 Spaces
Handicap:	28 Spaces
Fuel Facility:	20 Spaces
Retail:	77 Spaces
Standard:	73 Spaces
Handicap:	4 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Multi-Family (per Kanner CPUD 1.71 spaces / unit):	647 Spaces
Standard:	630 Spaces
Handicap:	17 Spaces
Total Parking Provided:	**1,672 Spaces**

Bicycle Parking

Retail, Bulk Merchandise		**Buildings 3 & 4**	
Required:	20 Spaces	Required:	8 Spaces
Provided:	20 Spaces	Provided:	8 Spaces
Buildings 1 & 2		**Multifamily**	
Required:	8 Spaces	Required:	20 Spaces
Provided:	8 Spaces	Provided:	20 Spaces

Neighborhood Special District

Residential Density		
Maximum UPA (Non-CRA):		15.0
Provided UPA:	7.7 UPA (378 units / 48.99 ac)	
Site Area	48.99 ac	
Residential		
Provided Area:	14.70 ac	30.0%
Non-Residential		
Provided Area:	34.29 ac	70.0%
Commercial/Retail:	22.80 ac	46.6%
Stormwater Tracts:	8.95 ac	18.3%
Right of Way:	2.51 ac	5.1%
Non-Residential Floor Area Ratio		
Maximum Allowable Area:	4,267,974 sf	2.0 FAR
Provided Area:	193,146 sf	0.09 FAR

Building Data

Building Coverage:	361,572 sf
Retail, Bulk Merchandise:	157,531 sf
Fuel Facility Office:	125 sf
Retail:	19,250 sf
Restaurant:	16,240 sf
Multi-Family (Includes Garages, Cabana & Maintenance)	168,426 sf

Native Vegetation Requirement

Total Site Area:	**48.99 acres**
Wetlands:	6.50 acres
Surface Waters:	4.10 acres
Upland Area:	38.39 acres
Required Native Vegetation Area (25.0%):	9.60 acres
Provided Native Vegetation Area (32.8%):	12.49 acres

General Notes:

- At building, parking and access areas shall document compliance with the requirements of the American Disabilities Act prior to the issuance of a building permit.
- Refer to Landscape Plan for landscape details and specifications.
- All smoke plant species shall be removed and all required landscaping shall be installed prior to the issuance of a Certificate of Occupancy.
- The applicant will request in writing, prior to any land clearing, that the City of Stuart Development Dept. Perform a field inspection to determine if barricades have been properly installed on the site.
- All signs will comply with the sign regulations at the time of permitting.
- "No Trespass" signs to be posted during construct on and displayed at all entrances and exits.
- All building numbers to be no less than four (4) inches tall, illuminated, and not blocked by landscaping.
- Building numbers shall be placed at front and rear entrances.
- Sediment control measures shall be maintained in working order at all times.
- Provisions shall be made to minimize the deposit of sediment by transport vehicles onto public paved surfaces.
- Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land activity and shall be made functional before land disturbance takes place.
- All public sidewalks are to be a minimum of 6' in width.
- A crime watch contact shall be established on site, to include all residents and businesses.
- Any sidewalk damaged during construction shall be repaired or replaced.
- A/C Units, trash receptacles, back flow preventer, and other above ground utilities shall be screened with landscape per City of Stuart LDR.
- Knox Box key vaults shall be provided as required.
- No permanent trailers shall be permitted on site. A temporary construction trailer shall be allowed during the course construction activities.
- Detectable warning surfaces shall be provided at all sidewalk ramps and crosswalks.
- Buildings 1, 2, 3, 4 & 5 may induce any use allowed in the CPUD Agreement and any additional additional parking required shall be debited against the excess parking provided.
- Kanner sidewalk relocation subject to FDOT approval. If not approved by FDOT, the review and approval of the change back to the existing sidewalk location can be done administratively.
- Sign/lit location may be adjusted southward of proposed location (not to exceed 100') and must meet FDOT access requirements.

lucido & associates

731 E Ocean Blvd, Stuart Florida 34994 (772) 220-2175, Fax (772) 223-2220

Key / Location:



Project Team:

Applicant:
M&M Realty Partners
1295 Station Rd
Piscataway, NJ 08701
703-819-3776

Engineer:
Maser Consulting
110 Eagleview Blvd, Suite 101
Exton, PA 19341
610-754-9140

Engineer:
CDC Engineering
Kyle Kennedy
10205 SW Village Pkwy, Suite 201
Port St Lucie, Florida, 34987

Surveyor:
CDC Engineering
Hoc Kennedy
10205 SW Village Pkwy, Suite 201
Port St Lucie, Florida, 34987

Landscape Architect/Land Planner:
Lucido & Associates
731 E Ocean Blvd
Stuart, FL 34994
772-220-2100

Environmental:
EW Consultants
Ed Wolfarth
3003 SE Monterey Commons Blvd #228
Stuart, Florida 34996

KANNER CPUD

City of Stuart, Martin County, Florida

Master Site Plan

Land Use Site Data

Total Site Area:	48.99 ac	
Right of Way:	2.51 ac	
Residential:	14.70 ac	5.1%
Commercial:	22.80 ac	30.0%
Retail, Bulk Merchandise:	17.24 ac	46.6%
Kanner Highway Parcel:	5.59 ac	
Stormwater Tracts:	8.95 ac	
Lake 1:	1.77 ac	18.3%
Lake 2:	2.85 ac	
Dry Retention Area 1:	0.32 ac	
Dry Retention Area 2:	0.78 ac	
Dry Retention Area 3:	0.45 ac	
DOT Basin:	2.78 ac	

Density & Floor Area Ratio

Residential		
Residential Units:		378
Density Overall Site:	7.7 UPA (378 units / 48.99 ac)	
Commercial		
Project Site Area:		2,133,987 sf
Total Commercial Building Area:		193,146 sf
Floor Area Ratio:		0.09 FAR

Date	By	Description
8.21.2020	SLS	Initial Submittal
12.18.2020	SLS	1st Resubmittal
03.16.2021	SLS	2nd Resubmittal
04.21.2021	SLS	3rd Resubmittal
05.13.2021	SLS	LPA Comments
07.02.2021	SLS	1st Reading Approval Conditions

NORTH

SCALE: 1" = 100'

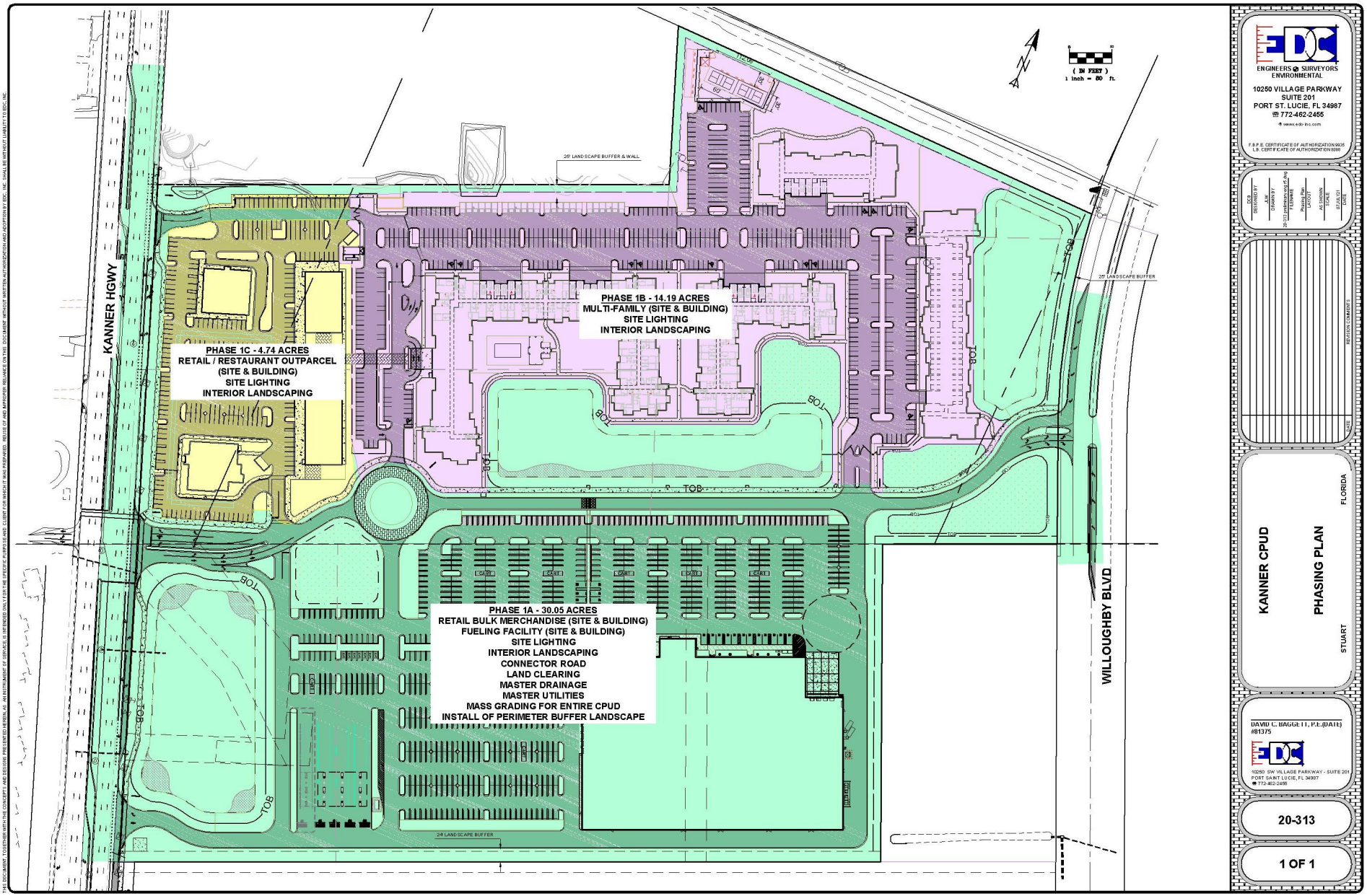
0 50' 100' 200'

REG. # 66018
Thomas P. Lucido

Designer	–
Manager	–
Project Number	–
Municipal Number	–
Computer File	19-035 • Costco Master Site Plan.dwg

Sheet: **1 of 1**

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ENGINEERS & SURVEYORS
ENVIRONMENTAL
10250 VILLAGE PARKWAY
SUITE 201
PORT ST. LUCIE, FL 34987
772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 9035
L.B. CERTIFICATE OF AUTHORIZATION 8089

EDC DESIGNED BY: AJM
DRAWN BY:
20-313 preliminary set of engineering FLEXHAGE
Phasing Plan LAYOUT
AS SHOWN SCALE
07/01/21 DATE

REVISION COMMENTS
DATE

KANNER CPUD
PHASING PLAN
STUART FLORIDA

DAVID C. BAGGETT, P.E.(DATE)
#81375

10250 SW VILLAGE PARKWAY - SUITE 201
PORT SAINT LUCIE, FL 34987
772-462-2455

20-313

1 OF 1

THIS DOCUMENT TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSES AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY EDC, INC. SHALL BE WITHOUT LIABILITY TO EDC, INC.

Z:\EDC 2020\20-313 - Costco Stuart - Kanner Highway\ENGINEERING\AutoCAD\DWG\20-313 Preliminary Eng Kanner Highway Phasing Plan 7-7-2021 10:39:20 AM, Jessica, EDC, Inc.

BOUNDARY, TOPOGRAPHY & TREE SURVEY

FOR: M&M STUART LLC

TITLE COMMITMENT
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
COMMITMENT # 807683 A1
COMMITMENT DATE: NOVEMBER 22, 2020, AT 11:00 PM
SCHEDULE B-II ITEMS

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE COMMITMENT DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT. **NOT A SURVEY MATTER.**
2. A. GENERAL OR SPECIAL TAXES AND ASSESSMENTS REQUIRED TO BE PAID IN THE YEAR 2019 AND SUBSEQUENT YEARS. **NOT A SURVEY MATTER.**
   B. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   C. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION OR ADVERSE CIRCUMSTANCE THAT WOULD BE DISCLOSED BY AN INSPECTION OR AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND INSPECTION OF THE LAND. **NOT A SURVEY MATTER.**
   D. EASEMENTS OR CLAIMS OF EASEMENTS NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   E. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR OR MATERIAL FURNISHED, IMPOSED BY LAW AND NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
3. ANY OWNER'S POLICY ISSUED PURSUANT HERETO WILL CONTAIN UNDER SCHEDULE B THE FOLLOWING EXCEPTION: ANY ADVERSE OWNERSHIP CLAIM BY THE STATE OF FLORIDA BY RIGHT OF SOVEREIGNTY TO ANY PORTION OF THE LAND INSURED HEREUNDER, INCLUDING SUBMERGED, FILLED AND ARTIFICIALLY EXPOSED LANDS, AND LANDS ACCRETED TO SUCH LANDS. **NOT A SURVEY MATTER.**
4. ANY LIEN PROVIDED BY COUNTY ORDINANCE OR BY CHAPTER 159, F.S., IN FAVOR OF ANY CITY, TOWN, VILLAGE OR PORT AUTHORITY, FOR UNPAID SERVICE CHARGES FOR SERVICES BY ANY WATER SYSTEMS, SEWER SYSTEMS OR GAS SYSTEMS SERVING THE LAND DESCRIBED HEREIN; AND ANY LIEN FOR WASTE FEES IN FAVOR OF ANY COUNTY OR MUNICIPALITY. **NOT A SURVEY MATTER.**
5. RIGHTS OF THE LESSEES UNDER UNRECORDED LEASES. **NOT A SURVEY MATTER.**
6. EASEMENT TO AMERICAN TELEPHONE AND TELEGRAPH RECORDED IN DEED BOOK 42, PAGE 63, AS AFFECTED BY ASSIGNMENT RECORDED IN O. R. BOOK 821, PAGE 1406, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. (AS TO PARCEL I) **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
7. ORDINANCE NO. 2337-2017, REGARDING ANNEXATION, RECORDED IN O.R. BOOK 2902, PAGE 693, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. (AS TO BOTH PARCELS) **NOT A SURVEY MATTER, AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
8. COMMITMENT EXCEPTION #3 IS HEREBY DELETED IN ITS ENTIRETY. **NOT A SURVEY MATTER.**

TITLE COMMITMENT
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
COMMITMENT # 807690 A1
COMMITMENT DATE: NOVEMBER 3, 2020, AT 11:00 PM
SCHEDULE B-II ITEMS

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE COMMITMENT DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT. **AFFECTS SUBJECT PROPERTY; NOT A SURVEY MATTER.**
2. A. GENERAL OR SPECIAL TAXES AND ASSESSMENTS REQUIRED TO BE PAID IN THE YEAR 2021 AND SUBSEQUENT YEARS. **NOT A SURVEY MATTER.**
3. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   C. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION OR ADVERSE CIRCUMSTANCE THAT WOULD BE DISCLOSED BY AN INSPECTION OR AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND INSPECTION OF THE LAND. **NOT A SURVEY MATTER.**
   D. EASEMENTS OR CLAIMS OF EASEMENTS NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   E. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR OR MATERIAL FURNISHED, IMPOSED BY LAW AND NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
3. ANY OWNER'S POLICY ISSUED PURSUANT HERETO WILL CONTAIN UNDER SCHEDULE B THE FOLLOWING EXCEPTION: ANY ADVERSE OWNERSHIP CLAIM BY THE STATE OF FLORIDA BY RIGHT OF SOVEREIGNTY TO ANY PORTION OF THE LAND INSURED HEREUNDER, INCLUDING SUBMERGED, FILLED AND ARTIFICIALLY EXPOSED LANDS, AND LANDS ACCRETED TO SUCH LANDS. **NOT A SURVEY MATTER.**
4. ANY LIEN PROVIDED BY COUNTY ORDINANCE OR BY CHAPTER 159, F.S., IN FAVOR OF ANY CITY, TOWN, VILLAGE OR PORT AUTHORITY, FOR UNPAID SERVICE CHARGES FOR SERVICES BY ANY WATER SYSTEMS, SEWER SYSTEMS OR GAS SYSTEMS SERVING THE LAND DESCRIBED HEREIN; AND ANY LIEN FOR WASTE FEES IN FAVOR OF ANY COUNTY OR MUNICIPALITY. **NOT A SURVEY MATTER.**
5. EASEMENT IN FAVOR OF AMERICAN TELEPHONE AND TELEGRAPH COMPANY RECORDED IN DEED BOOK 42, PAGE 63, TOGETHER WITH ASSIGNMENT RECORDED IN O.R. BOOK 821, PAGE 1406, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
6. RIGHTS OF THE LESSEES UNDER UNRECORDED LEASES. **NOT A SURVEY MATTER.**

LEGAL DESCRIPTION:
TITLE COMMITMENT # 807683

PARCEL 1 :

THE REAL PROPERTY LYING AND BEING IN GOVERNMENT LOT 5 AND 6, SECTION 16, TOWNSHIP 38 SOUTH , RANGE 41 EAST, MARTIN COUNTY, FLORIDA, DESCRIBED AS:

BEGINNING AT THE POINT OF INTERSECTION OF THE NORTH LINE OF THE HANSON GRANT AND THE CENTERLINE OF STATE ROAD 76, THENCE PROCEED NORTH 66°18'30" EAST ALONG THE NORTH LINE OF THE HANSON GRANT FOR A DISTANCE OF 82.08 FEET TO A CONCRETE MONUMENT ON THE EAST RIGHT OF WAY LINE OF STATE ROAD 76. THENCE PROCEED NORTH 20°23'20" WEST ALONG THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76 FOR A DISTANCE OF 330 FEET AND THE POINT OF PLACE OF BEGINNING. THENCE PROCEED NORTH 66°18'30" EAST FOR A DISTANCE OF 884.42 FEET TO A POINT, THENCE PROCEED NORTH 20°23'20" WEST FOR A DISTANCE OF 350 FEET TO A POINT, THENCE PROCEED SOUTH 66°18'30" WEST FOR A DISTANCE OF 884.42 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76. THENCE PROCEED SOUTH 20°23'20" EAST ALONG THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76 FOR A DISTANCE OF 350 FEET TO THE POINT OR PLACE OF BEGINNING.

LESS AND EXCEPT PARCEL NO. 145 CONVEYED TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, RECORDED IN O.R BOOK 951, PAGE 284, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF GOVERNMENT LOT 5, SECTION 16, TOWNSHIP 38 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 5; THENCE SOUTH 66°02'08" WEST ALONG THE SOUTH LINE OF SAID GOVERNMENT LOT 5, A DISTANCE OF 127.80 FEET TO A POINT ON THE EASTERLY EXISTING RIGHT OF WAY LINE FOR STATE ROAD 76 (KANNER HIGHWAY); THENCE NORTH 20°08'27" WEST ALONG SAID EASTERLY EXISTING RIGHT OF WAY LINE, A DISTANCE OF 330.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 20°08'37" WEST ALONG SAID EXISTING RIGHT OF WAY LINE, A DISTANCE OF 350.00 FEET; THENCE NORTH 66°02'08" EAST, A DISTANCE OF 20.03 FEET; THENCE SOUTH 20°39'37" EAST, A DISTANCE OF 350.00 FEET; THENCE SOUTH 66°02'08" WEST, A DISTANCE OF 20.03 FEET.

PARCEL 2:

A PARCEL OF LAND LYING IN GOVERNMENT LOTS 6 AND 7, SECTION 16, TOWNSHIP 38 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF TRACT 2, STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD; THENCE NORTH 23°40'21" WEST ALONG SAID WESTERLY RIGHT-OF-WAY LINE, FOR A DISTANCE OF 208.04 FEET TO A POINT OF CURVATURE CONCAVE TO THE EAST; THENCE NORTHERLY ALONG SAID CURVE AND SAID WESTERLY RIGHT-OF-WAY LINE HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 14°55'37", AND AN ARC LENGTH OF 369.95 FEET TO THE POINT OF BEGINNING; THENCE DEPARTING SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 66°43'59" WEST, FOR A DISTANCE OF 791.02 FEET TO A POINT; THENCE NORTH 20°39'22" WEST FOR A DISTANCE OF 395.23 FEET TO A POINT ON THE SOUTH LINE OF A MARTIN COUNTY ACCESS STRIP RECORDED IN OFFICIAL RECORDS BOOK 882, PAGES 783 AND 785, MARTIN COUNTY, FLORIDA; THENCE SOUTH 89°28'43" EAST ALONG SAID SOUTH LINE, SOUTH 66°43'59" EAST, FOR A DISTANCE OF 856.56 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, POINT ALSO BEING ON THE ARC OF A CURVE CONCAVE TO THE EAST, RADIAL LINE BEARS NORTH 82°49'31" EAST; THENCE SOUTHERLY ALONG SAID CURVE AND SAID WESTERLY RIGHT-OF-WAY LINE, HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 02°01'03", AND AN ARC LENGTH OF 50 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION:
TITLE COMMITMENT # 807690

A PARCEL OF LAND LYING IN GOVERNMENT LOTS 5, 6, AND 7, SECTION 16, TOWNSHIP 38 SOUTH RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS :

BEGINNING AT THE NORTHEAST CORNER OF TRACT 2, STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD AND ALSO BEING A POINT ON THE NORTH LINE OF THE HANSON GRANT; THENCE SOUTH 65°51'31" WEST ALONG THE NORTH LINE OF SAID HANSON GRANT, FOR A DISTANCE OF 1738.28 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF SOUTH KANNER HIGHWAY (S.R. 76); THENCE NORTH 20°39'22" WEST ALONG SAID EASTERLY RIGHT OF WAY LINE, FOR A DISTANCE OF 330.00 FEET TO A POINT; THENCE DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE, NORTH 65°51'31" EAST, FOR A DISTANCE OF 864.39 FEET TO A POINT; THENCE NORTH 20°39'22" WEST, FOR A DISTANCE OF 256.56 FEET TO A POINT; THENCE NORTH 66°43'59" EAST, FOR A DISTANCE OF 791.02 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, SAID POINT ALSO BEING A POINT ON A NON-TANGENT CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 14°56'37", A CHORD BEARING OF SOUTH 16°11'46" EAST AND A CHORD LENGTH OF 368.90 FEET; THENCE TRAVEL COUNTER-CLOCKWISE ALONG THE ARC OF SAID NON-TANGENT CURVE AND THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, FOR A DISTANCE OF 369.95 FEET TO A POINT OF TANGENCY; THENCE SOUTH 23°40'21" EAST ALONG SAID WESTERLY RIGHT-OF-WAY LINE, FOR A DISTANCE OF 208.04 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION:
TITLE COMMITMENT # 807694

A PARCEL OF LAND LYING WITHIN THE HANSON GRANT, MARTIN COUNTY, FLORIDA, BEING DESCRIBED AS FOLLOWS:

THE WESTERLY 330.00 FEET OF LOT 2, AND ALL OF LOTS 3 AND 4 OF STUART FARMS, AS RECORDED IN PLAT BOOK I, PAGE 63, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NOW SITUATED, LYING AND BEING IN MARTIN COUNTY, FLORIDA.

LESS AND EXCEPT

THAT PORTION CONVEYED TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION AS RECORDED IN OFFICIAL RECORDS BOOK 951, PAGE 282, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

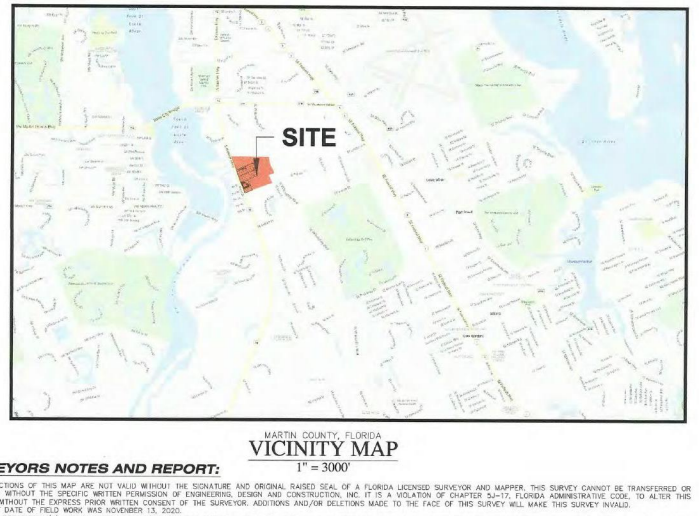
A 10 FOOT WIDE PARCEL OF LAND OVER THE WESTERLY PORTION OF LOT 4, ACCORDING TO THE PLAT OF STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF PALM BEACH (NOW MARTIN) COUNTY, FLORIDA, LYING EASTERLY OF STATE ROAD 76, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF SAID LOT 4; THENCE RUN SOUTH 66°02'08" WEST, ALONG THE NORTH LINE OF SAID LOT 4 AND ALONG THE NORTH LINE OF HANSON GRANT, A DISTANCE OF 376.46 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 66°02'08" WEST, ALONG THE NORTH LINE OF SAID LOT 4, A DISTANCE OF 10.01 FEET; THENCE SOUTH 20°39'37" EAST, ALONG A LINE THAT IS 10 FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE EASTERLY RIGHT OF WAY LINE OF THE 100 FOOT WIDE STATE ROAD 76, A DISTANCE OF 800.55 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE NORTH 66°06'12" EAST, ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 10.01 FEET; THENCE NORTH 20°39'37" WEST, ALONG A LINE 20 FEET EASTERLY OF AS MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE EASTERLY RIGHT OF WAY LINE OF THE SAID 100 FOOT WIDE STATE ROAD 76, A DISTANCE OF 800.55 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH AN ABANDONED 40 FOOT DEDICATED RIGHT OF WAY LYING BETWEEN SAID LOTS 2 AND 3.

TITLE COMMITMENT
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
COMMITMENT # 807694 A1
COMMITMENT DATE: NOVEMBER 3, 2020, AT 11:00 PM
SCHEDULE B-II ITEMS

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE COMMITMENT DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT. **AFFECTS SUBJECT PROPERTY; NOT A SURVEY MATTER.**
2. A. GENERAL OR SPECIAL TAXES AND ASSESSMENTS REQUIRED TO BE PAID IN THE YEAR 2019 AND SUBSEQUENT YEARS. **NOT A SURVEY MATTER.**
   B. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   C. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION OR ADVERSE CIRCUMSTANCE THAT WOULD BE DISCLOSED BY AN INSPECTION OR AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND INSPECTION OF THE LAND. **NOT A SURVEY MATTER.**
   D. EASEMENTS OR CLAIMS OF EASEMENTS NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   E. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR OR MATERIAL FURNISHED, IMPOSED BY LAW AND NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
3. ANY OWNER'S POLICY ISSUED PURSUANT HERETO WILL CONTAIN UNDER SCHEDULE B THE FOLLOWING EXCEPTION: ANY ADVERSE OWNERSHIP CLAIM BY THE STATE OF FLORIDA BY RIGHT OF SOVEREIGNTY TO ANY PORTION OF THE LAND INSURED HEREUNDER, INCLUDING SUBMERGED, FILLED AND ARTIFICIALLY EXPOSED LANDS, AND LANDS ACCRETED TO SUCH LANDS.
4. ANY LIEN PROVIDED BY COUNTY ORDINANCE OR BY CHAPTER 159, F.S., IN FAVOR OF ANY CITY, TOWN, VILLAGE OR PORT AUTHORITY, FOR UNPAID SERVICE CHARGES FOR SERVICES BY ANY WATER SYSTEMS, SEWER SYSTEMS OR GAS SYSTEMS SERVING THE LAND DESCRIBED HEREIN; AND ANY LIEN FOR WASTE FEES IN FAVOR OF ANY COUNTY OR MUNICIPALITY. **NOT A SURVEY MATTER.**
5. RIGHTS OF THE LESSEES UNDER UNRECORDED LEASES. **NOT A SURVEY MATTER.**
6. ALL MATTERS CONTAINED ON THE PLAT OF STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NOW SITUATED, LYING AND BEING IN MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
7. RESOLUTION NO. 51-98 CREATING UTILITY EASEMENT RECORDED IN O.R. BOOK 1174, PAGE 761, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
8. PERPETUAL EASEMENT IN FAVOR OF THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RECORDED IN O.R. BOOK 2777, PAGE 775, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
9. TEMPORARY EASEMENT IN FAVOR OF THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RECORDED IN O.R. BOOK 2777, PAGE 782, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
10. RESERVATIONS IN FAVOR OF THE STATE OF FLORIDA, AS SET FORTH IN THE DEED FROM THE TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA RECORDED, UNDER DEED BOOK 31, PAGE 137; PARTIALLY RELEASED IN O.R. BOOK 378, PAGE 309, TRANSFER OF ROAD RIGHT OF WAY RESERVATION RECORDED IN O.R. BOOK 835, PAGE 1822, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
11. EASEMENT TO FLORIDA POWER AND LIGHT COMPANY RECORDED IN O.R. BOOK 179, PAGE 275, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **DOES NOT AFFECT PROPERTY, EASEMENT NOW IN RIGHT-OF-WAY OF STATE ROAD 76.**
12. EASEMENT RECORDED IN DEED BOOK 12, PAGE 285, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
13. OUTFALL DITCH EASEMENT RECORDED IN DEED BOOK 42, PAGE 432, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
14. RIGHT OF WAY RESOLUTION RECORDED IN O.R. BOOK 774, PAGE 1469, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
15. ORDINANCE NO. 2327-16 RECORDED IN O.R. BOOK 2875, PAGE 760, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, PROVIDING FOR ANNEXATION OF SUBJECT PROPERTY INTO THE CITY OF STUART. **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
16. DEED RECORDED IN O.R. BOOK 2822, PAGE 939, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. SUBJECT TO AUTOMATIC PHOSPHATE, METALS, MINERALS AND PETROLEUM RESERVATIONS BY VIRTUE OF SEC. 270.11(1), F.S. **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
17. SUBJECT TO THE TERMS AND CONDITIONS SET FORTH IN THAT CERTAIN DEED RECORDED IN O.R. BOOK 2822, PAGE 939, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, RELATED TO PERMITTING REQUIREMENTS. **NOT A SURVEY MATTER.**
18. RIPARIAN AND LITTORAL RIGHTS ARE NOT INSURED. **NOT A SURVEY MATTER.**
19. ANY PORTION OF THE LAND LYING WATERWARD OF THE ORDINARY HIGH WATER MARK OF LAKE, AND LANDS ACCRETED THERETO. **NOT A SURVEY MATTER.**



MARTIN COUNTY, FLORIDA
VICINITY MAP
1" = 3000'

SURVEYORS NOTES AND REPORT:

1. REPRODUCTIONS OF THIS MAP ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. THIS SURVEY CANNOT BE TRANSFERRED OR ASSIGNED WITHOUT THE SPECIFIC WRITTEN PERMISSION OF ENGINEERING, DESIGN AND CONSTRUCTION, INC. IT IS A VIOLATION OF CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, TO ALTER THIS SURVEY WITHOUT THE EXPRESS PRIOR WRITTEN CONSENT OF THE SURVEYOR. ADDITIONS AND/OR DELETIONS MADE TO THE FACE OF THIS SURVEY WILL MAKE THIS SURVEY INVALID.
2. THE LAST DATE OF FIELD WORK WAS NOVEMBER 13, 2020.
3. CURRENT DESCRIPTION(S) SHOWN HEREON PROVIDED BY: THE CLIENT. A TITLE SEARCH FOR THIS PROPERTY HAS BEEN ABSTRACTED TO SHOW MATTERS OF RECORD SUCH AS EASEMENTS OR OTHER ENCUMBRANCES OR RESTRICTIONS.
4. PARCELS CONTAIN A TOTAL OF 48.99 ACRES, MORE OR LESS.
5. THE EXPECTED USE OF THE LAND, AS CLASSIFIED IN THE MINIMUM TECHNICAL STANDARDS (61G17-6 F.A.C.), IS "COMMERCIAL." THE MINIMUM RELATIVE DISTANCE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY IS 1 FOOT IN 10,000 FEET. THIS SURVEY EXCEEDS THE REQUIRED DISTANCE ACCURACY.
6. THIS BOUNDARY SURVEY HAS BEEN REFERENCED TO THE FLORIDA STATE PLANE BOUNDARY SYSTEM-EAST ZONE, NAD 83 (1990).
7. THE TOPOGRAPHIC AND TREE DATA COLLECTED AND DEPICTED ON THIS SURVEY IS OF SPECIFIC AREAS PREDETERMINED BY THE CLIENT AT THE TIME OF SURVEY REQUEST.
8. REVISIONS SHOWN HEREON DO NOT REPRESENT A "FIELD SURVEY UPDATE" UNLESS OTHERWISE NOTED.
9. BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE HANSON GRANT PER THE LINE LABELED HEREON AS (BEARING BASIS) AND ALL OTHER BEARINGS ARE RELATIVE THERETO. DISTANCES ARE IN U.S. SURVEY FEET AND DECIMAL PARTS THEREOF.
10. IN SOME INSTANCES, GRAPHIC REPRESENTATIONS AND SYMBOLS SHOWN HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE THE RELATIONSHIP BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. THE DIMENSIONS SHOWN SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS, OVER THE SCALED POSITIONS.
11. THE OWNERSHIP OF PERIMETER FENCES, WALLS, HEDGES AND LANDSCAPING, IF ANY, SHOWN HEREON ARE NOT KNOWN AND ARE NOT LISTED AS ENCROACHMENTS. THEIR RELATIVE LOCATION IS SHOWN IN RELATION TO THE BOUNDARY LINES SHOWN.
12. THE SURVEY MAP SHOWN HEREON DOES NOT NECESSARILY CONTAIN ALL OF THE INFORMATION OBTAINED OR DEVELOPED BY THE UNDERSIGNED SURVEYOR IN HIS FIELD WORK, OFFICE WORK OR RESEARCH.
13. THE PROPERTY WHICH IS THE SUBJECT OF THIS SURVEY APPEARS TO BE SITUATE IN AN AREA 0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE AT THIS TIME PURSUANT TO F.E.M.A. FIRM NUMBER 12085C0161H, HAVING AN EFFECTIVE DATE OF FEBRUARY 19, 2020. FOR APPROXIMATE DELINEATION OF THE FLOOD ZONE LIMITS, REFER TO AFOREMENTIONED FIRM PANELS.
14. TREES SHOWN HEREON WERE LOCATED BASED ON THE CONSERVATION CRITERIA ESTABLISHED BY THE CITY OF STUART, FLORIDA.
15. SHEETS 7, 8, AND 9 IS A TREE SURVEY BASED ON INFORMATION PROVIDED BY EW CONSULTANTS. JOB NAMED "M&M REALTY KANNER". THE WESTERN HALF BEING COLLECTED ON JULY THROUGH AUGUST OF 2018. THE EASTERN HALF BEING LOCATED IN SEPTEMBER OF 2020.
16. ADDITIONAL TOPOGRAPHIC DATA PROVIDED BY SJ BROWN INC. SURVEY JOB # 7227-01-01.

REFERENCE MATERIAL:

- MARTIN COUNTY ENGINEERING DEPT. RIGHT-OF-WAY SURVEY AND MAPPING RIGHT OF WAY MAP WILLOUGHBY BLVD. EXTENSION – MARTIN COUNTY. MAPS PREPARED BY GCY, INC. CIVIL ENGINEERS AND LAND SURVEYORS. DATED SEPTEMBER 1992. JOB# 91-1047
- BOUNDARY SURVEY BY STEPHEN J. BROWN, INC. PREPARED FOR M&M REALTY PARTNERS, LLC. COMPLETED ON 07/03/2018, JOB # 7227-01-01.
- FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY ENGINEERING SECTION, RIGHT OF WAY MAP, STATE ROAD NO. 76, MARTIN COUNTY. SECTION 89060-2510 (2511).
- CERTUS STU OWNER PLAT, LOTS 1 AND 2. PLAT BOOK 18, PAGE 17, MCR.
- STUART FARMS PALM BEACH COUNTY, PLAT BOOK 1, PAGE 63, MCR.
- 3100 SE WILLOUGHBY BLVD, STUART. OFFICIAL RECORD BOOK 2464, PAGE 1992, MCR. PARCEL ID 16-38-41-000-000-00460-3
- 3171 S KANNER HWY, STUART. OFFICIAL RECORD BOOK 2270, PAGE 399, MCR. PARCEL ID 16-38-41-000-000-00442-6
- S KANNER HWY, STUART. OFFICIAL RECORD BOOK 2465, PAGE 1851, MCR. PARCEL ID 16-38-41-000-000-00440-8.
- S KANNER HWY, STUART. OFFICIAL RECORD BOOK 2822, PAGE 939, MCR. PARCEL ID 40-38-41-001-002-00000-5.
- FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY OFFICIAL RECORD BOOK951, PAGE 284, MCR.
- FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY OFFICIAL RECORD BOOK951, PAGE 286, MCR.
- 20' NON EXCLUSIVE EASEMENT, OFFICIAL RECORD BOOK 1174, PAGE 761, MCR.
- 60' WIDE MARTIN COUNTY ACCESS STRIP OFFICIAL RECORD BOOK 882, PAGE 783 & 785.
- PARCEL 804 S.F.W.M.D. EASEMENT, OFFICIAL RECORDS BOOK 277, PAGE 775, MCR.
- PARCEL 804 S.F.W.M.D. EASEMENT, OFFICIAL RECORDS BOOK 277, PAGE 782, MCR.
- 40' FLORIDA DEPARTMENT OF TRANSPORTATION DRAINAGE EASEMENT, DEED BOOK 42, PAGE 432, MCR.
- GCY TOPOGRAPHIC SURVEY JOB # 19-1034-02 DATED NOVEMBER 2019.
- TOPOGRAPHIC SURVEY BY SJ BROWN INC. FOR M&M REALTY PARTNERS, LLC JOB # 7227-01-01 DATED 07/23/2019

CERTIFIED TO:

1. M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
2. OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

SHEETS:

1. COVER
2. BOUNDARY SURVEY
3. TOPOGRAPHIC SURVEY
4. TREE SURVEY
5. TREE SURVEY CONTINUED
6. TREE SCHEDULE
7. TREE SURVEY BY OTHERS
8. TREE SURVEY BY OTHERS CONTINUED
9. TREE SCHEDULE BY OTHERS

MICHAEL T. OWEN PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA REGISTRATION #5556

MICHAEL T. OWEN License Number 5556 STATE OF FLORIDA PROFESSIONAL SURVEYOR AND MAPPER

ENGINEERS & SURVEYORS ENVIRONMENTAL
10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 29315
L.B. CERTIFICATE OF AUTHORIZATION 8106

DWG	
DRAWN BY	MTO
CHECKED BY	
FIELD BOOK	20-313SV, 20-313SV_INVOING
RELEASE	
COVER	
SHEET	AS SHOWN
SCALE	
DATE	February 26, 2021

DATE	DESCRIPTION
05/05/2021	ADDED TREE DATA FROM EW CONSULTANTS AND TOPO FROM SJ BROWN
12/15/2020	ADDED REC. INFO ABANDONING OF DEDICATED R/W STUART FARMS PLAT
	REVISION COMMENTS

BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
MARTIN COUNTY

BOUNDARY, TOPOGRAPHY & TREE SURVEY

FOR: M&M STUART LLC

TITLE COMMITMENT
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
COMMITMENT # 807683 A1
COMMITMENT DATE: NOVEMBER 22, 2020, AT 11:00 PM
SCHEDULE B-II ITEMS

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE COMMITMENT DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT. **NOT A SURVEY MATTER.**
2. A. GENERAL OR SPECIAL TAXES AND ASSESSMENTS REQUIRED TO BE PAID IN THE YEAR 2019 AND SUBSEQUENT YEARS. **NOT A SURVEY MATTER.**
   B. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   C. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION OR ADVERSE CIRCUMSTANCE THAT WOULD BE DISCLOSED BY AN INSPECTION OR AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND INSPECTION OF THE LAND. **NOT A SURVEY MATTER.**
   D. EASEMENTS OR CLAIMS OF EASEMENTS NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   E. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR OR MATERIAL FURNISHED, IMPOSED BY LAW AND NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
3. ANY OWNER'S POLICY ISSUED PURSUANT HERETO WILL CONTAIN UNDER SCHEDULE B THE FOLLOWING EXCEPTION: ANY ADVERSE OWNERSHIP CLAIM BY THE STATE OF FLORIDA BY RIGHT OF SOVEREIGNTY TO ANY PORTION OF THE LAND INSURED HEREUNDER, INCLUDING SUBMERGED, FILLED AND ARTIFICIALLY EXPOSED LANDS, AND LANDS ACCRETED TO SUCH LANDS. **NOT A SURVEY MATTER.**
4. ANY LIEN PROVIDED BY COUNTY ORDINANCE OR BY CHAPTER 159, F.S., IN FAVOR OF ANY CITY, TOWN, VILLAGE OR PORT AUTHORITY. FOR UNPAID SERVICE CHARGES FOR SERVICES BY ANY WATER SYSTEMS, SEWER SYSTEMS OR GAS SYSTEMS SERVING THE LAND DESCRIBED HEREIN; AND ANY LIEN FOR WASTE FEES IN FAVOR OF ANY COUNTY OR MUNICIPALITY. **NOT A SURVEY MATTER.**
5. RIGHTS OF THE LESSEES UNDER UNRECORDED LEASES. **NOT A SURVEY MATTER.**
6. EASEMENT TO AMERICAN TELEPHONE AND TELEGRAPH RECORDED IN DEED BOOK 42, PAGE 63, AS AFFECTED BY ASSIGNMENT RECORDED IN O. R. BOOK 821, PAGE 1406, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. (AS TO PARCEL 1) **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
7. ORDINANCE NO. 2337-2017, REGARDING ANNEXATION, RECORDED IN O.R. BOOK 2902, PAGE 693, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA (AS TO BOTH PARCELS) **NOT A SURVEY MATTER, AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
8. COMMITMENT EXCEPTION #3 IS HEREBY DELETED IN ITS ENTIRETY. **NOT A SURVEY MATTER.**

TITLE COMMITMENT
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
COMMITMENT # 807690 A1
COMMITMENT DATE: NOVEMBER 3, 2020, AT 11:00 PM
SCHEDULE B-II ITEMS

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE COMMITMENT DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT. **AFFECTS SUBJECT PROPERTY; NOT A SURVEY MATTER.**
2. A. GENERAL OR SPECIAL TAXES AND ASSESSMENTS REQUIRED TO BE PAID IN THE YEAR 2021 AND SUBSEQUENT YEARS. **NOT A SURVEY MATTER.**
   B. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   C. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION OR ADVERSE CIRCUMSTANCE THAT WOULD BE DISCLOSED BY AN INSPECTION OR AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND AND INSPECTION OF THE LAND. **NOT A SURVEY MATTER.**
   D. EASEMENTS OR CLAIMS OF EASEMENTS NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
   E. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR OR MATERIAL FURNISHED, IMPOSED BY LAW AND NOT RECORDED IN THE PUBLIC RECORDS. **NOT A SURVEY MATTER.**
3. ANY OWNER'S POLICY ISSUED PURSUANT HERETO WILL CONTAIN UNDER SCHEDULE B THE FOLLOWING EXCEPTION: ANY ADVERSE OWNERSHIP CLAIM BY THE STATE OF FLORIDA BY RIGHT OF SOVEREIGNTY TO ANY PORTION OF THE LAND INSURED HEREUNDER, INCLUDING SUBMERGED, FILLED AND ARTIFICIALLY EXPOSED LANDS, AND LANDS ACCRETED TO SUCH LANDS.
4. ANY LIEN PROVIDED BY COUNTY ORDINANCE OR BY CHAPTER 159, F.S., IN FAVOR OF ANY CITY, TOWN, VILLAGE OR PORT AUTHORITY. FOR UNPAID SERVICE CHARGES FOR SERVICES BY ANY WATER SYSTEMS, SEWER SYSTEMS OR GAS SYSTEMS SERVING THE LAND DESCRIBED HEREIN; AND ANY LIEN FOR WASTE FEES IN FAVOR OF ANY COUNTY OR MUNICIPALITY. **NOT A SURVEY MATTER**
5. RIGHTS OF THE LESSEES UNDER UNRECORDED LEASES. **NOT A SURVEY MATTER.**
6. ALL MATTERS CONTAINED ON THE PLAT OF STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NOW SITUATED, LYING AND BEING IN MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
7. RESOLUTION NO. 51-96 CREATING UTILITY EASEMENT RECORDED IN O.R. BOOK 1174, PAGE 781, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
8. PERPETUAL EASEMENT IN FAVOR OF THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RECORDED IN O.R. BOOK 2777, PAGE 775, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
9. TEMPORARY EASEMENT IN FAVOR OF THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION RECORDED IN O.R. BOOK 2777, PAGE 782, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
10. RESERVATIONS IN FAVOR OF THE STATE OF FLORIDA, AS SET FORTH IN THE DEED FROM THE TRUSTEES OF THE INTERNAL IMPROVEMENT FUND OF THE STATE OF FLORIDA RECORDED, UNDER DEED BOOK 31, PAGE 137; PARTIALLY RELEASED IN O.R. BOOK 318, PAGE 309. TRANSFER OF ROAD RIGHT OF WAY RESERVATION RECORDED IN O.R. BOOK 835, PAGE 1822, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
11. EASEMENT TO FLORIDA POWER AND LIGHT COMPANY RECORDED IN O.R. BOOK 179, PAGE 275, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **DOES NOT AFFECT PROPERTY, EASEMENT NOW IN RIGHT-OF-WAY OF STATE ROAD 76.**
12. EASEMENT RECORDED IN DEED BOOK 12, PAGE 285, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
13. OUTFALL DITCH EASEMENT RECORDED IN DEED BOOK 42, PAGE 432, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. **AFFECTS PROPERTY, SHOWN ON SURVEY.**
14. RIGHT OF WAY RESOLUTION RECORDED IN O.R. BOOK 774, PAGE 1489, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
15. ORDINANCE NO. 2327-16 RECORDED IN O.R. BOOK 2875, PAGE 760, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. PROVIDING FOR ANNEXATION OF SUBJECT PROPERTY INTO THE CITY OF STUART. **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
16. DEED RECORDED IN O.R. BOOK 2822, PAGE 939, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. SUBJECT TO ALL PHOSPHATE, PHOSPHATE, METALS, MINERALS AND PETROLEUM RESERVATIONS BY VIRTUE OF SEC. 270.11(1), F.S. **AFFECTS PROPERTY, BLANKET IN NATURE, NOT PLOTTABLE.**
17. SUBJECT TO THE TERMS AND CONDITIONS SET FORTH IN THAT CERTAIN DEED RECORDED IN O.R. BOOK 2822, PAGE 939, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA. RELATED TO PERMITTING REQUIREMENTS. **NOT A SURVEY MATTER.**
18. RIPARIAN AND LITTORAL RIGHTS ARE NOT INSURED **NOT A SURVEY MATTER.**
19. ANY PORTION OF THE LAND LYING WATERWARD OF THE ORDINARY HIGH WATER MARK OF LAKE, AND LANDS ACCRETED THERETO. **NOT A SURVEY MATTER.**

LEGAL DESCRIPTION:
TITLE COMMITMENT # 807683

PARCEL 1 :

THE REAL PROPERTY LYING AND BEING IN GOVERNMENT LOT 5 AND 6, SECTION 16, TOWNSHIP 38 SOUTH , RANGE 41 EAST, MARTIN COUNTY, FLORIDA, DESCRIBED AS:

BEGINNING AT THE POINT OF INTERSECTION OF THE NORTH LINE OF THE HANSON GRANT AND THE CENTERLINE OF STATE ROAD 76, THENCE PROCEED NORTH 67°51'30" EAST ALONG THE NORTH LINE OF THE HANSON GRANT FOR A DISTANCE OF 50.08 FEET TO A CONCRETE MONUMENT ON THE EAST RIGHT OF WAY LINE OF STATE ROAD 76, THENCE PROCEED NORTH 20°23'20" WEST ALONG THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76 FOR A DISTANCE OF 330 FEET AND THE POINT OR PLACE OF BEGINNING; THENCE PROCEED NORTH 66°18'30" EAST FOR A DISTANCE OF 984.42 FEET TO A POINT, THENCE PROCEED NORTH 20°23'20" WEST FOR A DISTANCE OF 350 FEET TO A POINT, THENCE PROCEED SOUTH 66°18'30" WEST FOR A DISTANCE OF 984.42 FEET TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76; THENCE PROCEED SOUTH 20°23'20" EAST ALONG THE EASTERLY RIGHT OF WAY LINE OF STATE ROAD 76 FOR THE POINT OR PLACE OF BEGINNING.

LESS AND EXCEPT PARCEL NO. 145 CONVEYED TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, RECORDED IN O.R. BOOK 951, PAGE 284, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THAT PART OF GOVERNMENT LOT 5, SECTION 16, TOWNSHIP 38 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 5; THENCE SOUTH 66°02'08" WEST ALONG THE SOUTH LINE OF SAID GOVERNMENT LOT 5, A DISTANCE OF 127.80 FEET TO A POINT ON THE EASTERLY EXISTING RIGHT OF WAY LINE FOR STATE ROAD 76 (KANNER HIGHWAY); THENCE NORTH 20°39'37" WEST ALONG SAID EASTERLY EXISTING RIGHT OF WAY LINE, A DISTANCE OF 330.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 20°39'37" WEST ALONG SAID EXISTING RIGHT OF WAY LINE, A DISTANCE OF 350.00 FEET; THENCE NORTH 66°02'08" EAST, A DISTANCE OF 20.03 FEET; THENCE SOUTH 20°39'37" EAST, A DISTANCE OF 350.00 FEET; THENCE SOUTH 66°02'08" WEST, A DISTANCE OF 20.03 FEET.

PARCEL 2:

A PARCEL OF LAND LYING IN GOVERNMENT LOTS 6 AND 7, SECTION 16, TOWNSHIP 38 SOUTH, RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF TRACT 2, STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD; THENCE NORTH 23°40'21" WEST ALONG SAID WESTERLY RIGHT-OF-WAY LINE, FOR A DISTANCE OF 208.04 FEET TO A POINT OF CURVATURE CONCAVE TO THE EAST; THENCE NORTHERLY ALONG SAID CURVE AND SAID WESTERLY RIGHT-OF-WAY LINE HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 14°55'37", AND AN ARC LENGTH OF 369.95 FEET TO THE POINT OF BEGINNING; THENCE DEPARTING SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 66°43'59" WEST, FOR A DISTANCE OF 791.02 FEET TO A POINT; THENCE NORTH 20°39'22" WEST FOR A DISTANCE OF 395.23 FEET TO A POINT ON THE SOUTH LINE OF A MARTIN COUNTY ACCESS STRIP RECORDED IN OFFICIAL RECORDS BOOK 882, PAGES 783 AND 785, MARTIN COUNTY, FLORIDA; THENCE SOUTH 89°28'43" EAST ALONG SAID MARTIN COUNTY ACCESS STRIP, FOR A DISTANCE OF 859.34 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, POINT ALSO BEING ON A NON-TANGENT CURVE CONCAVE TO THE EAST, RADIAL TO SAID POINT BEARS NORTH 82°49'31" EAST; THENCE SOUTHERLY ALONG SAID CURVE AND SAID WESTERLY RIGHT-OF-WAY LINE, HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 02°01'03", AND AN ARC LENGTH OF 50 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION:
TITLE COMMITMENT # 807690

A PARCEL OF LAND LYING IN GOVERNMENT LOTS 5, 6, AND 7, SECTION 16, TOWNSHIP 38 SOUTH RANGE 41 EAST, MARTIN COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS :

BEGINNING AT THE NORTHEAST CORNER OF TRACT 2, STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, POINT ALSO BEING ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD AND BEING A POINT ON THE NORTH LINE OF THE HANSON GRANT; THENCE SOUTH 65°51'31" WEST ALONG THE NORTH LINE OF SAID HANSON GRANT, FOR A DISTANCE OF 1738.28 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 76 (KANNER HIGHWAY (S.R. 76); THENCE NORTH 20°39'22" WEST ALONG SAID EASTERLY RIGHT OF WAY LINE, FOR A DISTANCE OF 330.00 FEET TO A POINT; THENCE DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE, NORTH 65°51'31" EAST, FOR A DISTANCE OF 964.39 FEET TO A POINT; THENCE NORTH 20°39'22" WEST, FOR A DISTANCE OF 256.55 FEET TO A POINT, THENCE NORTH 66°43'59" EAST, FOR A DISTANCE OF 791.02 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, SAID POINT ALSO BEING A POINT ON A NON-TANGENT CURVE CONCAVE TO THE EAST, HAVING A RADIUS OF 1420.00 FEET, A CENTRAL ANGLE OF 14°55'37", A CHORD BEARING OF SOUTH 16°11'48" EAST AND A CHORD LENGTH OF 368.90 FEET; THENCE TRAVEL COUNTER-CLOCKWISE ALONG THE ARC OF SAID NON-TANGENT CURVE AND THE WESTERLY RIGHT-OF-WAY LINE OF S.E. WILLOUGHBY BOULEVARD, FOR A DISTANCE OF 369.95 FEET TO A POINT OF TANGENCY; THENCE SOUTH 23°40'21" EAST ALONG SAID WESTERLY RIGHT-OF-WAY LINE, FOR A DISTANCE OF 208.04 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION:
TITLE COMMITMENT # 807694

A PARCEL OF LAND LYING WITHIN THE HANSON GRANT, MARTIN COUNTY, FLORIDA. BEING DESCRIBED AS FOLLOWS:

THE WESTERLY 330.00 FEET OF LOT 2, AND ALL OF LOTS 3 AND 4 OF STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, NOW SITUATED, LYING AND BEING IN MARTIN COUNTY, FLORIDA.

LESS AND EXCEPT

THAT PORTION CONVEYED TO THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION AS RECORDED IN OFFICIAL RECORDS BOOK 951, PAGE 282, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A 10 FOOT WIDE PARCEL OF LAND OVER THE WESTERLY PORTION OF LOT 4, ACCORDING TO THE PLAT OF STUART FARMS, AS RECORDED IN PLAT BOOK 1, PAGE 63, PUBLIC RECORDS OF PALM BEACH (NOW MARTIN) COUNTY, FLORIDA. LYING EASTERLY OF STATE ROAD 76, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF SAID LOT 4; THENCE RUN SOUTH 66°02'08" WEST, ALONG THE NORTH LINE OF SAID LOT 4 AND ALONG THE NORTH LINE OF HANSON GRANT, A DISTANCE OF 376.46 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 66°02'08" WEST, ALONG THE NORTH LINE OF SAID LOT 4, A DISTANCE OF 10.01 FEET; THENCE SOUTH 20°39'37" EAST, ALONG A LINE THAT IS 10 FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE EASTERLY RIGHT OF WAY LINE OF THE 100 FOOT WIDE STATE ROAD 76, A DISTANCE OF 690.55 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 4; THENCE NORTH 66°06'12" EAST, ALONG THE SOUTH LINE OF SAID LOT 4, A DISTANCE OF 10.01 FEET; THENCE NORTH 20°39'37" WEST, ALONG A LINE 20 FEET EASTERLY OF AS MEASURED AT RIGHT ANGLES TO AND PARALLEL WITH THE EASTERLY RIGHT OF WAY LINE OF THE SAID 100 FOOT WIDE STATE ROAD 76, A DISTANCE OF 600.56 FEET TO THE POINT OF BEGINNING

TOGETHER WITH AN ABANDONED 40 FOOT DEDICATED RIGHT OF WAY LYING BETWEEN SAID LOTS 2 AND 3.



MARTIN COUNTY, FLORIDA
VICINITY MAP
1" = 3000'

SURVEYORS NOTES AND REPORT:

1. REPRODUCTIONS OF THIS MAP ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. THIS SURVEY CANNOT BE TRANSFERRED OR ASSIGNED WITHOUT THE SPECIFIC WRITTEN PERMISSION OF ENGINEERING, DESIGN AND CONSTRUCTION, INC. IT IS A VIOLATION OF CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, TO ALTER THIS SURVEY WITHOUT THE EXPRESS PRIOR WRITTEN CONSENT OF THE SURVEYOR. ADDITIONS AND/OR DELETIONS MADE TO THE FACE OF THIS SURVEY WILL MAKE THIS SURVEY INVALID.
2. THE LAST DATE OF FIELD WORK WAS NOVEMBER 13, 2020.
3. CURRENT DESCRIPTION(S) SHOWN HEREON PROVIDED BY: THE CLIENT. A TITLE SEARCH FOR THIS PROPERTY HAS BEEN ABSTRACTED TO SHOW MATTERS OF RECORD SUCH AS EASEMENTS OR OTHER ENCUMBRANCES OR RESTRICTIONS.
4. PARCELS CONTAIN A TOTAL OF 48.99 ACRES, MORE OR LESS.
5. THE EXPECTED USE OF THE LAND, AS CLASSIFIED IN THE MINIMUM TECHNICAL STANDARDS (61G17-6 F.A.C.), IS "COMMERCIAL." THE MINIMUM RELATIVE DISTANCE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY IS 1 FOOT IN 10,000 FEET. THIS SURVEY EXCEEDS THE REQUIRED DISTANCE ACCURACY.
6. THIS BOUNDARY SURVEY HAS BEEN REFERENCED TO THE FLORIDA STATE PLANE BOUNDARY SYSTEM-EAST ZONE, NAD 83 (1990)
7. THE TOPOGRAPHIC AND TREE DATA COLLECTED AND DEPICTED ON THIS SURVEY IS OF SPECIFIC AREAS PREDETERMINED BY THE CLIENT AT THE TIME OF SURVEY REQUEST.
8. REVISIONS SHOWN HEREON DO NOT REPRESENT A "FIELD SURVEY UPDATE" UNLESS OTHERWISE NOTED.
9. BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE HANSON GRANT PER THE LINE LABELED HERON AS (BEARING BASIS) AND ALL OTHER BEARINGS ARE RELATIVE THERETO. DISTANCES ARE IN U.S. SURVEY FEET AND DECIMAL PARTS THEREOF.
10. IN SOME INSTANCES, GRAPHIC REPRESENTATIONS AND SYMBOLS SHOWN HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE THE RELATIONSHIP BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. THE DIMENSIONS SHOWN SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS OVER THE SCALED POSITIONS.
11. THE OWNERSHIP OF PERIMETER FENCES, WALLS, HEDGES AND LANDSCAPING, IF ANY, SHOWN HEREON ARE NOT KNOWN AND ARE NOT LISTED AS ENCROACHMENTS. THEIR RELATIVE LOCATION IS SHOWN IN RELATION TO THE BOUNDARY LINES SHOWN.
12. THE SURVEY MAP SHOWN HEREON DOES NOT NECESSARILY CONTAIN ALL OF THE INFORMATION OBTAINED OR DEVELOPED BY THE UNDERSIGNED SURVEYOR IN HIS FIELD WORK, OFFICE WORK OR RESEARCH.
13. THE PROPERTY WHICH IS THE SUBJECT OF THIS SURVEY APPEARS TO BE SITUATE IN AN AREA 0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE AT THIS TIME PURSUANT TO F.E.M.A. FIRM NUMBER 12085C0161H, HAVING AN EFFECTIVE DATE OF FEBRUARY 19, 2020. FOR APPROXIMATE DELINEATION OF THE FLOOD ZONE LIMITS, REFER TO AFOREMENTIONED FIRM PANELS.
14. TREES SHOWN HEREON WERE LOCATED BASED ON THE CONSERVATION CRITERIA ESTABLISHED BY THE CITY OF STUART, FLORIDA.
15. SHEETS 7, 8, AND 9 IS A TREE SURVEY BASED ON INFORMATION PROVIDED BY EW CONSULTANTS, JOB NAMED "M&M REALTY KANNER". THE WESTERN HALF BEING COLLECTED ON JULY THROUGH AUGUST OF 2018. THE EASTERN HALF BEING LOCATED IN SEPTEMBER OF 2020.
16. ADDITIONAL TOPOGRAPHIC DATA PROVIDED BY SJ BROWN INC. SURVEY JOB # 7227-01-01.

REFERENCE MATERIAL:

- MARTIN COUNTY ENGINEERING DEPT. RIGHT-OF-WAY SURVEY AND MAPPING RIGHT OF WAY MAP WILLOUGHBY BLVD. EXTENSION – MARTIN COUNTY. MAPS PREPARED BY GCV, INC. CIVIL ENGINEERS AND LAND SURVEYORS, DATED SEPTEMBER 1992. JOB# 91-1047
- BOUNDARY SURVEY BY STEPHEN J. BROWN, INC. PREPARED FOR M&M REALTY PARTNERS, LLC. COMPLETED ON 07/03/2018, JOB # 7227-01-01.
- FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT OF WAY ENGINEERING SECTION, RIGHT OF WAY MAP, STATE ROAD NO. 76, MARTIN COUNTY. SECTION 89060-2510 (2511).
- CERTIFIED STU OWNER PLAT, LOTS 1 AND 2, PLAT BOOK 18, PAGE 17, MCR.
- STUART FARMS PALM BEACH COUNTY, PLAT BOOK 1, PAGE 63, MCR
- 3100 SE WILLOUGHBY BLVD, STUART, OFFICIAL RECORD BOOK 2464, PAGE 1992, MCR, PARCEL ID 16-38-41-000-000-00460-3
- 3171 S KANNER HWY, STUART OFFICIAL RECORD BOOK 2270, PAGE 398, MCR. PARCEL ID 16-38-41-000-000-00442-6
- S KANNER HWY, STUART, OFFICIAL RECORD BOOK 2465, PAGE 1851, MCR. PARCEL ID 16-38-41-000-000-00440-8.
- S KANNER HWY, STUART, OFFICIAL RECORD BOOK 2822, PAGE 939, MCR. PARCEL ID 40-38-41-001-002-00000-5.
- FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY OFFICIAL RECORD BOOK951, PAGE 284, MCR.
- FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY OFFICIAL RECORD BOOK951, PAGE 286, MCR.
- 20' NON EXCLUSIVE EASEMENT, OFFICIAL RECORD BOOK 1174, PAGE 761, MCR.
- 60' WIDE MARTIN COUNTY ACCESS STRIP OFFICIAL RECORD BOOK 882, PAGE 783 & 785.
- PARCEL B04 S.F.W.M.D EASEMENT, OFFICIAL RECORDS BOOK 277, PAGE 775, MCR
- PARCEL B04 S.F.W.M.D. EASEMENT, OFFICIAL RECORDS BOOK 277, PAGE 782, MCR.
- 40' FLORIDA DEPARTMENT OF TRANSPORTATION DRAINAGE EASEMENT, DEED BOOK 42, PAGE 432, MCR.
- GCV TOPOGRAPHIC SURVEY JOB # 19-1034-02 DATED NOVEMBER 2019.
- TOPOGRAPHIC SURVEY BY SJ BROWN INC. FOR M&M REALTY PARTNERS, LLC JOB # 7227-01-01 DATED 07/23/2019

CERTIFIED TO:

1. M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
2. OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

SHEETS:

1. COVER
2. BOUNDARY SURVEY
3. TOPOGRAPHIC SURVEY
4. TREE SURVEY
5. TREE SURVEY CONTINUED
6. TREE SCHEDULE
7. TREE SURVEY BY OTHERS
8. TREE SURVEY BY OTHERS CONTINUED
9. TREE SCHEDULE BY OTHERS

MICHAEL T. OWEN PROFESSIONAL SURVEYOR AND MAPPER — SIGNATURE DATE:
FLORIDA REGISTRATION #5556

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UNIT 201
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L.B. CERTIFICATE OF AUTHORIZATION 6556

DRAWN BY: MTO
CHECKED BY: SJB
FIELD CREW: TL/BS/MM
FILENAME: 20-313SV.dwg
JOB: 20-313
LAYOUT: 1
SCALE: AS SHOWN
DATE: February 25, 2021
REVISIONS: 12/15/2021 ADDED TREE DATA FROM EW CONSULTANTS AND TOPO FROM SJ BROWN
12/21/2021 ADDED REF. INFO. ABANDONING OF EASEMENTS AND STUART FARMS PLAT

BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
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1 OF 9

Z:\EDC 2020\20-313 - Outer Boat - Kitson Island\SURVEY\Dwg - PDF\Kitson ARCH 2020 (11x17).dwg, Last Saved: 12/21/2021 11:01 AM
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BOUNDARY, TOPOGRAPHY & TREE SURVEY

FOR: M&M STUART LLC



SYMBOL & ABBREVIATION LEGEND:

⊗	TREE DATA BY EW CONSULTANTS	Ⓓ	DRAINAGE MANHOLE	HDPE	HIGH DENSITY POLYETHYLENE PIPE	PCN	PARCEL CONTROL NUMBER	⋈	SPIGOT
●	TREE DATA BY EDC INC	DIP	DUCTILE IRON PIPE	HW	HOG WIRE FENCE	PK NAIL	PARKER-KALON NAIL	⋈	SPRINKLER VALVE
ASPH	ASPHALT	E	EAST/EASTING		HYDRANT	PK-SD	PARKER-KALON NAIL & DISK	SLC	ST LUCIE COUNTY
BFP	BACK FLOW PREVENTER	EOW	EDGE OF WATER	IN	INCH	POT	PERMANENT CONTROL POINT	STA	STATION
	BENCHMARK (BM)	EB	ELECTRIC BOX	INV	INVERT	PRM	PERMANENT REFERENCE MONUMENT	Ⓢ	STORMWATER DRAINAGE MANHOLE
	BIKE RACK	EHH	ELECTRIC HAND HOLE (CWH)	IP	IRON PIPE	PB	PLAT BOOK		STREET SIGN
CATV ☐	CABLE RISER	EM	ELECTRIC METER	IR	IRON ROD	(P)	PLAT DATA	TELE RISER ☐	TELEPHONE RISER BOX
(C)	CALCULATED	EL./ELEV.	ELECTRIC PANEL	IR/C	IRON ROD AND CAP	POB	POINT OF BEGINNING		TOE OF SLOPE
	CATCH BASIN	FEMA	ELEVATION		IRRIGATION CONTROL VALVE	POC	POINT OF COMMENCEMENT	TOE	TOP OF BANK/BERM
℄	CENTERLINE	F.O.	FEDERAL EMERGENCY MANAGEMENT AGENCY	L	LENGTH	P.C.C	POINT OF COMPOUND CURVE	TOB	TOP OF NUT
CCR	CERTIFIED CORNER RECORD	FOH	FIBER OPTIC	○	LIGHT POST	P.C.	POINT OF CURVATURE	T.O.N.	TOPOGRAPHIC DATA (SOFT SURFACE)
CLF	CHAIN LINK FENCE	FOHH	FIBER OPTIC HAND HOLE	MAG/D	MAG NAIL MAG BRAND NAIL	P.T.	POINT OF TANGENCY	X.OD	TOPOGRAPHIC DATA (HARD SURFACE)
CHD.	CHORD	FOM	FIBER OPTIC MARKER	MB	MAILBOX	P.O.T.	POINT OF TERMINUS	X.OD	TOWNSHIP
CO ○	CLEAN OUT	FOR	FIBER OPTIC RISER	MCR	MARTIN COUNTY RECORDS	PVC	POLYVINYL CHLORIDE	TWP/SHP	TRAFFIC HANDHOLD
COMM RISER ☐	COMMUNICATION RISER	(M)	FIELD MEASURED	MHWL	MEAN HIGH WATER LINE	PSL	POINT SAINT LUCIE, FLORIDA		TRAFFIC SIGNAL CONTROL BOX
CONC	CONCRETE	F.F.E.	FINISHED FLOOR ELEVATION	MLWL	MEAN LOWER WATER LINE	PLS	PROFESSIONAL LAND SURVEYOR	TSCB	TYPICAL
○	CONCRETE LIGHT POST	FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	◇	METAL LIGHT POST	R	RADIUS	TYP	UNKNOWN
CM	CONCRETE MONUMENT	FPL	FLORIDA POWER AND LIGHT	MP	METAL PIPE	RW	REAL TIME KINEMATIC	UNK	UNKNOWN HANDHOLD
CPP ☒	CONCRETE POWER POLE (CPP)	FT	FOOT	◎	MONITORING WELL	RW-D	RECLAIMED WATER VALVE	UNK	UNKNOWN MANHOLE
	CONCRETE POWER POLE W/STREET LIGHT	FM	FORCE MAIN	MON	MONUMENT	RLS	REGISTERED LAND SURVEYOR	PVED BOX	UNKNOWN RISER BOX
	CONCRETE SIGNAL LIGHT POLE	FND	FOUND	NAD1929	NATIONAL GEODETIC VERTICAL DATUM OF 1929	RCP	REINFORCED CONCRETE PIPE	(U)	UNKNOWN TYPE MANHOLE
CMP	CORRUGATED METAL PIPE	(F)	FPL MANHOLE	N/D	NON DESCRIPT NAIL AND DISK	R/W	RIGHT-OF-WAY	VCP	VITRIFIED CLAY PIPE
CURB	CURB INLET	SQ FT.	SQUARE FEET	N/P	NON RADIAL	R/C	ROD AND CAP	WM	WATER METER
D	DECORATIVE LIGHT POST	GAS-D	GAS VALVE		NORTH AMERICAN VERTICAL DATUM OF 1988	(S)	SANITARY MANHOLE		WATER SERVICE METER (WM)
(D)	DEED	GIS	GEOGRAPHIC INFORMATION SYSTEMS	NAVD88		SV-D	SANITARY VALVE	WV-D	WATER VALVE (WV)
D.B.	DEED BOOK	GND	GROUND	N	NORTH OR NORTHING	SEC	SECTION	W	WEST
ø	DIAMETER (DIA.)	▶	GROUND LIGHT	No.	NUMBER	●	PROPERTY CORNER	WF	WOOD FENCE
		⟵	GUY WIRE ANCHOR	ORB	OFFICIAL RECORDS BOOK	▲	RIGHT-OF-WAY CONTROL		WOOD POLE STREET LIGHT
		♿	HANDICAP	OHW	OVER HEAD WIRES	SIGN	SIGN		WOOD POWER POLE
				PG	PAGE	S	SOUTH		

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L.B. CERTIFICATE OF AUTHORIZATION 8058

DWG	BOUNDARY
DRAWN BY	MDS
CHECKED BY	MDS
P.C.	
FIELD CREW	
20-313SURV.dwg	
FILENAME	
SURVEY	
LAYOUT	
AS SHOWN	
SCALE	
February 25, 2021	
DATE	

12/15/2020	ADDED TREE DATA FROM EW CONSULTANTS AND TOPO FROM TJ BROWN
12/15/2020	ADDED ESE, INFO, ABANDONING OF EXISTING R/W & LIGHT / SIGNS PLAT

BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
MARTIN COUNTY, FLORIDA

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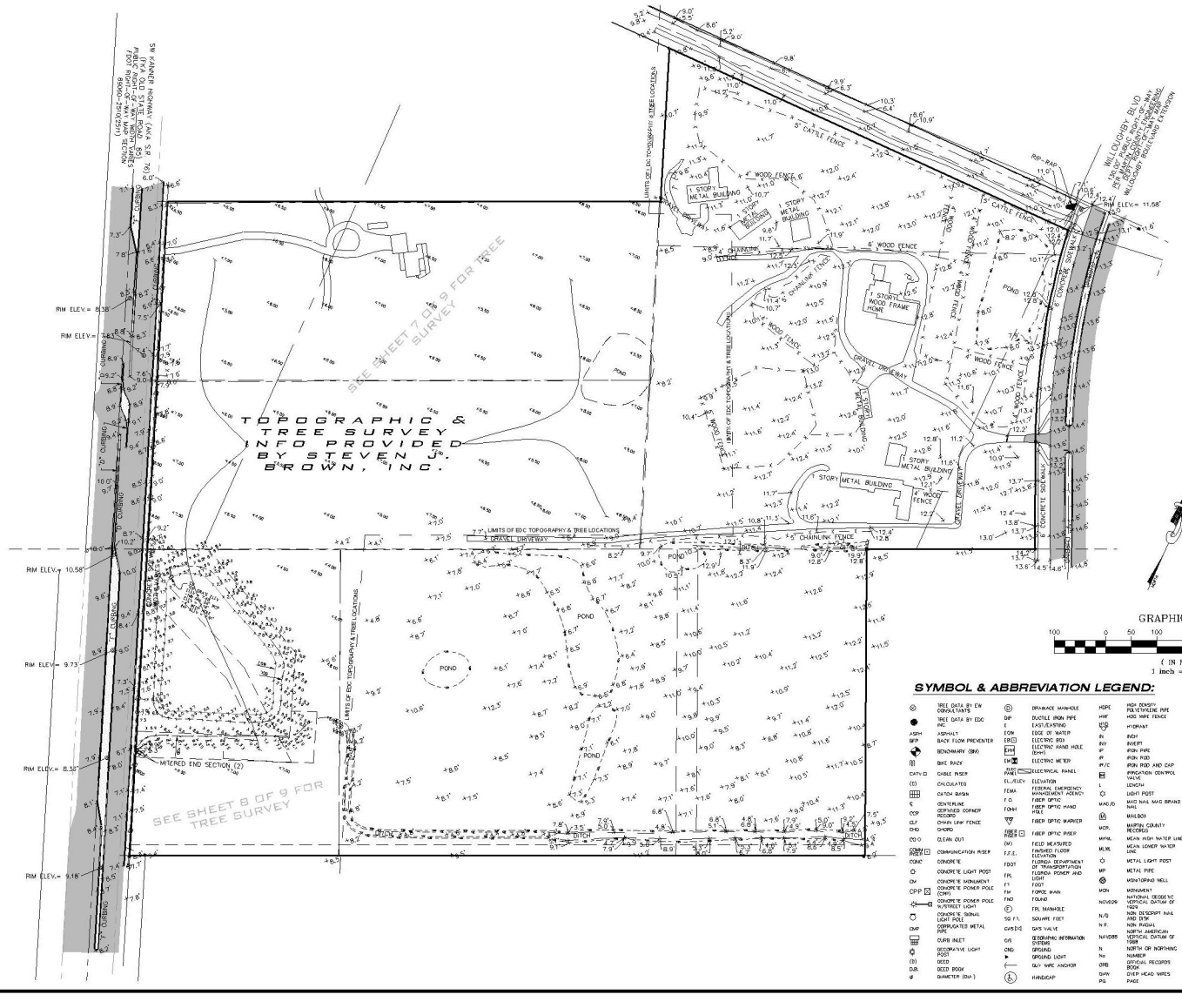
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BOUNDARY, TOPOGRAPHY & TREE SURVEY

FOR: M&M STUART LLC



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

SYMBOL & ABBREVIATION LEGEND:

⊗	TREE DATA BY EW CONSULTANTS	Ⓓ	DRAINAGE MANDHOLE	HDPE	HIGH DENSITY POLYETHELENE PIPE	PCN	PARCEL CONTROL NUMBER	⊠	SPIGOT		
●	TREE DATA BY EDC INC.	DIP	DUCTILE IRON PIPE	HWF	HOG WIRE FENCE	PK NAIL	PARKER-KALON NAIL	⊹	SPRINKLER VALVE		
ASPH	ASPHALT	E	EAST/EASTING	HYD	HYDRANT	PK/D	PARKER-KALON NAIL & DISK	SLC	ST. LUCIE COUNTY		
BFP	BACK FLOW PREVENTER	EOW	EDGE OF WATER	IN	INCH	PCP	PERMANENT CONTROL POINT	STA	STATION		
⊕	BENCHMARK (BM)	EB	ELECTRIC BOX	INV	INVERT	PRM	PERMANENT REFERENCE MONUMENT	Ⓢ	STORMWATER DRAINAGE MANHOLE		
	BIKE RACK	EMH	ELECTRIC HAND HOLE (EHH)	IP	IRON PIPE	PB	PLAT BOOK	┼	STREET SIGN		
CATV □	CABLE RISER	EM	ELECTRIC METER	IR	IRON ROD	(P)	PLAT DATA	TELE RISER □	TELEPHONE RISER BOX		
(C)	CALCULATED	ELEC RISER □	ELECTRICAL PANEL	IR/C	IRON ROD AND CAP	POB	POINT OF BEGINNING	TOE	TOE OF SLOPE		
	CATCH BASIN	EL/ELEV	ELEVATION		IRRIGATION CONTROL VALVE	POC	POINT OF COMMENCEMENT	TOB	TOP OF BANK/BERM		
℄	CENTERLINE	FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY	L	LENGTH	P.C.C	POINT OF COMPOUND CURVE	T.O.N	TOP OF NUT		
CCP	CERTIFIED CORNER RECORD	F.O.	FIBER OPTIC		LIGHT POST	P.C.	POINT OF CURVATURE	X 0.0	TOPOGRAPHIC DATA (SOFT SURFACE)		
CLF	CHAIN LINK FENCE	FOHH	FIBER OPTIC HAND HOLE	MAG/D	MAG NAIL W/AD BRAND NAIL	P.T.	POINT OF TANGENCY	X 0.00	TOPOGRAPHIC DATA (HARD SURFACE)		
CHD	CHORD	FOM	FIBER OPTIC MARKER	MB	MAILBOX	P.C.L	POINT OF TERMINUS				
CO O	CLEAN OUT	FIBER RISER □	FIBER OPTIC RISER	MCR.	MARTIN COUNTY RECORDS	PVC	POLYVINYL CHLORIDE	TWP	TOWNSHIP		
COMM RISER □	COMMUNICATION RISER	(M)	FIELD MEASURED	MHWL	MEAN HIGH WATER LINE	PSL	PORT SAINT LUCIE, FLORIDA	T	TRAFFIC HANDHOLD		
CONC	CONCRETE	F.F.E.	FINISHED FLOOR ELEVATION	MLW	MEAN LOWER WATER LINE	PLS	PROFESSIONAL LAND SURVEYOR	TSCB	TRAFFIC SIGNAL CONTROL BOX		
○	CONCRETE LIGHT POST	FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	☼	METAL LIGHT POST	#	RADIUS	TYP	TYPICAL		
CM	CONCRETE MONUMENT	FPL	FLORIDA POWER AND LIGHT	MP	METAL PIPE	RGE	RANGE	UNK	UNKNOWN		
CPP ☒	CONCRETE POWER POLE (CPP)	FT	FOOT	⊛	MONITORING WELL	RW	REAL TIME KINEMATIC	UHH	UNKNOWN HANDHOLD		
☼	CONCRETE POWER POLE W/STREET LIGHT	FM	FORCE MAIN	MON	MONUMENT	RW □	RECLAIMED WATER VALVE	RISER □	UNKNOWN RISER BOX		
	CONCRETE SIGNAL LIGHT POLE	FND	FOUND	NGVD29	NATIONAL GEODETIC VERTICAL DATUM OF 1929	RLS	REGISTERED LAND SURVEYOR	UM	UNKNOWN MANHOLE		
CMP	CORRUGATED METAL PIPE	(F)	FPL MANHOLE	N/D	NON DESCRIPT NAIL AND DISK	ROP	REINFORCED CONCRETE PIPE	UP	UNKNOWN TYPE MANHOLE		
	CURB INLET	SQ FT.	SQUARE FEET	N/R	NON RADIAL	R/W	RIGHT-OF-WAY	VCP	VITRIFIED CLAY PIPE		
GAS □	GAS VALVE	GEOSPATIAL INFORMATION SYSTEMS	NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988	R/C	ROD AND CAP	WM	WATER METER			
GIS	GEOSPATIAL INFORMATION SYSTEMS	GPS		N	NORTH OR NORTHING	S	SANITARY MANHOLE	WM	WATER SERVICE METER (WM)		
GND	GROUND	▶	GROUND LIGHT	No	NUMBER	SEC	SECTION	W	WEST		
(D)	DEED	⟵	GUY WIRE ANCHOR	ORB	OFFICIAL RECORDS BOOK	◉	PROPERTY CORNER	WV □	WATER VALVE (WV)		
D.B.	DEED BOOK	Ⓗ	HANDICAP	O/H	OVER HEAD WIRES	▲	POINT-OF-CONTROL	WF	WOOD FENCE		
ø	DIAMETER (DIA.)			PG	PAGE	—	SIGN		WOOD POLE STREET LIGHT		
						S	SOUTH		WOOD POWER POLE		

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DJD | DRAWN BY
MTD | CHECKED BY
F.B. | FIELD CREW
20-313SV.dwg | FILENAME
TOPOGRAPHIC | TREE LOCATIONS
AS SHOWN | SCALE
February 25, 2021 | DATE

12/5/2020 ADDED TREE DATA FROM EW CONSULTANTS AND TOPO FROM SJ BROWN
12/4/2020 ADDED EDC INFO - ABANDONING OF EXISTING BASE STUDY TARGET PLAT

BOUNDARY, TOPOGRAPHIC & TREE SURVEY

FOR:

M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

RECORD INFORMATION

SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT

MARTIN COUNTY, FLORIDA

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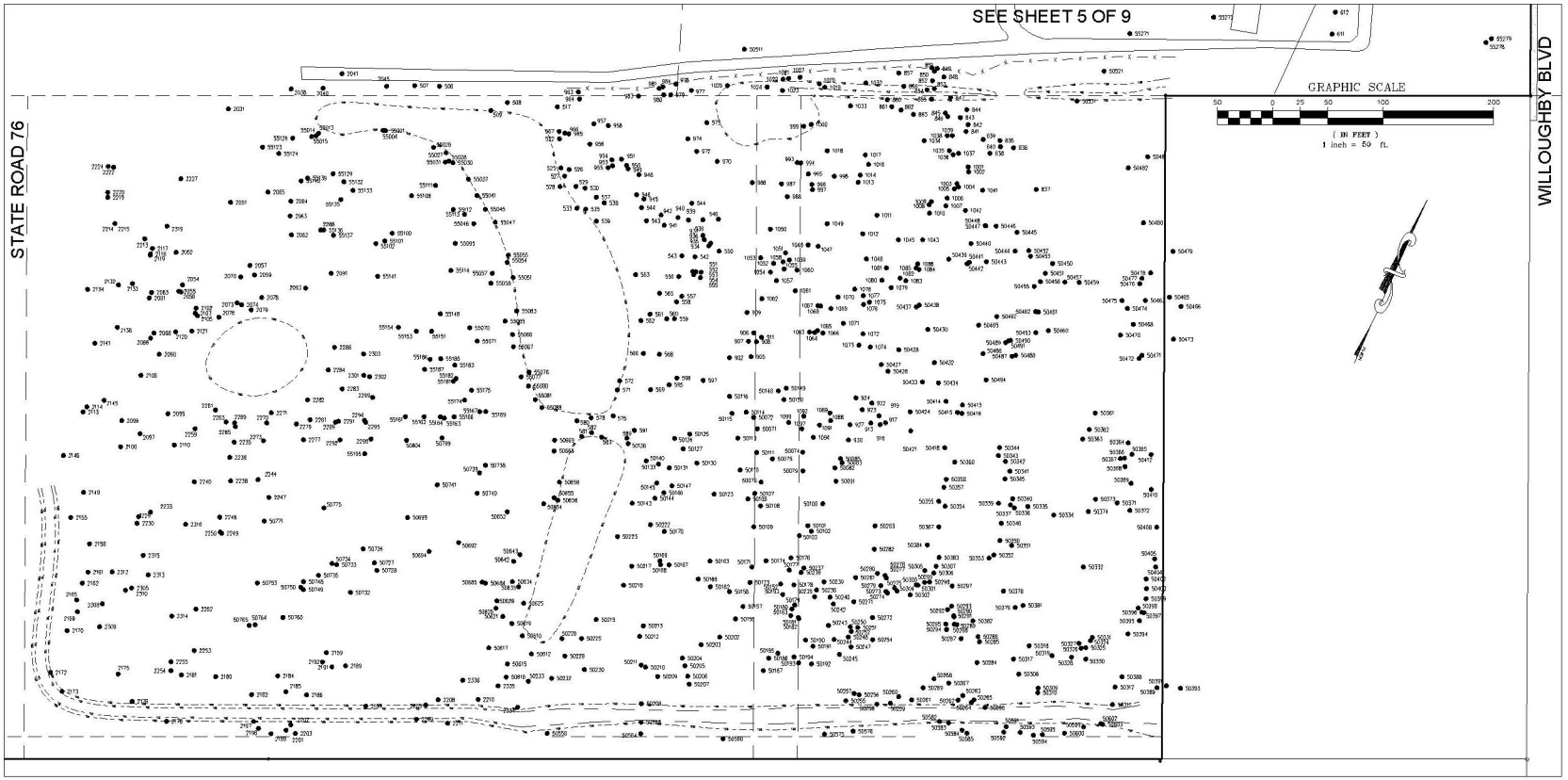
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BOUNDARY, TOPOGRAPHIC & TREE SURVEY

FOR: M&M STUART LLC



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DWG
DRAWN BY
CHECKED BY
FIELD CREW
20-313_TREE.dwg
TREEWIRE
PROJECT #
LAYOUT
AS SHOWN
SCALE
November 17, 2020
DATE

DATE	ISSUE
12/4/2020	ADDED REC. INFO. ABANDONED OF RESERVED EASTSTUART FARMS PLAT

BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
MARTIN COUNTY, FLORIDA

10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
772-462-2455

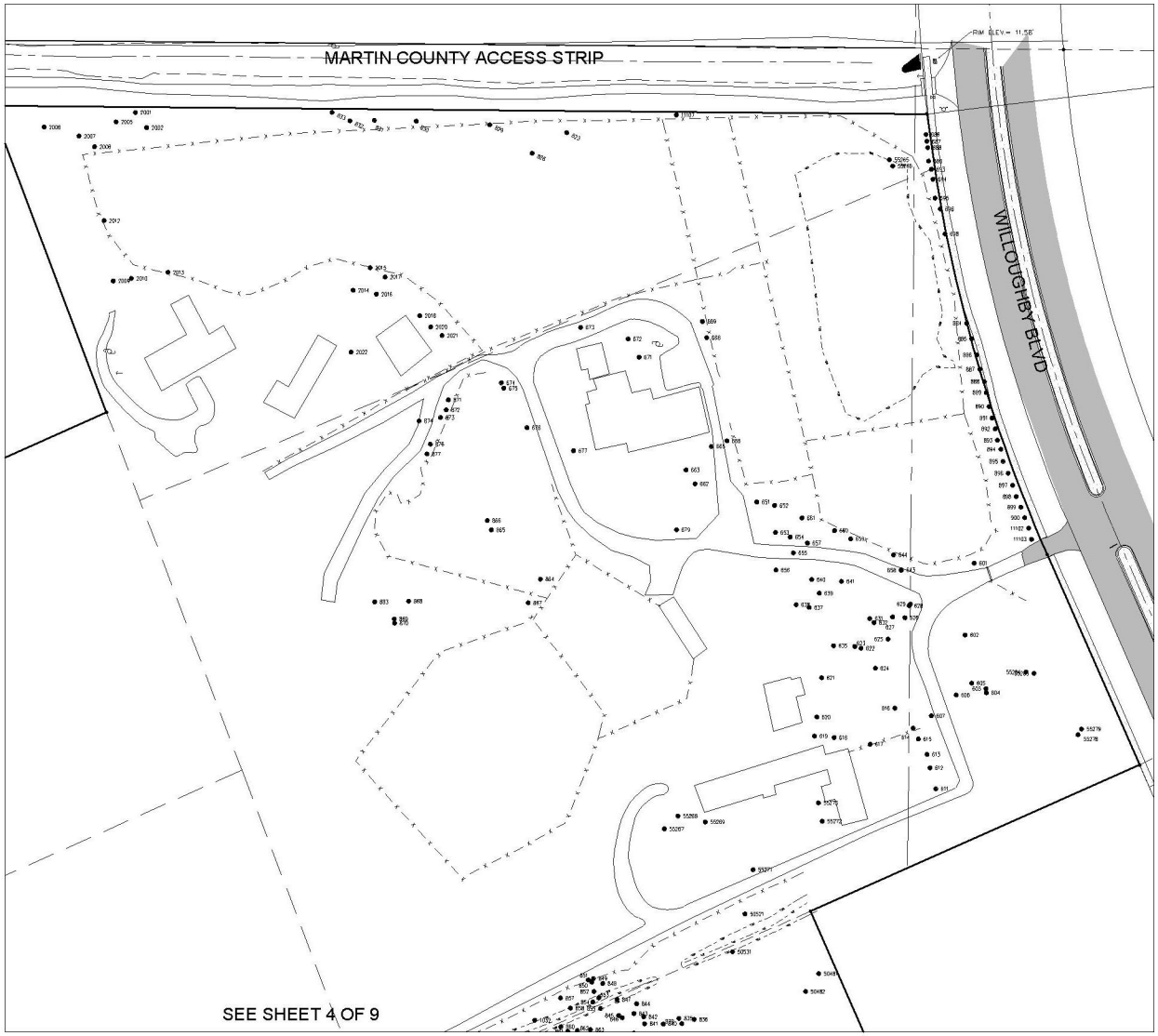
20-313

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Z:\EDC 2020\20-313 - Palm Beach - Kitson Hedges\BOUNDARY\Dwg - PBP\Kitson\20-313_TREE.dwg 12/8/2021 11:07 AM
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BOUNDARY, TOPOGRAPHIC & TREE SURVEY

FOR: M&M STUART LLC



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

ENGINEERS & SURVEYORS
ENVIRONMENTAL
10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
☎ 772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 6935
L.B. CERTIFICATE OF AUTHORIZATION 6936

DWG DRAWN BY: MTO
CHECKED BY: JLT
FIELD CREW: 20-313 TREE.dwg
FIELDWORK DATE: 11/2020
PROJECT LAYOUT: AS SHOWN
SCALE: 1" = 50'
November 17, 2020

DATE	DESCRIPTION
12/4/2020	ADDED REC. INFO. (ABANDONED OF ENCROACHMENT) & REVISED CERTIFICATION

BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
MARTIN COUNTY, FLORIDA

10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
☎ 772-462-2455

20-313

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Z:\EDC 2020\20-313\ - Entire Sheet - Xrefs Attached\BOUNDARY.DWG xref: TREE.dwg 12/3/2021 11:01 AM
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BOUNDARY, TOPOGRAPHIC & TREE SURVEY

FOR: M&M STUART LLC

TAG #	TYPE	DBH
EDC-506	PINE	18
EDC-507	PINE	15
EDC-508	PINE	12
EDC-509	PINE	18
EDC-517	PINE	16
EDC-522	PINE	15
EDC-525	PINE	15
EDC-526	PINE	11
EDC-527	PINE	11
EDC-528	PINE	11
EDC-529	PINE	18
EDC-530	PINE	10
EDC-532	WILLOW	12
EDC-533	PINE	12
EDC-535	PINE	11
EDC-537	PINE	15
EDC-538	PINE	11
EDC-539	PINE	11
EDC-542	PINE	11
EDC-543	PINE	14
EDC-544	PINE	12
EDC-546	PINE	16
EDC-550	PINE	10
EDC-551	BAY LEAF	7
EDC-552	BAY LEAF	9
EDC-553	BAY LEAF	9
EDC-554	BAY LEAF	9
EDC-555	BAY LEAF	9
EDC-559	BAY LEAF	8
EDC-557	BAY LEAF	6
EDC-558	BAY LEAF	8 X2
EDC-559	BAY LEAF	8
EDC-560	PINE	13
EDC-561	BAY LEAF	9
EDC-562	PINE	11
EDC-565	PINE	14
EDC-565	GUMBO	8 X5
EDC-566	PINE	14
EDC-568	PINE	13
EDC-569	PINE	14
EDC-571	PINE	11
EDC-572	BAY LEAF	8
EDC-575	PINE	13
EDC-578	PINE	10
EDC-580	PINE	11
EDC-581	PINE	13
EDC-582	PINE	12
EDC-583	PINE	11
EDC-589	PINE	12
EDC-591	PINE	11
EDC-595	PINE	12
EDC-596	PINE	19
EDC-597	BANYAN	8
EDC-601	PINE	14
EDC-602	PINE	18
EDC-603	PINE	18
EDC-604	PINE	18
EDC-605	OAK	18
EDC-609	PINE	20
EDC-607	PINE	15
EDC-611	OAK	12
EDC-612	OAK	16
EDC-613	OAK	18
EDC-614	OAK	12
EDC-615	OAK	6
EDC-616	PINE	24
EDC-617	OAK	6
EDC-618	OAK	6
EDC-619	OAK	12
EDC-620	OAK	8
EDC-621	OAK	20
EDC-622	PINE	14
EDC-623	PINE	16
EDC-624	PINE	20
EDC-625	PINE	18
EDC-626	PINE	15
EDC-627	PINE	14
EDC-628	PINE	13
EDC-629	PINE	18
EDC-631	PINE	11
EDC-632	PINE	12
EDC-635	PINE	12
EDC-637	PINE	12
EDC-638	PINE	18
EDC-639	PINE	11
EDC-640	PINE	12
EDC-641	PINE	18
EDC-643	PINE	17
EDC-644	PINE	14
EDC-651	OAK	12
EDC-652	OAK	15
EDC-653	OAK	18
EDC-654	PINE	15
EDC-655	PINE	17
EDC-656	PINE	14
EDC-657	OAK	18
EDC-658	PINE	17

TAG #	TYPE	DBH
EDC-659	OAK	21
EDC-660	OAK	15
EDC-661	OAK	15
EDC-662	FLOWERING TREE	15
EDC-663	FLOWERING TREE	18
EDC-665	FLOWERING TREE	8
EDC-666	FLOWERING TREE	36
EDC-668	FLOWERING TREE	8
EDC-669	FLOWERING TREE	8
EDC-671	FLOWERING TREE	16
EDC-672	PINE	14
EDC-673	FLOWERING TREE	36
EDC-674	FLOWERING TREE	16
EDC-675	FLOWERING TREE	20
EDC-676	OAK	28
EDC-677	FLOWERING TREE	28
EDC-679	PINE	11
EDC-686	OAK	16
EDC-687	OAK	8
EDC-688	OAK	12
EDC-689	OAK	12
EDC-690	OAK	16
EDC-691	OAK	16
EDC-692	OAK	18
EDC-693	OAK	18
EDC-694	OAK	18
EDC-695	OAK	18
EDC-696	PINE	24
EDC-831	FLOWERING TREE	8
EDC-832	BANYAN	12
EDC-833	BANYAN	12
EDC-835	SLASH PINE	9
EDC-839	SLASH PINE	10
EDC-837	SLASH PINE	14
EDC-838	SLASH PINE	5
EDC-839	SLASH PINE	8
EDC-840	SLASH PINE	9
EDC-841	SLASH PINE	6
EDC-842	SLASH PINE	7
EDC-843	SLASH PINE	5
EDC-844	SLASH PINE	5
EDC-845	SLASH PINE	5
EDC-846	SLASH PINE	6
EDC-847	SLASH PINE	6
EDC-848	SLASH PINE	10
EDC-849	SLASH PINE	8
EDC-850	SLASH PINE	10
EDC-851	SLASH PINE	7
EDC-852	SLASH PINE	6
EDC-853	SLASH PINE	6
EDC-854	SLASH PINE	6
EDC-855	SLASH PINE	6
EDC-857	SLASH PINE	9
EDC-858	SLASH PINE	6
EDC-860	SLASH PINE	7
EDC-861	SLASH PINE	6
EDC-862	SLASH PINE	8
EDC-863	SLASH PINE	8
EDC-864	OAK	8
EDC-865	SLASH PINE	30
EDC-866	OAK	12
EDC-867	OAK	24
EDC-868	OAK	6
EDC-869	OAK	12
EDC-870	OAK	36
EDC-871	FLOWERING TREE	18
EDC-872	FLOWERING TREE	8
EDC-873	FLOWERING TREE	12
EDC-874	FLOWERING TREE	18
EDC-876	FLOWERING TREE	8
EDC-877	FLOWERING TREE	12
EDC-883	PINE	15
EDC-884	OAK	24
EDC-885	OAK	16
EDC-886	OAK	16
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EDC-890	OAK	12
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EDC-893	OAK	12
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EDC-895	OAK	12
EDC-896	OAK	12
EDC-897	OAK	12
EDC-898	OAK	14
EDC-899	OAK	14
EDC-900	OAK	18
EDC-902	PINE	21
EDC-905	PINE	13
EDC-907	PINE	13
EDC-908	PINE	18
EDC-909	PINE	15

TAG #	TYPE	DBH
EDC-911	GUMBO	7
EDC-913	PINE	10
EDC-916	PINE	10
EDC-917	PINE	10
EDC-918	PINE	10
EDC-922	PINE	11
EDC-925	PINE	13
EDC-926	PINE	13
EDC-927	PINE	15
EDC-930	PINE	11
EDC-934	BAY LEAF	12
EDC-935	BAY LEAF	7
EDC-936	BAY LEAF	7
EDC-937	BAY LEAF	7
EDC-938	BAY LEAF	8 X2
EDC-939	BAY LEAF	7 X2
EDC-941	BAY LEAF	8
EDC-942	BAY LEAF	8
EDC-943	BAY LEAF	10
EDC-944	BAY LEAF	6
EDC-945	BAY LEAF	8
EDC-946	BAY LEAF	8
EDC-948	PINE	12
EDC-949	PINE	12
EDC-950	PINE	13
EDC-951	PINE	12
EDC-953	BAY LEAF	8
EDC-954	BAY LEAF	7
EDC-955	BAY LEAF	7
EDC-959	PINE	11
EDC-957	PINE	13
EDC-958	PINE	10
EDC-963	BAY LEAF	11
EDC-964	BAY LEAF	8
EDC-965	BAY LEAF	6
EDC-966	BAY LEAF	7
EDC-967	BAY LEAF	6
EDC-970	OAK	21
EDC-972	PINE	12
EDC-974	PINE	13
EDC-975	BAY LEAF	10
EDC-977	BAY LEAF	7 X2
EDC-978	BAY LEAF	10
EDC-979	BAY LEAF	21
EDC-980	BAY LEAF	14
EDC-981	PINE	11
EDC-983	BAY LEAF	7
EDC-984	GUMBO	8 X3
EDC-989	PINE	11
EDC-987	GUMBO	9
EDC-988	PINE	17
EDC-993	OAK	6
EDC-994	OAK	6
EDC-995	OAK	6
EDC-996	OAK	6
EDC-997	OAK	6
EDC-998	PINE	12
EDC-999	BAY LEAF	12
EDC-1000	BAY LEAF	15
EDC-1001	SLASH PINE	7
EDC-1002	SLASH PINE	9
EDC-1003	SLASH PINE	7
EDC-1004	SLASH PINE	7
EDC-1005	SLASH PINE	6
EDC-1006	PINE	12
EDC-1007	SLASH PINE	7
EDC-1008	SLASH PINE	5
EDC-1009	SLASH PINE	6
EDC-1010	PINE	11
EDC-1011	SLASH PINE	12
EDC-1012	SLASH PINE	13
EDC-1013	SLASH PINE	11
EDC-1014	SLASH PINE	5
EDC-1015	SLASH PINE	11
EDC-1016	SLASH PINE	11
EDC-1017	PINE	16
EDC-1018	PINE	18
EDC-1019	PINE	13
EDC-1020	PINE	11
EDC-1021	PINE	13
EDC-1022	BAY LEAF	7
EDC-1023	BAY LEAF	8
EDC-1024	BAY LEAF	20
EDC-1026	GUMBO	7
EDC-1027	GUMBO	6
EDC-1052	OAK	10
EDC-1053	PINE	18
EDC-1054	SLASH PINE	6
EDC-1055	SLASH PINE	6
EDC-1056	SLASH PINE	6
EDC-1057	SLASH PINE	6
EDC-1058	SLASH PINE	6
EDC-1059	SLASH PINE	5
EDC-1041	SLASH PINE	6
EDC-1042	SLASH PINE	11
EDC-1043	SLASH PINE	6
EDC-1045	SLASH PINE	6

TAG #	TYPE	DBH
EDC-1046	SLASHPINE	9
EDC-1047	SLASHPINE	9
EDC-1048	PINE	13
EDC-1049	PINE	14
EDC-1050	PINE	14
EDC-1051	PINE	13
EDC-1052	PINE	15
EDC-1053	PINE	13
EDC-1054	PINE	12
EDC-1055	PINE	14
EDC-1057	OAK	9
EDC-1058	OAK	6
EDC-1059	OAK	9
EDC-1060	PINE	12
EDC-1061	SLASHPINE	9
EDC-1062	PINE	15
EDC-1063	OAK	7
EDC-1064	OAK	7
EDC-1065	OAK	7
EDC-1066	OAK	7
EDC-1067	PINE	17
EDC-1068	PINE	16
EDC-1069	SLASHPINE	7
EDC-1070	SLASHPINE	7
EDC-1071	PINE	13
EDC-1072	PINE	11
EDC-1073	PINE	11
EDC-1074	PINE	12
EDC-1075	SLASHPINE	11
EDC-1076	SLASHPINE	9
EDC-1077	PINE	11
EDC-1078	SLASHPINE	6
EDC-1079	SLASHPINE	9
EDC-1080	SLASHPINE	6
EDC-1081	SLASHPINE	5
EDC-1082	SLASHPINE	5
EDC-1083	SLASHPINE	6
EDC-1084	SLASHPINE	5
EDC-1085	SLASHPINE	5
EDC-1086	SLASHPINE	8
EDC-1088	BAY LEAF	6
EDC-1089	GUMBO	6X5
EDC-1091	PINE	10
EDC-1092	PINE	14
EDC-1094	PINE	12
EDC-1097	PINE	11
EDC-1099	PINE	12
EDC-2001	OAK	14
EDC-2002	OAK	18
EDC-2005	OAK	8
EDC-2006	PINE	16
EDC-2007	OAK	18
EDC-2008	OAK	12
EDC-2009	OAK	24
EDC-2010	OAK	18
EDC-2011	PINE	18
EDC-2012	OAK	24
EDC-2013	OAK	12
EDC-2014	PINE	17
EDC-2015	OAK	12
EDC-2016	BANYAN	14
EDC-2017	OAK	6
EDC-2018	OAK	18
EDC-2020	OAK	24
EDC-2021	OAK	24
EDC-2022	BANYAN	38
EDC-2035	PINE	12
EDC-2038	PINE	24
EDC-2040	PINE	15
EDC-2041	PINE	20
EDC-2042	PINE	20
EDC-2051	PINE	14
EDC-2052	PINE	14
EDC-2054	PINE	16
EDC-2055	PINE	18
EDC-2056	PINE	18
EDC-2057	PINE	18
EDC-2059	PINE	20
EDC-2062	PINE	18
EDC-2063	PINE	10
EDC-2064	PINE	20
EDC-2065	PINE	18
EDC-2070	PINE	20
EDC-2073	PINE	12
EDC-2074	PINE	20
EDC-2076	PINE	24
EDC-2078	PINE	14
EDC-2079	PINE	14
EDC-2081	PINE	18
EDC-2083	PINE	12
EDC-2086	PINE	12
EDC-2088	PINE	12
EDC-2090	PINE	18
EDC-2091	PINE	18
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EDC-2097	PINE	10
EDC-2098	PINE	14

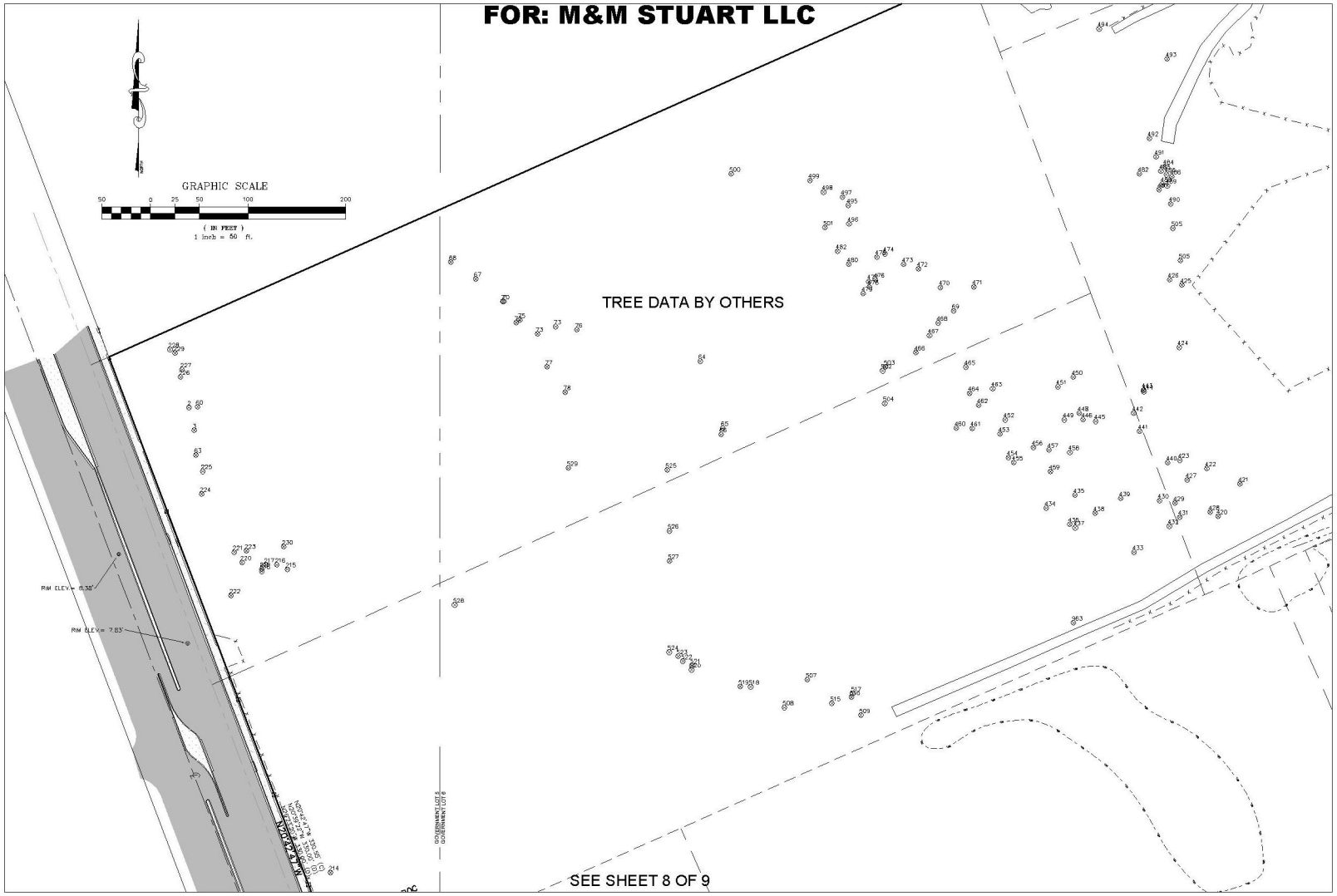
TAG #	TYPE	DBH
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EDC-2103	PINE	14
EDC-2105	PINE	12
EDC-2106	PINE	12
EDC-2110	PINE	12
EDC-2113	PINE	12
EDC-2114	PINE	12
EDC-2117	PINE	20
EDC-2118	PINE	12
EDC-2119	PINE	12
EDC-2120	PINE	12
EDC-2121	PINE	20
EDC-2132	PINE	12
EDC-2133	PINE	12
EDC-2134	PINE	18
EDC-2138	PINE	18
EDC-2141	PINE	20
EDC-2145	PINE	15
EDC-2148	PINE	15
EDC-2149	PINE	15
EDC-2155	PINE	18
EDC-2158	PINE	13
EDC-2159	PINE	13
EDC-2161	PINE	14
EDC-2169	PINE	14
EDC-2170	PINE	24
EDC-2172	PINE	18
EDC-2173	PINE	20
EDC-2175	PINE	20
EDC-2176	PINE	20
EDC-2178	PINE	20
EDC-2180	PINE	15
EDC-2181	PINE	30
EDC-2182	PINE	16
EDC-2184	PINE	18
EDC-2185	PINE	12
EDC-2188	PINE	18
EDC-2187	PINE	28
EDC-2189	PINE	10
EDC-2191	PINE	18
EDC-2192	PINE	18
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EDC-2202	PINE	20
EDC-2203	PINE	16
EDC-2208	PINE	18
EDC-2209	PINE	26
EDC-2210	PINE	24
EDC-2211	PINE	18
EDC-2213	PINE	30
EDC-2214	PINE	12
EDC-2215	PINE	14
EDC-2219	PINE	12
EDC-2220	PINE	18
EDC-2222	PINE	18
EDC-2224	PINE	18
EDC-2227	PINE	12
EDC-2229	PINE	14
EDC-2230	PINE	18
EDC-2233	PINE	18
EDC-2235	PINE	12
EDC-2236	PINE	12
EDC-2240	PINE	18
EDC-2244	PINE	18
EDC-2247	PINE	12
EDC-2248	PINE	10
EDC-2249	PINE	12
EDC-2250	PINE	12
EDC-2252	PINE	20
EDC-2257	PINE	18
EDC-2264	OAK	12
EDC-2255	PINE	18
EDC-2259	PINE	12
EDC-2261	PINE	12
EDC-2263	PINE	10
EDC-2268	PINE	10
EDC-2269	PINE	14
EDC-2271	PINE	12
EDC-2273	PINE	15
EDC-2277	PINE	10
EDC-2279	PINE	14
EDC-2281	PINE	10
EDC-2282	PINE	12
EDC-2283	PINE	14
EDC-2284	PINE	20
EDC-2289	PINE	14
EDC-2288	PINE	18
EDC-2286	PINE	12
EDC-2291	PINE	14

TAG #	TYPE	DBH
EDC-2292	PINE	10
EDC-2294	PINE	10
EDC-2295	PINE	12
EDC-2299	PINE	35
EDC-2296	PINE	18
EDC-2301	PINE	35
EDC-2302	PINE	12
EDC-2303	PINE	35
EDC-2306	PINE	35
EDC-2308	PINE	12
EDC-2309	PINE	12
EDC-2310	PINE	18
EDC-2312	PINE	12
EDC-2313	PINE	35
EDC-2314	PINE	10
EDC-2315	PINE	19
EDC-2316	PINE	18
EDC-2319	PINE	12
EDC-2334	PINE	30
EDC-2335	PINE	30
EDC-2338	OAK	12
EDC-11102	OAK	12
EDC-11103	OAK	30
EDC-11107	PINE	20
EDC-50071	PINE	12
EDC-50072	PINE	10
EDC-50074	PINE	11
EDC-50076	PINE	31
EDC-50079	OAK	9
EDC-50078	PINE	12
EDC-50082	PINE	12
EDC-50085	BAY LEAF	11
EDC-50091	PINE	10
EDC-50092	PINE	10
EDC-50093	PINE	10
EDC-50094	PINE	12
EDC-50095	PINE	12
EDC-50096	PINE	12
EDC-50097	PINE	12
EDC-50098	PINE	12
EDC-50099	PINE	12
EDC-50100	PINE	12
EDC-50101	PINE	10
EDC-50102	PINE	10
EDC-50103	PINE	12
EDC-50104	PINE	11
EDC-50107	PINE	11
EDC-50108	PINE	12
EDC-50109	PINE	18
EDC-50110	PINE	18
EDC-50111	PINE	18
EDC-50113	BAY LEAF	7 X2
EDC-50114	PINE	11
EDC-50115	PINE	11
EDC-50116	PINE	14
EDC-50123	PINE	14
EDC-50125	PINE	35
EDC-50126	PINE	37
EDC-50127	PINE	14
EDC-50130	PINE	13
EDC-50131	PINE	11
EDC-50133	BANYAN	12
EDC-50139	PINE	11
EDC-50140	PINE	13
EDC-50143	PINE	10
EDC-50144	PINE	18
EDC-50145	BANYAN	8
EDC-50146	BANYAN	10
EDC-50147	PINE	10
EDC-50148	PINE	10
EDC-50149	PINE	13
EDC-50150	PINE	11
EDC-50152	PINE	12
EDC-50153	PINE	11
EDC-50154	PINE	11
EDC-50156	PINE	12
EDC-50157	PINE	12
EDC-50158	PINE	12
EDC-50159	BAY LEAF	8
EDC-50167	BAY LEAF	8
EDC-50169	PINE	10
EDC-50170	PINE	14
EDC-50172	PINE	12
EDC-50173	PINE	12
EDC-50174	PINE	13
EDC-50175	PINE	12
EDC-50176	PINE	12
EDC-50177	PINE	12
EDC-50178	PINE	12
EDC-50179	PINE	13
EDC-50180	PINE	18
EDC-50181	PINE	12
EDC-50182	BAY LEAF	8
EDC-50183	BAY LEAF	8
EDC-50184	SLASH PINE	5
EDC-50185	SLASH PINE	5
EDC-50186	SLASH PINE	9
EDC-50187	OAK	6
EDC-50188	OAK	7
EDC-50189	OAK	9
EDC-50190	OAK	6
EDC-50191	OAK	14
EDC-50192	OAK	6
EDC-50193	OAK	6
EDC-50194	OAK	6
EDC-50195	OAK	7
EDC-50196	OAK	6
EDC-50197	PINE	12
EDC-50198	PINE	12
EDC-50199	PINE	12
EDC-50200	PINE	12
EDC-50201	PINE	18
EDC-50202	PINE	16
EDC-50203	PINE	18
EDC-50204	BANYAN	9
EDC-50205	PINE	35
EDC-50206	PINE	10
EDC-50207	PINE	12
EDC-50208	PINE	35
EDC-50209	PINE	16
EDC-50210	PINE	12
EDC-50211	BANYAN	13
EDC-50212	BANYAN	22
EDC-50213	BANYAN	26
EDC-50215	BAY LEAF	9
EDC-50216	PINE	35
EDC-50217	PINE	18
EDC-50222	PINE	11
EDC-50223	PINE	18
EDC-50225	PINE	15
EDC-50226	PINE	15
EDC-50228	PINE	16
EDC-50230	PINE	16
EDC-50252	PINE	18
EDC-50253	PINE	16
EDC-50235	PINE	10
EDC-50236	PINE	11
EDC-50237	PINE	11
EDC-50238	PINE	13
EDC-50239	PINE	11
EDC-50240	PINE	18
EDC-50242	PINE	10
EDC-50243	PINE	11
EDC-50244	PINE	14
EDC-50245	PINE	11
EDC-50247	PINE	11
EDC-50248	PINE	12
EDC-50251	PINE	12
EDC-50252	PINE	10
EDC-50253	PINE	10
EDC-50254	PINE	12
EDC-50255	PINE	12
EDC-50256	PINE	13
EDC-50257	PINE	14
EDC-50258	PINE	12
EDC-50259	PINE	13
EDC-50260	PINE	12
EDC-50261	PINE	14
EDC-50262	PINE	12
EDC-50263	PINE	10
EDC-50264	PINE	12
EDC-50265	OAK	9
EDC-50266	PINE	13
EDC-50267	PINE	12
EDC-50268	PINE	12
EDC-50269	PINE	10
EDC-50271	PINE	12
EDC-50272	PINE	13
EDC-50273	PINE	10
EDC-50274	PINE	13
EDC-50275	PINE	12
EDC-50277	OAK	6
EDC-50278	PINE	11
EDC-50279	PINE	10
EDC-50280	PINE	13
EDC-50281	PINE	12
EDC-50282	PINE	10
EDC-50284	PINE	12
EDC-50285	PINE	12
EDC-50286	PINE	12
EDC-50287	PINE	12
EDC-50288	PINE	13
EDC-50290	PINE	14
EDC-50291	PINE	11
EDC-50292	PINE	12
EDC-50293	PINE	13
EDC-50294	PINE	13
EDC-50295	PINE	14
EDC-50296	PINE	13
EDC-50297	PINE	12
EDC-50298	PINE	12
EDC-50299	PINE	10
EDC-50300	PINE	11
EDC-50301	PINE	12
EDC-50302	PINE	12
EDC-50304	PINE	10
EDC-50305	PINE	10
EDC-50306	PINE	14
EDC-50307	PINE	14
EDC-50308	PINE	14
EDC-50309	PINE	12
EDC-50310	PINE	12
EDC-50311	PINE	18
EDC-50312	PINE	12
EDC-50313	PINE	12
EDC-50314	PINE	12
EDC-50315	PINE	12
EDC-50316	PINE	12
EDC-50317	PINE	12
EDC-50318	PINE	13
EDC-50319	PINE	12
EDC-50320	PINE	12
EDC-50321	PINE	12
EDC-50322	PINE	12
EDC-50323	PINE	12
EDC-50324	PINE	12
EDC-50325	OAK	8
EDC-50326	OAK	8
EDC-50327	OAK	8
EDC-50328	OAK	12
EDC-50330	OAK	6
EDC-50331	OAK	7
EDC-50332	PINE	16
EDC-50334	PINE	14
EDC-50335	PINE	12
EDC-50336	OAK	7
EDC-50337	PINE	11
EDC-50339	PINE	14
EDC-50340	OAK	8
EDC-50341	PINE	14
EDC-50342	PINE	17
EDC-50343	PINE	10
EDC-50344	PINE	13
EDC-50345	PINE	13
EDC-50346	PINE	14
EDC-50350	PINE	14
EDC-50351	PINE	14
EDC-50352	PINE	12
EDC-50353	PINE	14
EDC-50354	PINE	12
EDC-50355	PINE	11
EDC-50356	PINE	12
EDC-50357	PINE	11
EDC-50358	PINE	12
EDC-50359	PINE	14
EDC-50360	PINE	12
EDC-50361	PINE	12
EDC-50362	PINE	12
EDC-50363	PINE	10
EDC-50364	PINE	14
EDC-50365	PINE	11
EDC-50367	PINE	12
EDC-50368	PINE	12
EDC-50369	PINE	10
EDC-50370	PINE	12
EDC-50371	PINE	13
EDC-50372	PINE	14
EDC-50373	PINE	14
EDC-50374	PINE	13
EDC-50378	PINE	12
EDC-50379	PINE	18
EDC-50381	PINE	18
EDC-50382	PINE	12
EDC-50383	PINE	12
EDC-50384	PINE	11
EDC-50387	PINE	11
EDC-50388	PINE	23
EDC-50389	PINE	13
EDC-50392	PINE	13
EDC-50397	PINE	17
EDC-50398	PINE	12
EDC-50399	PINE	14
EDC-50400	PINE	11
EDC-50402	PINE	15
EDC-50404	PINE	11
EDC-50405	PINE	10
EDC-50408	PINE	11
EDC-50410	PINE	10
EDC-50412	PINE	16
EDC-50413	PINE	12
EDC-50414	PINE	11
EDC-50415	PINE	16
EDC-50416	PINE	10
EDC-50418	PINE	17
EDC-50421	PINE	10
EDC-50424	PINE	10
EDC-50426	PINE	12
EDC-50427	PINE	12
EDC-50428	PINE	16
EDC-50430	PINE	11
EDC-50437	SLASH PINE	5
EDC-50438	SLASH PINE	5
EDC-50439	SLASH PINE	5
EDC-50440	SLASH PINE	8
EDC-50441	SLASH PINE	8
EDC-50442	SLASH PINE	10
EDC-50443	SLASH PINE	8
EDC-50444	SLASH PINE	8
EDC-50445	SLASH PINE	8
EDC-50446	SLASH PINE	5
EDC-50447	SLASH PINE	5
EDC-50450	OAK	7
EDC-50451	OAK	6
EDC-50452	OAK	8
EDC-50453	OAK	10
EDC-50455	OAK	6
EDC-50456	OAK	6
EDC-50457	OAK	6

TAG #	TYPE	DBH
EDC-50458	PINE	13
EDC-50460	SLASH PINE	15
EDC-50461	OAK	7
EDC-50462	OAK	7
EDC-50463	PINE	12
EDC-50465	SLASH PINE	11
EDC-50466	OAK	10
EDC-50468	PINE	13
EDC-50470	PINE	10
EDC-50471	PINE	11
EDC-50472	OAK	9
EDC-50473	PINE	14
EDC-50474	SLASH PINE	8
EDC-50475	OAK	7
EDC-50476	PINE	14
EDC-50477	PINE	12
EDC-50478	PINE	11
EDC-50479	PINE	13
EDC-50480	PINE	18
EDC-50481	PINE	10
EDC-50482	BAY LEAF	8
EDC-50485	SLASH PINE	5
EDC-50486	SLASH PINE	9
EDC-50487	OAK	6
EDC-50488	OAK	7
EDC-50489	OAK	9
EDC-50490	OAK	8
EDC-50491	PINE	14
EDC-50492	OAK	8
EDC-50493	OAK	8
EDC-50494	OAK	6
EDC-50511	BANYAN	34
EDC-505 25	BAY LEAF	10
EDC-505 31	PINE	11
EDC-505 58	PINE	18
EDC-505 80	PINE	19
EDC-505 84	PINE	21
EDC-505 88	PINE	17
EDC-505 75	PINE	20
EDC-505 76	PINE	23
EDC-505 82	PINE	15
EDC-505 83	PINE	15
EDC-505 84	PINE	14
EDC-505 85	PINE	16
EDC-505 91	PINE	12
EDC-505 92	PINE	11
EDC-505 93	PINE	15
EDC-505 94	PINE	12
EDC-505 95	PINE	14
EDC-505 96	PINE	13
EDC-506 00	PINE	13
EDC-506 02	BAY LEAF	8
EDC-506 03	PINE	16
EDC-506 12	PINE	11
EDC-506 15	PINE	12
EDC-506 17	PINE	14
EDC-506 19	PINE	12
EDC-506 21	PINE	12
EDC-506 25	PINE	11
EDC-506 26	PINE	10
EDC-506 28	PINE	12
EDC-506 34	PINE	12

BOUNDARY, TOPOGRAPHIC & TREE SURVEY

FOR: M&M STUART LLC



ENGINEERS & SURVEYORS ENVIRONMENTAL
10250 VILLAGE PARKWAY
UNIT 201
PORT ST. LUCIE, FL 34987
772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 6935
L.B. CERTIFICATE OF AUTHORIZATION 6936

DWG BY: JDH
CHECKED BY: MTD
FIELD CREW: J.T.
20-313_TREE.dwg
FILENAME: TREE
LAYOUT: 1
AS SHOWN
SCALE
November 17, 2020
DATE

DATE/DWG	DESCRIPTION
12/4/2020	ADDED REC. INFO. (ABANDONED OF ENCROACHMENT) PER NEW SURVEY

BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
MARTIN COUNTY, FLORIDA

10250 VILLAGE PARKWAY
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PORT ST. LUCIE, FL 34987
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20-313

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BOUNDARY, TOPOGRAPHIC & TREE SURVEY

FOR: M&M STUART LLC



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L.B. CERTIFICATE OF AUTHORIZATION 6936

DWG DRAWN BY: MTO
CHECKED BY: JLP
FIELD CREW: TS/BW/WE
DATE: 20-313 TREE.dwg
PROJECT MGR: JLP
LAYOUT: AS SHOWN
SCALE: 1"=50'
November 17, 2020

DATE	DESCRIPTION
12/4/2020	ADDED REC. INFO. - ABANDONMENT OF RESERVED EASTERLY PARKER PLAT

BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
MARTIN COUNTY, FLORIDA

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UNIT 201
PORT ST. LUCIE, FL 34987
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BOUNDARY, TOPOGRAPHIC & TREE SURVEY

FOR: M&M STUART LLC

TREE DATA BY OTHERS

TAG#	TYPE	DBH
EW-2	Slash Pine	13
EW-3	Slash Pine	15
EW-60	Slash Pine	13
EW-63	Slash Pine	11
EW-64	Slash Pine	14
EW-65	Slash Pine	17
EW-66	Slash Pine	14
EW-67	Slash Pine	14
EW-68	Slash Pine	10
EW-69	Slash Pine	12
EW-70	Laurel Oak	16
EW-71	Slash Pine	13
EW-72	Slash Pine	15
EW-73	Live Oak	13
EW-73	Slash Pine	14
EW-75	Slash Pine	16
EW-76	Slash Pine	22
EW-77	Slash Pine	11
EW-78	Slash Pine	16
EW-214	Slash Pine	22
EW-215	Slash Pine	10
EW-216	Slash Pine	12
EW-217	Slash Pine	13
EW-218	Slash Pine	12
EW-219	Slash Pine	13
EW-220	Slash Pine	10
EW-221	Slash Pine	15
EW-222	Slash Pine	14
EW-223	Slash Pine	13
EW-224	Slash Pine	10.5
EW-225	Slash Pine	12
EW-226	Slash Pine	14
EW-227	Red Bay	6

TAG#	TYPE	DBH
EW-228	Strangler Fig	10.5
EW-229	Slash Pine	11
EW-230	Slash Pine	12
EW-303	Slash Pine	14
EW-337	Slash Pine	13
EW-338	Slash Pine	12
EW-339	Slash Pine	13
EW-340	Slash Pine	12
EW-348	Slash Pine	14
EW-354	Slash Pine	16.5
EW-361	Slash Pine	10
EW-362	Slash Pine	13
EW-363	Slash Pine	18
EW-364	Slash Pine	20
EW-365	Slash Pine	10
EW-366	Slash Pine	21
EW-367	Slash Pine	13
EW-368	Slash Pine	12
EW-369	Slash Pine	12
EW-370	Slash Pine	13
EW-371	Slash Pine	10
EW-372	Slash Pine	14
EW-373	Slash Pine	15
EW-374	Slash Pine	10
EW-375	Slash Pine	12
EW-376	Slash Pine	10
EW-377	Slash Pine	12
EW-378	Slash Pine	10
EW-379	Slash Pine	10
EW-380	Slash Pine	14
EW-381	Slash Pine	12
EW-382	Slash Pine	10

TAG#	TYPE	DBH
EW-383	Slash Pine	10
EW-384	Slash Pine	11
EW-385	Slash Pine	14
EW-386	Slash Pine	11
EW-387	Slash Pine	11
EW-388	Slash Pine	14
EW-389	Slash Pine	17
EW-390	Slash Pine	10
EW-391	Slash Pine	11
EW-392	Magnolia	6
EW-393	Slash Pine	17
EW-394	Slash Pine	12
EW-395	Slash Pine	13
EW-396	Slash Pine	10
EW-397	Slash Pine	11
EW-398	Slash Pine	11
EW-399	Slash Pine	12
EW-400	Slash Pine	18
EW-401	Slash Pine	10
EW-402	Slash Pine	11
EW-403	Slash Pine	12
EW-404	Slash Pine	11
EW-405	Slash Pine	12
EW-406	Slash Pine	10
EW-420	Slash Pine	24
EW-421	Slash Pine	18
EW-422	Slash Pine	16
EW-423	Slash Pine	18
EW-424	Slash Pine	17
EW-425	Slash Pine	16
EW-426	Slash Pine	12
EW-427	Slash Pine	16

TAG#	TYPE	DBH
EW-428	Slash Pine	13
EW-429	Slash Pine	13
EW-430	Slash Pine	13
EW-431	Slash Pine	13
EW-432	Slash Pine	13
EW-433	Slash Pine	11
EW-434	Slash Pine	18
EW-435	Slash Pine	17
EW-436	Slash Pine	12
EW-437	Slash Pine	12
EW-438	Slash Pine	19
EW-439	Slash Pine	16
EW-440	Slash Pine	16
EW-441	Slash Pine	13
EW-442	Slash Pine	20.5
EW-443	Slash Pine	10
EW-444	Slash Pine	13
EW-445	Slash Pine	14
EW-446	Slash Pine	16
EW-447	Slash Pine	13
EW-448	Slash Pine	10
EW-449	Slash Pine	12
EW-450	Slash Pine	14.5
EW-451	Slash Pine	12
EW-452	Slash Pine	11
EW-453	Slash Pine	13
EW-454	Slash Pine	11
EW-455	Slash Pine	11
EW-456	Slash Pine	13
EW-457	Slash Pine	13
EW-458	Slash Pine	10.5
EW-459	Slash Pine	15

TAG#	TYPE	DBH
EW-460	Slash Pine	10
EW-461	Slash Pine	10
EW-462	Slash Pine	10
EW-463	Slash Pine	11
EW-464	Slash Pine	10
EW-465	Slash Pine	13
EW-466	Slash Pine	14
EW-467	Slash Pine	13
EW-468	Slash Pine	11
EW-470	Slash Pine	10
EW-471	Slash Pine	11
EW-472	Slash Pine	10
EW-473	Slash Pine	12
EW-474	Slash Pine	10
EW-475	Slash Pine	11
EW-476	Slash Pine	11
EW-477	Slash Pine	13
EW-478	Slash Pine	15
EW-479	Slash Pine	14
EW-480	Slash Pine	12
EW-482	Live Oak	7.5
EW-482	Slash Pine	12
EW-483	Live Oak	10
EW-484	Live Oak	12
EW-485	Live Oak	13
EW-486	Live Oak	11
EW-487	Live Oak	8
EW-488	Live Oak	12
EW-489	Slash Pine	16
EW-490	Live Oak	9
EW-491	Slash Pine	15
EW-492	Slash Pine	15
EW-493	Slash Pine	18
EW-494	Slash Pine	17

TAG#	TYPE	DBH
EW-495	Slash Pine	10
EW-496	Slash Pine	12
EW-497	Slash Pine	10
EW-498	Slash Pine	10
EW-499	Slash Pine	18
EW-500	Slash Pine	17.5
EW-501	Slash Pine	15
EW-502	Slash Pine	11
EW-503	Slash Pine	12
EW-504	Slash Pine	16
EW-505	Live Oak	9
EW-506	Slash Pine	13
EW-507	Slash Pine	15
EW-508	Slash Pine	13
EW-509	Slash Pine	29
EW-515	Slash Pine	11
EW-516	Slash Pine	12
EW-517	Slash Pine	11
EW-518	Slash Pine	11
EW-519	Slash Pine	12
EW-520	Slash Pine	12
EW-521	Slash Pine	16
EW-522	Slash Pine	12
EW-523	Strangler Fig	7
EW-524	Slash Pine	15
EW-525	Slash Pine	15
EW-526	Slash Pine	11
EW-527	Slash Pine	10
EW-528	Slash Pine	11
EW-529	Slash Pine	13
EW-891	Sand Pine	5
EW-963	Slash Pine	16

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UNIT 201
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☎ 772-462-2455
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DWG DRAWN BY MTO CHECKED BY P.C.P. FIELD ORDER 20-313 TREE.dwg FILENAME DATE 5 LAYOUT AS SHOWN SCALE November 17, 2020 DATE

12/04/20 ADDED REC. INFO. (BEARINGS/DIST OF RECORDED EAST STUART FARMS PLAT) MTO

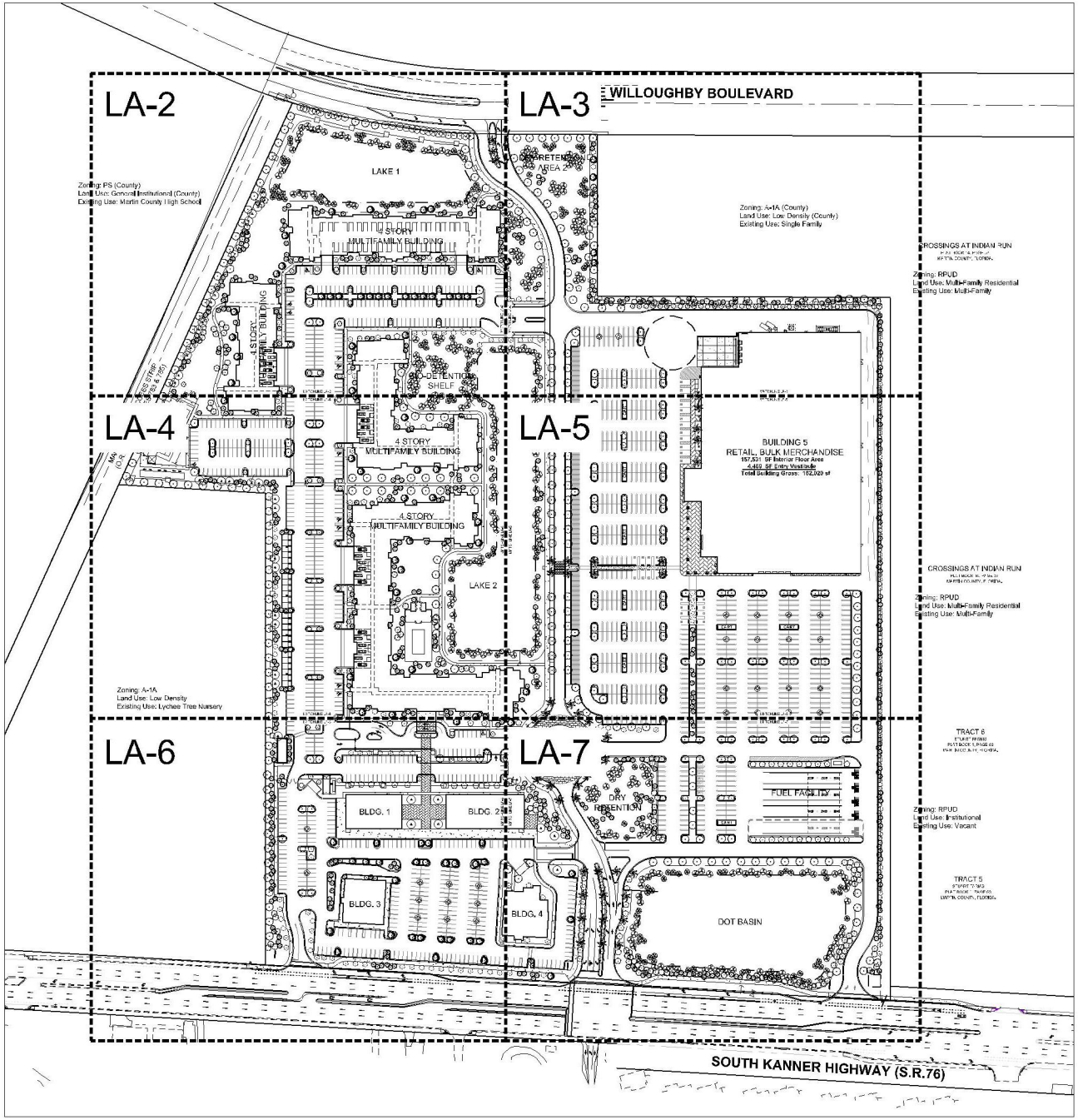
BOUNDARY, TOPOGRAPHIC & TREE SURVEY
FOR:
M&M STUART LLC, A FLORIDA LIMITED LIABILITY COMPANY
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
RECORD INFORMATION
SEC. 16, TWNSHP. 38 SOUTH, RGE. 42 EAST
AND LYING WITHIN THE HANSON GRANT
MARTIN COUNTY, FLORIDA

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UNIT 201
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20-313

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SITE DATA

TOTAL SITE AREA:	2,133,987 SF, 48.99 AC
COMMERCIAL SITE AREA:	1,493,655 SF
RESIDENTIAL SITE AREA:	640,332 SF
TOTAL DEVELOPED AREA:	2,130,905 SF, 48.92 AC
(TOTAL SITE AREA MINUS NATIVE AREAS)	

LANDSCAPE CALCULATIONS

NATIVE LANDSCAPE (SEC. 6.04.02)

REQUIRED:	MIN. 50% OF ALL REQUIRED LANDSCAPE
PROVIDED:	99%

LANDSCAPE AREA (SEC. 6.04.03.B.1)

REQUIRED LANDSCAPE AREA:	426,181 SF
(MIN. 20% OF TOTAL DEVELOPED AREA)	
PROVIDED LANDSCAPE AREA:	577,309 SF (27%)

MULTI-FAMILY PARKING AREAS (SEC. 6.04.07)

REQUIRED VUA TREES:	227 TREES
PROVIDED VUA TREES:	227 TREES

DEVELOPMENT LANDSCAPING REQUIREMENTS (SEC. 6.04.08.B)

REQUIRED SITE AREA TREES:		1,024 TREES
COMMERCIAL:	597	
(ONE TREE PER 2,500 SF OF DEVELOPED AREA)		
RESIDENTIAL:	427	
(ONE TREE PER 1,500 SF OF DEVELOPED AREA)		
PROVIDED SITE AREA TREES:		1,833 TREES
LF OF BUILDING WALL ADJACENT TO PARKING:		1,734 LF
REQUIRED MULTIFAMILY FOUNDATION TREES:		86 TREES
(ONE TREE PER 20 LF)		
PROVIDED MULTIFAMILY FOUNDATION TREES:		86 TREES
PERIMETER LANDSCAPE:		6,141 LF
REQUIRED PERIMETER TREES:		204 TREES
(ONE TREE PER 30 LF)		
PROVIDE PERIMETER TREES:		268 TREES
REQUIRED PERIMETER SHRUBS:		2,456 SHRUBS
(ONE SHRUB PER 2.5 LF)		
PROVIDED PERIMETER SHRUBS:		2,456 SHRUBS

Landscape Notes:

1. Removal of all unwanted landscape and trash debris in open areas by vehicles, hands, mobile screens, rollers, etc. shall not be permitted. Use any of these methods shall be considered sufficient cause for termination of the contract by either owner or engineer.
2. Post-installation irrigation shall be maintained so as to at all times make for healthy and orderly appearance, free of refuse and debris. If vegetation which is required to be planted dies, it shall be replaced with equivalent vegetation. All trees for which the trunk was guyed and staked shall subsequently die shall be replaced by the requisite number of living trees according to the standards established in the City of Stuart Landscape Code.
3. All landscaping shall be maintained free from disease, pests, weeds, refuse, debris and trash. All plant growth in landscaped areas shall be controlled by pruning, mowing, trimming, or other customary acceptable and scientifically sound practices. Periodical maintenance shall be provided to control the seasonal growth of weeds and to maintain lawns and prevent fire hazards.
4. Regular landscape maintenance shall be provided for repair or replacement, where necessary, of any screening or curbing required, and as shown on the plan. Regular landscape maintenance shall be provided for the repair or replacement of required walls, fences or structures in a safe, sturdy and sound condition and in accordance with the plan.
5. All maintenance plant areas as the related landscape may be amended subject to review and approval by the City of Stuart Growth Management Department in writing.
6. All shrubbery and hedges shall be maintained so as not to obstruct sight distances at roadway intersections.
7. No Occupancy Shall or Roof Shall be in the case on site, Excavation or Modified Mulch is to be used in 3" consistent layer in all planting beds.
8. Enhanced landscaping beyond minimum requirements shall conform to all applicable sections of the City of Stuart Landscape Code. As-built drawings shall be submitted to City of Stuart Growth Management with Certification of Landscaping Installation and Maintenance.
9. This plan has been designed to meet the tree planting requirements contained in the FPL document entitled "Plant the right tree in the RIGHT Place".
10. To ensuring proposed utilities, no trees shall be planted in areas that, at mature height conflict with overhead power lines.
11. Single trees (single trunk species of more than 30') shall be planted at no closer than a horizontal distance of 30' from the nearest overhead power lines.
12. Shrubs and hedges (except hedge rows, hedges over 30' and 30') shall be offset at least 30' and small from the right of way of less than 20') require no offset.
13. No tree shrubs, hedges or trees shall be planted within 3' of an existing or proposed utility pole, guy wire, or public sidewalk for utilities.
14. Trees should be planted at a distance equal to or greater than the average frond length, plus two (2) feet from power lines.
15. Tree species shall be selected such that mature canopies do not obstruct power lines.

Irrigation Notes:

1. A design or irrigation of landscaped areas shall be provided for the first full growing season and shall install weather responsive, automatic controller.
2. Irrigation systems shall conform to the following standards: Irrigation systems shall be zoned manually installed in nothing water use shall be done so as not to create pollution, waste or to cause inconvenience.
3. No irrigation system shall be installed or maintained that may in any way cause water from the system to overspray onto the roadway or to cause pooling on the roadway.

Index of Drawings:

Cover Sheet	CV
Plant Schedules, Sections & Mitigation	LA-1
Landscape Plan	LA-2 - LA-7
Tree Mitigation Plan	LA-8 - LA-14
Landscape Details	LA-15
Landscape Specifications	LA-16

Required Xeriscape Points

At least 51% of the grass areas are made up of drought-tolerant grass species	10 points
At least 51% of the required shrubs are made up of drought-tolerant species	10 points
At least 51% of the required trees are made up of drought-tolerant species	10 points
Utilization of moisture sensing controller other than a rain-sensor override device	5 points
Plan submitted with low, moderate and high water usage zones indicated on the landscape plan*	5 points
Utilization of over-seeded mulch with a 3" min. depth in all planted areas except ground cover	10 points
	50 total points

*Refer to Irrigation Notes for water usage zones.

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KANNER CPUD

Cover Sheet

City of Stuart, Florida

Date	By	Description
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NORTH

SCALE: 1" = 100'

0 50 100' 200'

RLG. # 1918
Thomas P. Lucido

Designer	KV	Sheet
Manager	DF	CV
Project Number	20-620	
Municipal Number	—	
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PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	HEIGHT	WIDTH	NOTES	NATIVE	CALIPER
AR	130	Acer rubrum	Red Maple	FG	16' HT	7' SPR	F, SP	Native	4.5" Caliper
BUR	33	Bursera simaruba	Gumbo Limbo	FG	14'-16' HT	8'W		Native	5" Caliper
CCG	156	Conocarpus erectus	Buttonwood	FG	14" HT	5' SPR	STD, F, SP	Native	4.5" Caliper
CON	90	Conocarpus erectus sericeus	Silver Buttonwood	FG	14' HT	5' W	STD, F, SP	Native	4.5" Caliper
RP	1	Delonix regia	Royal Poinciana	FG	16' HT	8' SPR	F, SP	Non-native	6" Caliper
ILE	152	Ilex x attenuata 'Eagleston'	Eagleston Holly	FG	16 - 18' HT	6' SPR	F, SP	Native	5" Caliper
NCM	29	Lagerstroemia faurlei 'Natchez'	Natchez Crape Myrtle	FG	16' H	7' SPR	STD, F, SP	Non-native	4.5" Caliper
MD	89	Magnolia grandiflora ' D.D. Blanchard' TM	Southern Magnolia	FG	16' - 18' HT	8' SPR	FTB, SP	Native	4.5" Caliper
PE	171	Pinus elliottii	Slash Pine	FG	16' HT	6'W	F, SP	Native	6" Caliper
QV	341	Quercus virginiana	Southern Live Oak	FG	16' HT	7' SPR	F, SP	Native	4.5" Caliper
TD	305	Taxodium distichum	Bald Cypress	FG	18' HT	7' SPR	F, SP	Native	6" Caliper

PALMS	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	HEIGHT	WIDTH	NOTES	NATIVE	CALIPER
RO	60	Roystonea regia	Florida Cuban Royal Palm	FG	18' CT		F, SP, No Scars	Native	
SP	612	Sabal palmetto	Sabal Palm	FG	20 CT		HVY CAL, SP	Native	

PRESERVED TREES	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	HEIGHT	WIDTH	NOTES	NATIVE	CALIPER
ETR	27	Existing Tree to Remain	Existing	-					

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	HEIGHT	WIDTH	NOTES	NATIVE
CHR2	824	Chrysobalanus icaco 'Red Tip'	Red Tip Cocoplum	3G	24" HT	24"W	F, SP	Native
MFF	1,892	Myrcianthes fragrans	Simpson's Stopper	3G	30" HT	18"W		Native

CONCEPT PLANT SCHEDULE

LITTORAL	56,058 sf			
Acrostichum danaeifolium / Leather Fern	183	1G		5% @ 48" oc
Canna flaccida / Yellow Canna	1,457	B.R.		10% @ 24" oc
Cladium jamaicense / Sawgrass	1,457	1G		10% @ 24" oc
Eleocharis interstincta / Jointed Spikerush	5,170	B.R.		20% @ 18" oc
Pontederia cordata / Pickerel Weed	5,170	B.R.		20% @ 18" oc
Sagittaria lancifolia / Lanceleaf Arrowhead	3,584	B.R.		15% @ 18" oc
Thalia geniculata / Fire Flag	11,852	B.R.		20% @ 12" oc
RETENTION	72,955 sf			
Muhlenbergia capillaris / Pink Muhly Grass	1,685	3G, 24"HT		20% @ 36" oc
Paspalum notatum / Bahia Grass	30,316	Flat, Non-native		40% @ 12" oc
Sporobolus baileyi / Sand Cordgrass	1,685	3G, 24"HT		20% @ 36" oc
Spartina patens / Salt Meadow Cord Grass	1,685	3G, 12"HT		20% @ 36" oc
UPLAND	386,511 sf			
Chrysobalanus icaco 'Red Tip' / Red Tip Cocoplum	8,427	3G, 18"HT		10% @ 30" oc
Conocarpus erectus / Buttonwood	3,221	3G, 24"HT		5% @ 30" oc
Hamelia patens / Firebush	8,427	3G, 18" HT		10% @ 30" oc
Muhlenbergia capillaris / Pink Muhly Grass	8,427	3G, 18" HT, Native		10% @ 30" oc
Myrcianthes fragrans / Simpson's Stopper	8,427	3G, 24"HT		10% @ 30" oc
Paspalum notatum / Bahia Grass	169,673	Flat, Non-native		40% @ 12" oc
Serenoa repens 'C nerad' / Silver Saw Palmetto	1,256	3G, 24" OA		5% @ 48" oc
Tripsacum floridanum / Florida Gamagrass	4,464	3G, 24"HT		10% @ 30" oc
INTERNAL	61,799 sf			
Callicarpa americana / American Beautyberry	1,071	3G, 18" HT		10% @ 36" oc
Ilex vomitoria 'Nana' / Dwarf Yaupon Holly	2,855	3G, 12" OA		10% @ 18" oc
Muhlenbergia capillaris / Pink Muhly Grass	1,542	3G, 18"HT, Native		10% @ 30" oc
Tripsacum floridanum / Florida Gamagrass	2,141	3G, 24"HT		30% @ 36" oc
Viburnum obovatum / Walter's Viburnum	2,141	3G, 18" HT		30% @ 36" oc

LANDSCAPE MITIGATION

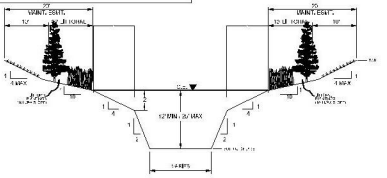
	DBH	MULTIPLIER	REQUIRED MITIGATION (DBH)
HARDWOOD			
Removed:	3173	2.5	7932.5
Provided (4.5" DBH MIN.):	3280		
PINE			
Inches Removed:	11181	1.5	16771.5
Inches Provided (3" DBH MIN.):	11184		

	QTY	NOTES	PROVIDED MITIGATION (DBH)
SHRUB CREDITS			
Retention Shrub Mix	5055	1" DBH PER 12 SHRUBS	421
Upland Shrub Mix	34642	1" DBH PER 12 SHRUBS	2887
Littoral Shrub Mix	28991	1" DBH PER 12 SHRUBS	2416

	NOTES	ESTIMATED COST	CONVERSION TO TREES	CONVERSION TO DBH
SITE IMPROVEMENT CREDITS				
Innovative Stormwater BMP's & Phosphorus and Nitrogen Removal		$ 486,712	$486,712 / $187.5 = 2,595	2,595 x 2.5 = 6,487

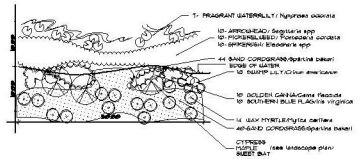
MISC. LANDSCAPE CALCULATIONS

Total Mitigation Required (DBH):	**24,704**
Total Mitigation Provided (DBH):	**26,675**
Hardwood DBH Provided:	**3,280**
Pine DBH Provided:	**11,184**
Shrub DBH Provided:	**5,724**
Site Improvement DBH Provided:	**6,487**
Required Site Area Trees:	**1024**
Shade / Canopy Tree Proposed:	**883**
Min. Required Shade Trees:	**50%**
Provided Shade Trees (883/1024):	**86%**

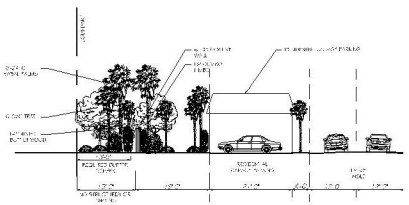


TYPICAL LAKE SECTION

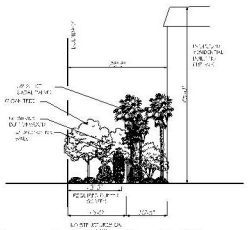
Littoral Section:
(typ.)



Littoral Plan View:
(typ.)



Landscape Buffer Section: Parking
(typ.)



Landscape Buffer Section: Building
(typ.)

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KANNER CPUD

Plant Schedules, Sections and Mitigation

City of Stuart, Florida

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NORTH

SCALE: 1" = 100'

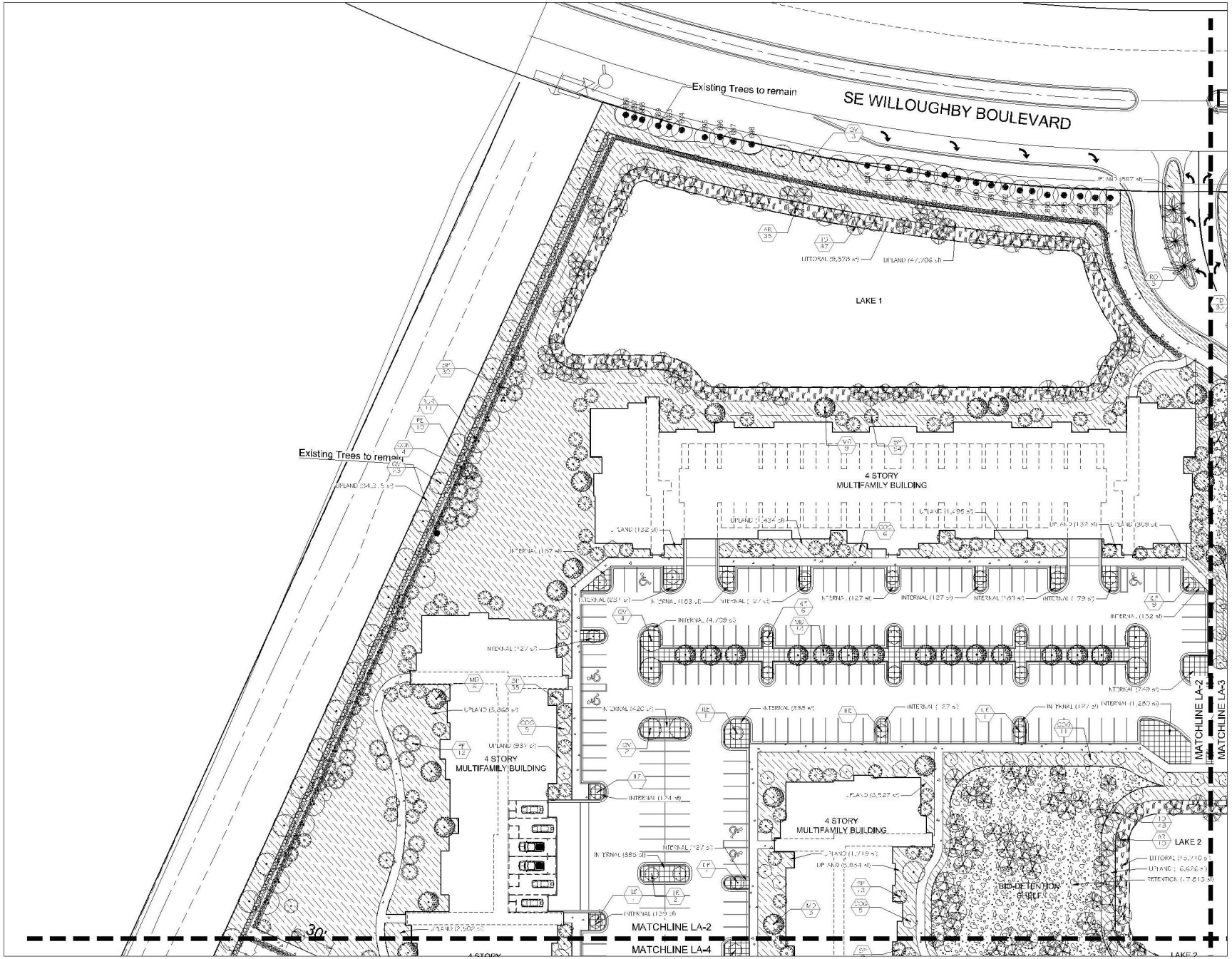
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RLG. # 1918
Thomas P. Lucido

Designer	KV	Sheet
Manager	DF	**LA-1**
Project Number	20-620	
Municipal Number	—	
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Landscape Plan

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SCALE: 1" = 30'

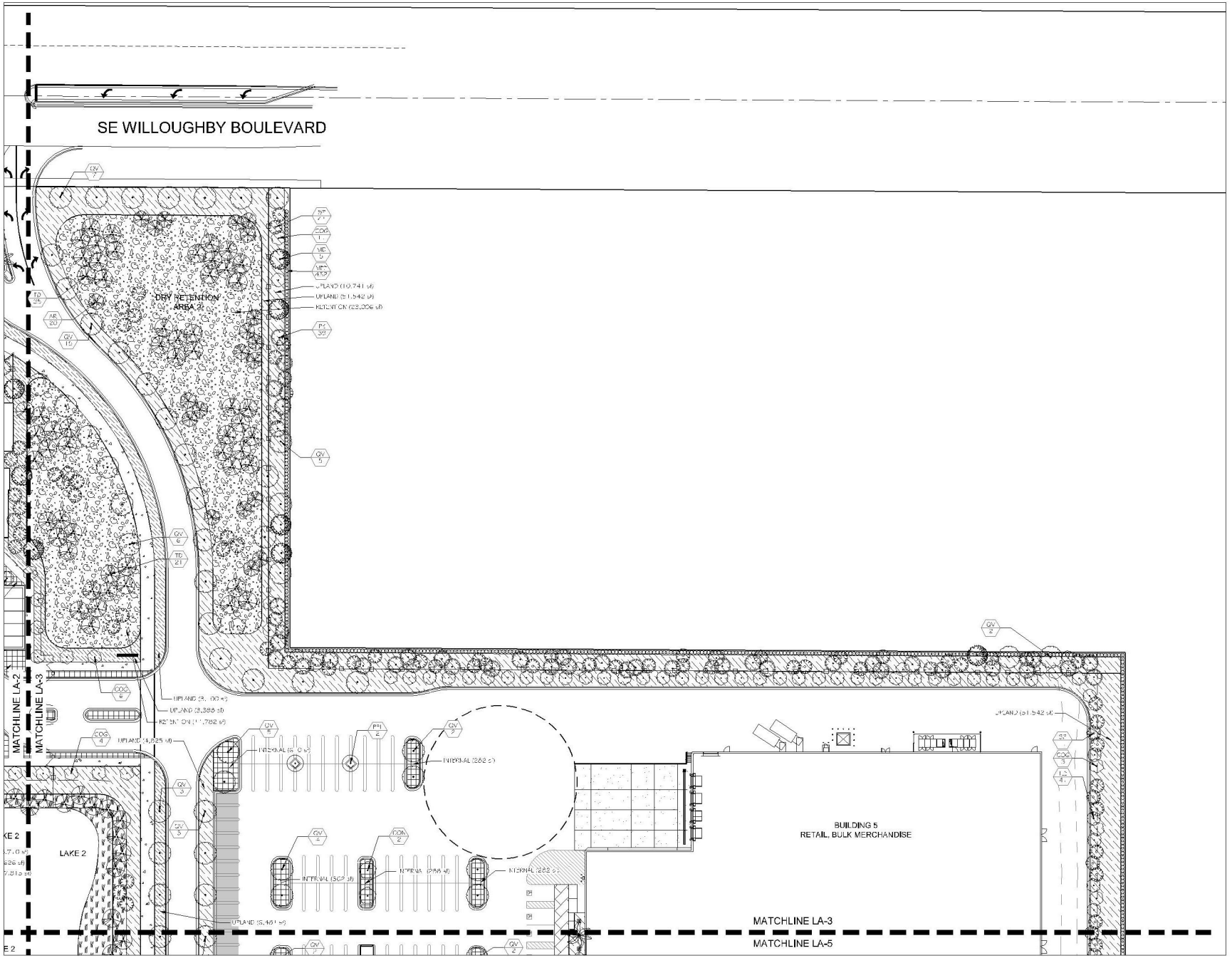
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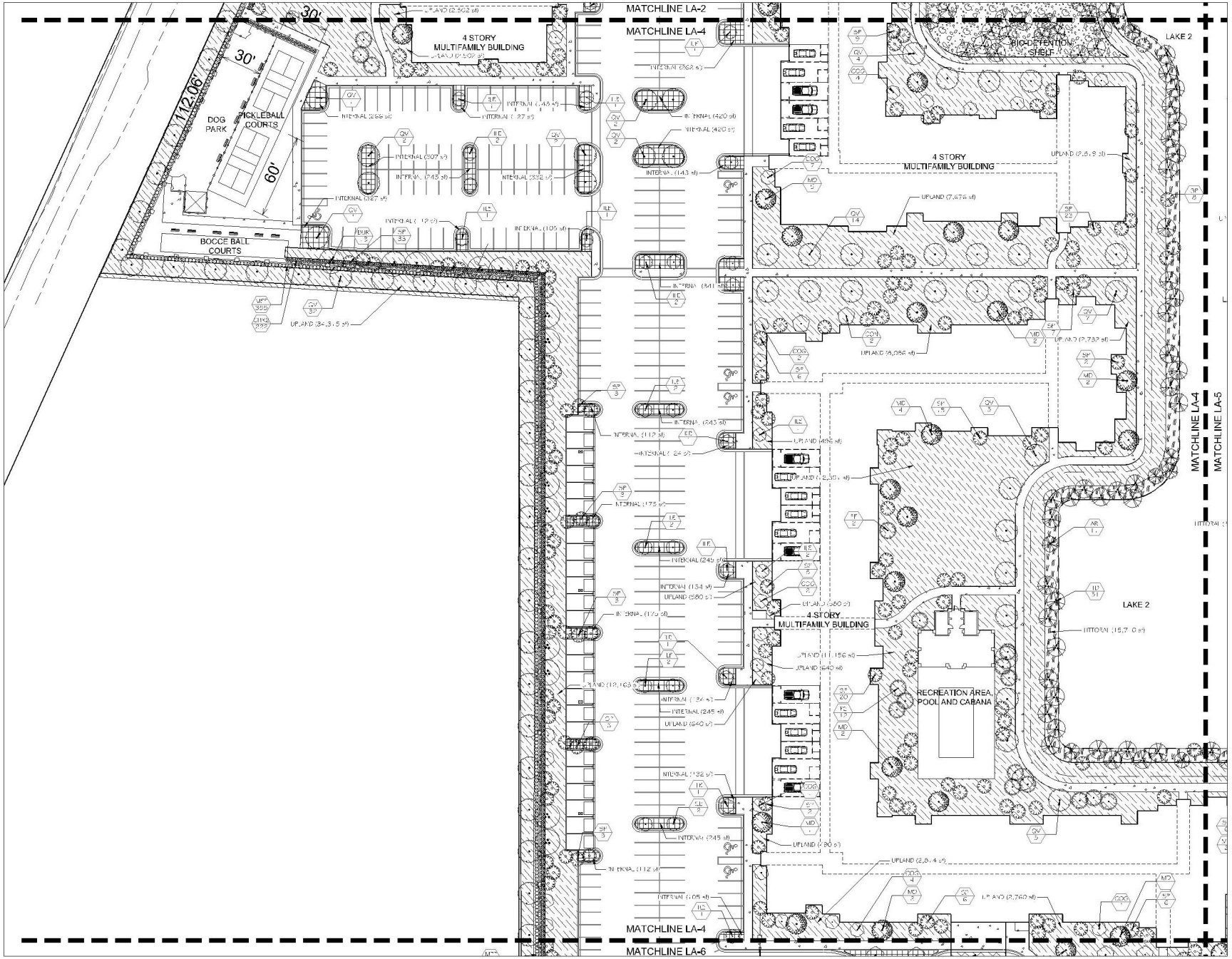
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Designer	KV
Manager	DF
Project Number	20-620
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Sheet **LA-3**

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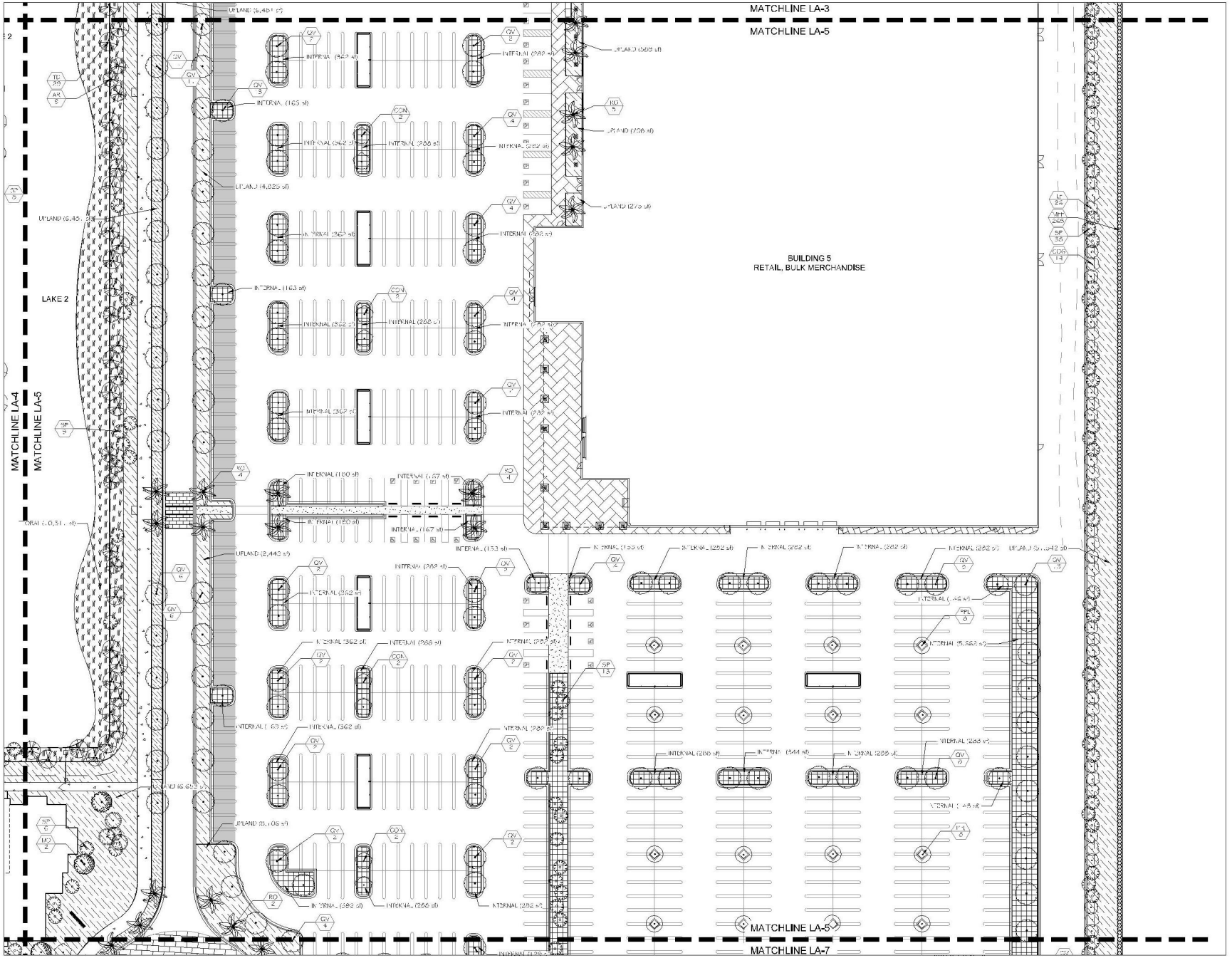
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Thomas P. Lucido

Designer	KV	Sheet
Manager	DF	LA-4
Project Number	20-620	
Municipal Number	—	
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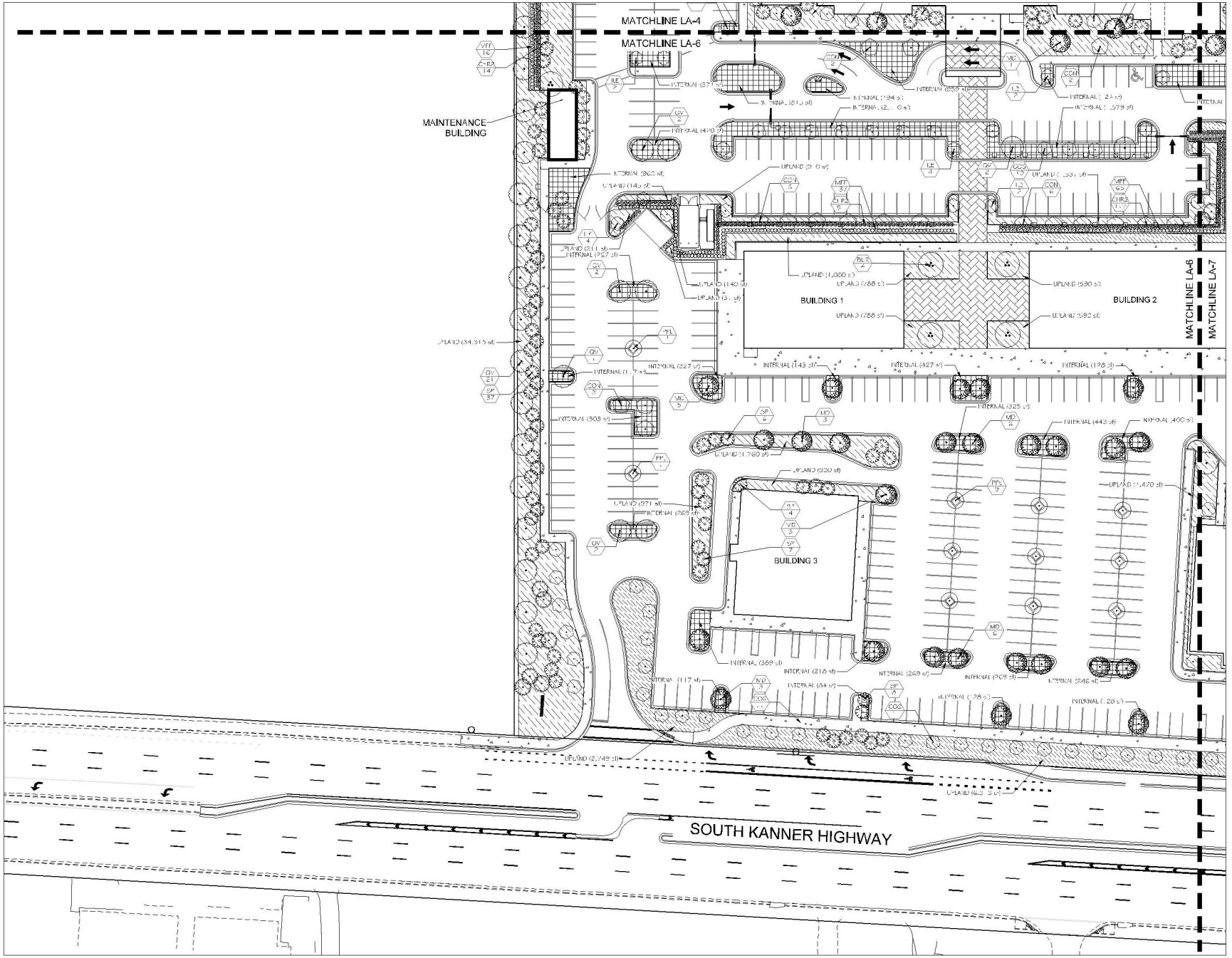
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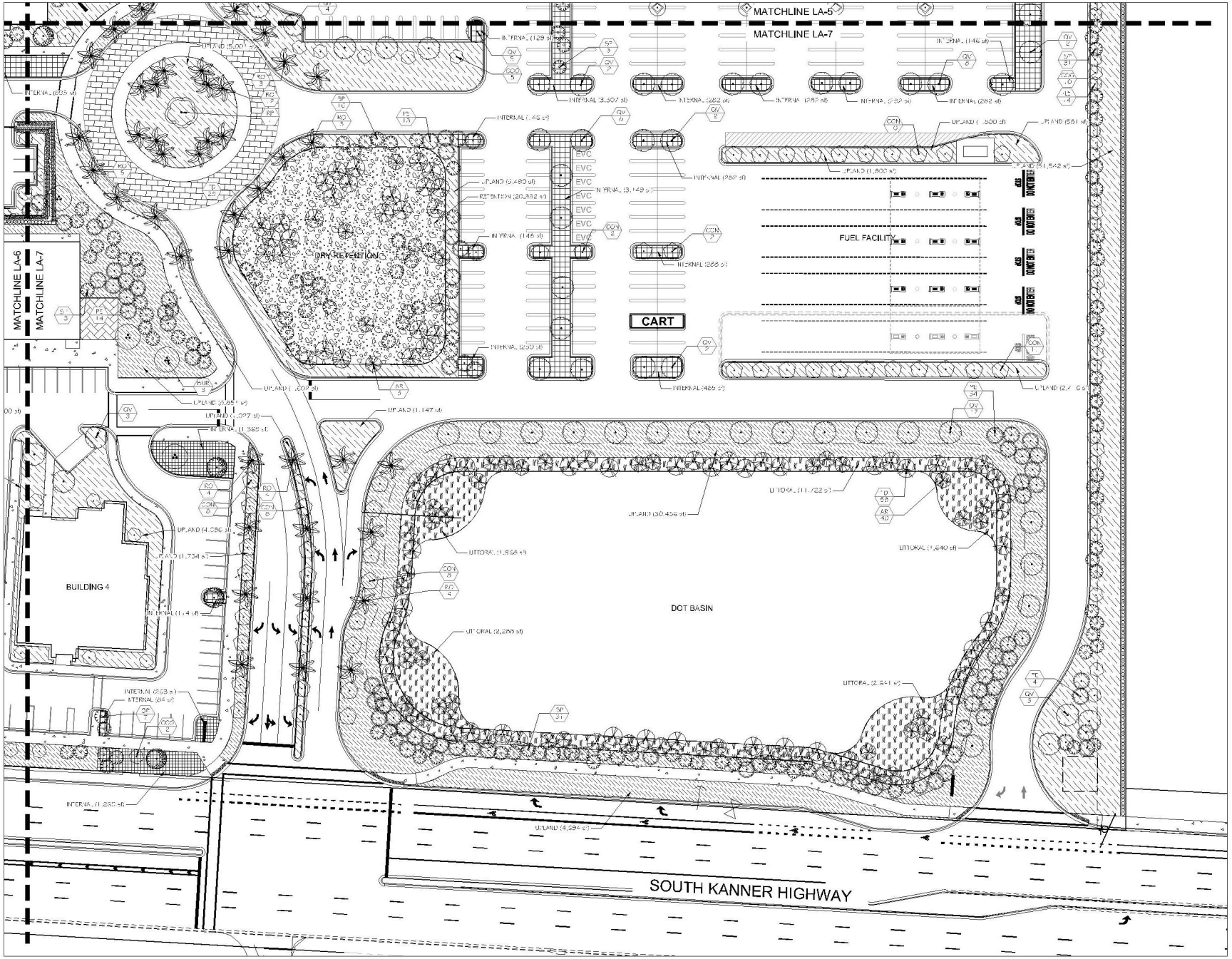
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LA-6

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SCALE: 1" = 30'

0 15' 30' 60'

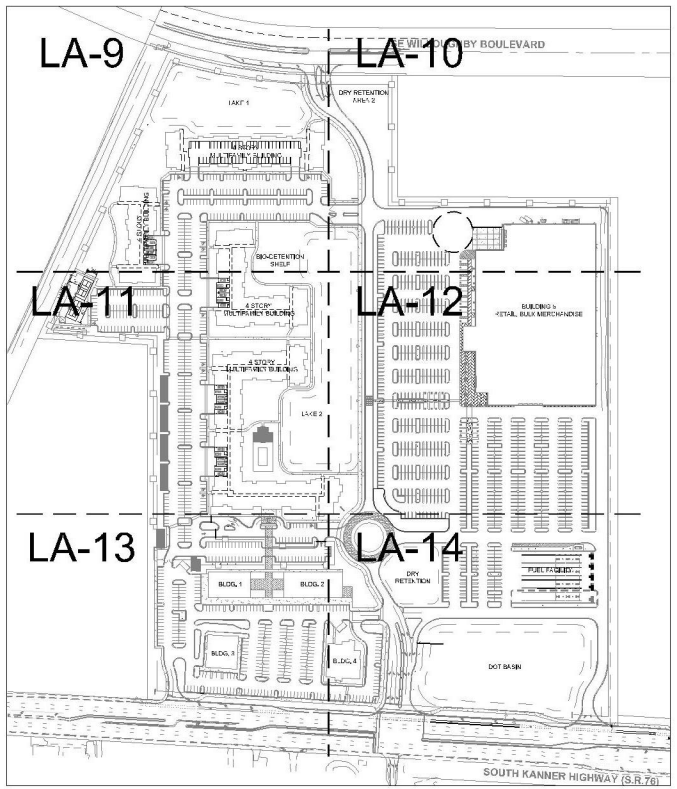
RLG. # 1918
Thomas P. Lucido

Designer	KV
Manager	DF
Project Number	20-620
Municipal Number	—
Computer File	

Sheet
LA-7

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080820021 CC:M



08/02/2021 CC:M

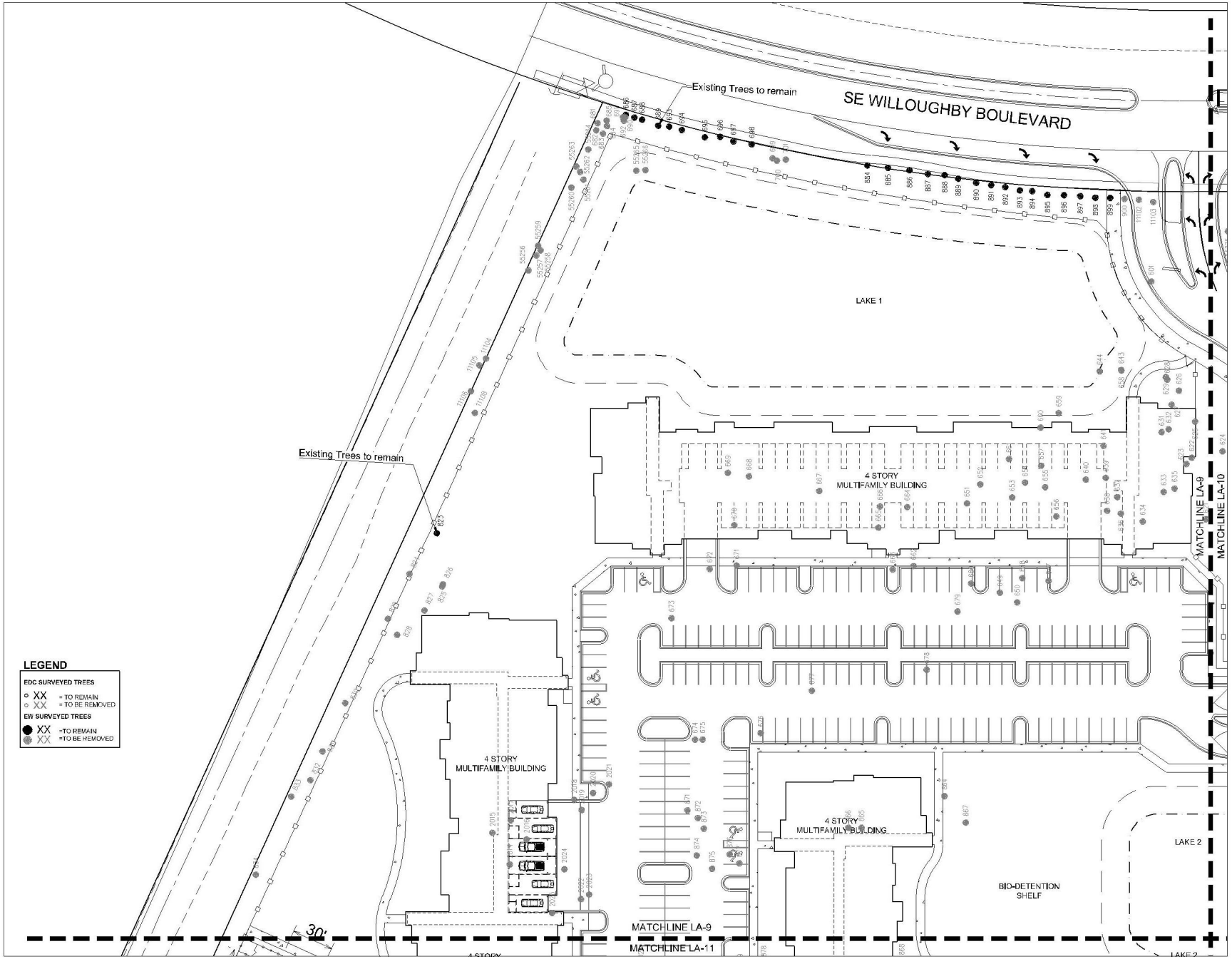
TAG#	TYPE	DBH	MIT. REQ.
EW-59	Laurel Oak	16	YES - OAK
EW-75	Live Oak	39	YES - OAK
EW-482	Live Oak	75	YES - OAK
EW-489	Live Oak	19	YES - OAK
EW-494	Live Oak	32	YES - OAK
EW-495	Live Oak	18	YES - OAK
EW-496	Live Oak	31	YES - OAK
EW-497	Live Oak	6	YES - OAK
EW-498	Live Oak	8	YES - OAK
EW-499	Live Oak	5	YES - OAK
EW-505	Live Oak	5	YES - OAK
EOC-501	OAK	32	YES - OAK
EOC-502	OAK	36	YES - OAK
EOC-503	OAK	39	YES - OAK
EOC-504	OAK	32	YES - OAK
EOC-505	OAK	6	YES - OAK
EOC-506	OAK	6	YES - OAK
EOC-507	OAK	6	YES - OAK
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EW-2	Slash Pine	15	YES - PINE
EW-3	Slash Pine	15	YES - PINE
EW-60	Slash Pine	16	YES - PINE
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EW-65	Slash Pine	17	YES - PINE
EW-66	Slash Pine	16	YES - PINE
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EW-70	Slash Pine	12	YES - PINE
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EW-72	Slash Pine	16	YES - PINE
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EW-74	Slash Pine	15	YES - PINE
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EW-221	Slash Pine	15	YES - PINE
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EW-224	Slash Pine	16	YES - PINE
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EW-230	Slash Pine	16	YES - PINE
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EW-238	Slash Pine	32	YES - PINE
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EW-240	Slash Pine	32	YES - PINE
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EW-290	Slash Pine	32	YES - PINE
EW-291	Slash Pine	32	YES - PINE
EW-292	Slash Pine	32	YES - PINE
EW-293	Slash Pine	32	YES - PINE
EW-294	Slash Pine	32	YES - PINE
EW-295	Slash Pine	32	YES - PINE

TAG#	TYPE	DBH	MIT. REQ.
EW-296	Slash Pine	32	YES - PINE
EW-297	Slash Pine	32	YES - PINE
EW-298	Slash Pine	32	YES - PINE
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EW-300	Slash Pine	32	YES - PINE
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EW-393	Slash Pine	32	YES - PINE
EW-394	Slash Pine	32	YES - PINE
EW-395	Slash Pine	32	YES - PINE

TAG#	TYPE	DBH	MIT. REQ.
EW-396	Slash Pine	32	YES - PINE
EW-397	Slash Pine	32	YES - PINE
EW-398	Slash Pine	32	YES - PINE
EW-399	Slash Pine	32	YES - PINE
EW-400	Slash Pine	32	YES - PINE
EW-401	Slash Pine	32	YES - PINE
EW-402	Slash Pine	32	YES - PINE
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EW-407	Slash Pine	32	YES - PINE
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EW-495	Slash Pine	32	YES - PINE
EW-496	Slash Pine	32	YES - PINE
EW-497	Slash Pine	32	YES - PINE
EW-498	Slash Pine	32	YES - PINE
EW-499	Slash Pine	32	YES - PINE
EW-500	Slash Pine	32	YES - PINE

TAG#	TYPE	DBH	MIT. REQ.
EOC-501	PINE	11	YES - PINE
EOC-502	PINE	11	YES - PINE
EOC-503	PINE	12	YES - PINE
EOC-504	PINE	15	YES - PINE
EOC-505	PINE	11	YES - PINE
EOC-506	PINE	15	YES - PINE
EOC-507	PINE	10	YES - PINE
EOC-508	PINE	18	YES - PINE
EOC-509	PINE	15	YES - PINE
EOC-510	PINE	15	YES - PINE
EOC-511	PINE	14	YES - PINE
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EOC-527	PINE	15	YES - PINE
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EOC-572	PINE	15	YES - PINE
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EOC-574	PINE	15	YES - PINE
EOC-575	PINE	15	YES - PINE
EOC-576	PINE	15	YES - PINE
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EOC-611	PINE	15	YES - PINE
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EOC-613	PINE	15	YES - PINE
EOC-614	PINE	15	YES - PINE
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EOC-616	PINE	15	YES - PINE
EOC-617	PINE	15	YES - PINE
EOC-618	PINE	15	YES - PINE
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EOC-620	PINE	15	YES - PINE
EOC-621	PINE	15	YES - PINE
EOC-622	PINE	15	YES - PINE
EOC-623	PINE	15	YES - PINE
EOC-624	PINE	15	YES - PINE
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EOC-716	PINE	15	YES - PINE
EOC-717	PINE	15	YES - PINE
EOC-718	PINE	15	YES - PINE



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KANNER CPUD

Tree Mitigation Plan

City of Stuart, Florida

Date	By	Description
12.17.20	SAW	Initial Submittal
03.19.21	SAW	2nd ReSubmittal
04.22.21	SAW	3rd ReSubmittal
05.13.21	SAW	Addressing Landscape Comments
07.01.21	KV	Resubmittal

NORTH

SCALE: 1" = 30'

0 15' 30' 60'

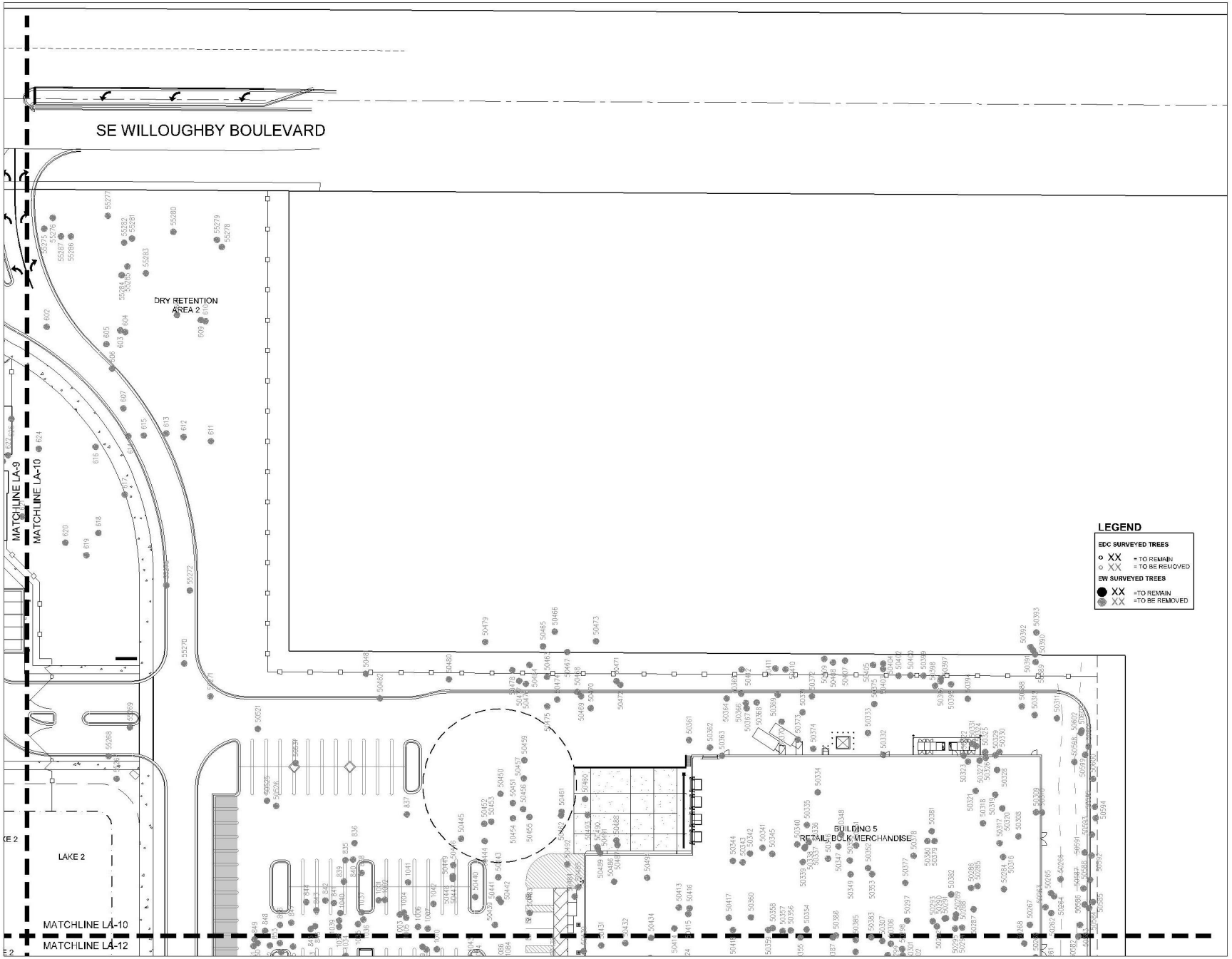
RLG. # 1918
Thomas P. Lucido

Designer	KV
Manager	DF
Project Number	20-620
Municipal Number	—
Computer File	

Sheet
LA-9

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NORTH

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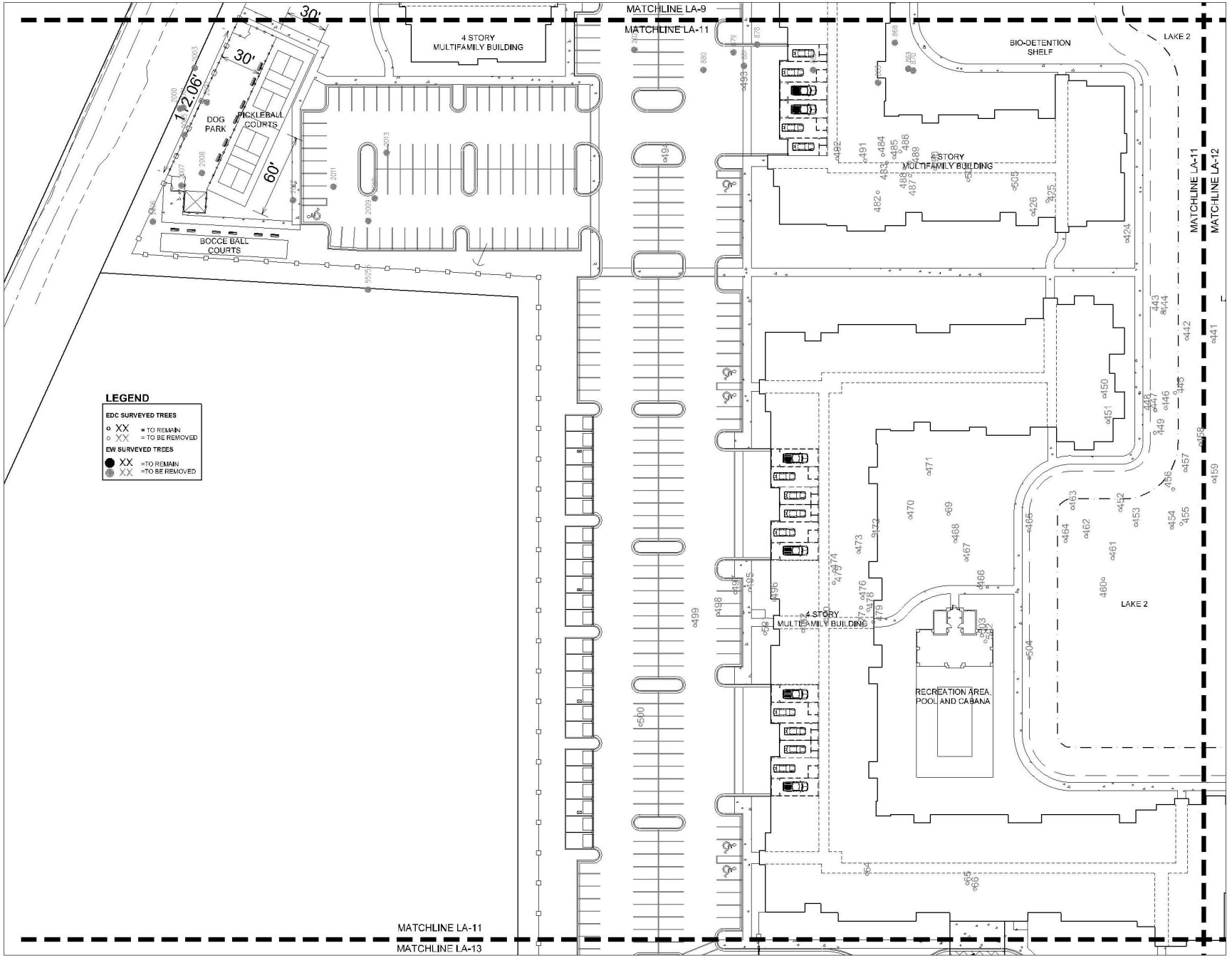
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Thomas P. Lucido

Designer	KV
Manager	DF
Project Number	20-620
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KANNER CPUD

Tree Mitigation Plan

City of Stuart, Florida

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05.13.21	SAW	Addressing Landscape Comments
07.01.21	KV	Resubmittal

NORTH

SCALE: 1" = 30'

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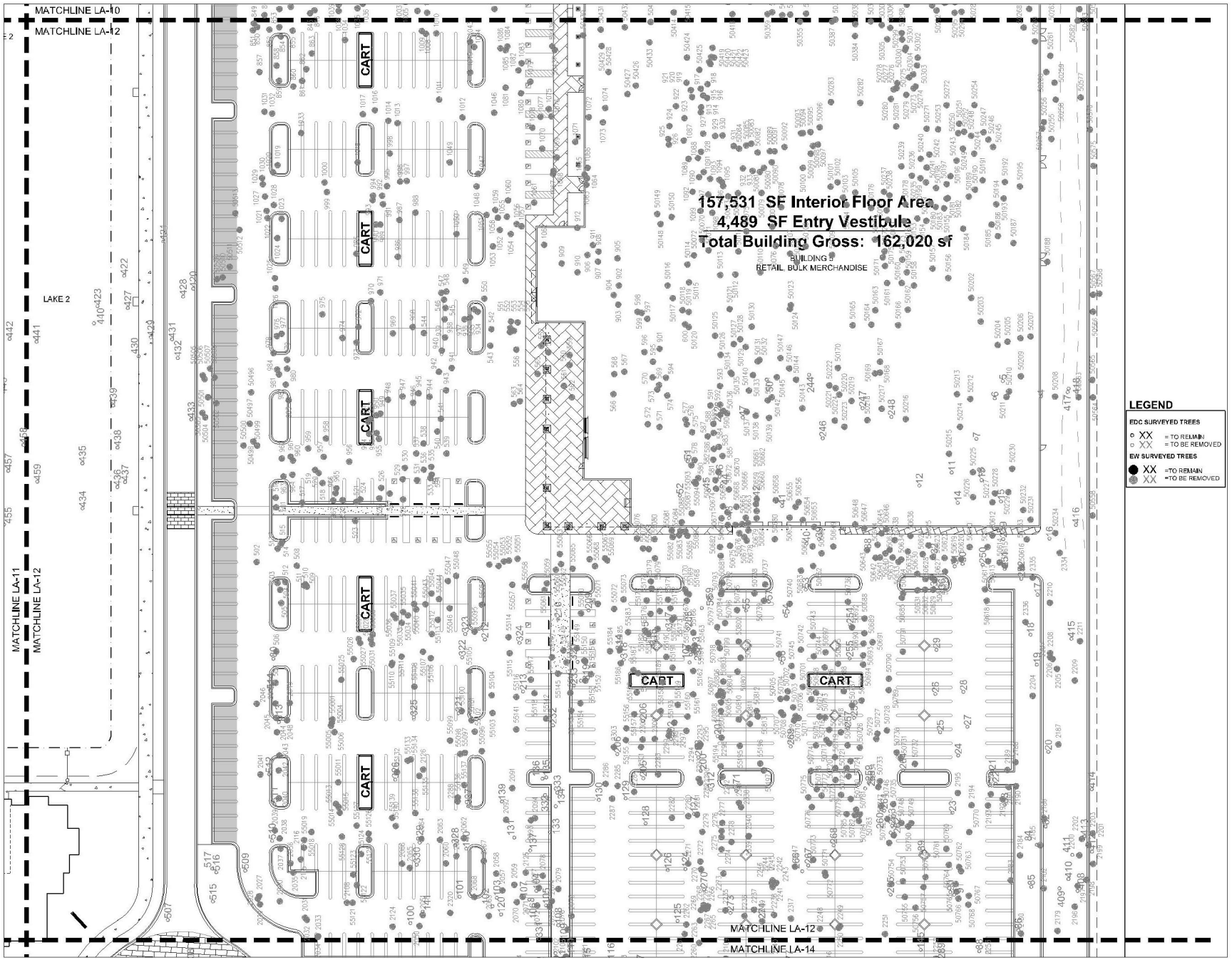
RLG. # 1918
Thomas P. Lucido

Designer	KV
Manager	DF
Project Number	20-620
Municipal Number	—
Computer File	

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KANNER CPUD

Tree Mitigation Plan

City of Stuart, Florida

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07.01.21	KV	Resubmittal

NORTH

SCALE: 1" = 30'

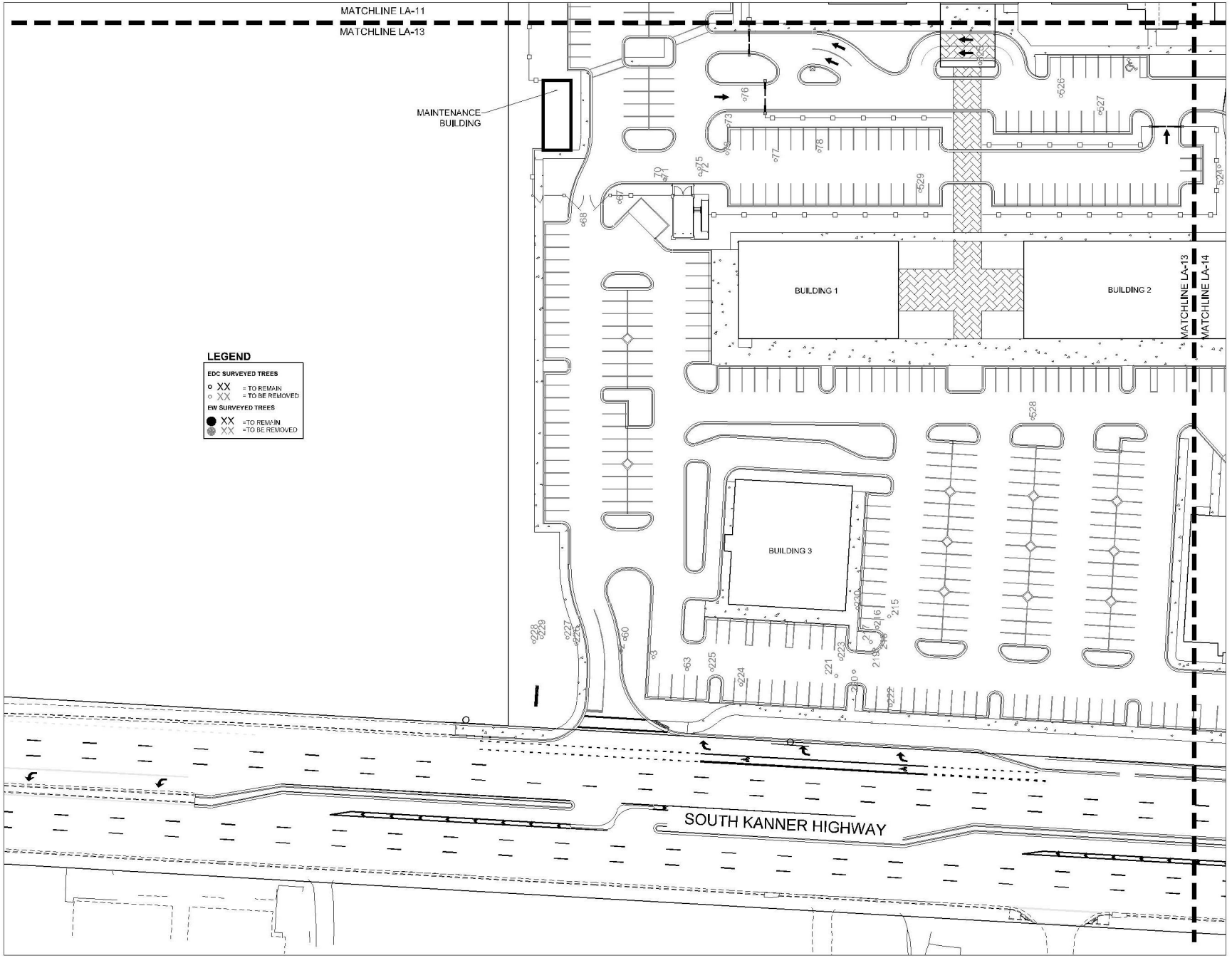
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RLG. # 1918
Thomas P. Lucido

Designer	KV	Sheet
Manager	DF	LA-12
Project Number	20-620	
Municipal Number	—	
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KANNER CPUD

Tree Mitigation Plan

City of Stuart, Florida

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04.22.21	SAW	3rd ReSubmittal
05.13.21	SAW	Addressing Landscape Comments
07.01.21	KV	Resubmittal

NORTH

SCALE: 1" = 30'

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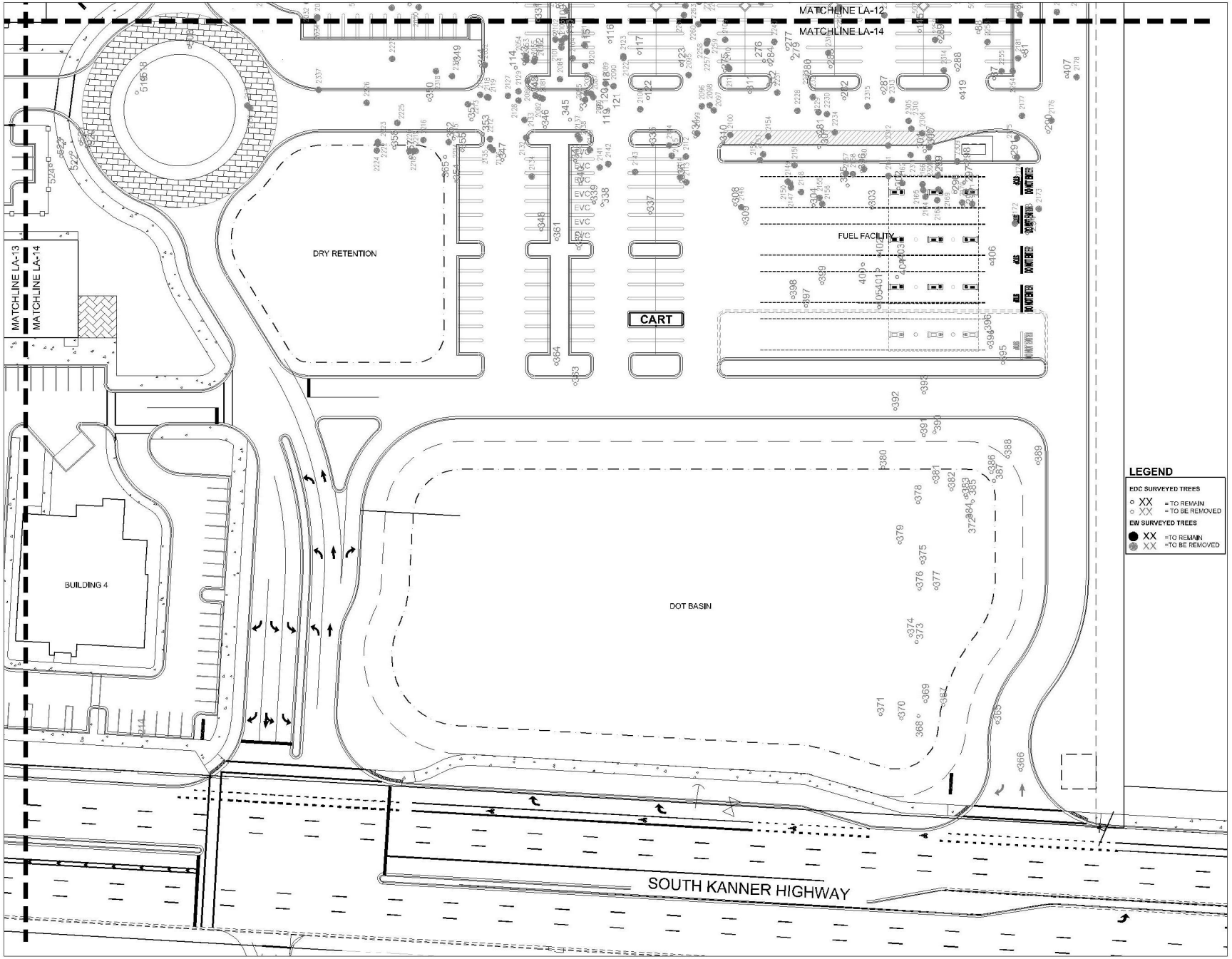
RLG. # 1918
Thomas P. Lucido

Designer	KV
Manager	DF
Project Number	20-620
Municipal Number	—
Computer File	

Sheet
LA-13

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KANNER CPUD

Tree Mitigation Plan

City of Stuart, Florida

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NORTH

SCALE: 1" = 30'

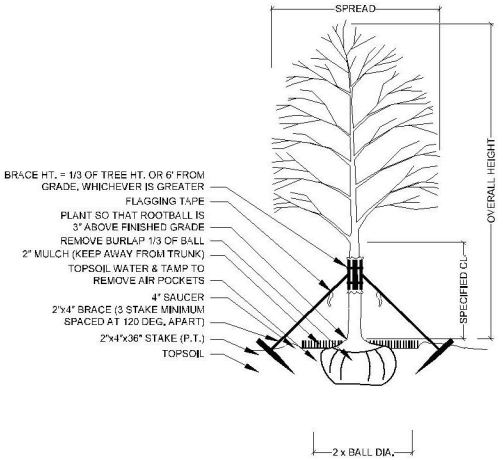
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RLG. # 1918
Thomas P. Lucido

Designer	KV	Sheet
Manager	DF	LA-14
Project Number	20-620	
Municipal Number	—	
Computer File		

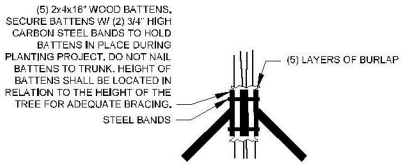
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TREE PLANTING & STAKING

NOT TO SCALE

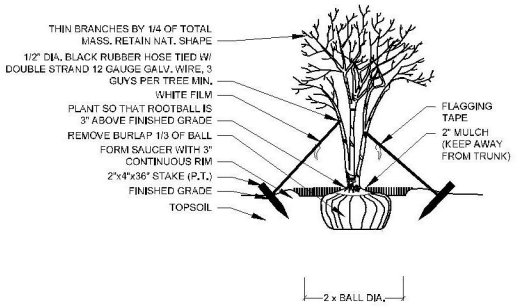


BRACING DETAIL

NOT TO SCALE

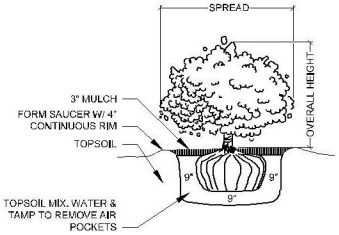
PALM PLANTING - ANGLE STAKE

NOT TO SCALE



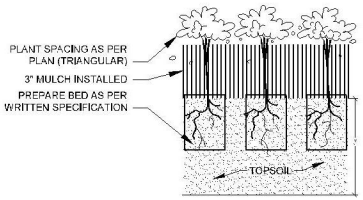
MULTI-TRUNK PLANTING & GUYING

NOT TO SCALE



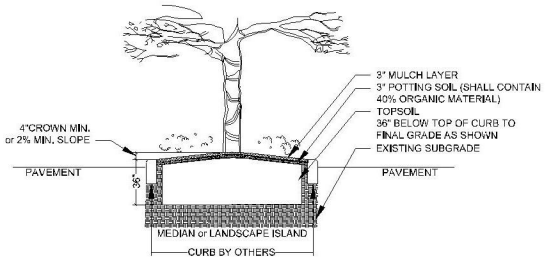
SHRUB PLANTING

NOT TO SCALE



GROUNDCOVER PLANTING DETAIL

NOT TO SCALE

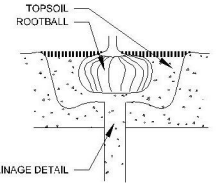


THIS DETAIL SHOWN DEPICTS A MEDIAN AND/OR LANDSCAPE ISLAND AND IS FOR GRAPHIC PURPOSES ONLY; SOIL PREPARATION SHALL APPLY TO ALL TREE, SHRUB, & GROUND COVER AREAS, THIS DOES NOT INCLUDE SOD AREAS

LANDSCAPE AREA PREPARATION DETAIL

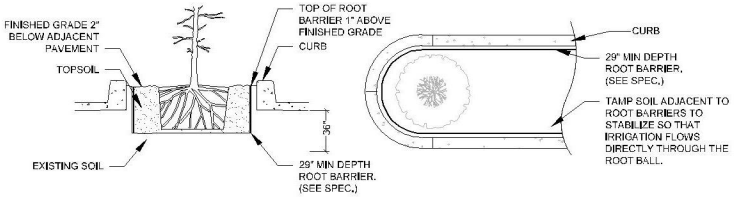
NOT TO SCALE

- *TOPSOIL SHALL BE NATURAL, FRIABLE, FINE LOAMY SOIL POSSESSING CHARACTERISTICS OF REPRESENTATIVE TOPSOIL IN THE VICINITY OF THE PROJECT SITE THAT PRODUCES HEAVY GROWTH.
- TOPSOIL SHALL HAVE A PH RANGE OF 5.5-7.4, FREE FROM SUBSOIL, WEEDS, LITTER, SODS, CLAY, STONES, STUMPS ROOTS, TRASH, HERBICIDES, TOXIC SUBSTANCES, OR ANY OTHER MATERIAL WHICH MAY BE HARMFUL TO PLANT GROWTH, OR HINDER PLANTING OPERATIONS.
- TOPSOIL SHALL CONTAIN A MINIMUM OF 3% ORGANIC MATERIAL.
- TOPSOIL MUST PERCOLATE WATER AT A RATE OF 1" PER HOUR (SEE ALSO DRAINAGE TESTING DETAIL FOR TREES)
- LANDSCAPE AREA SOILS SHALL BE APPROVED BY LANDSCAPE ARCHITECT/OWNER PRIOR TO PLANTING



DRAINAGE TESTING DETAIL

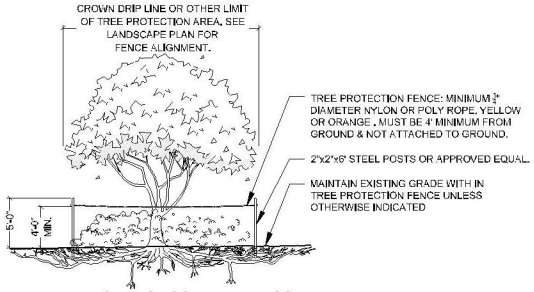
NOT TO SCALE



SPECIAL APPLICATIONS ROOT BARRIER DETAIL

NOT TO SCALE

NOTES:
1- ROOT BARRIER SHALL BE "BIO-BARRIER 29" DEPTH OR APPROVED EQUAL.
2- ROOT BARRIER SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.



TREE PROTECTION BARRICADE

NOT TO SCALE

NOTES:
1- SEE LANDSCAPE PLAN FOR FENCE ALIGNMENT.
3- NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
4- NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.

DRAINAGE TESTING/DRAINAGE CHANNEL REQUIREMENTS.

PRIOR TO PLANTING, ALL PLANTING PITS SELECTED FOR TESTING SHALL BE TESTED IN THE FOLLOWING MANNER.

A. DIG EACH PLANTING PIT TO THE MINIMUM SPECIFIED SIZE.

B. FILL PLANTING PIT WITH TWELVE INCHES (12") OF WATER. IF THE WATER LEVEL DROPS FOUR (4") OR MORE WITHIN FOUR (4) HOURS, THE DRAINAGE IS SUFFICIENT AND A DRAINAGE CHANNEL IS NOT REQUIRED. IF THE WATER LEVEL DROPS LESS THAN FOUR INCHES (4") WITHIN THE FOUR (4) HOUR PERIOD, A DRAINAGE CHANNEL IS REQUIRED.

C. WHERE REQUIRED, THE DRAINAGE CHANNEL MUST EXTEND DOWN THROUGH THE NON POROUS SOIL AND INTO POROUS SOIL. (SEE DETAIL)

D. ALL MATERIAL REMOVED FROM THE DRAINAGE CHANNEL SHALL BE DISCARDED.

E. WHEN BACKFILLING PLANTING PITS WITH NATIVE TOPSOIL, CARE MUST BE TAKEN TO KEEP THE CONSISTENCY OF THE SOIL MIX THE SAME THROUGHOUT THE PLANTING PIT AND DRAINAGE CHANNEL.

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KANNER CPUD

Landscape Details

City of Stuart, Florida

Date	By	Description
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07.01.21	KV	Resubmittal

NORTH

SCALE: 1" =

0

REG. # 1018
Thomas P. Lucido

Designer	SAW
Manager	DF
Project Number	20-020
Municipal Number	—
Computer File	

Sheet
LA-15

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LANDSCAPE SPECIFICATIONS

PART 1: GENERAL CONDITIONS

1.01 SCOPE
A. The landscape contract includes the supplying and planting of all trees, shrubs, vines, and ground cover together with all necessary labor, equipment, tools and materials needed for the successful completion, execution and maintenance of the landscape plans.

1.02 AGENCY STANDARDS:
A. Grades and standards of plant materials to be used shall be true to name, size, condition and graded Florida #1 or better as stated in: Grades and Standards of Florida Plant Materials published by the State of Florida Department of Agriculture, Tallahassee, Florida.

1.03 SITE EXAMINATION:
A. The landscape Contractor shall personally examine the site and fully acquaint him/herself with all of the existing conditions in order that no mis-understanding may afterwards arise as to the character or extent of the work to be performed, and, additionally, in order to acquaint him/herself with all precautions to be taken in order to avoid injury to property or persons. No additional compensation will be granted because of any unusual difficulties which may be encountered in the execution or ma ntenance of any portion of the work.

1.04 ERRORS AND OMISSIONS:
A. The plant list is a part of the drawings and is furnished as a convenience. The plant list indicates tho name, size and quantities of specific plant materials as called for and is located on the drawings. The Landscape Contractor is responsible for his/her own quantity count, and any discrepancy between drawings and plant list shall be considered as correct on the drawings.

B. The Landscape Contractor shall not take advantage of errors or omissions in the specifications or contract drawings. Full instruction will be given if such errors are discovered. Upon the discovery of any discrepancies in, or omissions from the drawings or documents, or should the Landscape Contractor be in doubt as to their meaning, the Landscape Architect shall be notified and will determine the actions necessary to each query.

C. If plans and specifications are found to disagree after the contract is awarded, the Landscape Architect shall be the judge as to which was intended.

1.05 EXECUTION OF THE WORK
A. The Landscape Contractor shall have his labor crews controlled and directed by a Foremen well versed in plant materials, planting methods, reading plans, and coordination between job and nursery in order to execute installat on correctly and in a timely manner.

B. The Landscape Contractor shall provide a competent English-speaking Foreman on the project; at all times, who shall be fully authorized as the Contractor's agent on the work. The Foreman shall be capable of reading and thoroughly understanding the Plans, Specifications and other Contract Documents. If the Superintendent is deemed incompetent by the Landscape Architect, he (the superintendent) shall be immediately replaced.

C. The Landscape Contractor shall be available for any meetings with the Owner and/or Landscape Architect during implementation of the job. Any additional work or changes required as a result of failure to communicate with the Owner or Landscape Architect during implementation will be the responsibility of the Landscape Contractor.

1.06 PROTECTION OF PUBLIC AND PROPERTY:
A. The Landscape Contractor shall protect all materials and work against injury from any cause and shall provide and maintain all necessary safeguards for the protection of the public. He shall be held responsible for any damage or injury to persons or property which may occur as a result of his fault or negligence in the execution of the work, i.e. damage to underground pipes or cables.

1.07 CHANGES AND EXTRAS:
A. The Contractor shall not start work on any changes or "extras" in the project until a written agreement setting forth the adjusted prices has been executed by the Owner and the Contractor. Any work performed on changes or "extras" prior to execution of a written agreement may or may not be compensated for by the Owner at his discretion.

1.08 GUARANTEE:
The Landscape Contractor shall furnish a written guarantee warranting all materials, workmanship and plant materials, except sod, for a period of 18 MONTHS from the time of completion and acceptance by the Landscape Architect and Owner. Sod shall be guaranteed to 90 calendar days after acceptance by the Landscape Architect and Owner. All plant material shall be alive and in satisfactory condition and growth for each specific kind of plant at the end of the guarantee period. The guaranteeing of plant material shall be construed to mean complete and immediate replacement with plant material of the same variety, type, size, quality and grade as that of the originally specified material. During the guarantee period it shall be the Landscape Contractor's responsibility to immediately replace any dead or unhealthy material as determined by the Landscape Architect. The guarantee will be null and void if plant material is damaged by lightning, hurricane force winds, or any other acts of God, as well as vandalism or lack of proper maintenance.

B. At the end of the specified guarantee period, any plant required under this contract that is dead or not in satisfactory condition, as determined by the Landscape Architect, shall be replaced. The Landscape Contractor shall be responsible for the full replacement cost of plant materials for the first replacement and share subsequent replacement (s) costs equally with the Owner, should the replacement plant fail to survive.

1.09 CARE AND MAINTENANCE:
A. The Landscape Contractor shall be responsible for the care and maintenance of all plant materials and irrigation when applicable until final acceptance by the Owner or Landscape Architect.

B. The Owner agrees to execute the instructions for such care and maintenance.

1.10 SAFETY:
A. It shall be the responsibility of the Landscape Contractor to protect all persons from injury and to avoid property damage. Adequate warning devices shall be placed and maintained during the progress of the work.

B. It shall be the contractor's responsibility to conform to all local, state, and federal safety laws and codes including the Federal Occupational Safety And Health Act (O.S.H.A.).

1.11 CONTRACTOR QUALIFICATION:
A. The Owner may require the apparent contractor (s) to qualify him/herself to be a responsible entity by furnishing any or all of the following documentary data:
1. A financial statement showing assets and liabilities of the company current to date.
2. A listing of not less than (3) completed projects of similar scope and nature.
3. Permanent name and address of place of business.
4. The number of regular employees of the organization and length of time the organization has been in business under the present name.

1.12 INSURANCE AND BONDING:
A. The contractor (s) shall submit proof of insurance for his job for the time period that the work is done. The minimum amount of insurance shall be $300,000.00 per person and $300,000.00 per aggregate or as required by owner and agreed to in the contract. The successful bidder shall be required to have this coverage in effect before beginning work on the site.

B. The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contrac: and payment obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

1.13 PERMITS AND CERTIFICATES:
A. All contractors shall secure and pay for all permits and certificates required for his/her class of work.

PART 2: MATERIALS

2.01 PLANT MATERIALS:
A. A complete list of plants is shown on the drawings, including a schedule of quantities, sizes, and such other requirements deemed necessary. In the event discrepancies occur, the specifications on the drawings shall govern.

B. Substitutions: Substitutions of plant materials or changes in size or spacing of materials will be permitted ONLY upon written authorization by the Owner or the Landscape Architect. If plant material is not of sufficient size to meet applicable codes, a letter of variance from the appropriate agency must be obtained by the Contractor prior to issuance of any change order. If material of smaller size is to be accepted, the quantity of material shall be increased, at no additional cost to the Owner, to meet the intent of the drawings.

C. All plant materials shall have a habit of growth that is normal for the species and shall be healthy, vigorous and equal to or exceed the measurements specified in the plant list, which are the minimum acceptable sizes. Plants shall be measured before pruning with branches in normal position. Any necessary pruning shall be done at the time of planting.

D. All plant materials shall be nursery grown, unless otherwise noted. Florida #1 or better and shall comply with all required inspections, grading standards and plant regulations as set forth by the Florida Department of Agriculture's Grades and Standards for Nursery Plants, most current addition and Grades and Standards for Nursery Plants, most current addition.

E. Plants that do not have the normal balance of height and spread typical for the respective plant shall not be acceptable.

F. The Landscape Contractor shall install each plant to display its best side. Adjustments may be required if plants are not installed properly and/or approved by the Landscape Architect at no additional cost to owner.

2.02 INSPECTION

A. The Landscape Architect and Owner may inspect trees and shrubs at place of growth or at site before planting, for compliance with requirements for genus, species, variety, size and quality. The Landscape Architect and Owner retain the right to further inspect trees and shrubs for size and condition of balls and root systems, insects, injuries and latent defects, and to reject unsatisfactory or defective material at any time during progress of work. Rejected plant materials shall be immediately removed from project site.

2.03 PROTECTION OF PLANT MATERIALS:
A. Balled and burlapped plants (B & B) shall be dug with firm natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Balls shall be firmly wrapped with burlap similar materials and bound with cord, rope, or wire mesh. All collected plants shall be balled and burlapped.

B. Plants with broken, damaged or insufficient rootballs will be rejected.

C. All plant material shall be protected from possible bark injury or breakage of branches. All plants transported by open trucks shall be adequately covered to prevent windburn, drying or damage to plants.

D. Plants which cannot be planted immediately on delivery to the site shall be covered with moist soil, mulch or other protection from the drying of wind and sun. All plants shall be watered as necessary by the Landscape Contractor until planted.

2.04 STORAGE
A. All plant materials shall be stored on the site in designated areas, specified by the Landscape Architect or Owner's agent.

B. No plant material shall be stored longer than seventy-two (72) hours unless approved by Landscape Architect and/or owner.

C. The Landscape Architect reserves the right to reject any plant materials not in conformance with these specifications.

D. All rejected material shall be immediately removed from the site and replaced with acceptable material at no cost to the Owner.

2.05 PROTECTION DURING PLANTING:
A. Trees moved by winch or crane shall be thoroughly protected from chain marks, girdling or bark slippage by means of burlap, wood battens or other approved methods. Battens shall NOT be attached to the tree with nails.

2.06 TOP SOIL:
A. Planting soil for all plantings shall consist of topsoil and be natural, friable, fertile, fine loamy soil possessing characteristics of representative topsoil in the vicinity of the project site that produces heavy growth. Topsoil shall have a PH range of 5.5-7.4, free from subsoil, weeds, litter, sods, clay, stones, stumps, roots, trash, herbicides, toxic substances, or any other material which may be harmful to plant growth, or hinder planting operations. Topsoil shall contain a minimum of 3% organic material. Topsoil must percolate water at a rate of 1" per hour (See also drainage testing detail for trees)

B. Landscape Area Preparation. The intent of this section is to ensure a healthy growing environment for all planting material in all landscaped areas. Landscape Contractor to examine existing soils prior to planting to ensure conformance to all definitions of "Topsoil" (see Landscape Area Preperation Details). In addition, a 3" layer of high organic (min 40%) potting soil shall be added to the topsoil and mixed in at time of planting. East Coast Recycling Inc. is a recommended source for imported Topsoil (if needed) as well as the top 3" layer of potting soil.

Existing soils must meet all definitions of "Topsoil" as described above in all planting areas throughout the site. If existing soils do not meet all definitions of Topsoil, please refer to the "Landscape Area Preparation" detail. Examination may require existing soils to be tested by an accredited testing laboratory. Should a soil test be necessary, Contractor shall contact soil testing lab directly to confirm such lab's soil collection and transmittal protocol; all costs if any shall be borne by the Contractor. Contractor shall provide to Landscape Architect for review the results of the soil test if conducted. Contractor shall schedule an on-site meeting with Landscape Architect to review existing and/or imported soils prior to planting. The Landscape Area Preperation is the responsibility of the Landscape Contractor, He/she shall accept all responsibility of planting soils and shall honor all guarantee items in section 1.08.

2.07 FERTILIZER:
A. Commercial fertilizer shall comply with the state and local fertilizer laws. Nitrogen shall not be less than 40% from organic source. Inorganic chemical nitrogen shall not be derived from the sodium form of nitrate. Fertilizers shall be delivered to the site in unopened original containers, each bearing the manufacturer's guaranteed analysis. Any fertilizer that becomes caked or otherwise damaged shall be rejected.

B. Thoroughly mixed 3 lbs. of commercial fertilizer to each cubic yard of planting soil.

C. Tablet ized fertilizer shall be Agriform planting tablets 20-10-5 formula, 21 gram or equal. All trees and shrubs shall be fertilized with tablet ized fertilizer as follows. While backfilling plant holes, fertilizer tablets shall be equally spaced and placed adjacent to the ball mid-way in depth in accordance with the following rates:

1 gallon container 1 tablet
3 gallon container 2 tablets
5 gallon container 3 tablets
7 gallon container 5 tablets

Large tubs, wire baskets, grow bags, and balled and burlapped material shall have 1 tablet for each 1/2 inch of trunk diameter (measured 3 feet from ground) or for each foot of height or spread of larger shrub material. The Landscape Architect reserves the right to inspect and review the application of fertilizer.

2.08 MULCH:
A. Mulch material shall be clean, dry, free of weeds, seeds and pests, moistened at the time of application to prevent wind displacement. Cypress &/or Red mulch is prohibited.

B. All trees and shrub beds shall receive 3" mulch immediately after planting and thoroughly watered. Apply 2" max on tree & palm rootballs, keep 6" away from tree & palm trunks or as required by local jurisdiction.

PART 3 EXECUTION

3.01 DIGGING:
A. The Landscape Contractor shall exercise care in digging and other work so as not to damage existing work, including overhead wires, underground pipes and cables and the pipes and hydrants of watering systems. Should such overhead or underground obstructions be encountered which interfere with planting, the Owner shall be consulted and contractor will adjust the location of plants to clear such obstruction. The Contractor shall be responsible for the immediate repair of any damage caused by his work.

3.02 GRADING:
A. Grading for drainage, swales, etc. to within 4 inches of the finished grade to be provided by others.

B. It shall be the responsibility of the Landscape Contractor to provide the final grading during the course of landscape installation so as to bring sod and planting areas to their proper elevations in relation to walks, paving, drain structures, and other site conditions. The site grading plan must be checked prior to installation of sod to insure that drainage and other conditions will NOT be modified.

3.03 PLANTING:
A. Planting shall take place during favorable weather conditions.

B. The Contractor shall call for utility locates and ascertain the location of all utilities and easements so proper precautions can be taken not to damage or encroach on them.

C. Tree Planting shall be located where it is shown on the plan. No planting holes shall be dug until the proposed locations have been staked on the ground by the Contractor.

D. Excavation of holes shall extend to the required subgrades as specified on the planting diagrams located in the landscape plans. Plant pits shall be circular in outline and shall have a profile which conforms to the aforementioned "Tree and Shrub Planting Diagrams".

E. A representative number of planting pits (a minimum of one in every 25 feet throughout the entire site) shall be tested for proper drainage. See Landscape Details for complete testing methods and requirements.

F. Planting pits shall be excavated to the following dimensions and backfilled with Topsoil- see Landscape Area Preparation Detail.
1 Gallon material (1 gal.): 12" x 12" x 12" min.
3 Gallon material (3 gal.): 20" x 20" x 18" min.
Lerio material (7 gal.): 30" x 30" x 24" min.
Field grown material and trees: 1-1/2 times width of ball and depth of ball plus 12" min.

G. No planting or laying of sod shall be initiated until the area has been cleaned of existing sod or other plant materials, rough grass, weeds, debris, stones etc., and the ground has been brought to an even grade, with positive drainage away from buildings and towards drain inlets and swales and approved by Landscape Architect or owner's rep.

H. Each plant shall be planted in an individual hole as specified for trees, shrubs, and vines.

I. All plants shall be set to ultimate finished grade. No filling will be permitted around trunks or stems. All ropes, wire, stakes, etc., shall be removed from sides and top of the ball and removed from hole before filling in.

J. All flagging ribbon shall be removed from trees and shrubs before planting.

K. Excess excavation (fill) from all holes shall be removed from the site, at no additional expense to Owner.

L. All palms shall be backfilled with sand, thoroughly washed in during planting operations and with a shallow saucer depression left at the soil line for future watering's. Saucer areas shall be top-dressed two (2") inches deep with topsoil raked and left in a neat, clean manner.

3.04 PRUNING:
A. Remove dead and broken branches from all plant material. Prune to retain typical growth habit of individual plants with as much height and spread as possible in a manner which will preserve the plant's natural character.

B. Make all cuts with sharp instruments flush with trunk or adjacent branch, in such a manner as to insure elimination of stubs. Cuts made at right angles to line of growth will not be permitted.

C. Trees shall not be poled or topped.

D. Remove all trimming from site.

3.05 GUYING:

A. All trees over six (6') feet in height shall, immediately after setting to proper grade, be guyed with three sets of two strands, No. 12 gauge malleable galvanized iron, in tripod fashion. See Detail.

B. Wires shall not come in direct contact with the tree but shall be covered with an approved protection device at all contact points. Wires shall be fastened in such a manner as to avoid pulling crotches apart.

C. Stake & Brace all trees larger than 12' oa. See detail. Stakes shall be 2" x 2" lumber of sufficient length to satisfactorily support each tree.

D. Turnbuckles for guying trees shall be galvanized or cadmium plated and shall be of adequate size and strength to properly maintain light guy wires.

3.06 WATER:
A. Each plant or tree shall be thoroughly watered in after planting. Watering of all newly installed plant materials shall be the responsibility of the Landscape Contractor until final acceptance by the Landscape Architect.

B. Prior to installing any irrigation system components, the contractor shall obtain a water sample from the proposed water supply and conduct a particle size and count analysis on the sample using the services of a reputable lab certified in such analysis. Submit the test results to the owner/owner's representative for review and approval. Do not proceed further with system installation until given written approval to do so.

3.07 SOD:
A. The Landscape Contractor shall sod all areas indicated on the drawings.

B. It shall be the responsibility of the Landscape Contractor to fine grade all landscape areas, eliminating all bumps, depressions, sticks, stones, and other debris.

C. The sod shall be firm, tough texture, having a compacted growth of grass with good root development. It shall contain no noxious weeds, or any other objectionable vegetation, fungus, insects, or disease. The soil embedded in the sod shall be good clean earth, free from stones and debris.

D. Before being cut and lifted, the sod shall have been mowed at least three times with a lawn mower, with the final mowing not more than seven days before the sod is cut. The sod shall be carefully cut into uniform dimensions.

E. 6-6-6 fertilizer with all trace elements is to be applied at the rate of 40 lbs. per 1,000 sq. ft. prior to laying sod.

F. Solid sod shall be laid with closely abutting, staggered joints with a tamped or rolled, even surface.

G. The finished level of all sod areas after settlement shall be one (1") inch below the top of abutting curbs, walks, paving and wood borders to allow for building turf.

H. If in the opinion of the Landscape Architect, top dressing is necessary after rolling, clean yellow sand will be evenly applied over the entire surface and thoroughly washed in.

3.08 SEEDING:
A. The Landscape Contractor shall remove all vegetation and rocks larger than (1") in diameter from areas to be seeded, scarify the area, then apply fertilizer at a rate of 500 lbs. per acre.

B. Application: Argentine Bahia Grass seed- 200 Pounds per acre mixed with common hulled Bermuda seed- 30 lbs. per acre. All other seed mixtures shall be applied per the manufacturer's instructions.

C. Roll immediately after seeding with a minimum 500 pound roller, then apply straw mulch at the rate of 2,500 pounds per acre.

D. Apply fertilizer at the rate of 150 lbs. per acre 45-60 days after seeding.

3.09 CLEANING UP:
A. The contractor shall at all times keep the premises free from accumulations of waste materials or rubbish caused by his employees or work. He shall leave all paved areas "broom clean" when completed with his work.

3.10 MAINTENANCE:
A. Maintenance shall begin immediately after each plant is installed and shall continue until all planting has been accepted by the Owner or Landscape Architect. Maintenance shall include watering, weeding, removal of dead materials, resetting plants to proper grades or upright positions, spraying, restoration of planting saucer and/or any other necessary operations.

B. Proper protection to lawn areas shall be provided and any damage resulting from planting operations shall be repaired promptly.

C. Replacement of plants during the maintenance period shall be the responsibility of the Contractor, excluding vandalism or damage on the part of others, lighting, or hurricane force winds, until final acceptance.

D. In the event that weeds or other undesirable vegetation become prevalent, it shall be the Contractor's responsibility to remove them.

E. Trees or other plant material which fall or are blown over during the maintenance period will be reset by the Contractor at no additional expense to the Owner, the only exception being hurricane force winds.

3.11 COMPLETION, INSPECTION AND ACCEPTANCE:
A. Completion of the work shall mean the full and exact compliance and conformity with the provisions expressed or implied in the Drawings and in the Specifications, including the complete removal of all trash, debris, soil or other waste created by the Landscape Contractor.

B. Inspection of work to determine completion of contract, exclusive of the possible replacement of plants, will be made by the Owner and/or Landscape Architect at the conclusion of all planting and at the request of the Landscape Contractor.

C. All plant material shall be alive and in good growing condition for each specified kind of plant at the time of acceptance. The rating of each plant according to Florida Grades and Standards shall be equal to or better than that called for on the plans and in these Specifications at the time of final inspection and acceptance.

D. After inspection, the Landscape Contractor will be notified by the Owner of the acceptance of all plant material and workmanship, exclusive of the possible replacement of plants subject to guarantee.

E. All trees & shrubs shall be straight and in correct position per the landscape plans, details and specifications. All nursery, shipping and identification tags & ribbons shall be removed from trees & shrubs immediately after planting.

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Key / Location:



Project Team:

Applicant:
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Piscataway, NJ 07704
732-638-3776

Engineer:
Maser Consulting
410 Eagleview Blvd, Suite 104
Exton, PA 19341
610-254-9140

Surveyor:
Stephen J Brown Inc
619 E. 5th St
Stuart, FL 34994
772-288-7176

Landscape Architect/Land Planner:
Lucido & Associates
701 E Ocean Blvd
Stuart, FL 34994
772-220-2100

KANNER CPUD

Landscape Specification

City of Stuart, Florida

Date	By	Description
12.17.20	SAW	Initial Submittal
03.19.21	SAW	2nd ReSubmittal
04.22.21	SAW	3rd ReSubmittal
05.13.21	SAW	Addressing Landscape Comments
07.01.21	KV	Resubmittal

NORTH

SCALE: 1" =

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REG. # 1018
Thomas P. Lucido

Designer	SAW
Manager	DF
Project Number	20-920
Municipal Number	—
Computer File	

Sheet
LA-16

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PRELIMINARY ENGINEERING PLANS AND SPECIFICATIONS

FOR

KANNER CPUD

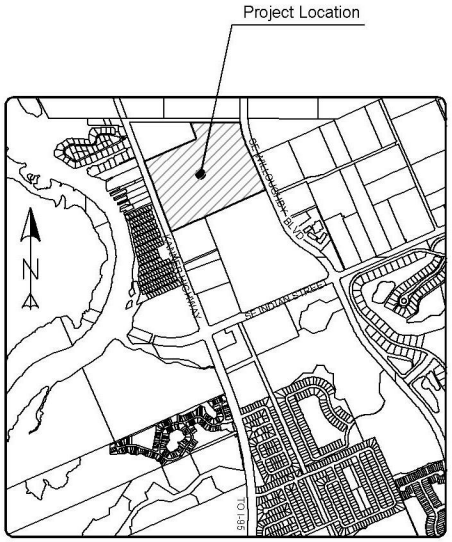
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STUART, FLORIDA

KANNER CPUD - PRELIMINARY ENGINEERING July 30, 2021 #20-313

LOCATION MAP





VICINITY MAP

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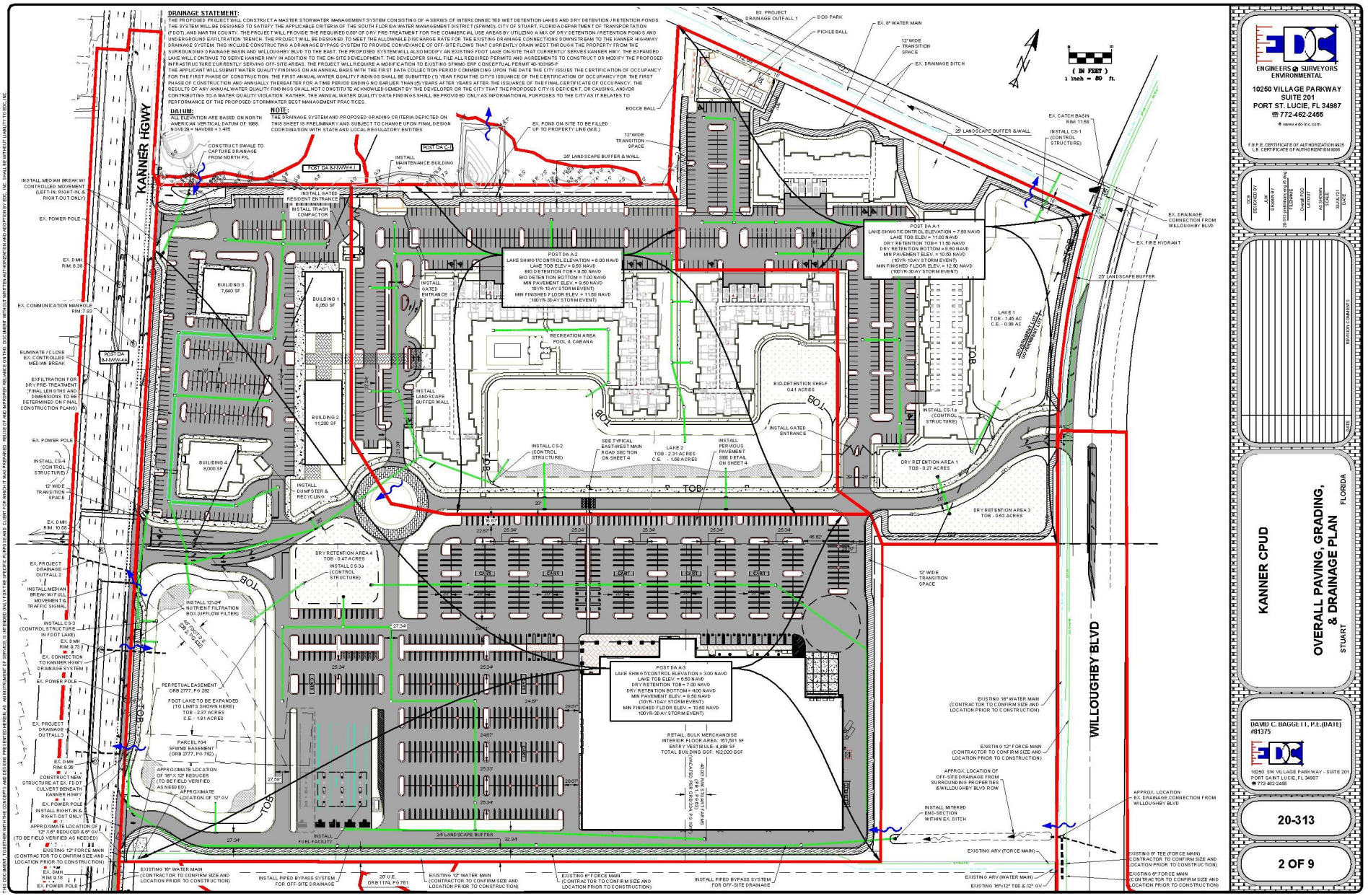
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10250 SW VILLAGE PARKWAY, SUITE 201
PORT SAINT LUCIE, FL 34987
772-462-2455
www.edc-inc.com

F.B.P.E. CERTIFICATE OF AUTHORIZATION 9005
L.B. CERTIFICATE OF AUTHORIZATION 8066

DAVID C. BAGGETT, P.E.(DATE)
#81375
10250 SW VILLAGE PKWY - SUITE 201
PORT SAINT LUCIE, FL 34987
772-462-2455

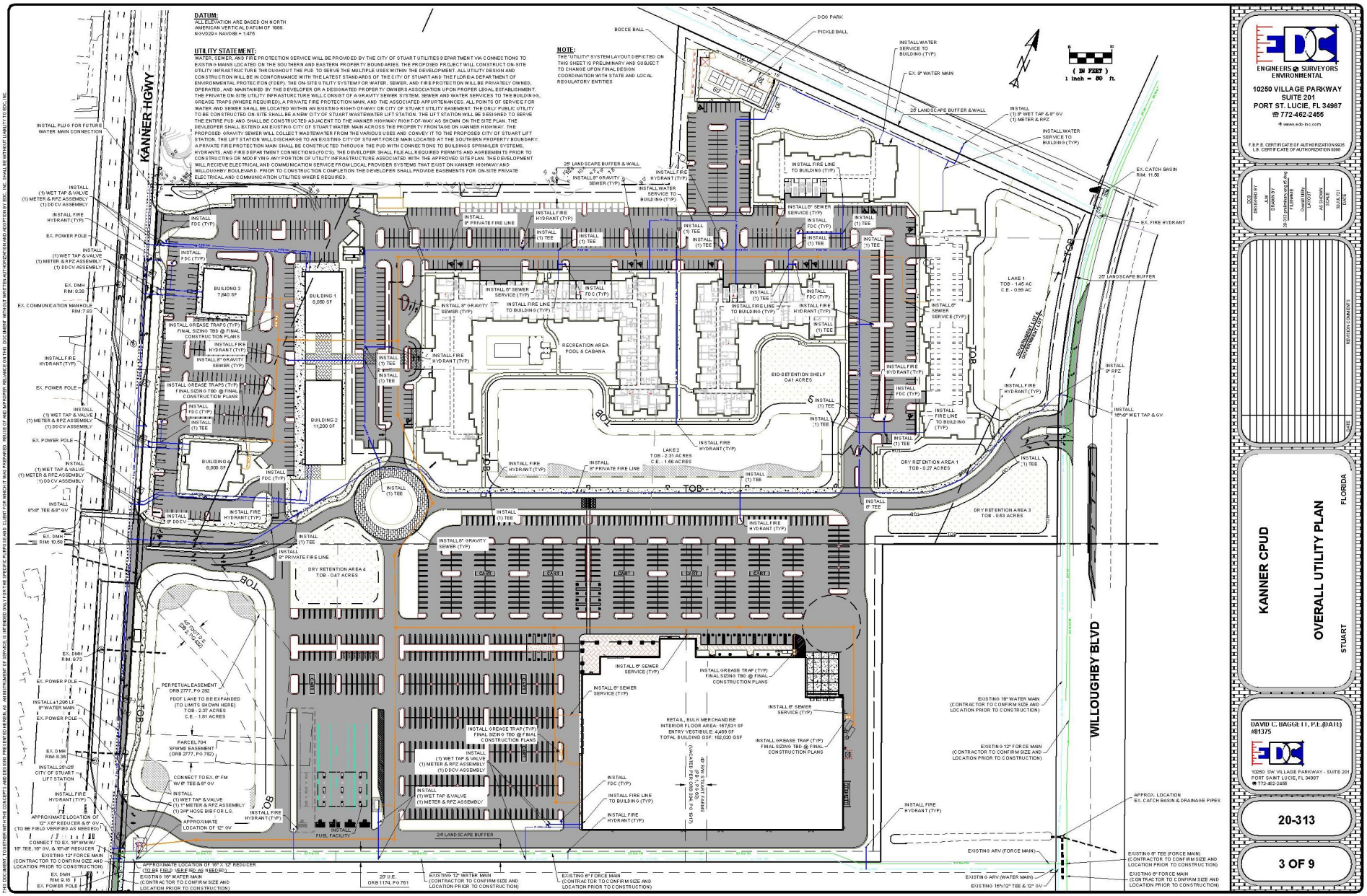
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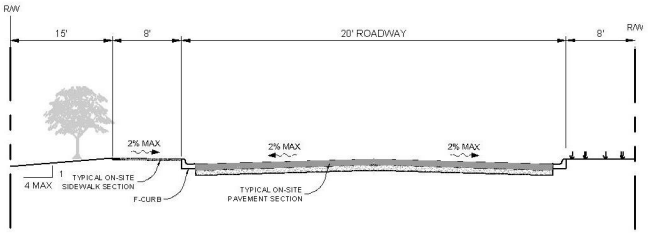
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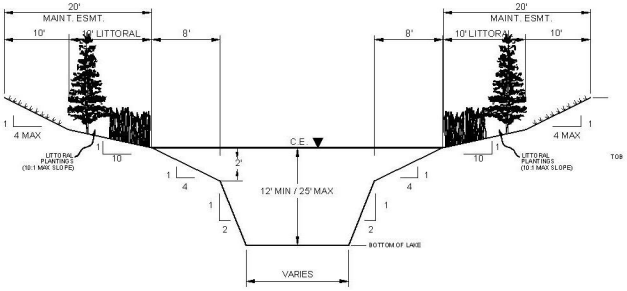
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DATUM:
ALL ELEVATION ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD29 = NAVD88 + 1.475
UTILITY STATEMENT:
WATER, SEWER, AND FIRE PROTECTION SERVICE WILL BE PROVIDED BY THE CITY OF STUART UTILITIES DEPARTMENT VIA CONNECTIONS TO EXISTING MAINS LOCATED ON THE SOUTHERN AND EASTERN PROPERTY BOUNDARIES. THE PROPOSED PROJECT WILL CONSTRUCT ON-SITE UTILITY INFRASTRUCTURE THROUGHOUT THE PUD, TO SERVE THE MULTIPLE USES WITHIN THE DEVELOPMENT. ALL UTILITY DESIGN AND CONSTRUCTION WILL BE IN CONFORMANCE WITH THE LATEST STANDARDS OF THE CITY OF STUART AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). THE ON-SITE UTILITY SYSTEM FOR WATER, SEWER, AND FIRE PROTECTION WILL BE PRIVATELY OWNED, OPERATED, AND MAINTAINED BY THE DEVELOPER OR A DESIGNATED PROPERTY OWNER'S ASSOCIATION UPON PROPER LEGAL ESTABLISHMENT. THE PRIVATE ON-SITE UTILITY INFRASTRUCTURE WILL CONSIST OF A GRAVITY SEWER SYSTEM, SEWER AND WATER SERVICES TO THE BUILDINGS, GREASE TRAPS (WHERE REQUIRED), A PRIVATE FIRE PROTECTION MAIN, AND THE ASSOCIATED APPURTENANCES. ALL POINTS OF SERVICE FOR WATER AND SEWER SHALL BE LOCATED WITHIN AN EXISTING RIGHT-OF-WAY OR CITY OF STUART UTILITY EASEMENT. THE ONLY PUBLIC UTILITY TO BE CONSTRUCTED ON-SITE SHALL BE A NEW CITY OF STUART WASTEWATER LIFT STATION. THE LIFT STATION WILL BE DESIGNED TO SERVE THE ENTIRE PUD AND SHALL BE CONSTRUCTED ADJACENT TO THE KANNER HIGHWAY RIGHT-OF-WAY AS SHOWN ON THE SITE PLAN. THE DEVELOPER SHALL EXTEND AN EXISTING CITY OF STUART WATER MAIN ACROSS THE PROPERTY FRONTAGE ON KANNER HIGHWAY. THE PROPOSED GRAVITY SEWER WILL COLLECT WASTEWATER FROM THE VARIOUS USES AND CONVEY IT TO THE PROPOSED CITY OF STUART LIFT STATION. THE LIFT STATION WILL DISCHARGE TO AN EXISTING CITY OF STUART FORCE MAIN LOCATED AT THE SOUTHERN PROPERTY BOUNDARY. A PRIVATE FIRE PROTECTION MAIN SHALL BE CONSTRUCTED THROUGH THE PUD WITH CONNECTIONS TO BUILDINGS SPRINKLER SYSTEMS, HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS (FDCS). THE DEVELOPER SHALL FILE ALL REQUIRED PERMITS AND AGREEMENTS PRIOR TO CONSTRUCTING OR MODIFYING ANY PORTION OF UTILITY INFRASTRUCTURE ASSOCIATED WITH THE APPROVED SITE PLAN. THE DEVELOPMENT WILL RECIEVE ELECTRICAL AND COMMUNICATION SERVICE FROM LOCAL PROVIDER SYSTEMS THAT EXIST ON KANNER HIGHWAY AND WILLOUGHBY BOULEVARD. PRIOR TO CONSTRUCTION COMPLETION THE DEVELOPER SHALL PROVIDE EASEMENTS FOR ON-SITE PRIVATE ELECTRICAL AND COMMUNICATION UTILITIES WHERE REQUIRED.
NOTE:
THE "UTILITY" SYSTEM LAYOUT DEPICTED ON THIS SHEET IS PRELIMINARY AND SUBJECT TO CHANGE UPON FINAL DESIGN COORDINATION WITH STATE AND LOCAL REGULATORY ENTITIES
(IN FEET)
1 inch = 80 ft.
KANNER HIGHWAY
WILLOUGHBY BLVD
DOG PARK
PICKLE BALL
BOCCE BALL
BUILDING 1 8,000 SF
BUILDING 2 11,200 SF
BUILDING 3 7,640 SF
BUILDING 4 8,000 SF
RECREATION AREA POOL & CABANA
BIO-DETENTION SHELF 0.41 ACRES
LAKE 1 TOB - 145 AC C.E. - 0.89 AC
LAKE 2 TOB - 2.31 ACRES C.E. - 1.56 ACRES
DRY RETENTION AREA 1 TOB - 0.27 ACRES
DRY RETENTION AREA 3 TOB - 0.53 ACRES
DRY RETENTION AREA 4 TOB - 0.47 ACRES
RETAIL, BULK MERCHANDISE INTERIOR FLOOR AREA: 157,531 SF ENTRY VESTIBULE 4,489 SF TOTAL BUILDING GSF: 162,020 GSF
PERPETUAL EASEMENT ORB 2777, PG 282
FDOT LAKE TO BE EXPANDED (TO LIMITS SHOWN HERE) TOB - 2.37 ACRES C.E. - 1.01 ACRES
PARCEL 704 SPOIL EASEMENT (ORB 2777, PG 782)
VACATED PER ORB 574, PG 1617
EXISTING 16" WATER MAIN (CONTRACTOR TO CONFIRM SIZE AND LOCATION PRIOR TO CONSTRUCTION)
EXISTING 12" FORCE MAIN (CONTRACTOR TO CONFIRM SIZE AND LOCATION PRIOR TO CONSTRUCTION)
EXISTING ARV (FORCE MAIN)
EXISTING 6" TEE (FORCE MAIN) (CONTRACTOR TO CONFIRM SIZE AND LOCATION PRIOR TO CONSTRUCTION)
EXISTING 6" FORCE MAIN (CONTRACTOR TO CONFIRM SIZE AND LOCATION PRIOR TO CONSTRUCTION)
EXISTING ARV (WATER MAIN)
EXISTING 16"x12" TEE & 12" GV
APPROX. LOCATION EX. CATCH BASIN & DRAINAGE PIPES
EX. CATCH BASIN RIM: 11.58
EX. FIRE HYDRANT
25' LANDSCAPE BUFFER
24' LANDSCAPE BUFFER
28' LANDSCAPE BUFFER & WALL
EX. 8" WATER MAIN
INSTALL WATER SERVICE TO BUILDING (TYP)
INSTALL (1) 8" WET TAP & 8" GV (1) METER & RPZ
INSTALL 8" RPZ
INSTALL 16"x8" WET TAP & GV
INSTALL FIRE HYDRANT (TYP)
INSTALL FDC (TYP)
INSTALL (1) TEE
INSTALL FIRE LINE TO BUILDING (TYP)
INSTALL 8" SEWER SERVICE (TYP)
INSTALL 8" GRAVITY SEWER (TYP)
INSTALL 8" PRIVATE FIRE LINE
INSTALL GREASE TRAPS (TYP) FINAL SIZING TBD @ FINAL CONSTRUCTION PLANS
INSTALL (3) WET TAP & VALVE (1) METER & RPZ ASSEMBLY (1) DDCV ASSEMBLY
INSTALL (1) WET TAP & VALVE (1) METER & RPZ ASSEMBLY
INSTALL 8"x8" TEE & 8" GV
INSTALL 2" BP DDCV
INSTALL 8" PRIVATE FIRE LINE
INSTALL 8" GRAVITY SEWER (TYP)
INSTALL 8" SEWER SERVICE (TYP)
INSTALL GREASE TRAP (TYP) FINAL SIZING TBD @ FINAL CONSTRUCTION PLANS
INSTALL (1) 1" METER & RPZ ASSEMBLY (1) DDCV ASSEMBLY
INSTALL (1) 1" METER & RPZ ASSEMBLY (1) 3/4" HOSE BIB FOR L.S.
INSTALL FUEL FACILITY
INSTALL 20'x28' CITY OF STUART LIFT STATION
CONNECT TO EX. 8" FM W/ 8" TEE & 8" GV
APPROXIMATE LOCATION OF 12"X8" REDUCER & 8" GV (TO BE FIELD VERIFIED AS NEEDED)
APPROXIMATE LOCATION OF 12" GV
CONNECT TO EX. 16" WM W/ 16" TEE, 16" GV, & 16"x8" REDUCER
APPROXIMATE LOCATION OF 16" X 12" REDUCER (TO BE FIELD VERIFIED AS NEEDED)
20' U.E. ORB 1174, PG 761
EX. POWER POLE
EX. DMH RIM: 8.58
EX. COMMUNICATION MANHOLE RIM: 7.93
EX. DMH RIM: 10.56
EX. DMH RIM: 9.73
EX. DMH RIM: 8.38
EX. DMH RIM: 9.18
TOB
TOP
ENGINEERS & SURVEYORS ENVIRONMENTAL
10250 VILLAGE PARKWAY SUITE 201
PORT ST. LUCIE, FL 34987
772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 9035
L.B. CERTIFICATE OF AUTHORIZATION 8089
KANNER CPUD
OVERALL UTILITY PLAN
STUART
FLORIDA
DAVID C. BAGGETT, P.E. (DATE)
#81375
20-313
3 OF 9
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 EDC, INC. SHALL BE WITHOUT LIABILITY TO EDC, INC.



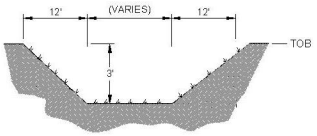
TYPICAL EAST-WEST MAIN ROAD SECTION

NOT TO SCALE



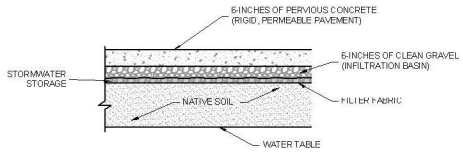
TYPICAL LAKE SECTION

*NOTE: LAKES TO BE EXCAVATED TO A MINIMUM OF 12' BELOW CONTROL ELEVATION UNLESS THE BORING LOGS REVEAL EXCEPTIONAL MATERIAL AND LAKE SIZE ALLOWS FOR DEEPER MATERIAL.

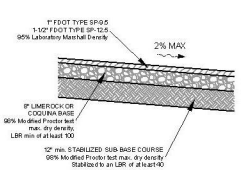


TYPICAL DRY RETENTION SECTION

*NOTE: SOD ALL DISTURBED AREAS

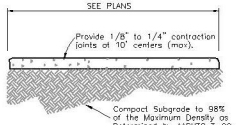


PERVIOUS CONCRETE TYPICAL SECTION W/ GRAVEL BED



TYPICAL ON-SITE PAVEMENT SECTION

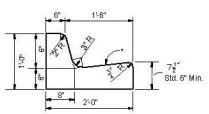
NOT TO SCALE



NOTES:
1. Use 3,000 P.S.I. Concrete At 28 Days for sidewalk construction.
2. Sidewalk thickness to be increased to 6" thick at driveway locations.
3. All repairs required during construction shall be removed and replaced 10' minimum to next full joint.
4. All sidewalk within FDOT right-of-way to be constructed per Standard plans 522-001.

4" THICK ON-SITE SIDEWALK DETAIL

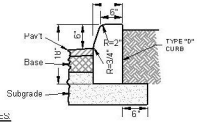
NOT TO SCALE



*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 8", UNLESS OTHERWISE SHOWN ON PLANS.

TYPE "F" CURB DETAIL

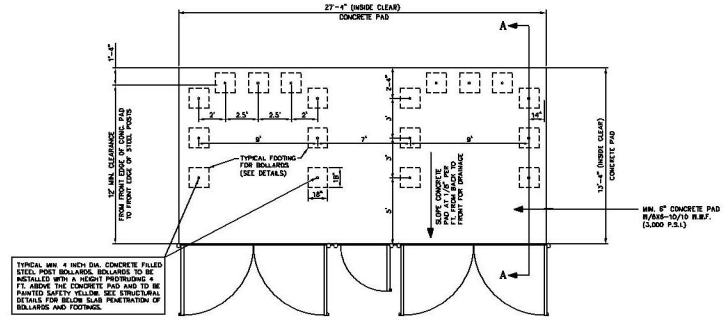
NOT TO SCALE



NOTES:
1. Use 3,000 P.S.I. concrete at 28 days for construction.
2. Subgrade to extend an additional 6" beyond Type "D" Curb.
3. Type "D" Curb to be constructed in accordance with FDOT Standard plans 520-001.

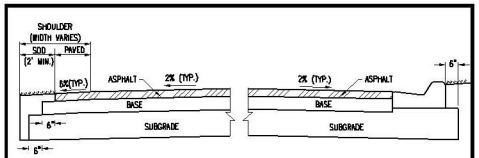
TYPE "D" CURB

NOT TO SCALE



CITY OF STUART DUMPSTER ENCLOSURE – STRUCTURAL PLAN
DOUBLE DUMPSTER w/ RECYCLING

N.T.S.



~~LOCAL RESIDENTIAL (SN-3.0 MIN.)~~
- ~~MIN. E.O.P. ELEVATION - PEAK STAGE OF 10-YR / 24-HR STORM EVENT~~
- ~~SURFACE COURSE - 1.5" TYPE SP-9.5 ASPHALTIC CONCRETE~~
  ~~ASPHALT MIX TO CONTAIN NO MORE THAN 30% RECLAIMED ASPHALT PAVEMENT (R.A.P.)~~
- ~~BASE COURSE: OPTIONAL BASE GROUP 5 PER FDOT INDEX 514~~
- ~~SUBGRADE: 12" COMPACTED OR STABILIZED SUBGRADE (LBR-40)~~

~~COLLECTOR & LOCAL COMMERCIAL/INDUSTRIAL (SN-3.5 MIN.)~~
- ~~MIN. E.O.P. ELEVATION - PEAK STAGE OF 10-YR / 24-HR STORM EVENT (MINOR)~~
- ~~MIN. E.O.P. ELEVATION - PEAK STAGE OF 25-YR / 24-HR STORM EVENT (MAJOR)~~
- ~~SURFACE COURSE - 1½" TYPE SP-12.5 ASPHALTIC CONCRETE (1ST LIFT)~~
  ~~1" TYPE SP-9.5 ASPHALTIC CONCRETE (2ND LIFT)~~
  ~~ASPHALT MIX TO CONTAIN NO MORE THAN 30% R.A.P.~~
- ~~BASE COURSE: OPTIONAL BASE GROUP 5 PER FDOT INDEX 514~~
- ~~SUBGRADE: 12" COMPACTED OR STABILIZED SUBGRADE (LBR-40)~~

ARTERIAL (SN-4.0 MIN.)
MIN. E.O.P. ELEVATION PEAK STAGE OF 25-YR / 72-HR STORM EVENT
- SURFACE COURSE 1½" TYPE S-1 OR SP-12.5 ASPHALTIC CONCRETE (1ST LIFT)
  1½" TYPE SP-9.5 ASPHALTIC CONCRETE (2ND LIFT)
  ASPHALT MIX TO CONTAIN NO MORE THAN 30% R.A.P.
- BASE COURSE: OPTIONAL BASE GROUP 9 PER FDOT INDEX 514
- SUBGRADE: 12" COMPACTED OR STABILIZED SUBGRADE (LBR-40)

NOTES:
1. SHOULDER DESIGN:
   - SURFACE COURSE: SAME AS TRAVEL LANE SURFACE COURSE
   - BASE COURSE: OPTIONAL BASE GROUP 4 PER FDOT INDEX 514
2. STRUCTURAL NUMBER (SN) PER FDOT STANDARDS (REFER TO FDOT FLEXIBLE PAVEMENT DESIGN MANUAL).
3. SUBSTITUTIONS MAY BE APPROVED BY MARTIN COUNTY, PROVIDED MINIMUM SN IS DEMONSTRATED.
4. R.A.P. – RECLAIMED ASPHALT PAVEMENT REUSED IN NEW HOT MIX ASPHALT MIXES (30% MAX IN ALL MIX DESIGNS)

MARTIN COUNTY ENGINEERING - STANDARD DETAILS
FLEXIBLE PAVEMENT SECTIONS
DETAIL R-10
DATE: 12/20/18

ENGINEERS ⊘ SURVEYORS ENVIRONMENTAL
10250 VILLAGE PARKWAY
SUITE 201
PORT ST. LUCIE, FL 34987
☎ 772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 9035
L.B. CERTIFICATE OF AUTHORIZATION 8089

EDC DESIGNED BY | JLM DRAWN BY | 20-313 engineering project file no. | FLEXPAVE | POD Details | LAYOUT | AS SHOWN | SCALE | 10x24 (1) | SIZE

REVISION COMMENTS | DATE

KANNER CPUD

PAVING, GRADING, & DRAINAGE DETAILS

STUART | FLORIDA

DAVID C. BAGGETT, P.E. (DATE)
#81375
10250 SW VILLAGE PARKWAY - SUITE 201
PORT SAINT LUCIE, FL 34987
☎ 772-462-2455

20-313

4 OF 9

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CITY OF STUART
WATER DISTRIBUTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE CITY OF STUART.
2. WATER MAIN WHERE SPECIFIED AS POLYVINYL CHLORIDE (PVC) SHALL CONFORM TO AWWA C-900 OR C-905, PRESSURE CLASS 150 OR 235, DR (18).
3. MIN. CLASS 50 WATER MAIN, WHERE SPECIFIED AS DUCTILE IRON PIPE , SHALL CONFORM TO ANSI/AWWA C-150/A-21.50 OR ANSI/AWWA C-151/A-21.51 AND SHALL BE PRESSURE CLASS 350 (MINIMUM).
4. POLYVINYL CHLORIDE WATER MAIN SHALL BE BLUE IN COLOR. ALL PIPE REQUIRE 1mm TRACER WIRE
5. FITTINGS SHALL BE CAST OR DUCTILE IRON, CONFORMING TO AWWA C-110 AND ANSI A21.11, CLASS 250 MINIMUM, CEMENT LINED, AND SEAL COATED.
6. GATE VALVES SHALL BE RESILIENT WEDGE SEAT. VALVES SHALL CONFORM TO AWWA C-509 AS WELL AS THE CITY OF STUARTS PRODUCT LIST.
7. WATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE CITY OF STUART'S DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY THE CITY AND THE COUNTY, FDOT. IN CASES WHERE AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
8. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND CITY/COUNTY/FDOT.
9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, CITY OF STUART AND COUNTY/FDOT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
10. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, THE CITY, COUNTY/FDOT AND ANY OTHER APPLICABLE AGENCIES SHALL BE MANDATORY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
11. TRAFFIC CONTROL, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF OF TRANSPORTATION STANDARDS AND APPROVED BY THE CITY ENGINEER.
12. MINIMUM COVER SHALL BE 36 INCHES EXCEPT AS APPROVED BY THE ENGINEER AND CITY/COUNTY/FDOT.
13. DISTURBED AREAS SHALL BE RESTORED IN CONFORMANCE WITH THE APPLICABLE GOVERNING AGENCY REQUIREMENTS.
14. EXISTING UTILITIES AND DRAINAGE SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND PROTECTED BY THE CONTRACTOR.
15. WATER MAINS SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH THE APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND AWWA C-601 FOR DISINFECTION.

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

WATER DISTRIBUTION NOTES
DATE: OCTOBER, 2018
FILE NAME: 2018 CDS Std Details.dwg
SHEET NUMBER 1

CITY OF STUART
WATER DISTRIBUTION NOTES
CONTINUED

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING UTILITIES AND DRAINAGE.
17. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER INCLUDING LOCATIONS OF VALVES, FITTINGS, SERVICE CONNECTIONS, BLOWOFFS, AIR RELEASE VALVES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT, AS REQUIRED BY THE UTILITIES ENGINEER.
18. THE CONTRACTOR SHALL TAP EXISTING LINES UNDER THE SUPERVISION OF THE CITY OF STUART ONLY AFTER TESTING AND DISINFECTION HAS BEEN COMPLETED AND APPROVED ON THE TAPPING SLEEVE AND VALVE.
19. SAMPLE POINT TAPS SHALL BE PLACED APPROXIMATELY THREE FEET AWAY FROM GATE VALVES, AS SHOWN, FOR TESTING. FOLLOWING TESTING AND STERILIZATION OF WATER LINES, CONTRACTOR SHALL PLACE A BRASS PLUG IN CORPORATION STOPS AND CURB STOPS SHALL BE REMOVED FROM TESTING LOCATIONS.
20. MECHANICAL RESTRAINTS TO BE USED ON ALL FITTINGS AND PLACED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND CITY OF STUART REQUIREMENTS, MORE STRINGENT SHALL APPLY.
21. ALL MAINS SHALL BE TESTED AT A MINIMUM OF 150 PSI. TESTING METHODS SHALL CONFORM TO AWWA C-600.

$$L = \frac{SND(P)^{1/2}}{133,200}$$

L= LEAKAGE IN GPH
S= LENGTH OF PIPE IN FEET
D= PIPE DIAMETER IN INCHES
P= TESTING PRESSURE IN PSI

22. PRIOR TO ANY TESTING, ALL MAINS 3" IN DIA. AND LARGER SHALL HAVE A LINE SIZE SWAB PASSED THRU THE ENTIRE LENGTH OF THE LINE. NOTE: SWAB SHOULD BE PLACED IN 1st. JOINT OF NEW LINE. END OF MAIN SHOULD BE "TURNED UP" AT 45Ø AND EXTENDED SO THAT SWABBING AND A FULL BORE FLUSH CAN BE ACCOMPLISHED. BLOW-OFF ASSY CAN THEN BE PLACED. WHERE LINES BRANCH, SWABS WILL BE PLACED IN BRANCH LINES AND SEQUENTIALLY SWABBED AND FLUSHED.
23. TEN FEET MINIMUM HORIZONTAL AND 12 INCHES MINIMUM VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND ANY WASTEWATER LINES. THE DISTANCE SHALL BE MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE OR STRUCTURE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
24. WHERE A WATER MAIN IS TO BE INSTALLED BELOW A STORM DRAIN PIPE, A MINIMUM OF 6 INCHES OF VERTICAL CLEARANCE BETWEEN PIPES SHALL BE CONSTRUCTED OF DIP AT THE CROSSING, AND SHALL BE MECHANICALLY RESTRAINED WITHIN 20 FEET OF THE CROSSING.
25. CONTRACTOR SHALL COMPLY WITH FLORIDA TRENCH SAFETY ACT REQUIREMENTS.

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

WATER DISTRIBUTION NOTES
DATE: OCTOBER, 2018
FILE NAME: 2018 CDS Std Details.dwg
SHEET NUMBER 2

CITY OF STUART
WASTEWATER CONSTRUCTION NOTES

1. ALL CONSTRUCTION MATERIAL, INSTALLATION AND TESTING SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE CITY OF STUART.
2. GRAVITY SEWER MAIN SHALL BE POLYVINYL CHLORIDE SDR-35, GREEN IN COLOR.
3. THE MANHOLE BASE SHALL BE SET ON A FIRM, DRY AND STABLE OR COMPACTED BASE FOUNDATION. IF NECESSARY, THE CONTRACTOR SHALL UTILIZE ROCK TO PROVIDE A FIRM AND SUITABLE MANHOLE BASE FOUNDATION.
4. WASTEWATER LINES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE CITY OF STUART DESIGN AND CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SUBMIT CERTIFIED DENSITY TESTS AS REQUIRED BY THE CITY. IN CASES WHERE AREAS FALL WITHIN THE JURISDICTION OF LOCAL OR STATE AGENCIES, THE COMPACTION REQUIREMENTS SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY THE APPROPRIATE RESPONSIBLE AGENCY.
5. A 1% MINIMUM SLOPE SHALL BE MAINTAINED ON ALL SANITARY SERVICE LATERALS.
6. THE CONTRACTOR SHALL FURNISH RECORD DRAWING INFORMATION TO THE ENGINEER CONSISTING OF PIPE SIZES, LOCATION OF SERVICE TEE WYES, DIAMETER OF SERVICES, LOCATION OF ANY FITTINGS, FINAL RIM AND INVERT ELEVATION OF ALL MANHOLES AND ANY OTHER PERTINENT INFORMATION NECESSARY TO LOCATE ITEMS CONSTRUCTED UNDER THIS PROJECT.
7. MAINTAIN 10 FEET HORIZONTAL DISTANCE BETWEEN WATER MAINS AND SEWER MAINS AS A MINIMUM.
8. WASTEWATER FORCE MAINS, WASTEWATER COLLECTION LINES, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. A MINIMUM VERTICAL DISTANCE OF 12 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE PROVIDED WHENEVER POSSIBLE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE WASTEWATER PIPE JOINTS AND THE WATER PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING, AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
9. A PRE-CONSTRUCTION CONFERENCE BETWEEN THE ENGINEER, THE CONTRACTOR, CITY OF STUART PUBLIC WORKS DEPARTMENT, COUNTY/FDOT AND ANY OTHER NECESSARY AGENCIES SHALL BE MANDATORY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. NO FIELD CHANGES OR DEVIATIONS FROM THE DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL FROM THE ENGINEER, CITY, OR COUNTY/FDOT.
11. TRAFFIC CONTROL, BARRICADES, ETC. SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
12. CONTRACTOR SHALL NOTIFY THE CITY OF STUART 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
13. WASTEWATER FORCE MAIN SHALL BE POLYVINYL CHLORIDE CONFORMING TO AWWA C-900, AND SHALL BE CLASS 150, DR-18 (12" AND SMALLER), OR DR-25, AWWA C-905 (14" AND ABOVE).
14. WASTEWATER FORCE MAIN SHALL BE GREEN IN COLOR. WASTEWATER FORCE MAIN SHALL HAVE THHN WIRE & LOCATOR TAPE WITH "SEWER" MARKED ON TAPE.
15. FITTINGS SHALL BE CAST OR DUCTILE IRON, CONFORMING TO AWWA C-110 AND ANSI A21.11, CLASS 250 MINIMUM, CEMENT LINED, & EPOXY COATED.
16. WASTEWATER FORCE MAIN SHALL BE MARKED BY THE USE OF CONTINUOUS COPPER WIRE (GREEN IN COLOR) OR OTHER APPROVED SIGNAL.
17. MINIMUM COVER SHALL BE 48 INCHES, PIPES WITH LESS COVER REQUIRE PRIOR APPROVAL OF THE ENGINEER AND CITY OF STUART AND SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE.
18. ALL MANHOLES SHALL HAVE SEWER RAIN GUARDS INSTALLED.
19. THE CONTRACTOR SHALL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT REQUIREMENTS.
20. PRIOR TO ANY TESTING, ALL MAINS 3" IN DIA. AND LARGER SHALL HAVE A LINE SIZE SWAB PASSED THRU THE ENTIRE LENGTH OF THE LINE. NOTE: SWAB SHOULD BE PLACED IN 1st. JOINT OF NEW LINE. END OF MAIN SHOULD BE "TURNED UP" AT 45Ø AND EXTENDED SO THAT SWABBING AND A FULL BORE FLUSH CAN BE ACCOMPLISHED. BLOW-OFF ASSY CAN THEN BE PLACED. WHERE LINES BRANCH, SWABS WILL BE PLACED IN BRANCH LINES AND SEQUENTIALLY SWABBED AND FLUSHED.

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

WASTEWATER CONSTRUCTION NOTES
DATE: OCTOBER, 2018
FILE NAME: 2018 CDS Std Details.dwg
SHEET NUMBER 3

STANDARD SEPARATION STATEMENT FOR
WATER / SEWER CONFLICTS

1. SANITARY SEWER, FORCE MAINS, AND STORM SEWERS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, FORCE MAINS AND STORM SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.

   WHERE SANITARY SEWER, FORCE MAINS, STORM SEWERS MUST CROSS A WATER MAIN LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. (DIP IS NOT REQUIRED FOR STORM SEWERS.) SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.

   ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

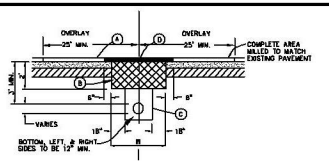
   WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWERS) AND NEW PIPES SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.
2. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

   IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON A UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

   WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP, AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (EXCEPT STORM SEWER) WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
3. ALL DIP SHALL BE PRESSURE CLASS 350 MIN. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN ENGINEER.

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

WATER and SEWER CONFLICT NOTES
DATE: OCTOBER, 2018
FILE NAME: 2018 CDS Std Details.dwg
SHEET NUMBER 4



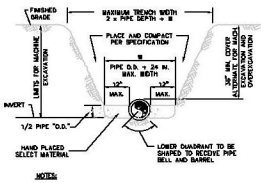
A. OVERLAY SHALL EXTEND 25' BEYOND TRENCH MILL ON BOTH SIDES OF ROAD CUT MINIMUM TYPE S-III ASPHALT OR MATCH EXISTING SURFACE MATERIAL WHEN POSSIBLE.
B. CONSTRUCT 2.0' DEEP X WIDTH AND LENGTH OF TRENCH WITH CEMENTED COQUINA OR LIMEROCK, SEE SPECIFICATIONS #2 BELOW FOR COMPACTION REQUIREMENTS.
C. PROVIDE CLEAN BACKFILL. BACKFILL SHALL BE REPLACED IN 6" LAYERS. EACH LAYER SHALL BE MECHANICALLY COMPACTED TO A MINIMUM 98% DENSITY AS DETERMINED BY AASHTO T-180.
D. DITCH WIDTH (W)=12", MATCH EXISTING TYPE AND THICKNESS OF ASPHALT OR TYPE S-3I.

NOTES:
1. REPLACED BASE MATERIAL OVER DITCH SHALL BE AS SHOWN ABOVE.
2. BASE MATERIAL SHALL BE PLACED IN 6" LAYERS OR AS OTHERWISE APPROVED AND EACH LAYER THOROUGHLY MECHANICALLY COMPACTED TO (98%) DENSITY AS DETERMINED BY AASHTO T-180.
3. FINAL ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MILLED TO MATCH EXISTING ASPHALT.
4. ALL PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED 90 DEGREES.
5. SURFACE MATERIAL WILL BE CONSISTENT WITH EXISTING SURFACE OR AS OTHERWISE DIRECTED (TYPE S-3I) AND PLACED IN ACCORDANCE WITH FDOT REQUIREMENTS.
6. A MINIMUM OF TWO DENSITY TESTS SHALL BE TAKEN FOR EACH SIX (6) INCH LIFT OF SUBGRADE AND EACH OPEN CUT CROSSING. WHEN THE SPECIFIED COMPACTED BASE IS GREATER THAN SIX AND ONE-HALF (6+1/2) INCHES THE BASE SHALL BE CONSTRUCTED IN TWO OR MORE COURSES. PROCTORS FOR MATERIALS USED IN BACK-FILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE TESTING CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO THE PUBLIC WORKS DEPT. AND/OR THE ENGINEER OF RECORD.

CITY OF STUART PAVEMENT RESTORATION DETAIL
(ASPHALT)

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
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(772) 288-5300

PAVEMENT RESTORATION DETAIL (ASPHALT)
DATE: OCTOBER, 2018
FILE NAME: 2018 CDS Std Details.dwg
SHEET NUMBER 7



NOTES:
1. THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
2. INITIAL BACKFILL SHALL BE HAND PLACED TO 12" ABOVE THE PIPE. BACKFILL SHALL BE MECHANICALLY TAMPED TO A MINIMUM OF 90% OF MAX. DENSITY AS DETERMINED BY AASHTO METHOD T-180.

TYPICAL TRENCH DETAIL

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
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TYPICAL TRENCH DETAIL
DATE: OCTOBER, 2018
FILE NAME: 2018 CDS Std Details.dwg
SHEET NUMBER 9

ENGINEERS & SURVEYORS
ENVIRONMENTAL
10250 VILLAGE PARKWAY
SUITE 201
PORT ST. LUCIE, FL 34987
772-462-2455
www.edc-inc.com
F.B.P.E. CERTIFICATE OF AUTHORIZATION 9035
L.B. CERTIFICATE OF AUTHORIZATION 8089

EDC DESIGNED BY | LAM DRAWN BY | 20-313 engineering set of.dwg FILENAME | Utility Details LAYOUT | AS SHOWN SCALE | 20JUL'21 DATE

REVISION COMMENTS | DATE

KANNER CPUD
UTILITY DETAILS
STUART FLORIDA

DAVID C. BAGGETT, P.E. (DATE)
#81375

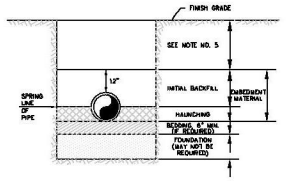
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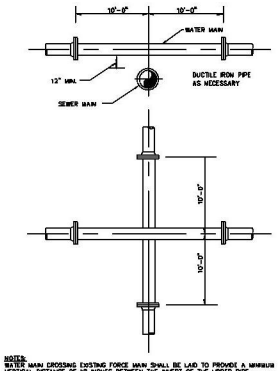
NOTES:

1. IN CERTAIN SOIL CONDITIONS A FOUNDATION MAY BE REQUIRED.
2. BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE.
3. HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4. INITIAL BACKFILL MATERIAL SHALL BE HAND PLACED TO 12" ABOVE THE TOP OF PIPE AND BE COMPACTED USING A HAND OPERATING TAMPING DEVICE.
5. BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY AS PER AASHTO T-180.
6. DENSITY TEST SHALL BE PERFORMED AT AREAS DETERMINED BY THE DESIGN ENGINEER OR PERMIT AGENCY HAVING JURISDICTION.

BACKFILLING REQUIREMENTS
OVER CITY OF STUART UTILITIES

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

BACKFILLING REQUIREMENTS
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 10

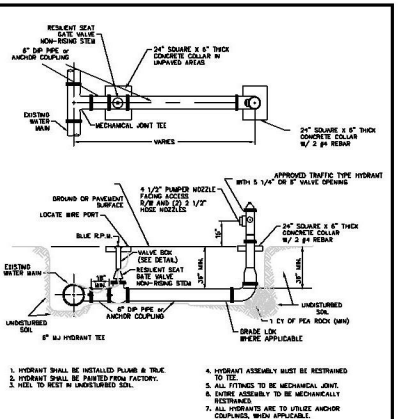


NOTE:
WATER MAIN CROSSING EXISTING FORCE MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 12 INCHES BETWEEN PIPES. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUAL DISTANCE FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING). IN ALL CASES A MIN. 18" VERTICAL SEPERATION SHALL BE REQUIRED.

UTILITY CROSSING DETAIL

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

UTILITY CROSSING DETAIL
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 15

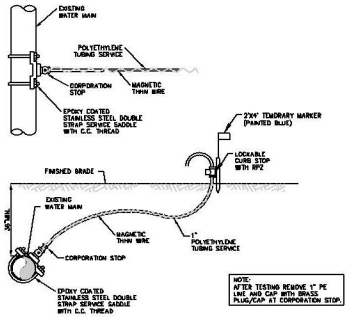


1. HYDRANT SHALL BE INSTALLED PLUMB & TRUE.
2. HYDRANT SHALL BE PAINTED FROM FACTORY.
3. HEEL TO REST IN UNDISTURBED SOIL.
4. HYDRANT ASSEMBLY MUST BE RESTRAINED TO TEE.
5. ALL FITTINGS TO BE MECHANICAL JOINT.
6. ENTIRE ASSEMBLY TO BE MECHANICALLY RESTRAINED.
7. ALL HYDRANTS ARE TO UTILIZE ANCHOR COUPLINGS, WHEN APPLICABLE.

TYPICAL FIRE HYDRANT ASSEMBLY

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City of Stuart Public Works Department
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TYPICAL FIRE HYDRANT ASSEMBLY
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 25



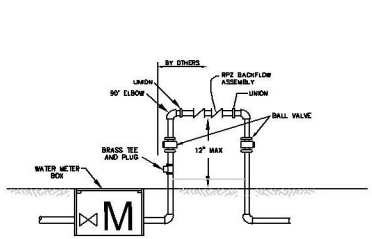
NOTE: AFTER TESTING REMOVE 1" PE LINE AND CAP WITH BRASS PLUG/CAP AT CORPORATION STOP.

BACTERIOLOGICAL SAMPLING POINT DETAIL

NOTE: ADD LAMINATED SIGN NOTING THAT "TESTING IS IN PROGRESS - DO NOT DISTURB" WHILE SAMPLE POINT IS IN SERVICE.

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
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BACTERIOLOGICAL SAMPLING POINT DETAIL
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 28

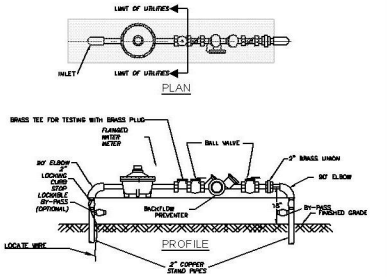


TYPICAL POTABLE / RECLAIMED WATER METER WITH BACKFLOW PREVENTER ASSEMBLY
5/8" X 3/4" & 1"
(COMMERCIAL / IRRIGATON)
BACKFLOW DEVICE MUST BE LANDSCAPED

NOTES:
1. RECLAIMED WATER BACKFLOW PREVENTER ASSEMBLY MUST BE PAINTED PURPLE PANTONE 522.
2. METER TO BE SUPPLIED BY THE CITY OF STUART

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
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TYPICAL BACKFLOW PREVENTER ASSEMBLY
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 29



NOTES:
1. LANDSCAPING REQUIRED PER CITY OF STUART ORDINANCE. NO PLANTS OR TREES WITHIN 18" AROUND METER OR BACKFLOW. NO SOLDER JOINTS. MUST BE SCREENED, NO GRASS IN PERIOD.
2. ASSEMBLY TO BE 18" FROM FINISH GRADE TO CENTERLINE OF THE 90° BEND.
3. RECLAIMED WATER METER ASSEMBLY MUST BE PAINTED PANTONE PURPLE 522.
4. NO SOLDER JOINTS.

1.5" & 2" POTABLE / RECLAIMED
WATER METER & BACKFLOW
PREVENTER ASSEMBLY SERVICE
(COMMERCIAL)

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

TYPICAL BACKFLOW PREVENTER ASSEMBLY
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 30

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SUITE 201
PORT ST. LUCIE, FL 34987
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DRAWN BY: 20120 preliminary set of new FILENAME
LAYOUT: Utility Details (2)
SCALE: AS SHOWN
SHEET NO.: SHEET NO.

REVISION COMMENTS
DATE

KANNER CPUD

UTILITY DETAILS

STUART FLORIDA

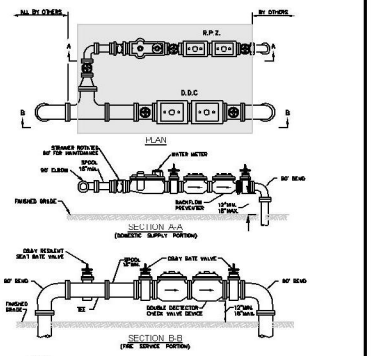
DAVID C. BAGGETT, P.E. (DATE)
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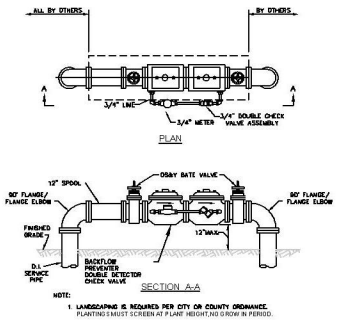


NOTES:
1. LANDSCAPING REQUIRED PER CITY OR COUNTY ORDINANCE. NO PLANTS OR TREES WITHIN 18" AROUND METER TO ALLOW MAINTENANCE WITHOUT DAMAGE TO PLANTS ETC.
2. NO SOLDER JOINTS.

WATER METER / BACKFLOW PREVENTER ASSEMBLY
- FIRE SERVICE w/ DOMESTIC SUPPLY

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.E. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

WATER METER/BACKFLOW PREVENTER-FIRE SERVICE w/ DOMESTIC SUPPLY
DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 32

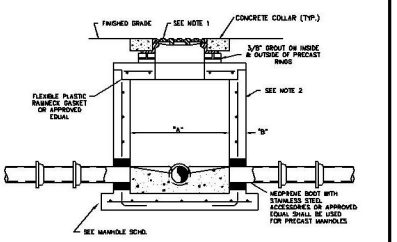


NOTE:
1. LANDSCAPING IS REQUIRED PER CITY OR COUNTY ORDINANCE. PLANTING MUST SCREEN AT PLANT HEIGHT, NO GROW IN PERIOD.

DOUBLE CHECK VALVE
w/ DETECTOR CHECK ASSEMBLY / FIRE SERVICE

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.E. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

DOUBLE CHECK VALVE
w/ DETECTOR CHECK ASSEMBLY
DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 33



PIPE DIA.	"A"	"B"	BOT. SLAB "T"
8"-24"	4'-0"	"B"	8"
30"-36"	5'-0"	"B"	10"
42"-48"	6'-0"	"B"	12"

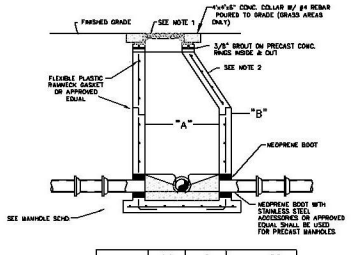
TYPICAL MANHOLE DIMENSIONS

NOTES:
1. MANHOLE FRAME & COVER WITH THE WORDS " SANITARY SEWER" CAST IN THE COVER. U.S. FOUNDRY 170 OR APPROVED EQUAL.
2. ALL CONCRETE MANHOLES TO BE 4000 P.S.I. TO MEET OR EXCEED ASTM C478 ALL CEMENT TO BE TYPE II ACID RESISTANT. REINFORCING AREA OF 0.02 SQ. IN/FT FOR WALL SECTION MIN. TO MEET OR EXCEED ASTM A 185.
3. A MAXIMUM OF 2 LAYERS OF PRECAST CONCRETE RINGS, IF REQUIRED.
4. RAINGUARDS SHALL BE INSTALLED IN MANHOLES.
5. ALL MANHOLES SHALL BE COATED INSIDE AND OUTSIDE W/ 8-10 MILS EACH OF 100% WATER BASED EPOXY.

SHALLOW MANHOLE
(DEPTH LESS THAN 5'-0")

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.E. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

SHALLOW MANHOLE
(DEPTH LESS THAN 5'-0")
DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 36



PIPE DIA.	"A"	"B"	BOT. SLAB "T"
8"-24"	4'-0"	"B"	8"
30"-36"	5'-0"	"B"	10"
42"-48"	6'-0"	"B"	12"

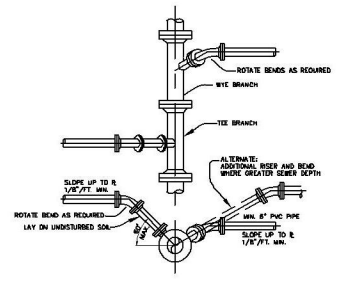
TYPICAL MANHOLE DIMENSIONS

NOTES:
1. MANHOLE FRAME & COVER WITH THE WORDS " SANITARY SEWER" CAST IN THE COVER. U.S. FOUNDRY 170 OR APPROVED EQUAL.
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5. ALL MANHOLES SHALL BE COATED INSIDE AND OUTSIDE W/ 8-10 MILS EACH OF 100% WATER BASED EPOXY.

STANDARD MANHOLE

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.E. Flagler Avenue, Stuart, Florida 34994
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STANDARD MANHOLE
DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 37

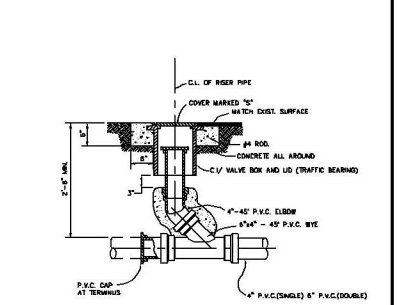


NOTE:
SERVICE LATERALS SHALL TERMINATE AT R/W AT A DEPTH OF (3)FEET, PLUGGED WATERTIGHT AND MARKED WITH 2"x2" TREATED STAKE AND ELECTRONIC MARKER

SERVICE CONNECTION
(LATERAL)

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
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SERVICE CONNECTION
(LATERAL)
DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 41



TERMINAL/ SERVICE LATERAL CLEANOUT DETAIL

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.E. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

TERMINAL/SERVICE LATERAL CLEANOUT DETAIL
DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 43

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SUITE 201
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772-462-2455
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L.B. CERTIFICATE OF AUTHORIZATION 6089

EDC DESIGNED BY: JLM
DRAWN BY:
20-313 preliminary set of plans FILENAME: Utility Details (2)
LAYOUT:
AS SHOWN
SCALE:
20JUL'21
ISSUE:

NO.	REVISION COMMENTS	DATE

KANNER CPUD

UTILITY DETAILS

STUART FLORIDA

DAVID C. BAGGETT, P.E.(DATE)
#81375

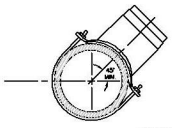
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20-313

7 OF 9

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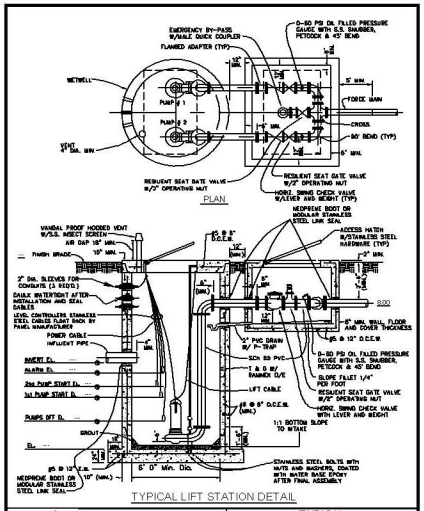
Z:\EDC 2020\20-313 - Costco Stuart - Kanner Highway\ENGINEERING\Autocad\20-313 Preliminary Eng Kidney Details (3) 7.20.2021 11:38:59 AM, Jessica EDC, Inc.



WASTEWATER SERVICE TAP DETAIL

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

WASTEWATER SERVICE TAP DETAIL
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 44



TYPICAL LIFT STATION DETAIL

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

TYPICAL LIFT STATION DETAIL
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 52

PUMP DATA:
MANUFACTURER, _____
MODEL No. ___ IMP. No. ___ MOTOR, ___ HP.
___ RPM, ___ VOLTS, ___ PHASE, 60 HERTZ

OPERATING CONDITIONS:
___ GPM AT ___ TDH, ___ % EFFICIENCY

WET WELL:
SIZED FOR MINIMUM PUMP CYCLE TIME OF 10 MINUTES AND A MAXIMUM OF 6 PUMP STARTS PER HOUR, WORKING DEPTH ___ FT. WORKING VOLUME ___ GALS.

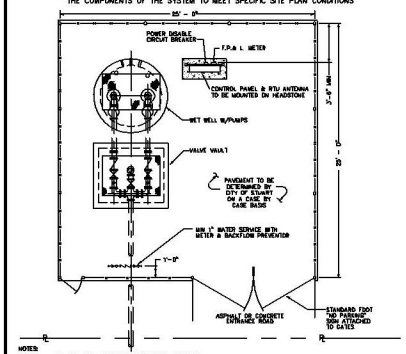
ELECTRICAL:
FEEDERS AND CONDUIT _____ MAIN SWITCH ___ POLES ___ AMPS.

TYPICAL LIFT STATION DATA

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

TYPICAL LIFT STATION DATA
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 53

THIS DRAWING DEPICTS A GENERAL SITE PLAN ONLY. THE ENGINEER OF RECORD SHALL ORIENT THE COMPONENTS OF THE SYSTEM TO MEET SPECIFIC SITE PLAN CONDITIONS

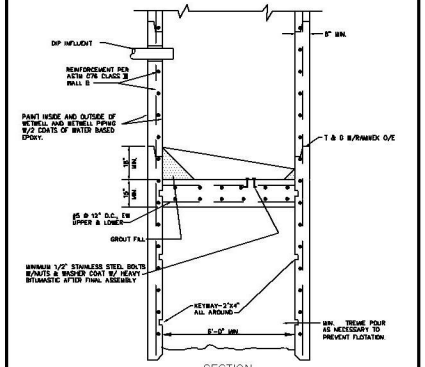


NOTES:
1. MINIMUM 12' WIDE ASPHALT OR CONCRETE ENTRANCE ROAD.
2. ENTRANCE ROAD TO BE EITHER CONCRETE OR ASPHALT AND CONFORM TO FDOT SPECIFICATIONS.
3. PROVIDE TWO (2) 6X FOOT WIDE SWING OPEN GATES AT THE ENTRANCE ROAD AND A 3.5' WALK-IN GATE.
4. PROVIDE A 1" DCDA WATER SERVICE WITH METER BOX THAN A REDUCED PRESSURE BACKFLOW PREVENTER AS REQUIRED BY CITY CODE.
5. THE CHAIN LINK FABRIC SHALL BE HOT-DIPPED GALVANIZED AFTER WEAVING. THE SIZE OF MESH SHALL BE 2 INCHES AND THE SIZE OF COATED WIRE SHALL BE 9 GAGE. FABRIC HEIGHT SHALL BE 72 INCHES. PRIVACY SLATS TO BE INSTALLED.
6. ALL POSTS, RAILS AND APPURTENANCES SHALL BE HOT-DIPPED ZINC-COATED STEEL. PIPE POSTS SHALL HAVE TOPS WHICH EXCLUDE MOISTURE. END, CORNER, PULL AND GATE POSTS SHALL BE BRACED WITH THE SAME MATERIAL AS TOP RAIL AND TRUSSED TO LINE POSTS WITH 3/8" RODS AND TIGHTENERS.
7. TOP AND BOTTOM RAIL SHALL BE 1 5/8" OD STANDARD WEIGHT PIPE, 2.27 lbs PER FT. INTERMEDIATE POSTS SHALL BE 2" OD STANDARD WEIGHT PIPE, 2.27 lbs PER FT AND POSTS FOR SWING GATES SHALL BE 4" OD STANDARD WEIGHT PIPE, 9.11 lbs PER FT.
8. POSTS WHICH COME IN CONTACT WITH CONCRETE SHALL BE COATED WITH WATER BASE EPOXY.
9. LIFT STATION MUST BE SCREENED WITH OTHER LANDSCAPING (AT PLANT HEIGHT, NO GROW IN PERIOD) OR APPROVED SPACKLE FENCE MATERIAL.
10. WATER VALVE SHALL BE LOCATED @ OR NEAR CONNECTION TO FORCEMAIN.

TYPICAL LIFT STATION SITE PLAN

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

TYPICAL LIFT STATION PLAN
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 54



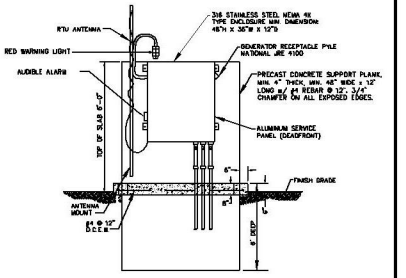
SECTION

NOTES:
1. CONCRETE WETWELL SECTIONS SHALL BE CONNECTED BY STEEL STRAPS. CONTRACTOR SHALL SUBMIT METHOD TO CITY OF STUART PUBLIC WORKS DEPARTMENT FOR APPROVAL ALONG WITH SHOP DRAWINGS.
2. SEE TYPICAL LIFT STATION DETAILS FOR ADDITIONAL DESIGN AND CONSTRUCTION STANDARDS.
3. BUOYANCY CALCULATIONS SHALL BE SUBMITTED TO THE CITY AND REVIEW. DESIGN CRITERIA SHALL BE BASED ON DEPTH OF GROUNDWATER AT FINISHED GRADE ELEVATION.

LIFT STATION TREMIE POUR DETAIL

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
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LIFT STATION TREMIE POUR DETAIL
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 55



NOTES:
1. ELECTRIC METER AND PRIMARY DISCONNECT MOUNTED ON BACK SIDE OF PANEL.
2. EMERGENCY GENERATOR RECEPTACLES: PYLE NATIONAL JRE 4100 (100 amp), 2044FR (200 amp).
3. ALL POWER AND CONTROLS LINES SHALL BE CONTINUOUS (NO SPLICES).
4. POWER SUPPLY MECHANICALLY INTERLOCKED.
5. GROUND FAULT INTERRUPTER ON CONVENIENCE RECEPTACLE.
6. CONTROL PANEL SHALL BE UL LISTED AS A UNIT.
7. TELEMETRY CONDUIT SHALL BE INSTALLED BY THE CONTRACTOR WITH SWEEP 90 DEGREE BEND.
8. ALL HARDWARE, NUTS & BOLTS, AND APPURTENANCES ABOVE GROUND SHALL BE 316 STAINLESS STEEL.
9. TCU FOR DATA FLOW MOUNTED INSIDE PANEL.

TYPICAL L/S CONTROL PANEL

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
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TYPICAL L/S CONTROL PANEL
DATE: OCTOBER, 2015
FILE NAME: 2015 CDS Std Details.dwg
SHEET NUMBER 56

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EDC DESIGNED BY: JLM
DRAWN BY:
20-313 preliminary set of eng FILENAME
Utility Details (4)
LAYOUT
AS SHOWN
SCALE
30x42 (2)
SIZE

REVISION COMMENTS
DATE

KANNER CPUD

UTILITY DETAILS

STUART FLORIDA

DAVID C. BAGGETT, P.E. (DATE)
#81375
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8 OF 9

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208V, 3ø, 4W, DUPLEX LIFT STATION EQUIPMENT SCHEDULE							
SERVICE CONDUIT & WIRE	MOTOR H.P.	STARTER NEMA SIZE	PUMP C.B. RATING	MCB & FCB RATING	SERVICE DISC. RATING	REM. RECEPT.	SPECIFIC NOTES
3ø#1"C	1/2	1	15	30	30/30	⑦	
3ø#1"C	3/4	1	15	30	30/30	⑦	
3ø#1"C	1	1	15	30	30/30	⑦	
3ø#1"C	1-1/2	1	15	30	30/30	⑦	
3ø#1"C	2	1	15	30	30/30	⑦	
3ø#1-1/4"C"C	3	1	20	40	40/60	⑦	
3ø#1-1/4"C"C	5	1	40	80	80/100	⑦	
3ø#1-1/4"C"C	7-1/2	1	50	80	80/100	⑦	
4@1/0#3-1/4"C	10	2	80	100	100/100	⑦	
4-1/0#2"C	15	3	80	150	150/200	⑥	
4-3/0#1/0-1/2"C	20	3	90	150	200/200	⑧	⑤
240V, 1ø, 3W, DUPLEX LIFT STATION EQUIPMENT SCHEDULE ⑤							
SERVICE CONDUIT & WIRE	MOTOR H.P.	STARTER NEMA SIZE	PUMP C.B. RATING	MCB & FCB RATING	SERVICE DISC. RATING	REM. RECEPT.	SPECIFIC NOTES
4ø#1"C	1/4	1	15	30	30/30	⑨	
4ø#1"C	1/3	1	15	30	30/30	⑨	
4ø#1"C	1/2	1	15	30	30/30	⑨	
4ø#1"C	3/4	1	15	30	30/30	⑨	
4ø#1"C	1	1	15	40	40/60	⑨	
4ø#1"C	1-1/2	1	20	40	40/60	⑨	
4ø#1"C	2	1	25	50	50/60	⑨	
3ø#1/0#1"C	3	1	35	80	60/60	⑨	④

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
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LIFT STATION EQUIPMENT SCHEDULE

DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 59

GENERAL ELECTRICAL NOTES

1. SERVICE CONDUIT AND WIRE INDICATED IN SCHEDULE SHALL BE 100 FEET OR LESS FOR LENGTHS GREATER THAN 100 FEET, PROVIDE FLORIDA REGISTERED ELECTRICAL ENGINEER'S DESIGN.
2. INTERRUPTING RATINGS OF ALL SHORT CIRCUIT AND GROUND FAULT PROTECTION EQUIPMENT SHALL BE PROVIDED AS PER THE DESIGN OF A FLORIDA REGISTERED ELECTRICIAN ENGINEER. A FAULT CURRENT LETTER FROM FPL SHALL BE PROVIDED.
3. FOR MOTOR HP NOT EQUAL TO NEC STANDARD SIZE, USE THE NEXT STANDARD SIZE RATING.
4. THE PREFERRED POWER SUPPLY FOR LIFT STATIONS SHALL BE 240V, 3PH, 4W.
5. GRINDER LIFT STATIONS (LESS THAN 2 HP) SHALL BE PROVIDED WITH AN AUTO DIALER SYSTEM AND REGULAR LIFT STATIONS (LARGER THAN 2 HP) SHALL BE PROVIDED WITH AN RTU SYSTEM.

SPECIFIC ELECTRICAL NOTES

① SPECIAL SERVICE VOLTAGE MAY BE PERMITTED BY PERMISSION OF THE CITY OF STUART. THE PREFERRED VOLTAGE FOR 15 HP AND LESS IS 230V, 3ø, 4W.

② COORDINATE WITH ELECTRICAL UTILITY. PROVIDE REDUCED VOLTAGE STARTERS AS REQUIRED.

③ SPECIAL SERVICE VOLTAGE MAY BE PERMITTED BY PERMISSION OF THE CITY OF STUART. THE PREFERRED VOLTAGE FOR 20 HP AND GREATER IS 480V, 3ø, 3W.

④ SPECIAL SERVICE VOLTAGE MAY BE PERMITTED BY PERMISSION OF THE CITY OF STUART. THE PREFERRED VOLTAGE FOR 3 HP AND LESS IS 230V, 3ø, 4W.

⑤ FOR SMALL GRINDER PUMP STATIONS WHERE ONLY 1ø, 240, 3W SERVICE IS AVAILABLE; PROVIDE CAPACITOR SYSTEM TO PROVIDE 3ø POWER OUTPUT TO PUMPS.

⑥ CITY DOES NOT CURRENTLY USE 480V STANDBY PORTABLE GENERATORS THEREFORE DIESEL ENGINE PUMPS OR LOCAL DIESEL STAND BY GENERATORS SHALL BE PROVIDED.

⑦ PROVIDE 120/240V, 3ø, 4W, WITH GROUND, MALE RECEPTACLE, 100 AMP, PYLE NATIONAL PART NUMBER JRE4100. CONFIRM WITH CITY BEFORE CONSTRUCTION.

⑧ PROVIDE 120/240V, 3ø, 4W, WITH GROUND, MALE RECEPTACLE, 200 AMP, RUSSELSTOLL PART NUMBER 7273444. CONFIRM WITH CITY BEFORE CONSTRUCTION.

⑨ PROVIDE 120/240V, 1ø, 3W, WITH GROUND, MALE RECEPTACLE, HUBBELL 8450A. CONFIRM WITH CITY BEFORE CONSTRUCTION.

STANDARD UTILITY DETAILS
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ELECTRICAL NOTES

DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 60

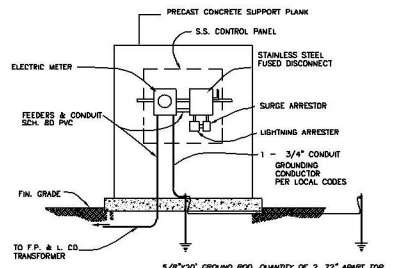
ELECTRICAL LEGEND

A	AMMETER	IL	INDICATING LIGHT
AB	ALARM BELL	ISR	INTRINSICALLY SAFE RELAY
AL	ALARM LIGHT	LA	LIGHTNING ARRESTOR
ALT	ALTERNATOR	LS	LEVEL SWITCH
ASB	ALARM SILENCE PUSH BUTTON	MCB	MAIN CIRCUIT BREAKER
ASR	ALARM SILENCE RELAY	MS	MAGNETIC STARTER
CR	CONTROL RELAY	OL	HEATER
CCB	CONTROL CIRCUIT BREAKER	PCB	PUMP CIRCUIT BREAKER
ETM	ELAPSED TIME METER	PM	PHASE MONITOR
ECB	EMERGENCY CIRCUIT BREAKER	PS	PRESSURE SWITCH
FL	FLASHER	R	RED LENS
F	FUSE	RL	RUN LIGHT
GFI	CONVENIENCE RECEPTACLES	RTU	REMOTE TELEMETRY UNIT
GP	GENERATOR PLUG	SD	SURGE DAPACITOR
GR	GENERATOR RECEPTACLE	XFMR	TRANSFORMER
HOA	HAND OFF AUTO SWITCH		

STANDARD UTILITY DETAILS
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ELECTRICAL LEGEND

DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 61



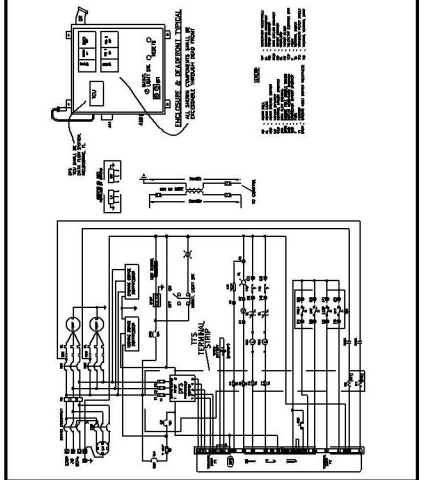
NOTES:

1. NO PENETRATION THROUGH PANEL TOPS.

STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
(772) 288-5300

U/S CONTROL PANEL REAR VIEW

DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 62



STANDARD UTILITY DETAILS
City of Stuart Public Works Department
121 S.W. Flagler Avenue, Stuart, Florida 34994
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TCU PANEL

DATE: OCTOBER, 2016
FILE NAME: 2016 CDS Std Details.dwg
SHEET NUMBER 63

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EDC DESIGNED BY: AJW
DRAWN BY:
20-313 preliminary set of.dwg
FILENAME:
Utility Details (5)
LAYOUT:
AS SHOWN
SCALE:
SHEET NO.
9 OF 9

REVISION COMMENTS

DATE

KANNER CPUD

UTILITY DETAILS

STUART FLORIDA

DAVID C. BAGGETT, P.E. (DATE)
#81375

10250 SW VILLAGE PARKWAY - SUITE 201
PORT SAINT LUCIE, FL 34987
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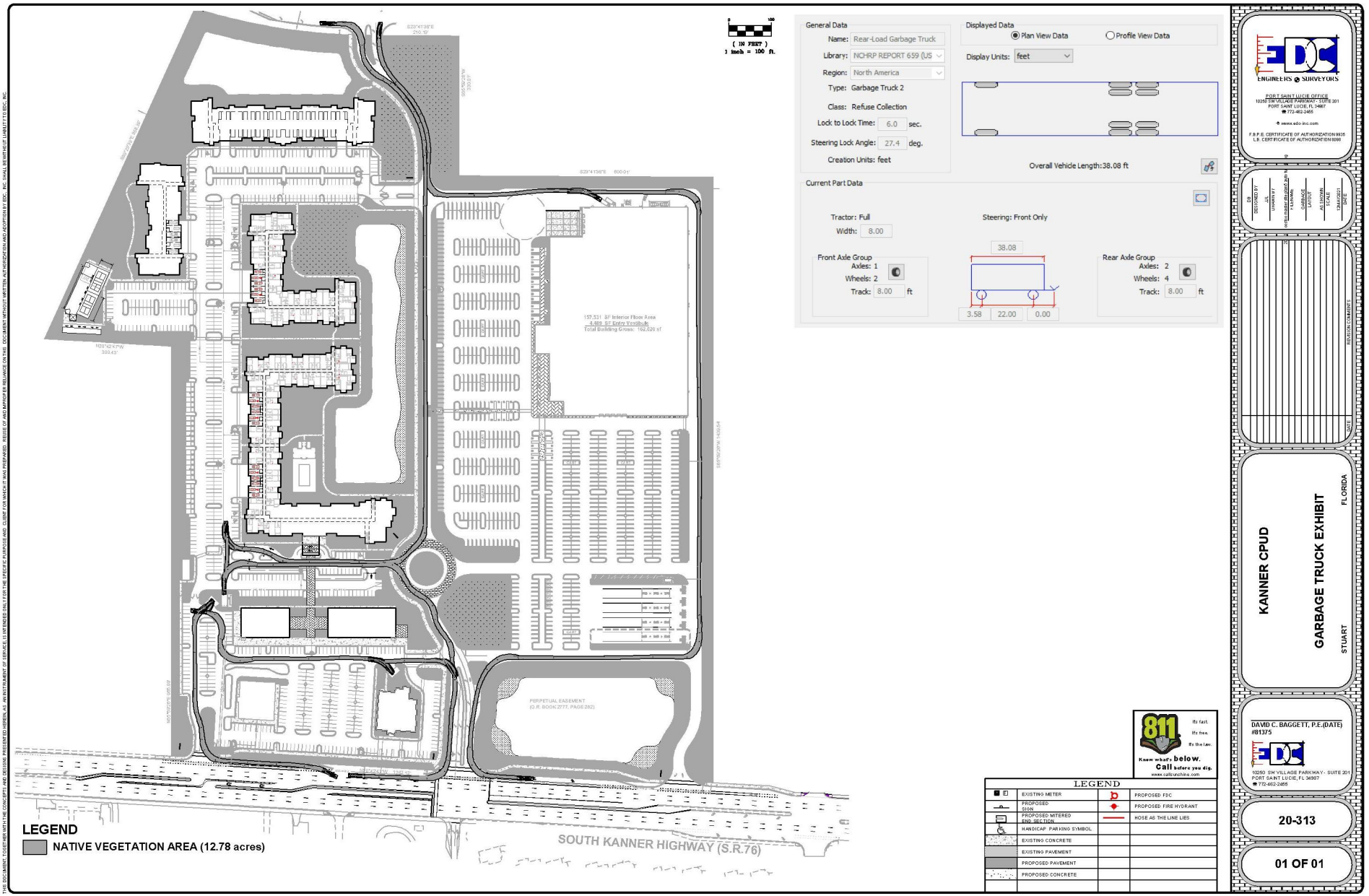
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080820021 CCM



General Data
Name: Rear-Load Garbage Truck
Library: NCHRP REPORT 659 (US
Region: North America
Type: Garbage Truck 2
Class: Refuse Collection
Lock to Lock Time: 6.0 sec.
Steering Lock Angle: 27.4 deg.
Creation Units: feet

Displayed Data
Plan View Data / Profile View Data
Display Units: feet
Overall Vehicle Length:38.08 ft

Current Part Data
Tractor: Full
Width: 8.00
Steering: Front Only
Front Axle Group
Axles: 1
Wheels: 2
Track: 8.00 ft
Rear Axle Group
Axles: 2
Wheels: 4
Track: 8.00 ft
38.08
3.58 22.00 0.00

LEGEND

EXISTING METER		PROPOSED FDC	
PROPOSED SWM		PROPOSED FIRE HYDRANT	
PROPOSED MITERED END SECTION		HOSE AS THE LINE LIES	
HANDICAP PARKING SYMBOL			
EXISTING CONCRETE			
EXISTING PAVEMENT			
PROPOSED PAVEMENT			
PROPOSED CONCRETE			

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DS	DESIGNED BY	JUL 2020	INITIAL ISSUE
GARBAGE LAYOUT	AS SHOWN	SCALE	JAN/2021	DATE

REVISION COMMENTS

DATE

KANNER CPUD
GARBAGE TRUCK EXHIBIT
STUART FLORIDA

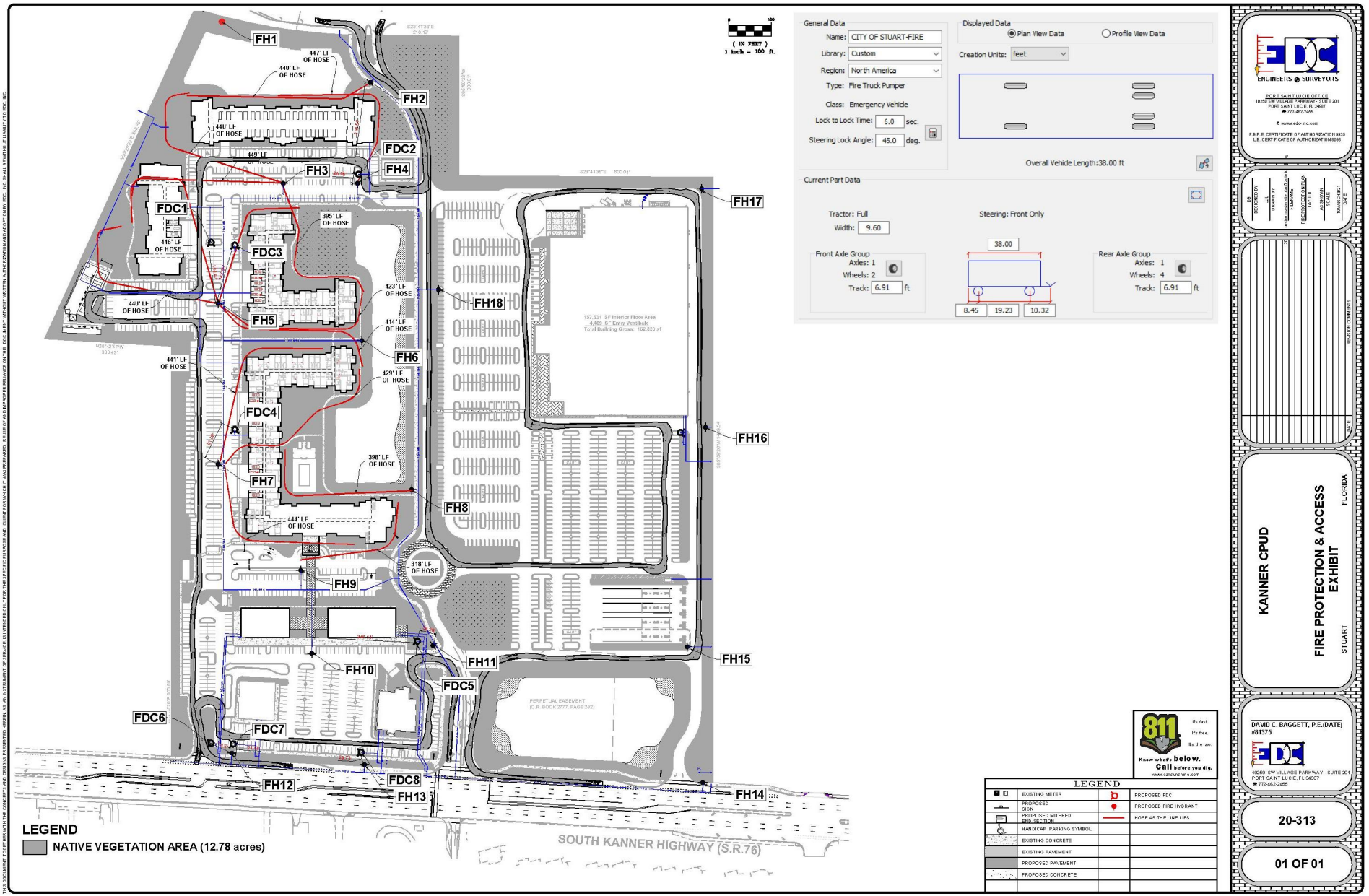
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L.B. CERTIFICATE OF AUTHORIZATION 8088

DESIGNED BY	JAL	DRAWN BY	JAL
CHECKED BY	DCB	DRAWING NAME	FIRE PROTECTION PLAN
LAYOUT	FIRE PROTECTION PLAN		
SCALE	AS SHOWN		
DRAWING NO.	20-313		
DATE	07/05/21		

REVISION COMMENTS

DATE

KANNER CPUD

FIRE PROTECTION & ACCESS EXHIBIT

STUART FLORIDA

DAVID C. BAGGETT, P.E.(DATE)
#81375

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ELECTRICAL SHEET INDEX

E0.1	ELECTRICAL NOTES, LEGEND & INDEX
E1.1	SITE PHOTOMETRIC PLAN
E1.2	SITE PHOTOMETRIC PLAN
E1.3	SITE PHOTOMETRIC PLAN
E1.4	SITE PHOTOMETRIC PLAN
E1.5	SITE PHOTOMETRIC PLAN
E1.6	SITE PHOTOMETRIC PLAN
E1.7	SITE PHOTOMETRIC PLAN
E1.8	SITE PHOTOMETRIC PLAN
E1.9	SITE PHOTOMETRIC PLAN
E1.10	SITE PHOTOMETRIC PLAN
E1.11	SITE PHOTOMETRIC PLAN

SESCO LIGHTING

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMPS Qty	LAMPS Type	LAMPS Total Wattage	DIMMER	VOLTS	MOUNTING	REMARKS
P	VISIONAIRE LIGHTING	VLX-T3-192LC-7-40-XXX-MA-XX-XXX-40.0.0	SINGLE HEAD LED SITE LUMINAIRE FOR COSTCO SITE, MOUNTED 33.5' AFG	INCL	LED	421	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,3
P1	VISIONAIRE LIGHTING	VLX-T-TSW-160LC-7-40-XXX-MA-XX-WSC-40.0.0	SINGLE HEAD LED SITE LUMINAIRE FOR COSTCO SITE, MOUNTED 33.5' AFG	INCL	LED	353	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,3
P2	VISIONAIRE LIGHTING	(2)VLX-T-TSW-160LC-7-40-XXX-MA-XX-WSC-40.0.0	DOUBLE HEAD LED SITE LUMINAIRE FOR COSTCO SITE, MOUNTED 33.5' AFG	INCL	LED	705	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,3
P3	VISIONAIRE LIGHTING	(3)VLX-T-TSW-160LC-7-40-XXX-MA-XX-WSC-40.0.0	TRIPLE HEAD LED SITE LUMINAIRE FOR COSTCO SITE, MOUNTED 33.5' AFG	INCL	LED	1058	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,3
P4	VISIONAIRE LIGHTING	(4)VLX-T-TSW-160LC-7-40-XXX-MA-XX-WSC-40.0.0	QUAD HEAD LED SITE LUMINAIRE FOR COSTCO SITE, MOUNTED 33.5' AFG	INCL	LED	1412	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,3
P5	VISIONAIRE LIGHTING	VLX-T3-192LC-5-40-XXX-MA-XX-XSC-40.0.0-S-1-0	SINGLE HEAD LED SITE LUMINAIRE FOR COSTCO SITE, MOUNTED 20' AFG	INCL	LED	267	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,3
W	VISIONAIRE LIGHTING	VWX-T-140-LC-7-40-XX-MA-XX-WSC-20 WP	WALL MOUNTED LED SITE LUMINAIRE FOR COSTCO SITE, MOUNTED 20' AFG	INCL	LED	177	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	WALL	1,2
SA	VISIONAIRE LIGHTING	VLX-T2-160LC-6-40-XXX-MA-XX-WSC-40.0.0	SINGLE HEAD LED SITE LUMINAIRE ON CONCRETE POLE, MOUNTED 20' AFG	INCL	LED	267	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,4
SB	VISIONAIRE LIGHTING	VLX-T-TSW-160LC-5-40-XXX-MA-XX-WSC-40.0.0	SINGLE HEAD LED SITE LUMINAIRE ON CONCRETE POLE, MOUNTED 28' AFG	INCL	LED	266	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,4
SC	VISIONAIRE LIGHTING	VLX-T3-160LC-5-40-XXX-MA-XX-WSC-40.0.0	SINGLE HEAD LED SITE LUMINAIRE ON CONCRETE POLE, MOUNTED 20' AFG	INCL	LED	171	0-10 NON-DIMMER ON/OFF/PIR	PER PLAN	POLE	1,2,4

LIGHTING SCHEDULE NOTES:

1. PROVIDE SUBMITTALS FOR ARCHITECT/OWNER APPROVAL PRIOR TO ORDERING. NO SUBSTITUTION ALLOWED.
2. PROVIDE MOTOR SENSOR AND SYNCHRONIZE FOR EACH LUMINAIRE TO AUTOMATICALLY DIMMER TO 50% TO OTHER WITHIN 1 TO 5 MIN. IF NO MOTION IS DETECTED, OR WHEN NO ACTIVITY FOR 15 MINUTES, PER 7TH EDITION FBC, CH.13 2.5.
3. POLE MOUNT PER COSTCO POLE DETAIL. PROVIDE CERTIFIED WIND LOAD CALCULATION TO MEET 170MPH, SIGNED AND SEALED BY FLORIDA REGISTERED ENGINEER.
4. POLE MOUNT ON PRECAST BURIAL CONCRETE POLE. PROVIDE CERTIFIED WIND LOAD CALCULATION TO MEET 170MPH, SIGNED AND SEALED BY FLORIDA REGISTERED ENGINEER.

Luminaire Schedule

Project: COSTCO STUART SITE REV2 05-11-2021

Symbol	Qty	Label	[MANUFAC]	Description	Arr. Lum. Lumens	LLF	Lum. Watts	Total Watts
	4	P	Visionaire Lighting LLC	VLX-T3-192LC-7-40-UNV POLE MOUNT 33.5' AFG	48856	0.900	421	1684
	1	P1	Visionaire Lighting LLC	VLX-T-TSW-160LC-7-40-UNV POLE MOUNT 33.5' AFG	40951	0.900	353	353
	20	P2	Visionaire Lighting LLC	VLX-T-TSW-160LC-7-40-UNV POLE MOUNT 33.5' AFG	81902	0.900	353	14120
	6	P3	Visionaire Lighting LLC	VLX-T-TSW-160LC-7-40-UNV POLE MOUNT 33.5' AFG	122873	0.900	353	6354
	2	P4	Visionaire Lighting LLC	VLX-T-TSW-160LC-7-40-UNV POLE MOUNT 33.5' AFG	81266	0.900	353	2824
	13	P5	Visionaire Lighting LLC	VLX-T3-160LC-5-40-UNV-CLS POLE MOUNT 28' AFG	30774	0.900	267	3471
	5	W	Visionaire Lighting LLC	VWX-T-T4-60LC-7-40-UNV WALL MOUNT 20' AFG	20959	0.900	177	885
	11	SA	Visionaire Lighting LLC	VLX-T2-160LC-6-40-UNV-CLS POLE MOUNT 28' AFG	30774	0.900	267	4005
	25	SB	Visionaire Lighting LLC	VLX-T-TSW-160LC-5-SK-UNV POLE MOUNT 28' AFG	33951	0.900	266	6650
	9	SC	Visionaire Lighting LLC	VLX-T3-160LC-5-40-UNV POLE MOUNT 20' AFG	23138	0.900	171	1539

Calculation Summary

Project: COSTCO STUART SITE REV2 05-11-2021

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
RESIDENTIAL PROP LINE NO. 9' AFG	Illuminance	Fc	0.00	0.2	0.0	N.A.	N.A.
RESIDENTIAL PROP LINE SO. 9' AFG	Illuminance	Fc	0.05	0.2	0.0	N.A.	N.A.
COSCTO WAREHOUSE PARKING	Illuminance	Fc	5.25	12.1	2.5	2.10	4.84
COSTCO MAIN WAREHOUSE ENTRANCE	Illuminance	Fc	7.67	9.5	5.2	1.48	1.83
ENTRY ROAD	Illuminance	Fc	2.34	7.3	0.6	4.73	11.67
MIXED USE SITE & PARKING	Illuminance	Fc	1.84	5.5	0.6	3.07	9.17

080802021 CC:M

ELECTRICAL LEGEND

- TELEPHONE OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNTED ABOVE COUNTER, SEE ARCHITECTURAL DRAWING FOR SPECIFIC REQUIREMENTS.
- TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING. MOUNT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT RUN TO THE NEAREST STUD WALL AND STUBBED OUT FROM WALL 6" ABOVE CEILING. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.
- TELEVISION RECESSED OUTLET, LEGRAND "TVTWNTVSSWCC2". MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS OTHERWISE NOTED.
- 20 AMP SINGLE RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- 20 AMP QUADRUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED AT 18" A.F.F. TO CENTER LINE OF OUTLET UNLESS NOTED OTHERWISE.
- GFI 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) WITH GROUND FAULT CIRCUIT INTERRUPTER, MOUNT AT 18" A.F.F. TO CENTER LINE OF OUTLET. UNLESS NOTED OTHERWISE.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) MOUNTED ABOVE COUNTER SEE ARCHITECTURAL DRAWINGS FOR SPECIFIC REQUIREMENTS.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.
- 20 AMP QUADRUPLEX RECEPTACLE (NEMA 5-20R) WITH ISOLATED GROUND, MOUNT AT 18" A.F.F. TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R), RECESS FLOOR MOUNTED. PROVIDE BRASS COVER PLATE AND CARPET FLANGE.
- 20 AMP DUPLEX RECEPTACLE (NEMA 5-20R), CEILING MOUNTED.
- SPECIAL-PURPOSE RECEPTACLE
- JUNCTION BOX
- SINGLE GANG JUNCTION BOX FOR POWER CONNECTION TO MODULAR FURNITURE SYSTEM INSTALL IN EXACT MANNER AS DIRECTED BY FURNITURE SUPPLIER.
- DOUBLE GANG JUNCTION BOX FOR TELEPHONE/DATA CONNECTION TO MODULAR FURNITURE SYSTEM. INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER. EXTEND (2) 3/4" EMPTY CONDUITS FROM JUNCTION BOX TO ABOVE CEILING AND TERMINATE WITH INSULATING BUSHING 8" FROM WALL.
- TELE/POWER POLE FOR TELEPHONE/DATA/POWER CONNECTION TO MODULAR FURNITURE & WIRE SYSTEM (SEE DETAIL THIS SHEET). INSTALL IN EXACT MANNER AND LOCATION AS DIRECTED BY FURNITURE SUPPLIER, WIREMOLD CATALOG # 2SDTP-4D W/IVORY FINISH.
- SPECIAL PURPOSE RECEPTACLE MOUNTED BELOW RAISE FLOOR.
- EXHAUST FAN. SEE MECHANICAL DRAWINGS FOR SPECIFICATIONS.
- $ SINGLE POLE, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
- $3 3-WAY, 20 AMP, SWITCH. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
- $D SINGLE POLE, 20 AMP, SWITCH WITH DIMMER. MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
- $M MOTOR RATED SWITCH
- $VS VACANCY SENSOR SWITCH, WATTSTOPPER, MOUNT 46" A.F.F. TO CENTERLINE OF SWITCH UNLESS OTHERWISE NOTED.
- $ TWO POLE, 30 AMP SWITCH. MOUNT ADJACENT EQUIPMENT TO BE CONTROLLED.
- FACTORY MOUNTED DISCONNECT/STARTER (SEE MECHANICAL SCHEDULE)
- FUSIBLE DISCONNECT SWITCH A = POLES, B= FRAME SIZE, C= FUSE RATING
- FUSIBLE MOTOR STARTER DISCONNECT SWITCH A = POLES, B= NEMA SIZE, C= FUSE RATING
- GROUNDING ELECTRODE & CONDUCTOR SYSTEM
- TRANSFORMER
- ELECTRICAL PANELBOARD
- TELEPHONE WOOD BACKBOARD
- WP WEATHERPROOF
- T/C TIME CLOCK
- RE RELOCATED
- E EXISTING TO REMAIN
- A.F.F. ABOVE FINISH FLOOR
- CEILING MOUNTED DUAL TECHNOLOGY MOTION SENSOR BY WATTSTOPPER.
- LV CEILING MOUNTED LOW VOLTAGE DUAL TECHNOLOGY MOTION SENSOR BY WATTSTOPPER.
- DS CEILING MOUNTED DAY LIGHTING SENSOR. SENSOR TO CONTROL THE DIMMING OF ALL FIXTURES WITHIN 15' OF THE WINDOWS WITH IN ROOM.

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

A. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL ARCHITECT/ENGINEER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.

B. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF.

C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION) AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION. THE SPECIFICATION, CODES AND STANDARDS LISTED BELOW ARE UTILIZED IN THIS PROJECT.
1. NATIONAL ELECTRICAL CODE (NFPA-70)
2. CODE FOR SAFETY TO LIFE (NFPA-101)
3. STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS (NFPA-72)
4. UNDERWRITERS' LABORATORIES (UL)
5. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
6. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
7. FEDERAL SPECIFICATION (FED. SPEC.)
8. INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
9. FLORIDA BUILDING CODE. FBC 2017 EDITION
10. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
11. CITY OF STUART BUILDING CODE. (AMENDMENTS TO FLORIDA BUILDING CODE FBC 2017)
12. ADDITIONALLY, DESIGNS, WORK PRACTICES AND CONDITIONS MUST CONFORM WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA)

D. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.

E. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.

F. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FROM A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.

G. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THERE BY.

H. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. THE TERM "PROVIDED" IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL MEAN THAT THE CONTRACTOR IS TO FURNISH, INSTALL AND CONNECT COMPLETE.

PART 2 – PRODUCTS

A. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. (EXCEPT AS NOTED OTHERWISE FOR CONTROL WIRING). ALL CONDUCTORS SHALL BE 98% CONDUCTIVITY, COPPER WITH "THHN-THWN" INSULATION UNLESS OTHERWISE NOTED.

B. ELECTRICAL METALLIC TUBING (EMT) SHALL BE OF BEST QUALITY STEEL, SMOOTH INSIDE AND OUT AND SHALL BE HOT-DIPPED GALVANIZED.

C. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.

D. RIGID NONMETALIC CONDUIT SHALL BE SCHEDULE 40 PVC.

E. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.

F. PANELBOARDS:
1. CURRENT CARRYING BUSES SHALL BE COPPER. GROUND BUS BARS SHALL BE COPPER.
2. ALL CIRCUIT BREAKERS SHALL BE BOLT ON TYPE. PLUG-IN BREAKERS ARE NOT ACCEPTABLE.
3. CIRCUIT BREAKERS USED AS SWITCHES IN FLUORESCENT OR HID LIGHTING CIRCUITS SHALL BE LISTED AND MARKED "SWD"
4. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
5. A.I.C. RATINGS SHALL BE AS INDICATED ON PANELBOARD SCHEDULES.
6. ALL PANELBOARDS SHALL BE FURNISHED WITH PLASTIC LAMINATE NAMEPLATES WITH 1/4" ENGRAVED LETTERING FOR PANEL IDENTIFICATION.
7. ALL PANELBOARDS SHALL BE PROVIDED WITH TYPE-WRITTEN DIRECTORY OF BRANCH CIRCUIT DESIGNATIONS.

G. DISCONNECT SWITCHES SHALL BE H.P. RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK. ENCLOSURES SHALL BE NEMA-1 FOR INDOOR LOCATIONS, NEMA 3R FOR OUTDOOR LOCATIONSOR AS OTHERWISE NOTED.

H. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC AS INDICATED ON THE ELECTRICAL DRAWINGS, WITH OVERLOAD RELAYS IN EACH PHASE.
WIRING DEVICES (GENERAL PURPOSE RECEPTACLES AND WALL SWITCHES) COLOR SHALL BE COORDINATED WITH CLIENT.

PART 3 – EXECUTION

A. COLOR CODING OF CONDUCTORS SHALL BE AS FOLLOWS:
1. 208/120 VOLTS, 3 PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BLACK, 1 RED AND 1 BLUE. GROUNDED (NEUTRAL) CONDUCTOR: WHITE. GROUNDING CONDUCTORS SHALL BE GREEN.
2. 480/277 VOLT, 3-PHASE, 4-WIRE SYSTEM: UNGROUNDED CONDUCTORS: 1 BROWN, 1 YELLOW, AND 1 PURPLE. GROUNDED (NEUTRAL) CONDUCTORS: GREY. GROUNDING CONDUCTORS SHALL BE GREEN.
3. BRANCH CIRCUIT WIRING (#6 AND SMALLER) SHALL BE COLOR CODED BY CONTINUOUS INSULATION COLOR AND FEEDERS AND SERVICES (#4 AND LARGER) SHALL BE CODED AT ALL JUNCTION OR PULL POINTS (EXCEPT LB'S OR LBD'S) USING COLOR MARKERS OR PLASTIC TAPE MANUFACTURED FOR THE PURPOSE.

I.

B. WIRING METHODS.
1. ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE NOTED, SPECIFIED OR AS SPECIFICALLY PROHIBITED BY THE AUTHORITY HAVING JURISDICTION. ALL FITTINGS AND COUPLINGS FOR EMT CONDUIT SHALL BE STEEL RAIN TIGHT COMPRESSION TYPE OR ALL STEEL CONCRETE TIGHT SET SCREW TYPE.
2. SCHEDULE 40 PVC CONDUIT, WITH FITTINGS AND COUPLINGS APPROPRIATE FOR THE USE, SHALL BE INSTALLED UNDERGROUND OR BELOW SLABS ON GRADE.
3. TYPE MC CABLE WITH ALUMINUM ARMOR AND INTERNAL GROUND IS ACCEPTABLE FOR USE AS GENERAL BRANCH CIRCUIT WIRING FOR CIRCUITS 20 AMPERES OR LESS AND CONCEALED IN WALLS OR ABOVE SUSPENDED CEILING AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.

C. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. AND LOCAL CODES.

D. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.

E. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.

F. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES, AND SHALL BE FULLY COORDINATED WITH THEM PRIOR TO COMMENCEMENT OF WORK.

G. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, AND WIRING DEVICES, FOR ALL OUTLETS AS INDICATED.

H. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF NEC, NEMA, AND IEC.
CONTRACTOR SHALL SUBMIT AT LEAST FIVE (5) SETS OF SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.

K. ALL LAY-IN LIGHTING FIXTURES SHALL BE SECURED TO THE SUSPENDED CEILING GRID AT EACH CORNER.

L. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.

M. ALL ELECTRICAL POWER WIRING FOR THE HVAC SYSTEM INCLUDING WIRING THRU LINE VOLTAGE CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

N. THE CONTRACTOR SHALL CONFIRM WITH THE ELECTRICAL UTILITY COMPANY ANY AND ALL REQUIREMENTS SUCH AS: METERING EQUIPMENT REQUIREMENTS AND METERING EQUIPMENT LOCATION, TRANSFORMER SIZE AND LOCATION OR SERVICE POINT, CONDUIT ENTRY AND LUG SIZE RESTRICTIONS. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED DOWN TIME FOR THE OWNERS CONFIRMATION.
ANY CONFLICTS AND DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE

O. PROCEEDING WITH ANY WORK.
PER NEC 210.8(B)(2) ALL 15- AND 20-AMPERE, 125-VOLT RECEPTACLES IN NONDWELLING-TYPE KITCHENS TO BE GFCI PROTECTED.

P. BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% DESIGN LOAD. FBC 2017 FBC ENERGY CONSERVATION SECTION 405.7.3.

Q. FEEDER CONDUCTORS SHALL BE SIZED FOR A MAXIMUM OF 2% VOLTAGE DROP PER 405.7.3.

ELECTRICAL NOTES

ISSUED FOR PERMIT ONLY 05-11-21
NOT FOR PRICING OR CONSTRUCTION

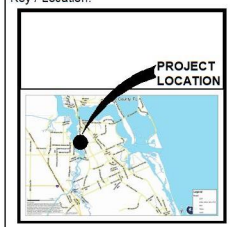
KAMM CONSULTING PROJECT #: 2021-030
PROJECT MANAGER: JOHN MAYR

KAMM Consulting
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Fort Pierce, Florida 34950
Phone 954.448.0392
jmayr@kammconsulting.com
Certification of Authorization #8189

PRINCIPAL: Brady T. Brown, Florida License #58232 — 05-11-21 date — signed

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Key / Location:



Project Team:

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Exton, PA 19341
610-254-9140

Surveyor:
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Stuart, FL 34994
772-288-7176

Landscape Architect/Land Planner:
Lucido & Associates
701 E Ocean Blvd
Stuart, FL 34994
772-220-2100

KANNER CPUD

City of Stuart, Martin County, Florida

Master Site Plan

Date	By	Description
8.21.2020	SLS	Initial Submittal
12.18.2020	SLS	1st Resubmittal

NORTH

SCALE: 1" = 100'

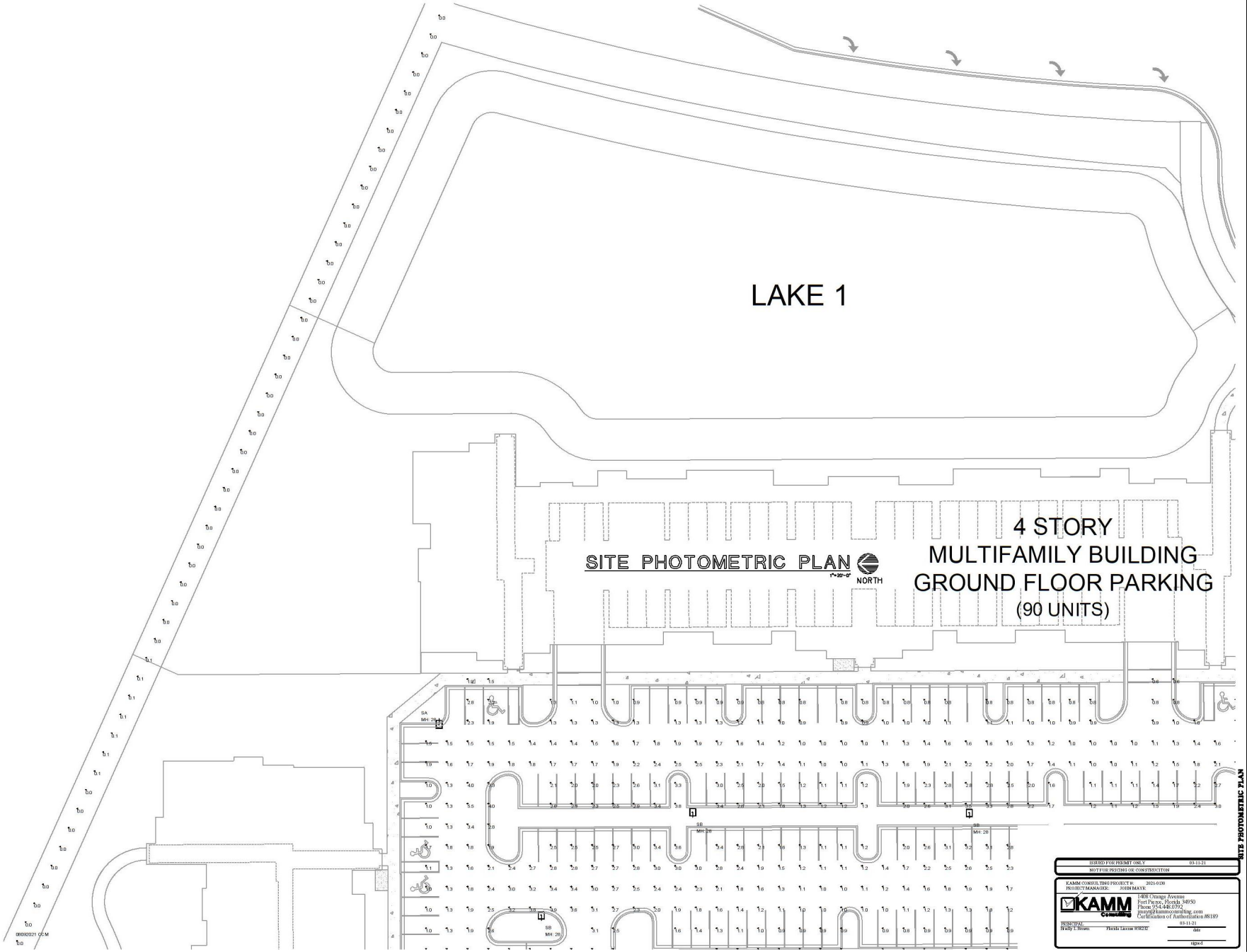
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REG. # 1018
Thomas P. Lucido

Designer ---
Manager ---
Project Number ---
Municipal Number ---
Computer File

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ISSUED FOR PERMIT ONLY 03-11-21
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PROJECT MANAGER: JOHN MAYR

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PRINCIPAL: Brady T. Brown Florida License #58232 03-11-21 date signed

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Key / Location:

PROJECT LOCATION

Project Team:

Applicant:
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Landscape Architect/Land Planner:
Lucido & Associates
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Stuart, FL 34994
772-220-2100

KANNER CPUD
City of Stuart, Martin County, Florida

Master Site Plan

Date	By	Description
8.21.2020	SLS	Initial Submittal
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NORTH

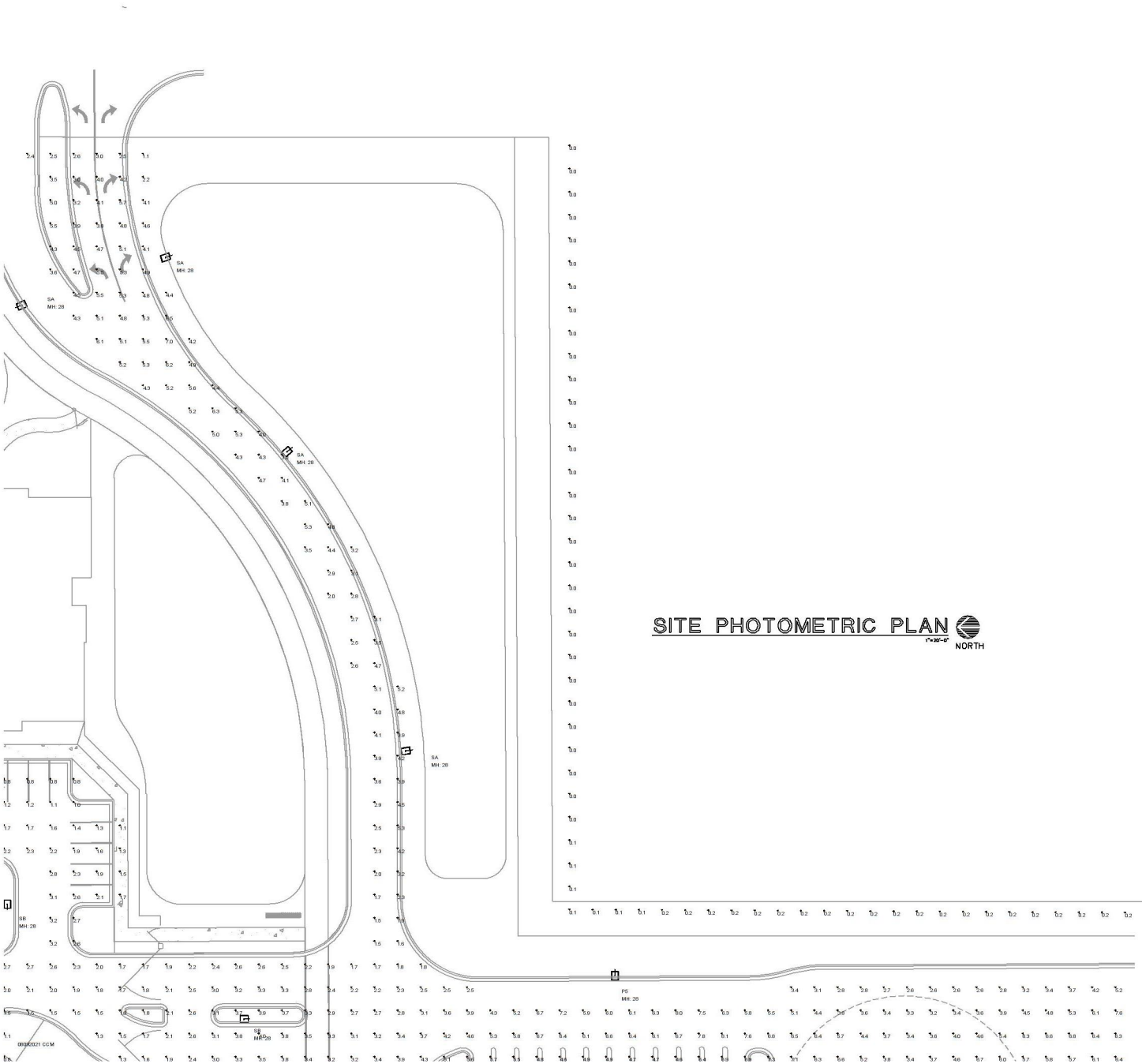
SCALE: 1" = 100'

0 50' 100' 200'

REG. # 1018
Thomas P. Lucido

Designer	---	Sheet
Manager	---	E1.1
Project Number	---	
Municipal Number	---	
Computer File		

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SITE PHOTOMETRIC PLAN

1"=30'-0"

lucido & associates
701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220

Key / Location:



Project Team:

Applicant:
M&M Realty Partners
1260 Stelton Rd
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703-839-3776

Engineer:
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Exton, PA 19341
610-254-9140

Surveyor:
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Stuart, FL 34994
772-288-7176

Landscape Architect/Land Planner:
Lucido & Associates
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Stuart, FL 34994
772-220-2100

KANNER CPUD
City of Stuart, Martin County, Florida

Master Site Plan

Date	By	Description
8.21.2020	SLS	Initial Submittal
12.18.2020	SLS	1st Resubmittal

NORTH

SCALE: 1" = 100'

0 50' 100' 200'

REG. # 1018
Thomas P. Lucido

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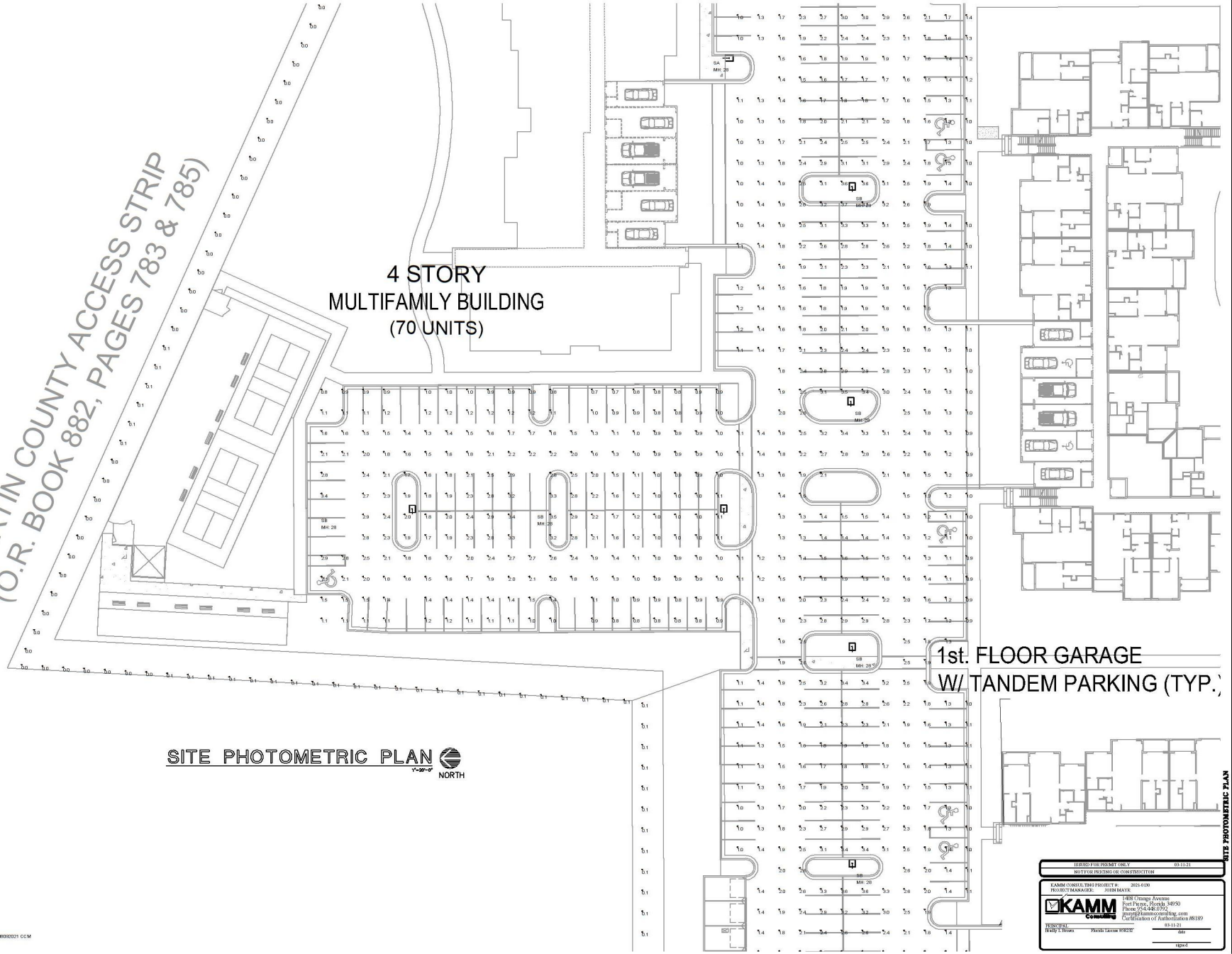
KAMM CONSULTING PROJECT #: 2021-030
PROJECT MANAGER: JOHN MAYE

KAMM Consulting
1408 Orange Avenue
Fort Pierce, Florida 34950
Phone 954.448.0392
jmaye@kammconsulting.com
Certification of Authorization #8189

PRINCIPAL:
Bradly T. Brown Florida License #58232 03-11-21
date
signed

Designer	---	Sheet
Manager	---	
Project Number	---	E1.2
Municipal Number	---	
Computer File		

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PRINCIPAL: Brady T. Brown Florida License #58202 03-11-21 date signed

ATLAS TECHNOLOGY, PLLC

NORTH

SCALE: 1" = 100'

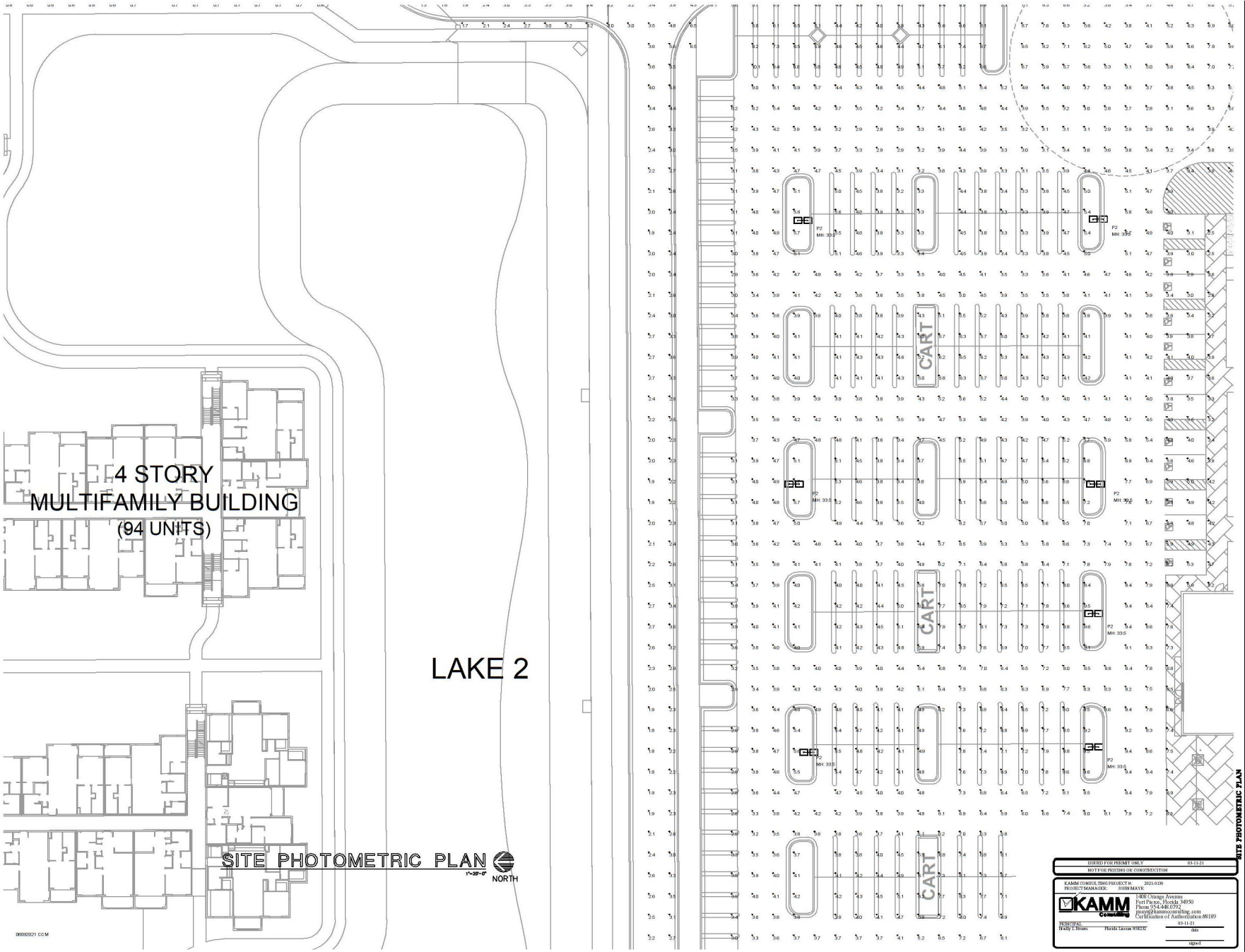
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REG. # 1018
Thomas P. Lucido

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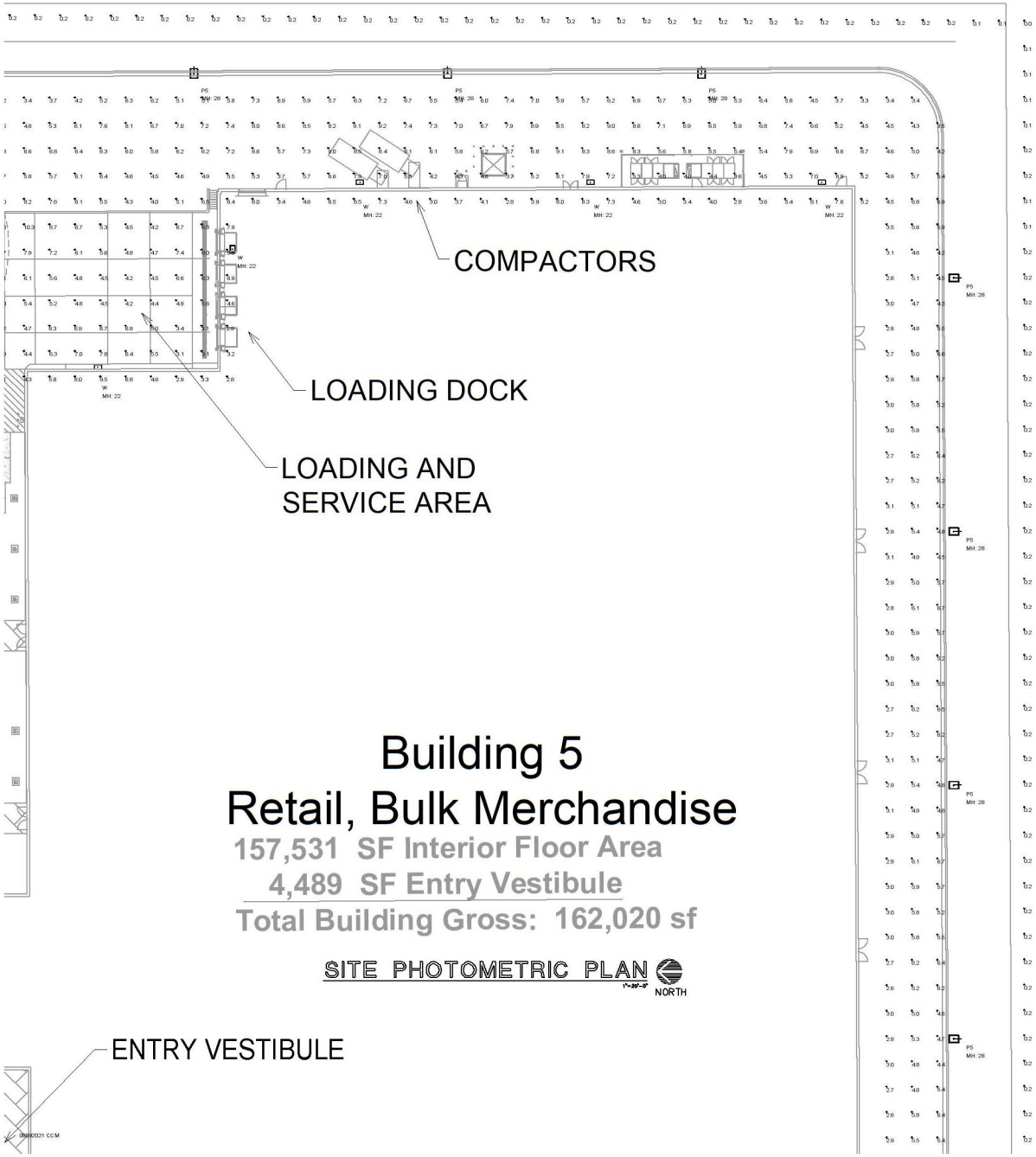
KAMM CONSULTING PROJECT #: 2021-030
PROJECT MANAGER: JOHN MAYR

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jmayr@kammconsulting.com
Certification of Authorization #8189

PRINCIPAL: Brady T. Brown Florida License #58232 03-11-21 date signed

Designer	---	Sheet
Manager	---	
Project Number	---	E1.4
Municipal Number	---	
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Building 5
Retail, Bulk Merchandise

157,531 SF Interior Floor Area

4,489 SF Entry Vestibule

Total Building Gross: 162,020 sf

SITE PHOTOMETRIC PLAN

1"=20'-0" NORTH

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701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220

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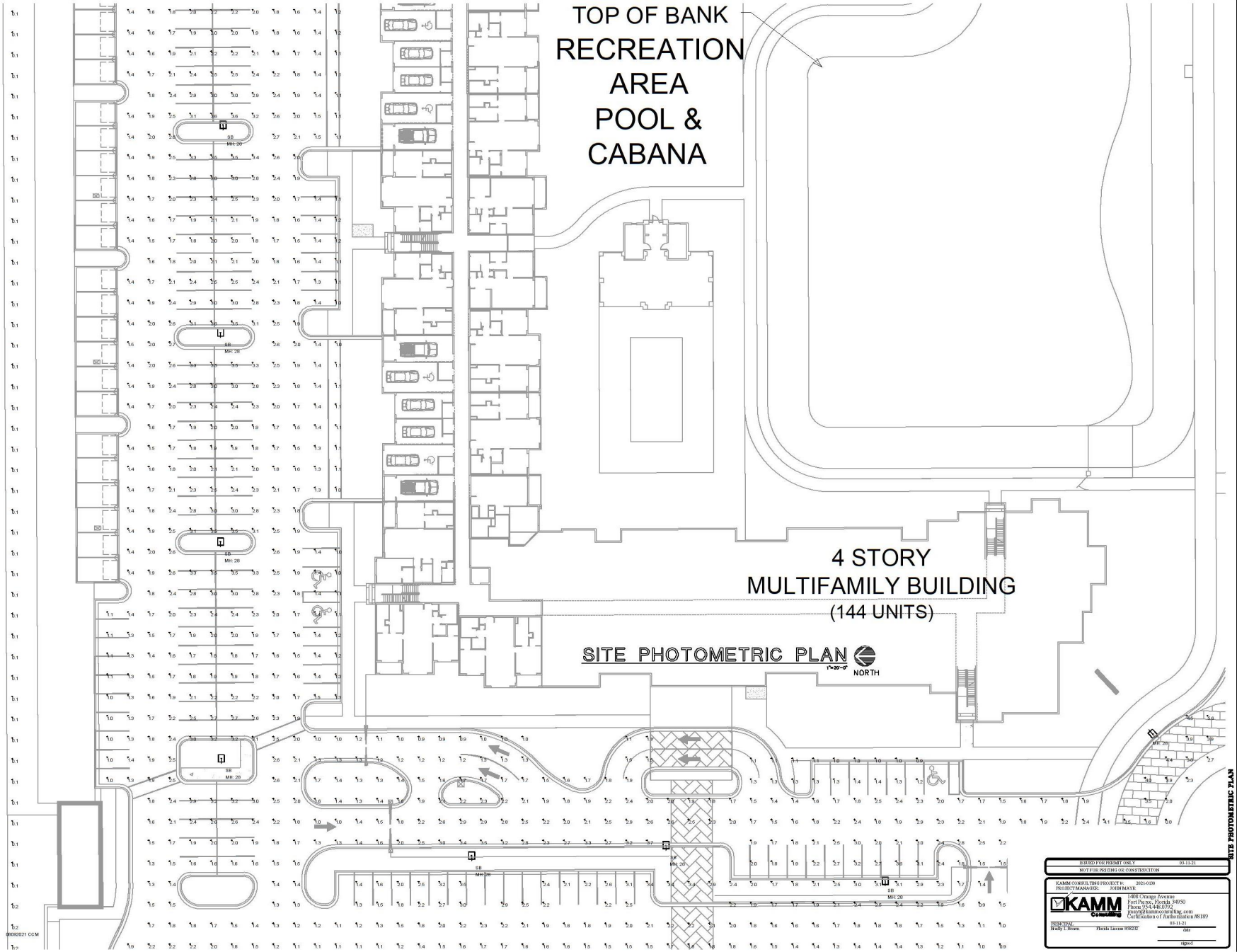
KAMM CONSULTING PROJECT #: 2021-030
PROJECT MANAGER: JOHN MAYE

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jmaye@kammconsulting.com
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Designer	---	Sheet
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Municipal Number	---	
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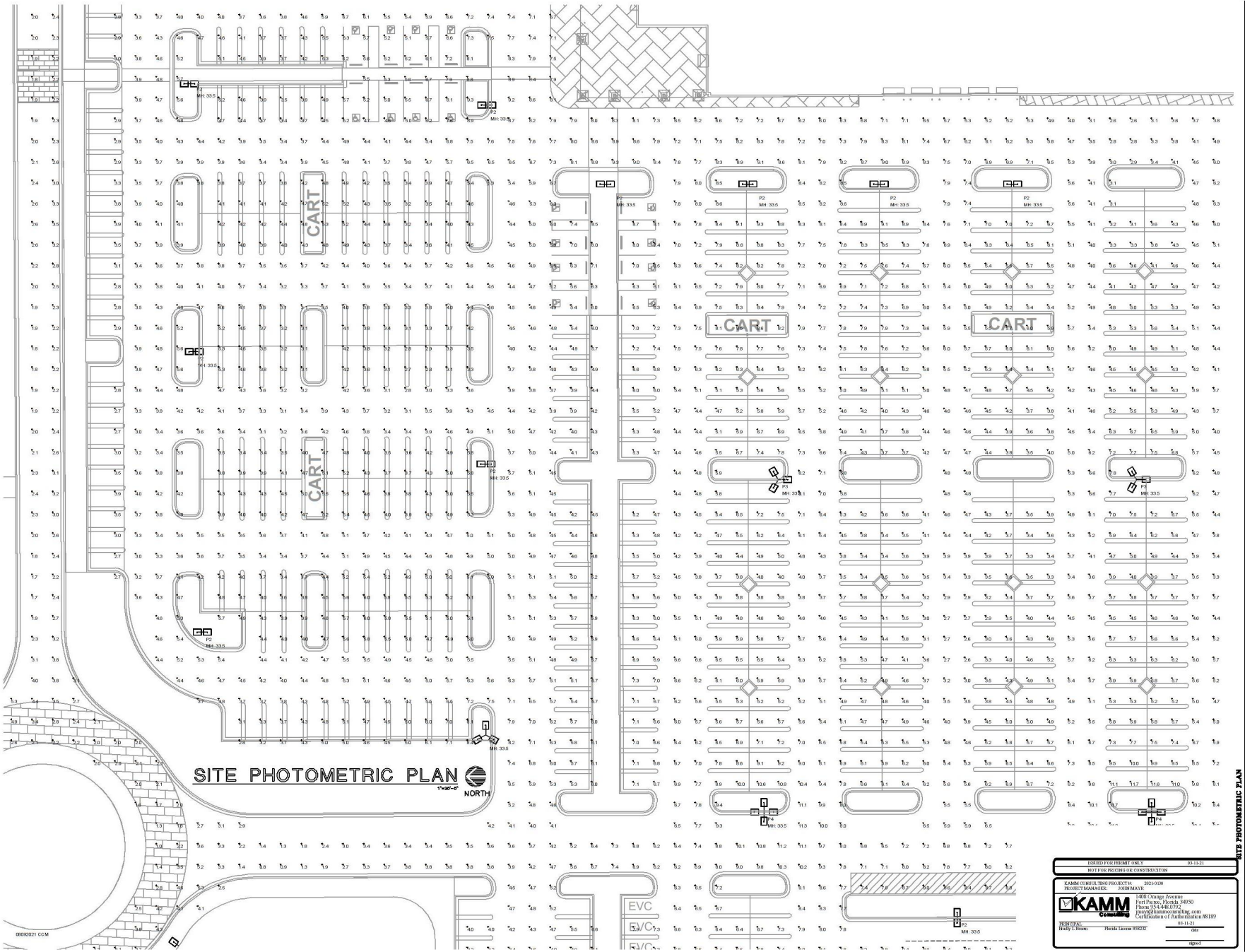
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Manager ---
Project Number ---
Municipal Number ---
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Sheet
E1.6

SITE PHOTOMETRIC PLAN

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SITE PHOTOMETRIC PLAN

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PROJECT MANAGER: JOHN MAYE

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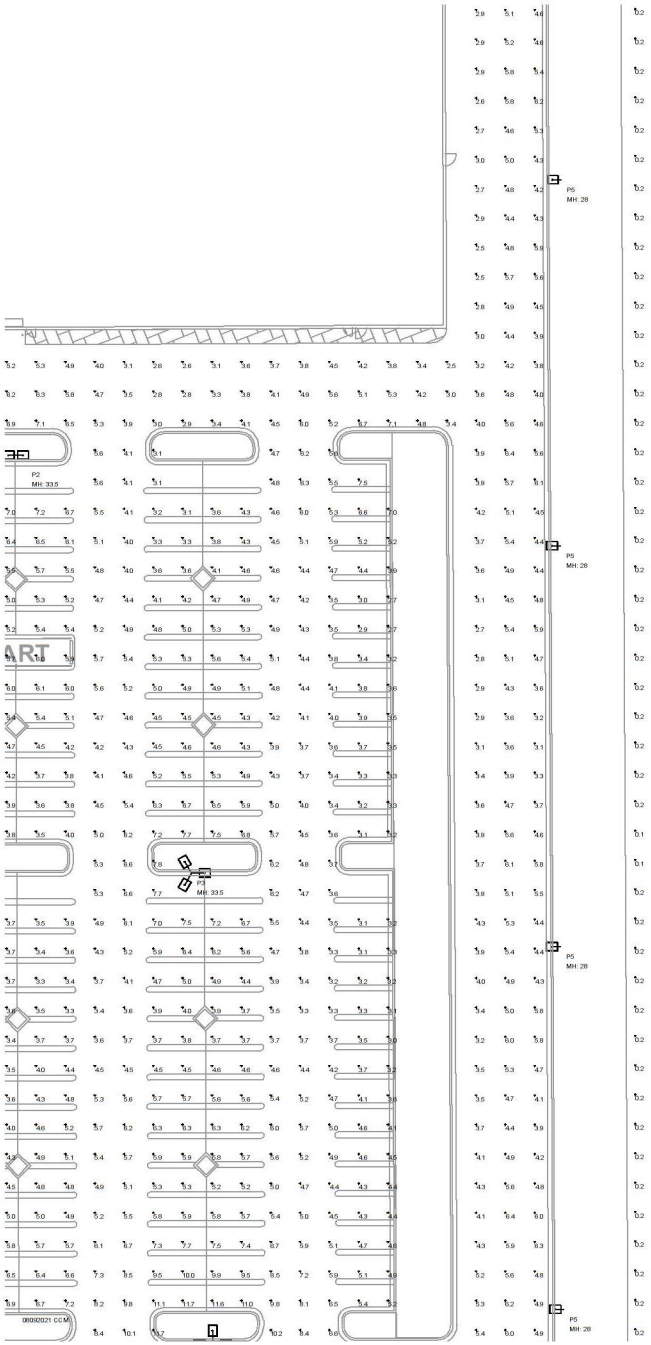
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Thomas P. Lucido

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SITE PHOTOMETRIC PLAN

1"=20'-0" NORTH

SITE PHOTOMETRIC PLAN

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KAMM CONSULTING PROJECT #: 2021-0130
PROJECT MANAGER: JOHN MAYE

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jmaye@kammconsulting.com
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PRINCIPAL: Brady T. Brown Florida License #58232 03-11-21 date signed

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KANNER CPUD
City of Stuart, Martin County, Florida

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8.21.2020	SLS	Initial Submittal
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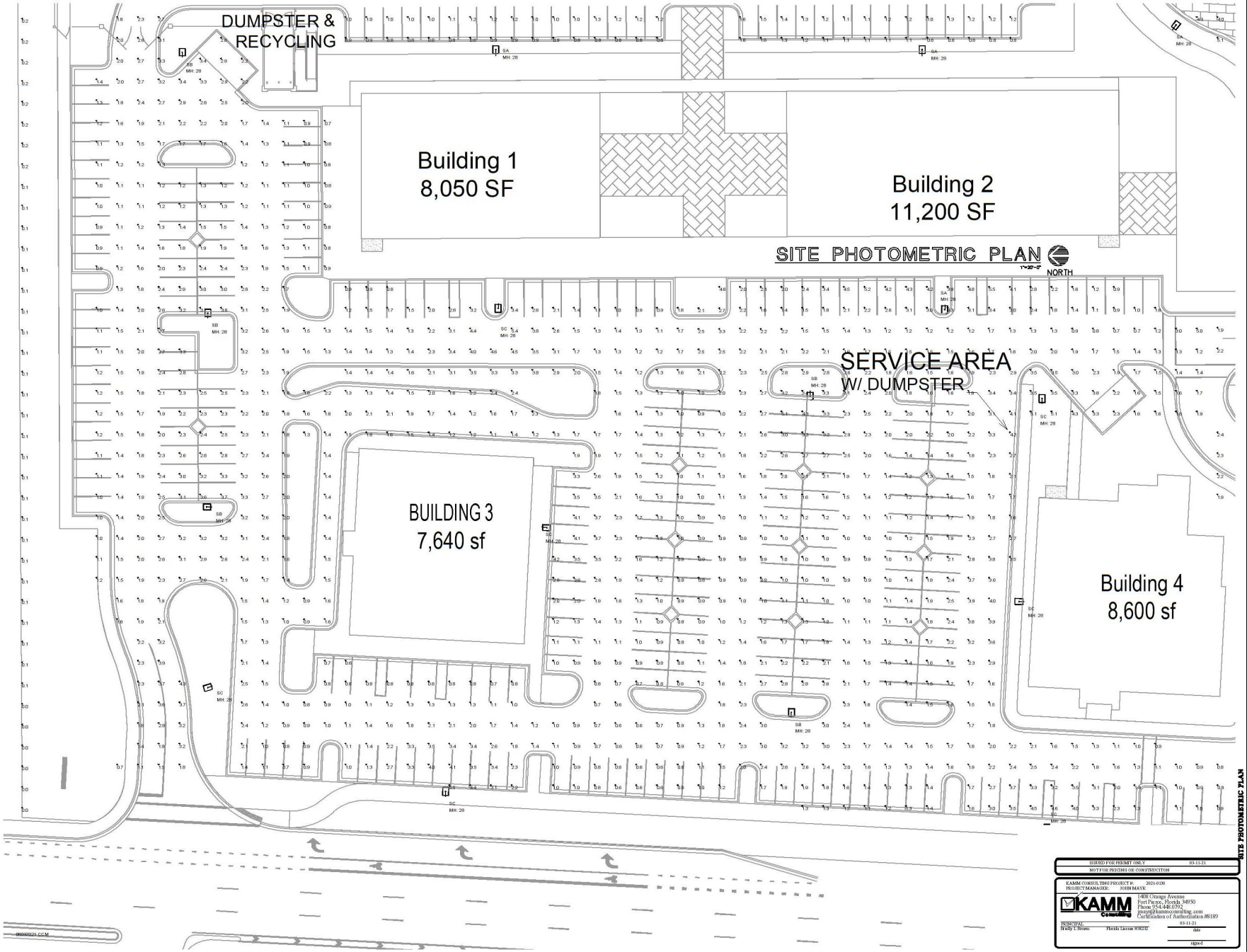
NORTH

SCALE: 1" = 100'
0 50' 100' 200'

REG. # 1018
Thomas P. Lucido

Designer	---	Sheet
Manager	---	E1.8
Project Number	---	
Municipal Number	---	
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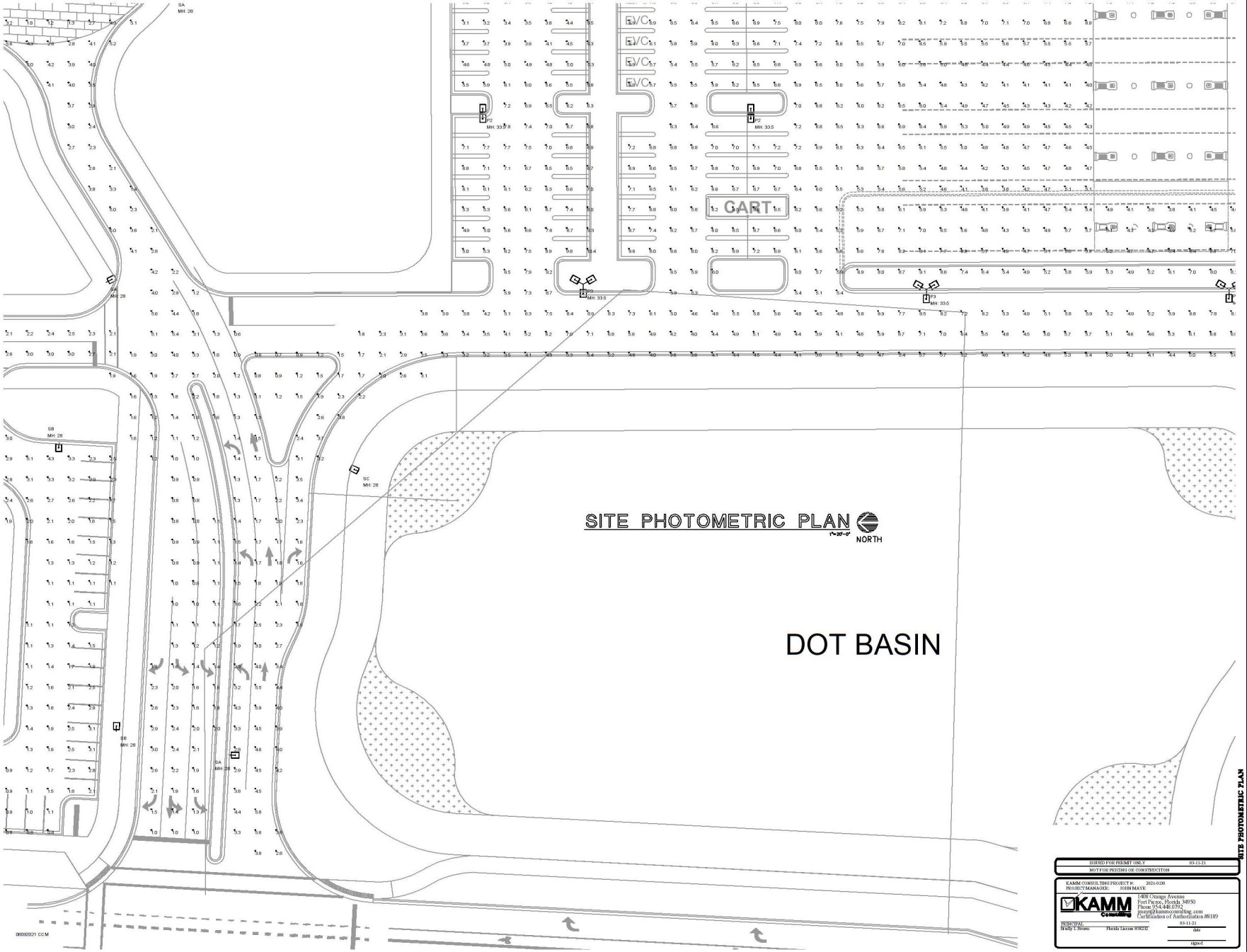
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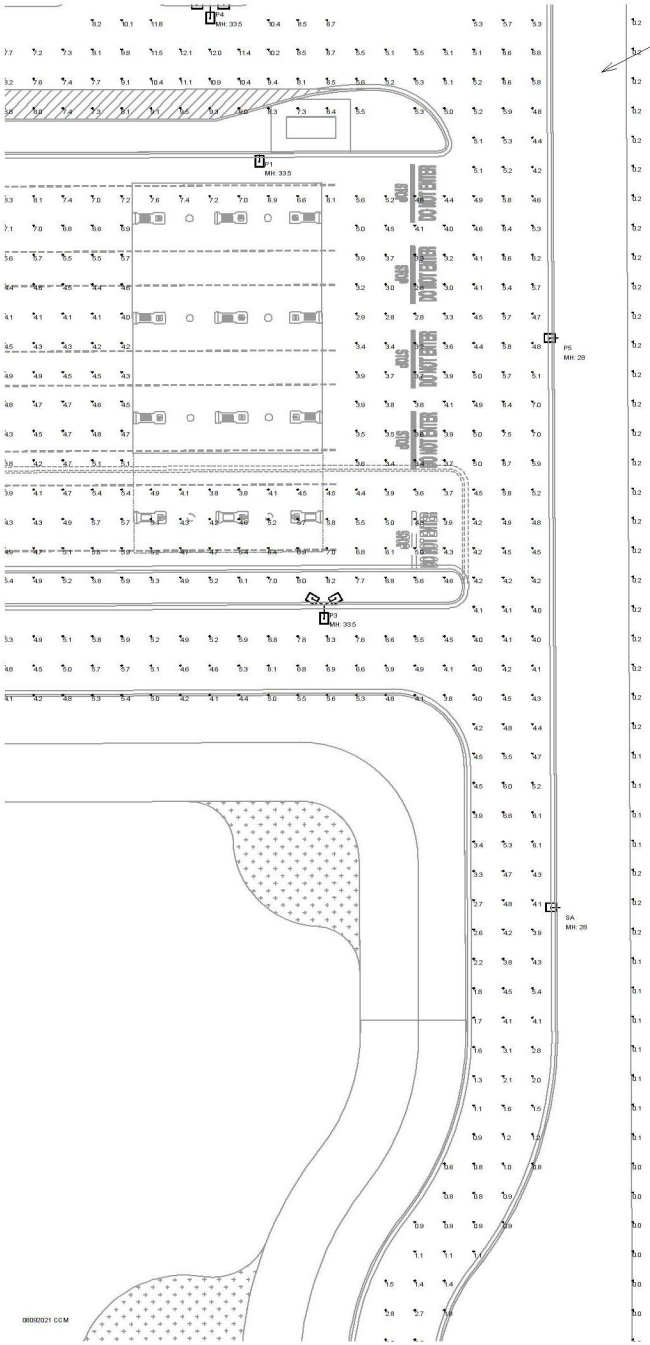
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Project Number	---	
Municipal Number	---	
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SITE PHOTOMETRIC PLAN

1"=20'-0"

NORTH

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SITE PHOTOMETRIC PLAN

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PROJECT MANAGER: JOHN MAYE

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Staff Review Report

A. Application

Kanner CPUD – Costco w/Residential

Applicant	M&M Realty Partners
Property Owner	Joe Marino M&M Realty Partners; Nehme Holdings, LLC; Willoughby Group, LLC
Agent for Applicant	Steve Garrett - Lucido & Associates Bob Raynes – Gunster Yoakley Attorneys
Project Planner	Tom Reetz – City of Stuart
Date of Report	7.30.21

B. Project Description

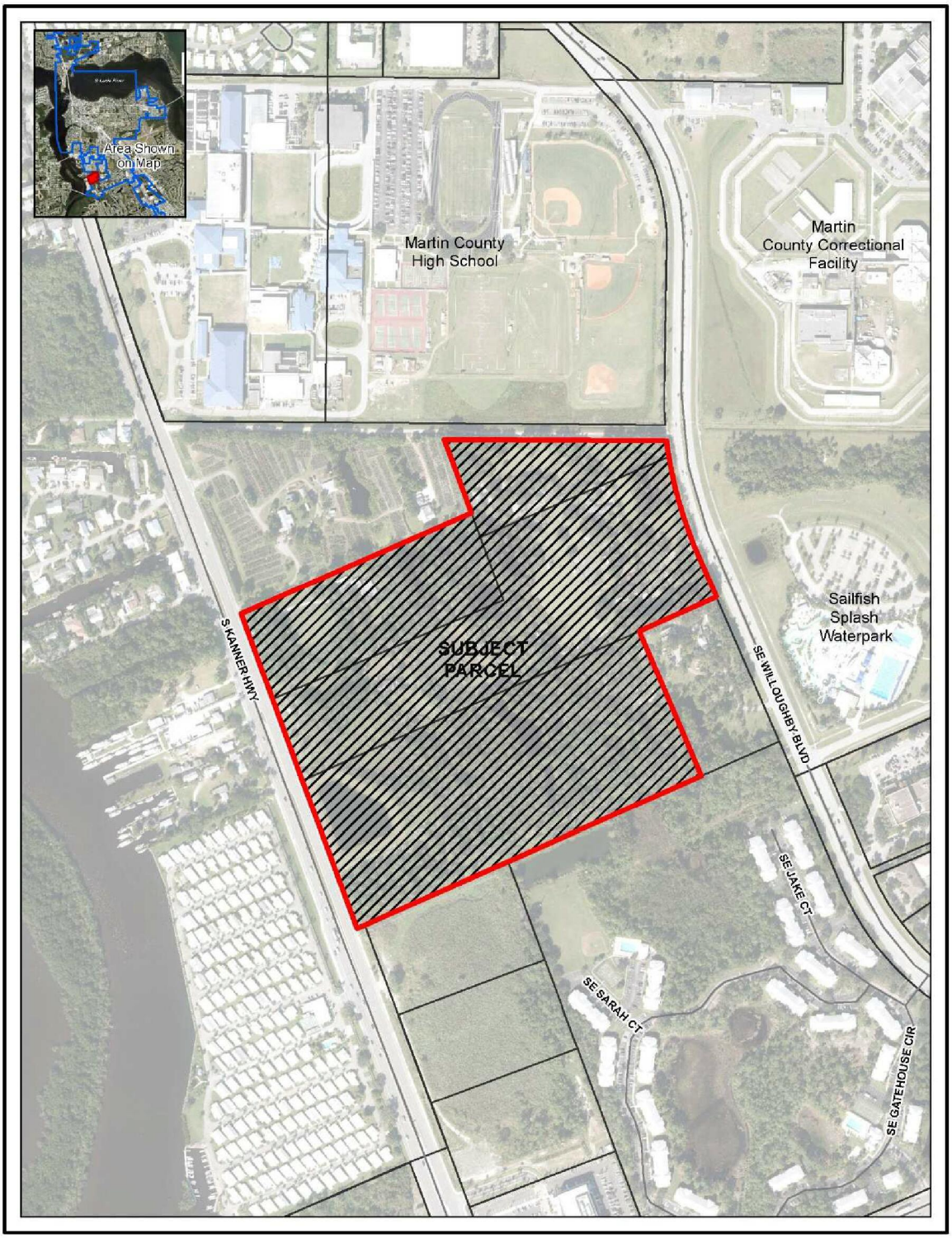
Address	Undeveloped 49 +- Acres
Parcel Number(s)	16-38-41-000-000-00440-8;16-38-41-000-000-00442-6;40-38-41-001-002-00000-5
Existing Zoning	A-1A Agricultural (County)
Proposed Zoning	CPUD 49+- acres
Existing Future Land Use	Low Density Residential (County)
Proposed Future Land Use	Neighborhood Special District
Site Area (acres)	49+- acres

SUMMARY

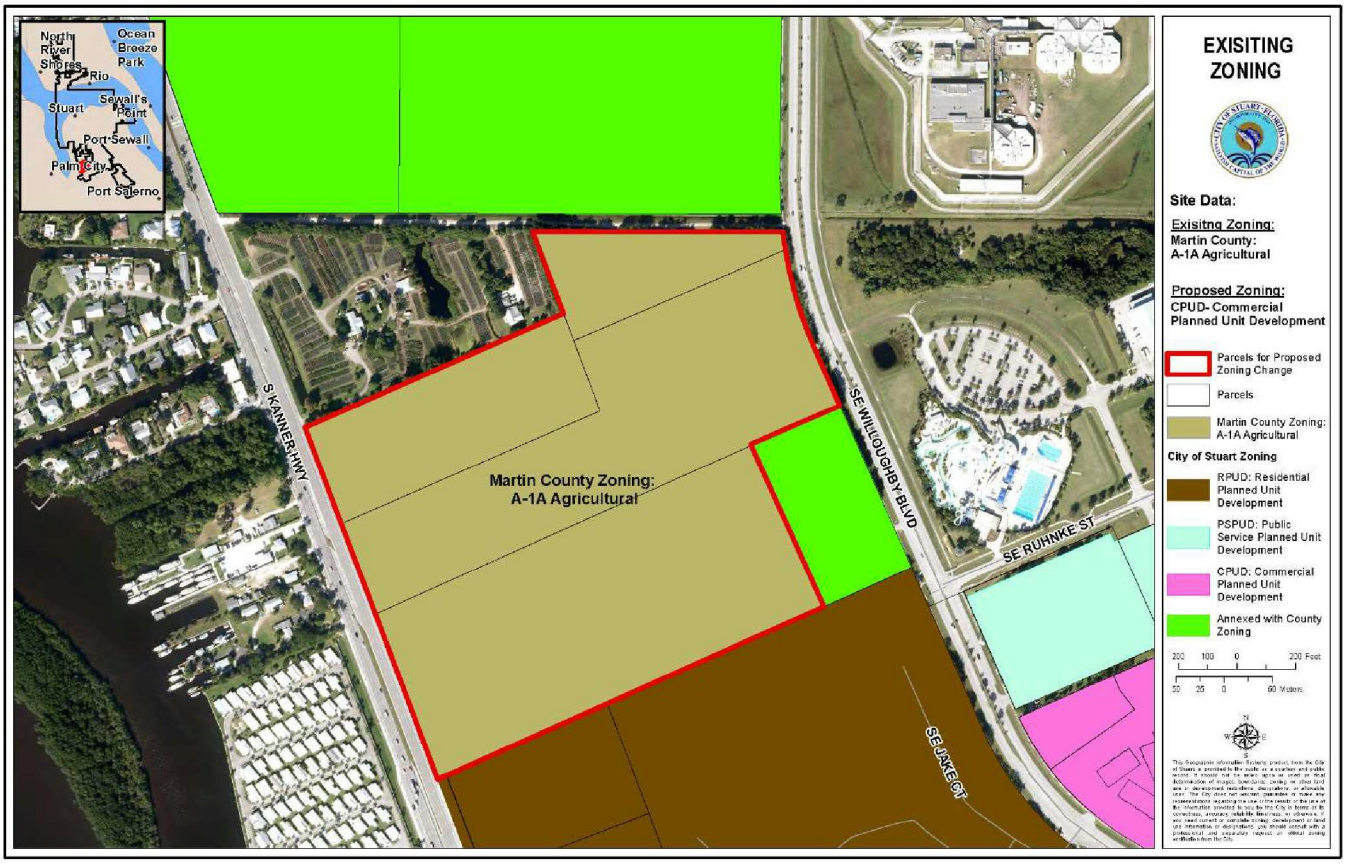
Assigning a Commercial Planned Unit Development Zoning and a Neighborhood Special District Land Use for annexed lands as described by the City's maps and a Boundary Survey provided by the applicant. For the 49+/- acre property, owned by Nehme Holdings, LLC and willoughby group, LLC located along SR-76 Kanner Highway, south of Martin County High School and abutting Lychee Tree Nursery, annexed by Ordinance No. 2327-2016 and Ordinance No. 2337-2017, and concurrently assigning "CPUD" zoning to said land on the city's official zoning map establishing the Kanner CPUD commercial planned unit development, consisting of 162,020 square feet of retail, bulk merchandise, and automobile repair services building footprint with a stand-alone kiosk and fuel facility, 378 residential apartment units and retail and restaurant pads providing for approval of a Master Site Plan.

C. Location and site information

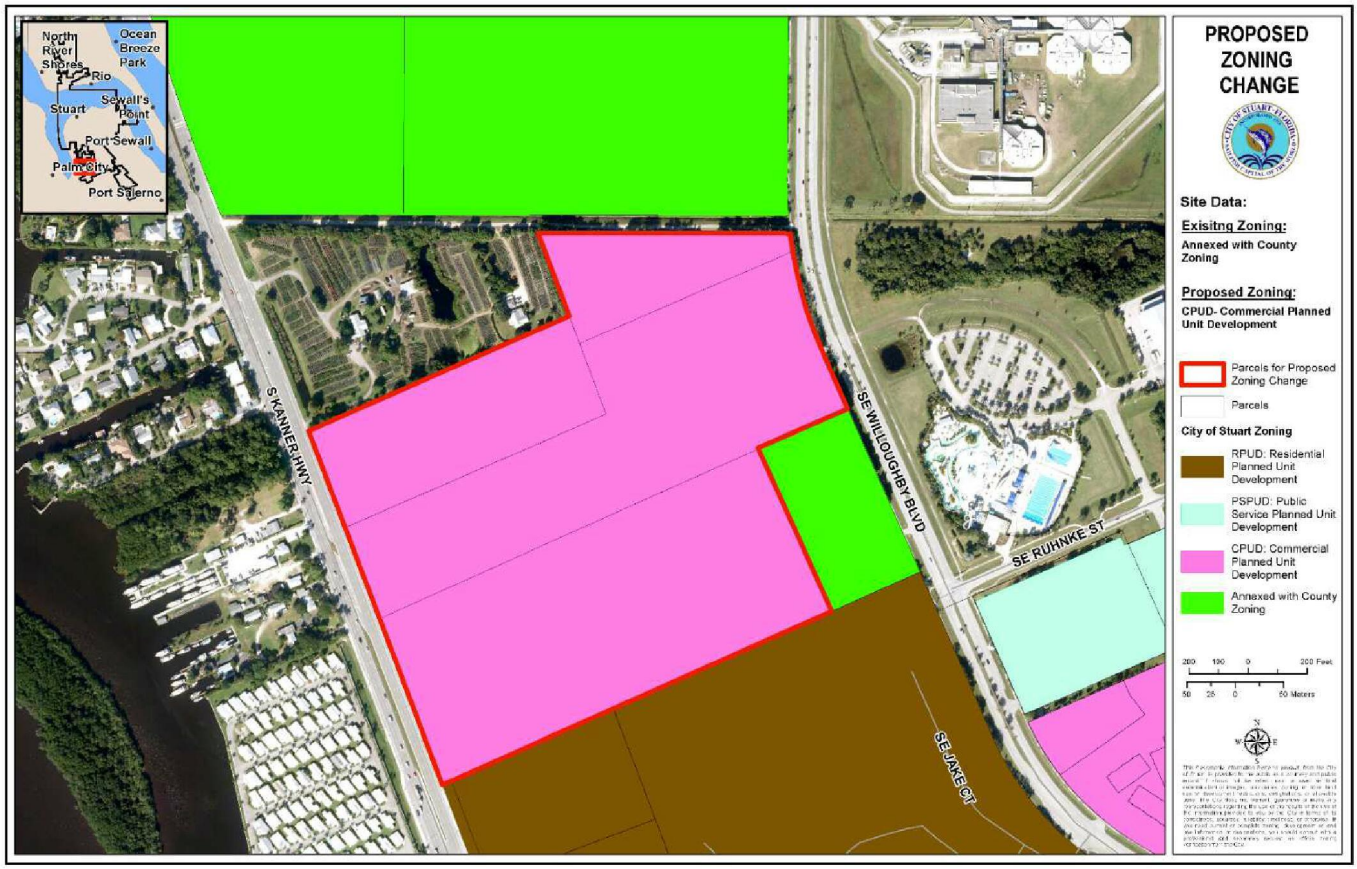
Location - Aerial Map



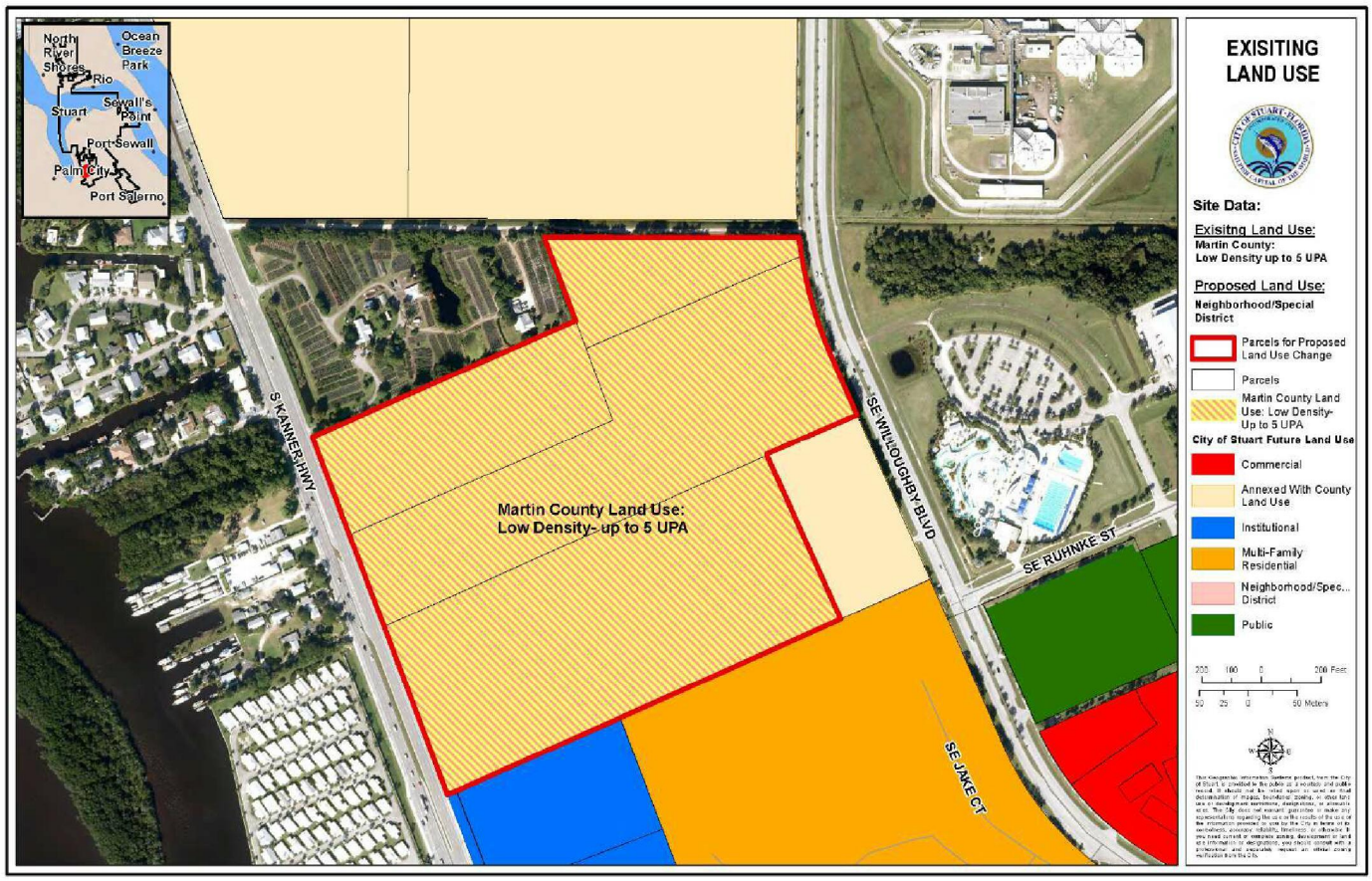
Existing Zoning: A-1A Agricultural - Martin County



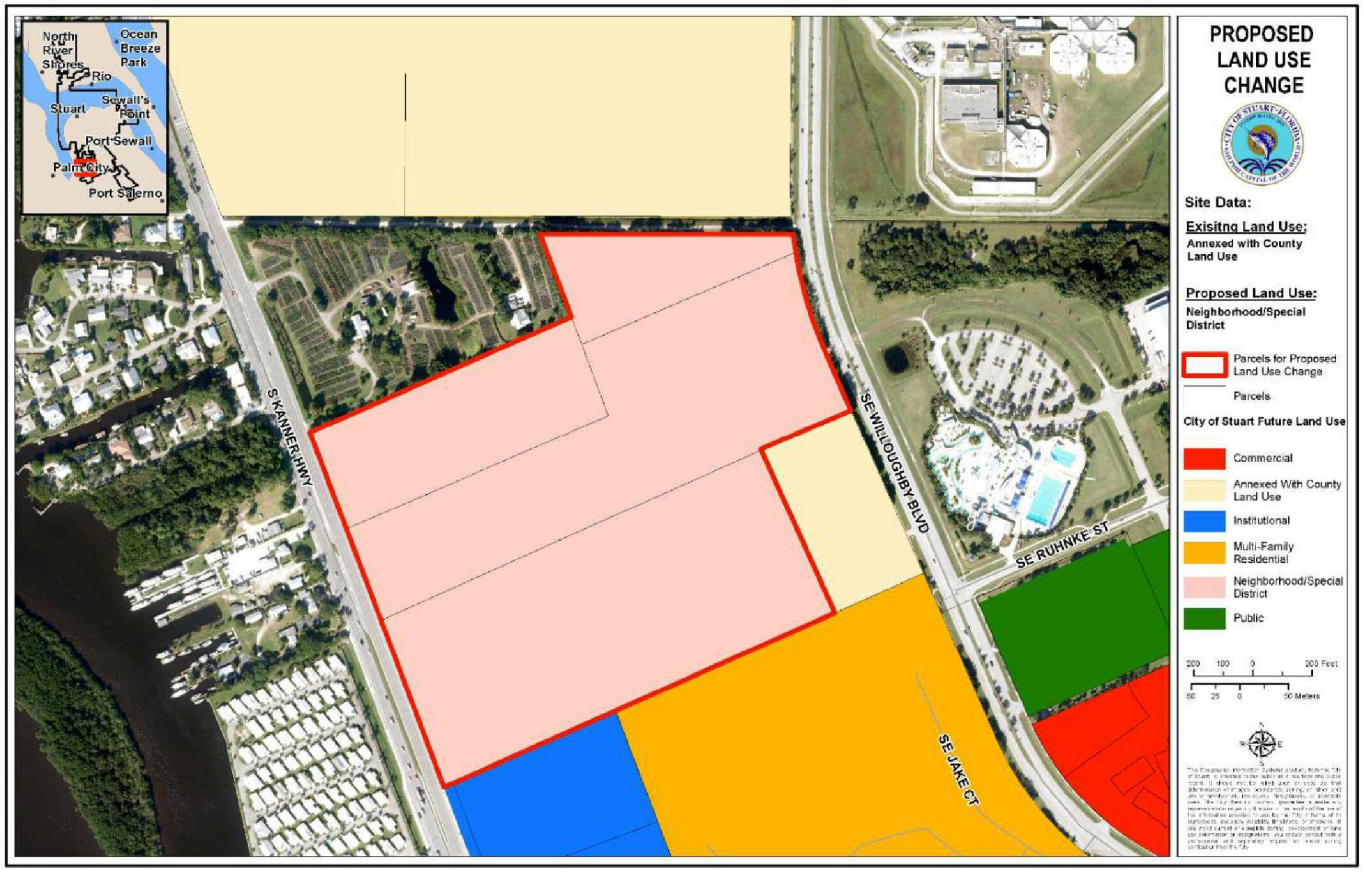
Proposed Zoning: CPUD – C.O.S.



Existing Land Use: Low Density – Martin County



Proposed Land Use: Neighborhood Special District – C.O.S.



D. Determination of compliance with Comp Plan

Objective A7. - Future land use categories.

The future land use categories defined below provide general descriptions intended to encompass all present and future land uses in the City of Stuart. The "Table of Land Use Densities and Intensities" provides specific density and intensity measures that shall establish the maximum density and intensity allowed in each land use category. The Future Land Use Map establishes the optimum, overall distribution of land uses as well as can be established on a City-wide basis. Neither these policies nor the Future Land Use Map shall be construed to mean that every parcel in a designated area is suitable for the designated use. Other plan objectives and policies will be applied to ensure that any proposed development will be suitable for the site. Similarly, the Future Land Use Map does not assure the landowner the right to the most intense use allowable under the designated future land use category. The City shall have the discretion to decide that the permitted land use shall be more limited than the maximum allowable under the future land use category; provided, that the City shall approve some development that is consistent with the City's plan.

Policy A7.1. The City of Stuart has designated the following land use categories and allowed uses for all land within the City of Stuart:

J. ***Neighborhood/Special District:*** **Mixed-use category allowing residential, commercial, and recreation land uses such that a functional vertical or horizontal mix of uses is achieved. Developments shall include a mix of residential and commercial or office. Uses may be mixed within a single building and on a single site if impacts from differing uses are mitigated through urban design techniques. Also, public facilities and electric distribution substations are allowed.**

Policy A7.2. Gross densities, gross intensities and proportional use amounts for each land use category are established in the "Table of Land Use Densities and Intensities" that is adopted as part of this element.

TABLE OF LAND USE DENSITIES AND INTENSITIES

		Residential			Non-Residential			
			RPUD or Major UCE [2]					
Land Use Category	In/Out CRA [1]	General	Not ALF [4]	ALF	% Residential	General	>2.0 FAR [3]	% Non-residential
Neighborhood/Special District	**Out**	**<15 du/ac**		<30 du/ac	**30—90%**	**<2.0 FAR**		**10—70%**

The TABLE OF LAND USE DENSITIES AND INTENSITIES (extract above) indicates that more than 30% and less than 90% of the site will need to be Residential Use at a density of no greater than 15 units/acre (using total site area).

Applicant's Response: **According to the Table of Land Use Densities and Intensities in Policy A7.2 the maximum density for the Neighborhood Special District Land Use outside the CRA is 15 du/ac. The proposed mixed used project is 48.99 acres with a proposed 378 apartments which yields 7.7 du/ac which is less than the maximum allowed density of 15 du/ac.**

[1] CRA = Community Redevelopment Agency. A delineated area.

[2] RPUD = Residential Planned Unit Development; Major UCCU = Major Urban Code Conditional Use.

[3] The total number of acres in developments approved and constructed after the policy effective date that exceed 2.0 FAR shall not exceed the specified amount.

[4] ALF = Assisted Living Facility

Policy A7.3. The term "mixed use project" means one which allows for a mix of residential, non-residential, and recreational land uses such that a functional vertical or horizontal mix of uses is achieved. These uses may be mixed within a single building or on a single site, providing that any impacts are mitigated through urban design techniques.

Applicant's Response: The Kanner CPUD project provides a horizontal mix of retail, apartments and restaurants which satisfies Policy A7.3.

Objective F1. - Development standards for Neighborhood/Special District land use category.

The City shall allow mixed-use and traditional neighborhood development, pedestrian accessibility, and innovative planning and land use techniques that strengthen the small-town character of Stuart through the application of the Neighborhood/Special District land use category.

Policy F1.1. Of the developable acreage of the site, not less than 30 percent shall consist of residential use and not less than ten percent shall consist of non-residential and non-recreational land uses.

Applicant's Response: Of the Kanner CPUD, 30% of the site consists of a residential use and the plan provides for 70% non-residential and non-recreational land uses.

Policy F1.2. Mixed-use development within the Neighborhood/Special District category shall integrate distinct uses together to create a functioning, multifaceted type of development. Integration is defined as the combination of distinct uses on a single site where impacts from differing uses are mitigated through urban design techniques and where differing uses are expected to benefit from the close immediate proximity of complementary uses. This may include horizontal and vertical integration.

Applicant's Response: The proposed mixed-use development provides distinct and interconnected uses on a single site. The proposed retail and restaurant use will benefit from the connection to the proposed 378 residential apartments.

Policy F1.3. To promote pedestrian friendly and neighborhood-scale development, blocks within a mixed-use development should not exceed an average block perimeter of more than 1,600 linear feet, or a five-minute walk, unless the block perimeter has pedestrian access points at intervals not exceeding 550 feet. No block frontage along a single street should exceed 550 feet.

Applicant's Response: Within the project, no building frontage exceeds 550 feet and pedestrian access points have been provided at intervals not exceeding 550 feet.

Policy F1.4. Large expanses of parking area discourage neighborhood scale and pedestrian friendliness. Therefore, where possible, development shall include smaller scattered parking lots of "nodes" that are approximately located such that the massing or "bunching" of parking into large expanses of parking area is prevented.

Applicant's Response: The proposed parking is configured in the most efficient manner possible to service the proposed retail, restaurant, and residential uses. By consolidating the parking areas in an efficient manner allows the project to provide a consolidated stormwater system which is augmented with native landscape.

E. Applicant's Response to Review Comments

City of Stuart Zoning - Landscaping & Site Design

The proposal to assign a commercial planned unit development and a neighborhood special district land use that will allow for the mixed-use development consisting of the Costco wholesale with fueling station, Commercial Retail, Restaurant, and Multi-Family Residential on the 49+- acres described in the Maps above. The applicant has provided the following responses to review comments.

(Since the First Reading)

The applicant has responded to the conditions of approval by the Commission at First Reading and are as follows:

1. A 5% density reduction was accomplished by reducing the dwelling one-bedroom units bringing the total to 378 units, a reduction of 20 units A result from the decrease in density is an increase in landscaping area and open space.

2. Fertilizer use is now a condition (33) prohibiting the use of herbicides with glyphosate.

3. Pervious Parking in the form of pervious pavers within the Costco parking area adjacent to the connector road and in the proposed connector road roundabout.

4. Shade trees (Oaks) now make up 83% of required shade trees. Also, Plum trees are provided within the parking diamonds.

5. Fountains in Lakes; the applicant has agreed to add fountains in the proposed lakes.

6. Fence in front of Lake 2 adjacent to the connector road has been removed resulting in a more open plan.

7. Irregular shaped lakes continues to be provided with the addition of Littoral plants within the proposed Lakes.

8. The roadway will not be named Costco Blvd. The applicant welcomes suggestion from the Commission.

9. The decorative Roundabout feature now consist of natural caprock, water features and landscaping. The design approach is to extend the natural native landscape palette and 'water' experience (lakes and stormwater improvements) within the connector road greenway.

10. The applicant is no longer asking for fill credit, however, is asking for pervious pavers and concrete in respect of tree replacement and stormwater.

11. A full breakdown of Tree mitigation has been provided on the Landscape Plans. The applicant is proposing to meet 100 % of the required mitigation on-site using new plantings and innovative stormwater improvements.

12. Stormwater function-monitoring and reporting is now a condition (#22) with samples taken and analyzed for nutrients during the construction process. After completion of the stormwater project construction and annually thereafter, a sample of runoff water that is leaving the site during or immediately after a rainfall event that generates sufficient runoff will be collected the final outfall location with a report being provided to the City annually.

(LPA comments prior to the First Reading)

The Master Site plan has been updated to show 18 fuel pumps and a future expansion area of 6 fuel pumps.

Directional arrows have been provided to show the flow of traffic.

The amount of open space has been recalculated and exceeds the required 25% per the CPUD zoning codes.

The applicant has updated the tree inventory calculations to inches provided for tree mitigation.

A grade transition space is provided on the plans to delineate where native trees can be saved. The perimeter grading has been reviewed and the applicant is able to save 25 oak trees in the northeastern corner of the property along Willoughby Boulevard.

The applicant's engineer has reviewed the feasibility of a pedestrian bridge spanning Lake 2 and determined that due to the proposed depth of the lake that a pedestrian bridge would be exceedingly difficult to construct and would cause the lake to become shallower, adversely impacting nutrient removal. A 6' sidewalk is proposed on the northside of the lake which reduces the block perimeter intervals to less than 550-feet.

The required transition buffer for the multifamily project adjacent to a single-family zone is 25' with an additional 10' for each additional story. The total transitional buffer width is 55', however according to the City of Stuart Land Development Code, the required landscape buffer screen is limited to 25% of the required buffer, or 13.75'. The majority of the provided landscape buffer is 33.8' with a minimum width of 25' which exceeds City of Stuart requirements.

The proposed buffer for the Kanner CPUD exceeds the requirements outlined in Section 6.04.06.

Twenty-five oak trees in the northeastern portion of the project along Willoughby Boulevard have been identified to be preserved on the landscape plan.

A hedge and berm have been provided adjacent to the Kanner Highway right-of-way.

Elevations and building footprints for the proposed restaurants and retail buildings have been provided

A 200-SF outdoor patio has been provided on the northeast side of the proposed Costco and a bench for seating has been provided at the main entry.

The proposed sidewalk with bench along the connector road with shade trees and large palms having been provided on the pedestrian walkways.

A departure from the code to provide one cart coral for every 25 parking stalls. Based on 720 parking spaces for the bulk retail, 28 space cart corals are required. The applicant is providing 16 space cart corals strategically placed at the parking area.

The parking data table has been updated to show the proposed unit breakdown. Within the multi-family portion of the project 692 parking spaces are required based on the City of StuartParking Code. Based on other similar multifamily projects owned and operated by the applicant, 647 parking spaces is more than adequate for this project, providing 1.71 spaces per unit average. In the recent past, the City has accepted 1.6 parking spaces per unit average for multi-family development.

Bike parking has been included on the site data table. Bicycle parking racks have been provided at the proposed Costco, the retail, restaurants, and the multi-family portions for the project.

The landscape buffer has been increased to a minimum of 25'.

A screen wall has been provided to the east of the Costco and called out on the site plan.

A departure from the code regarding parking that exceeds 10 spaces between landscape areas, However, Landscaping diamonds are now provided with Pidgen Plum trees for those areas.

The private fire protection lines have been added to the Auto-TURN analysis for reference. In addition, all multi-family buildings will be sprinkled.

The site plan has been updated to show proposed walls and gates. The multifamily site will not be open to the public.

Dumpsters have been provided at the restaurant buildings.

Commercial PUD

Project:	Kanner CPUD
Date	4.20.21

Adjacent N	A-1A Agricultural - Martin County
Adjacent S	RPUD C.O.S.
Adjacent E	R-2 Low Density Martin County
Adjacent W	A-1A Agricultural - Martin County
Total Floor Space (sq.ft)	**See Site Plan**

LDR Reference	Land Development Regulations	CPUD REVIEW STATUS
2.07.00 E.1	Land Use Designation	COMPLY
2.07.00 E.2 a	Uses	NOT APPLICABLE
2.07.00 E.2 b	Residential (<30%)	COMPLY
2.07.00 E.2 c	Commercial Residential (<30%)	COMPLY
2.07.00 E.2 c	Commercial Uses	COMPLY
2.07.03 E.3.b	Open Space (>25%)	COMPLY
2.07.03 E.3.c	Native Vegetation (>25%)	TO BE REVIEWED

AREA, IMPERVIOUS SURFACE, SETBACK AND HEIGHT

2.04.03	Supplemental impervious surface	COMPLY
2.04.04	Supplemental setback requirements	COMPLY
2.04.05	Waterfront setbacks	NOT APPLICABLE
2.04.06	Certain street setbacks	NOT APPLICABLE
2.04.07	Supplemental building height	COMPLY
2.06.00	Supplemental Use standards	NOT APPLICABLE

4.04.01	Traffic Concurrency	COMPLY
4.09.00	School Concurrency	TO BE REVIEWED

RESOURCE PROTECTION

5.02.00	Environmental Assessment	COMPLY
5.03.02	Wetland Protection	COMPLY
5.04.00	Evironmentally sensitive lands	COMPLY
5.04.03	Monitoring & Maintenance	REVIEWED AT SITE PLAN
5.05.01	Tree Survey	REVIEWED AT SITE PLAN
5.05.02	Tree removal	REVIEWED AT SITE PLAN
5.06.00	Mangrove & Shoreline	NOT APPLICABLE
5.07.00	Floodplain Management	TO BE REVIEWED
Comp Plan	Comprehensive Plan	COMPLY

DEVELOPMENT STANDARDS

6.00.03	Principles of Design	COMPLY

6.00.04.A	Qualitative Design	COMPLY
6.00.04.B	Qualitative Design Standards	COMPLY

TRANSPORTATION

6.01.02	Streets	COMPLY
6.01.03	Rights of Way	TO BE REVIEWED
6.01.04	Sidewalks/bikeways	COMPLY
6.01.05	Bike Ped (LCD)	COMPLY
6.01.06	Access	COMPLY
6.01.07	Drive-through	NOT APPLICABLE
6.01.08	Vehicular Access	COMPLY
6.01.09	Parking Code - Residential 6.01.13	EXCEPTION REQUESTED
6.01.14	Off-Street Parking Design.6.01.14.C.3.c	EXCEPTION REQUESTED
6.01.18	Off-Street Loading	COMPLY
6.01.19	PILOP	NOT APPLICABLE

STORMWATER

6.03.01	Generally	COMPLY
6.03.04	Management	COMPLY
6.03.08	Erosion	TO BE REVIEWED

LANDSCAPING

6.04.02	General Standards	COMPLY
6.04.02 A.1	Native Landscaping	COMPLY
6.06.02 A.2	Shade Trees Required	COMPLY
6.06.02 A.4	Banyan, Fiscus & Rubber Trees	NOT APPLICABLE
6.06.02 A.5	Proximity to power lines	TO BE REVIEWED
6.06.02 A.6	Shrubs	COMPLY
6.06.02 A.7	Hedges	COMPLY
6.06.02 A.8	Vines	COMPLY
6.06.02 A.9	Ground cover	COMPLY
6.06.02 A.10	Grass Area	COMPLY
6.06.02 B	Irrigation	COMPLY

LANDSCAPE DESIGN

6.04.03 A	Utility Lines (Existing and Proposed)	COMPLY
6.04.03 B.1	Landscaped Area >20%	COMPLY
6.04.03 B.2	Interior landscaping >50%	COMPLY
6.04.03 B.3	location of impervious	COMPLY
6.04.03 B.4	Mulch	COMPLY
6.04.03 B.5	Shoreline protection	NOT APPLICABLE

6.04.03 B.8	Visibility triangles	REVIEWED AT SITE PLAN
6.04.06	Land Use Transitions	COMPLY

LANDSCAPING - PARKING AREAS

6.04.07 A.1	Landscaped strip adjacent to street	COMPLY
6.04.07 A.2	Landscaped strip length linear feet	COMPLY
6.04.07 A.2a	Parking area adjacent to street	COMPLY
6.04.07 A.2b	Hedge/wall/berm on outside of strip	COMPLY
6.04.07 A.2c	Other Landscaping	COMPLY
6.06.07 A.2d	Grass	COMPLY
6.04.07 A.3	Shrubs/ground cover	COMPLY
6.04.07 B	parking screened from private propery	COMPLY
6.04.07 B.1	Landscaped strip adjacent to private property	COMPLY
6.04.07 B.2a	Parking area adjacent to private property	COMPLY
6.04.07 B.2b	Hedge/wall/berm on outside of strip	COMPLY
6.04.07 B.2c	Other Landscaping	COMPLY
6.04.07 B.2d	Grass	COMPLY
6.04.07 B.3	Shrubs/ground cover	COMPLY
6.04.07 C.1	Parking Area (Major Dev't only)	TO BE REVIEWED
6.04.07 C.2	Parking area rear and sides of building	COMPLY
6.04.07 C.3	Interior trees	COMPLY
6.04.07 C.4	Vechicle encroachment	COMPLY
6.04.07 C.5	Interior landscaped islands	EXCEPTION REQUESTED
6.04.07 C.6	Terminal landscaped islands	COMPLY
6.04.07 C.7	Interior landscaped medians	COMPLY
6.04.07 C.8	Interior shade trees	COMPLY
6.04.07 D	Visability triangles	COMPLY
6.04.08	Tree Requirements	COMPLY
6.04.10	Loading Storage	COMPLY

COMMERCIAL DEVELOPMENT STANDARDS

6.05.02 B	Building Location	COMPLY
6.05.02 C	Building Orientation	COMPLY
6.05.02 D	Façade Design	TO BE REVIEWED
6.05.02 E	Massing	TO BE REVIEWED
6.05.02 F	Other Features	TO BE REVIEWED
6.05.02 G	Transitional Elevations	NOT APPLICABLE
6.05.03 B	Blank Wall Area	TO BE REVIEWED
6.05.03 C	Repeating Façade	COMPLY
6.05.04	Additional Façade	COMPLY
6.05.05	Roof Treatments	COMPLY

6.05.06	Entryways and customer entrance	COMPLY
6.05.07	Materials and Color	NOT APPLICABLE
6.06.00	Green Development	NOT APPLICABLE
6.07.00	Lighting	COMPLY
6.08.00	Dumpster & Recycling	COMPLY
6.09.05	Fences	TO BE REVIEWED
6.11.00	Signs	TO BE REVIEWED

Kanner PUD – Maximum Buildout Analysis of Neighborhood/Special District FLU

The potential maximum buildout of the subject property has been analyzed by staff to determine the potential impact allowed under law with the utilization of the Neighborhood/Special District Future Land Use.

The Neighborhood/Special Future Land Use is defined in the City's Comprehensive Plan in Policy 1.A7.1.J.

Neighborhood/Special District: Mixed-use category allowing residential, commercial, and recreation land uses such that a functional vertical or horizontal mix of uses is achieved. Developments shall include a mix of residential and commercial or office. Uses may be mixed within a single building and on a single site provided that impacts from differing uses are mitigated through urban design techniques. Also, public facilities and electric distribution substations are allowed.

Uses within the Neighborhood/Special District are limited such:

- Residential minimum 30% to maximum 90%
- Commercial minimum 10% to maximum 70%

The maximum gross residential density allowed within the Neighborhood/Special District is set at <15 dwelling units/acre

The gross area of the subject property is 48.9 acres. The analysis uses the entire acreage bounded by the property.

The maximum number of residential dwelling units allowed on the subject property is therefore 48.9 x 15 = 734

The calculations take into account the constraints of providing appropriate car parking for residential and for commercial uses and apportion 400 sq.ft required per parking stall. The stormwater and open space requirements are also considered.

The following analysis breaks down three potential options:

1. Maximum commercial development (with Costco)
2. Maximum residential development
3. Maximum commercial development (without Costco)

Each analysis considers the maximum number of dwelling units and commercial floorspace

1. **30% Residential & 70% Commercial**

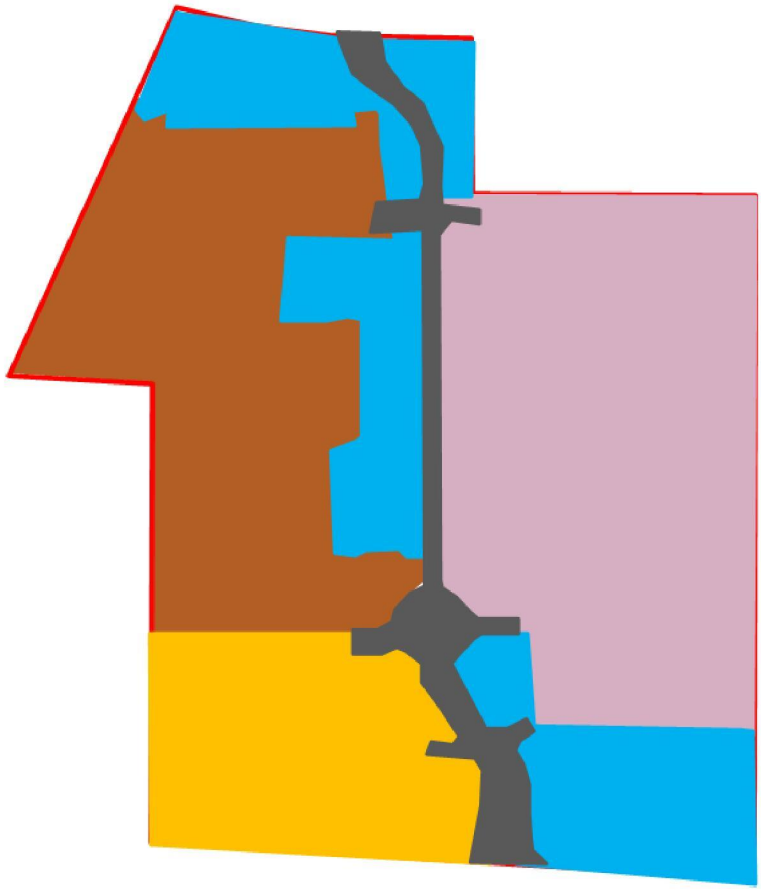
The original site plan proposed 396 residential units (since amended to accommodate a reduction in units) and set out a 30% residential and 70% commercial land use split.

Use Category	Du	Sq.ft	%
Residential	396	-	30
Commercial*	-	192,928	70

*Commercial includes Costco, Retail and Restaurant uses

The City's Utilities Department have confirmed the City has capacity to serve water and sewer to the 396 dwelling units and to the Costco, retail and restaurant uses.

The traffic impact of 6,149 new net daily vehicular trips has been confirmed to be within the level of service of Kanner Hwy and adjacent roadways.



2. 90% Residential & 10% Commercial

The maximum residential density has been applied at 15 du/ac. The remaining 4.89 acres has been allocated to commercial (retail and restaurant uses).

Use Category	Du	Sq.ft	%
Residential	734	-	90
Commercial*	-	30,000	10

*Commercial includes Retail and Restaurant uses.

The City's Utilities Department have confirmed the City has capacity to serve water and sewer to 734 dwelling units and to the retail and restaurant uses.

The estimated traffic impact of 5,475 new net daily vehicular trips is below that already confirmed to be within the level of service of Kanner Hwy and adjacent roadways.



3. 30% Residential & 70% Commercial (no-Costco)

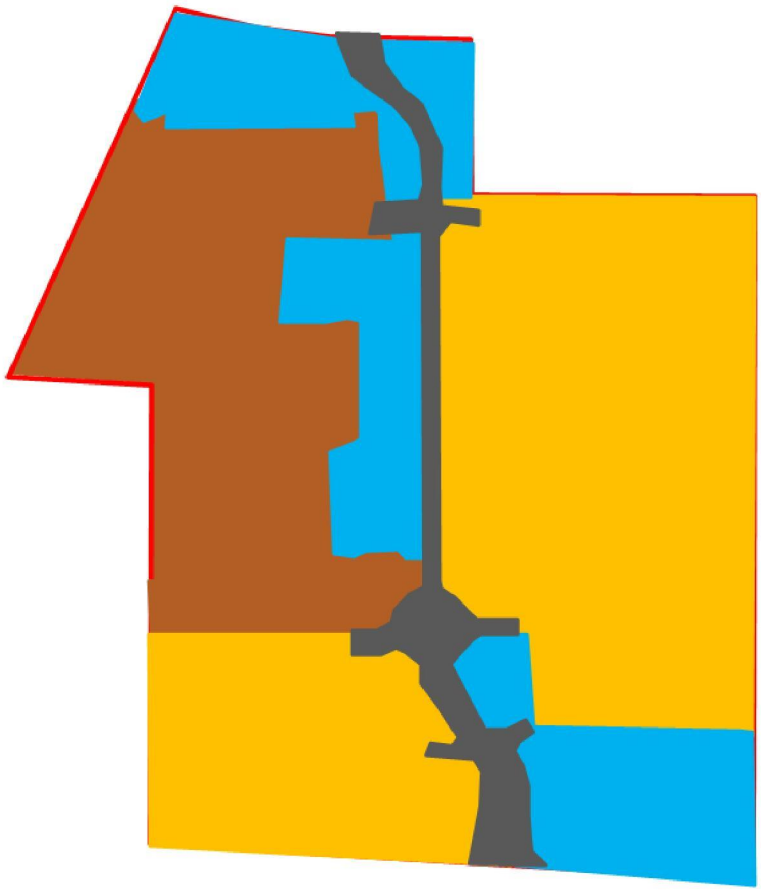
This scenario analysis the property without the Costco. With a maximum buildout of residential units, retail, and restaurant floorspace constrained by parking requirements.

Use Category	Du	Sq.ft	%
Residential	396	-	30
Commercial*	-	105,000	70

*Commercial includes 80,000 sq.ft Retail and 25,000 sq.ft Restaurant uses.

The City's Utilities Department have confirmed the City has capacity to serve water and sewer to 396 dwelling units and to the retail and restaurant uses.

The estimated traffic impact of 6,160 new net daily vehicular trips is within the level of service of Kanner Hwy and adjacent roadways.



City of Stuart
121 SW Flagler Ave
Stuart, FL 34994

(772) 288-5326

Received by: _____
Reviewed by: _____
Approved by: _____

Application to Rezone Real Property

(including Planned Unit Developments)

Project ID#_____ Agricultural / Vacant
(Staff Entry)

Pre-App Conference Date: July 2018	Application Date: 10/23/2018
Project Name: Kanner CPUD	
Parcel ID# 16-38-41-000-000-00440-8, 16-38-41-000-000-00442-6, 40-38-41-001-002-00000-5	Project Address: TBD
Current Zoning: A-1A (Martin Co)	Current Land Use: Low Density (Martin Co)
Proposed Zoning: CPUD	Proposed Land Use: Commercial
Present Use:	Site Area/Acreage: 29.23 ac

Fees *(check box)*: *This does not include fees that may be charged as a result of application review by the City's consultants*

Rezoning to CPUD	$3,584.00	[x]	Site space must be greater than 20,000 sq. ft.
Rezoning to RPUD	$3,584.00	[ ]	Site area must be greater than .5 acre
Rezoning to MXPUD	$3,584.00	[ ]	Site area must be greater than .5 acre
Rezoning to Industrial IPUD	$3,584.00	[ ]	Site area must be greater than 1 acre
Rezoning to Public Service PSPUD	$3,584.00	[ ]	Site area must be greater than 2.5 acres
Non-PUD District Rezoning	$1,433.00	[ ]	

Submittal Requirements: A completed application form, the payment of fees, one (1) copy of all documents on a PDF formatted disc electronically signed and sealed, and a site plan. (Note: A concept plan may, at the discretion of the applicant, be submitted instead of a site plan. However, in doing so the applicant acknowledges that a site plan will need to be submitted for City Commission approval prior to making application for a development permit.) The data requirements for a site plan and a concept plan are available at the Development Department.

Approving Authority: The Development Director is required to prepare a staff report and recommendation concerning this application. The Local Planning Agency (LPA) is required to hold an advertised public hearing and formulate a recommendation to the City Commission. The City Commission is also required to hold an advertised public hearing after which it may approve, approve with conditions, or deny the application.

Written justification supporting the application and demonstrating how the application:

(a) is consistent with the relevant components of the City of Stuart Comprehensive Plan including concurrency with adopted levels-of-service for utilities/facilities and compatibility with existing/planned uses and

(b) complies with the relevant development standards of the City of Stuart Land Development Code *(include additional pages if needed).*

(over)

General Information

(Please Print or Type)

1. Property Owner, Lessee, Contract Purchaser, or Applicant (circle one):

Name: Joe Marino	City/State/Zip Code: Piscatoway, NJ 07704
Title: Managing Partner	Telephone Number: 979-779-7466
Company: M&M Realty Partners	Facsimile Number:
Company Address: 1260 Stelton Rd	Email Address (optional): jmarino@jmpholdings.com

2. Agent of Record (if any): The following individual is designated as the Agent of Record for the property owner, lessee, or contract purchaser and should receive all correspondence related to the application review.

Name: Steven Garrett	City/State/Zip Code: Stuart, FL 34994
Title: Vice President	Telephone Number: 772-220-2100
Company: Lucido & Associates	Facsimile Number:
Company Address: 701 E Ocean Blvd	Email Address (optional): sgarrett@lucidodesign.com

3. The Undersigned, as the Property Owner, Lessee, Contract Purchaser, or Applicant (circle one), acknowledges responsibility for all City expenses associated with the referenced application (s) including time spent by the City's consultants and further acknowledges that payment of consultant fees will be made prior to the receipt of the consultant comments.

Name: Steven Garrett	City/State/Zip Code: Stuart, FL 34994
Title: Vice President	Telephone Number: 772-220-2100
Company: Lucido & Associates	Facsimile Number:
Company Address: 701 E Ocean Blvd	Email Address (optional): sgarrett@lucidodesign.com

I hereby certify that all information contained herein is true and correct.

4. Signed this _____ day of _____, 20____.

_____

Signature of Property Owner, Lessee, Contract Purchaser or Applicant (circle one)

State of Florida, Martin County The foregoing instrument was acknowledged before me on this _____day of

_____ by _____ who is personally known to me, or who has produced

_____ as identification and who did/did not take an oath.

_____ Commission Expires:

Notary Signature

ITEM #	TYPICAL PLAN COMPONENTS
1	Schedule a pre-application meeting
2	Plans shall be 24” x 36” in size (2 sets)- "State Plane Coordinates"
3	All drawings to be folded to nominal 9" x 12" size
4	Legible graphic scale displayed on each sheet of both sets
5	Title Block including: north arrow, street address of the zoning lot, date of preparation, name and address of the firm that prepared the site plan, type of plan, project or development name project (includes any former name if existing)
6	Site data summary to include but limited to: a) Tabulation of total project area b) Total anticipated phases/units c) Lot coverage of structures d) Number of buildings with square footage e) Impervious/pervious surface coverage f) Density units per acre, if applicable g) No. of off-street parking spaces, required and provided, including handicapped spaces h) No. of off-street loading space(s) i) Existing and proposed zoning j) Future Land Use designation k) Existing and proposed use l) Floor area ratio m) Open space or urban open space, if applicable n) Handicapped access to structures, including type of ramping and slope
7	Legal description and parcel boundary(s) survey of the property prepared by a licensed surveyor registered in the State of Florida
8	Vicinity map preferably at a scale of 1’ = 2,000’
9	Zoning Map, Future Land Use Map, Aerial of subject property
10	All submittals shall be on a CD in PDF downloadable file
11	Final submittal of plan documents shall be signed and sealed in a PDF downloadable file on a disc
12	All revised plans must be clouded and must be accompanied by a cover letter indicating all changes and their locations (Include it with the application form)
13	Access and Traffic Flow Plans including parking, loading and internal traffic circulation patterns (Turning radius trucks)
14	Any traffic lights installed by the proposed project will include installation of traffic pre-emption device as approved by the development director
15	Fire Department Access and Water Supply a) Fire department access road shall extend to within 50 ft of a single exterior door providing access to the interior of the building;

	b) Fire department access roads shall have an unobstructed width of not less than 20 ft. c) Fire department access roads shall be provided such that any portion of the facility is located not more than 150 ft from the fire dept. access road; d) Required fire lanes shall be provided with the inner edge of the roadway no closer than 10 feet and no further than 30 feet from the building; e) Turning radius (25' inside, 45' outside and height minimum of 13'6") f) Fire Department Connection Location g) Fire Hydrant Locations, existing and proposed - clearance of 7'6" in front of and to the side of the fire hydrant, with a 4' clearance to the rear of the hydrant h) Fire mains - minimum 6" supply; minimum 8" dead end main as approved by MCU
16	Existing buildings and structures on the project zoning lot(s) and within fifty (50) feet of the project's property lines, or such additional distance as may be necessary in order to show major features or conditions that may affect the project
17	Existing Uses and zoning on all adjacent property
18	Locations of the nearest available public water supply and wastewater disposal system and the proposed tie-in points, or an explanation of alternative systems to be used
19	Proposed development shall include but not limited to: a) Location and size of all proposed buildings and structures, labeled with allowable use, height, total and gross floor area, and distance to all property lines and between buildings b) Number, height, and type of residential units; Provide density units per acre (Gross) c) Architectural elevations of all sides of all buildings d) Height and Type of Fencing and Walls, existing and proposed e) Off-Street Parking and Loading layout including typical size and number of spaces by location (parking bays). If structured parking, include parking layout of each level (ground and typical) f) Minimum of six-foot wide sidewalks g) Drive-thru windows, including vehicle queuing or stacking spaces and queuing lane dimensions, if any h) Passenger drop-off/pick-up areas; Decorative benches, if provided
20	Building setback distances from property lines, abutting right-of-way centerlines, and all adjacent buildings and structures
21	Minimum floor elevations of buildings and finished floor elevations of subject property and adjacent property
22	Pedestrian Circulation System and Points of Ingress and egress (including proposed public street modifications)
23	Concurrency Review: a) Demonstrate ability to meet concurrency (Traffic, School, Utility, Parks & Recreation) b) A traffic statement shall be required if proposed development have the potential to generate 19 or less peak-hour trips b) A traffic study shall be required if proposed development have the potential to generate 20 or more new peak-hour trips d) School Concurrency requirement - Residential developments shall comply with bus stops size, location and turning radius to accommodate a school bus by coordinating with the Martin County Zoning, Planning and Engineering Departments, as well as the Martin County School

	District Planning and Transportation Department.
24	Phasing, if any; Total acreage in each phase and gross/net intensity (non-residential) and gross/net density (residential) of each phase; What will be built in each phase; Construction phase lines
25	Dumpsters: a) Refuse and recycling collection areas b) Dumpster enclosure details per City of Stuart's standard specification
26	Various plans including: a) Site Lighting Plan including location, type, height and intensity pattern of all exterior lights, if applicable b) Signage plan/Unified signage plan c) Landscape plan and specifications, signed/sealed/dated by a Florida Registered Landscape Architect
27	Location, names and widths of existing and proposed streets, highways, easements, building lines, alleys, parks, public spaces, and Rights-of-Way and similar facts regarding adjacent property
28	Utility Lines and Structures such as water, sewer, gas, electric, telephone, hydrants, main size to support fire flows and FDC locations, on the project site, including size and/or capacity and similar facts regarding adjacent property
29	Cross sections and specifications of all proposed pavements
30	Location of proposed retention/detention areas
31	Typical and special roadway and drainage sections
32	Locations of all land to be abandoned, dedicated or reserved for all public or private uses including rights-of-way, easements, special reservations
33	Location of onsite well and any wells within 1,500 feet of any property line
34	PRE-APPLICATION MEETING(S) REQUIRED TO REVIEW POTENTIAL ENVIRONMENTAL IMPACTS Before creating a detailed conceptual site plan or seeking environmental permits from federal, state or other agencies, the applicant shall first schedule and attend at least one pre-application meeting with Town Officials to discuss the project's probable environmental impacts. For the pre-application meeting, the applicant shall provide an environmental report, prepared by a qualified environmental professional (i.e. Certified Ecologist, Certified Environmental Professional, Professional Wetland Scientist, or other recognized certification), in accordance with the Town's Land Development Code. The applicant is also encouraged to provide a rough layout of the proposed site plan, if available. The primary purpose of the pre-application meeting(s) is to ensure that before detailed site planning begins and substantial costs are incurred, the applicant is made fully aware of the Town's environmental design standards, particularly its "avoidance or minimization" of impact standards, and that this awareness is ultimately reflecting in the site's final design.
34A	Avoidance or Minimization of Wetland and Other Environmental Impacts

	On-Site Avoidance 1. Can another vertical level be added to a building to decrease the overall building footprint? 2. Can the building footprint be reduced and still achieve the project's purpose and need? 3. Can a building be repositioned on the parcel to reduce or eliminate environmental impacts? 4. Can multiple structures be clustered to reduce or eliminate impacts? 5. Can road or utility alignments be reconfigured? 6. Can spans and bridges be used instead of culverts? 7. Can grading be minimized by incorporating natural topography? 8. Can more trees and vegetation be preserved? 9. Can lot layout be reconfigured? 10. Can state waters, including wetlands, be concentrated into subdivision "common areas"? 11. Can the project's storm water facilities be designed using Low Impact Development (LID) Techniques?
34B	On-Site Minimization: 1. Can some of the above listed techniques be used to further minimize impacts? 2. Can directional drilling be used to install underground utilities instead of excavation and backfill? 3. Can equipment fitted with low pressure tires or tracks be used? 4. Can any permanent impacts (e.g. access roads) be converted to temporary impacts? 5. Can construction staging or stockpiling of materials occur in areas outside of environmentally sensitive lands?
34C	All water bodies, watercourses, wetlands and associated buffers on-site and immediately adjacent to the site and within the watershed, inclusive of all environmentally sensitive land on the site, including wetlands, and any proposed disturbance thereof.
34D	Vegetation – existing vegetation on site, including each separate type of upland vegetation or land cover and each type of wetland vegetation cover mapped and described in accordance with the Florida Land Use, Cover, and Forms Classification System (FLUCCS), including total acreage calculations of each vegetative type shown on the map, as well as a recent aerial photograph of the subject property.
34E	Wetlands – a copy of a wetland delineation map according to the State of Florida, including a separate map determining the existence of outstanding resource wetlands, if applicable, including an opinion from the Florida Fish & Wildlife Conservation Commission (FWCC) or U.S. Fish and Wildlife Service (USFWS), or a professional biologist rendering an opinion as to whether the wetland or wetlands on site have significant wildlife values.
34F	Wildlife – a description of the wildlife observed or expected to be present on site, based on habitat, using indicators such as tracks, burrows, nests, and live sightings of species listed by Florida Fish and Wildlife Conservation Commission and the U.S. Fish and Wildlife Service as endangered, threatened or of special concern, including an account of field reconnaissance and identification efforts, as well as all correspondence, documents, reports, etc. to and from all pertinent environmental regulatory agencies.
34G	Preserve area and upland buffer evaluation -- calculation of the preserve area and upland buffer requirements, including a summary of total site area, acreage of wetlands, acreage of native upland and of non-native upland, as well as a map depicting each area type and location of

	wildlife observations from the wildlife evaluation. Native vegetation constituting up to 25 percent of a development site shall be preserved.
34H	Native Vegetation Preserve Area Onsite/Offsite -- for proposed upland native vegetation preserve areas – either onsite or offsite – the location of the proposed relocation area, consisting of the same type of vegetative community, provided on-site and offsite preserve areas of a different type may be proposed, providing that the area is a native vegetative community that is rare within the City or Martin County.
34I	Use of drought-tolerant, native vegetation in landscaping.
34J	Exotic and invasive vegetation to be removed upon development or redevelopment.
35	Frontage Type(s)
36	Minimum percentage of façade along front lot line, indicate amount required and provided
37	Location of transition line, if applicable
38	Minimum percentage of glass, indicate amount required and provided
39	Slope of pitched roof, if provided
40	Height of parapet wall, if any
41	List of exterior materials, colors and finishes
42	Except for single-family residential, all developments which are less than 20,000 square feet shall incorporate a minimum of four of the following building design standards, and all developments which exceed 20,001 square feet shall incorporate a minimum of five of the following building treatments: a. Overhangs; b. Arcades as defined by this Code; c. Sculptured artwork and/or fountains; d. Raised cornice parapets over doors; e. Peaked roof forms; f. Display windows; g. Ornamental and structural architectural details, other than cornices, which are integrated into the building structure and overall design; h. Clock or bell towers; i. Decorative light fixtures; j. Decorative landscape planters or planting areas, a minimum of five feet in width, and areas for shaded seating consisting of a minimum of 100 square feet; k. Integration of specialty pavers, or stamped, colored concrete along the building's walkway to constitute a minimum of 60 percent of walkway area; l. Water elements, a minimum of 50 square feet in area; and m. Courtyards along the front building facade.
43	Curb cut, if any

44	Outbuildings, if any
45	Height/length/depth/projection of balconies and balcony rails
46	Traffic drive aisle width
47	Material of roofs and gutters
48	Specifications of arcades and porches, if any
49	Materials, configuration, and operations of windows and doors
50	Garden wall, if any

121 SW Flagler Ave
Stuart, FL 34994
Tel: 772-288-5326
Fax: 772-288-5388

COMPREHENSIVE PLAN AMENDMENT/REZONING

(LDR 11.06.00, 11.09.00 & 11.10.00)

Please print clearly and provide all required information

DEVELOPMENT DEPARTMENT USE ONLY	
APP Ref#	

A.	REZONING $1,433.60		
	SMALL SCALE COMPREHENSIVE PLAN (FLU) AMENDMENT FEE $1,792.00		LESS THAN 10 ACRES
	COMPREHENSIVE PLAN (FUTURE LAND USE MAP) AMENDMENT FEE $1,792.00	X	GREATER THAN 10 ACRES WILL REQUIRE DISTRIBUTION TO DCA WITHIN ONE OF THE TWO WINDOWS ALLOWED (USUALLY APRIL AND NOVEMBER EACH YEAR)

B. PROPERTY INFORMATION				
PROJECT TITLE	Kanner CPUD			
PARCEL ID#	16-38-41-000-000-00440-8, 16-38-41-000-000-00442-6, 40-38-41-001-002-00000-5			
CURRENT ZONING	A-1A (Martin County)			
PROPOSED ZONING	CPUD			
CURRENT FUTURE LAND USE	Low Density (Martin County)			
PROPOSED FUTURE LAND USE	Commercial			
PRESENT USE	Vacant			
SITE AREA	29.23 ac			
STREET ADDRESS	TBD			
AGENT	Steven Garrett			
COMPANY	Lucido and Associates			
PHONE	772-220-2100	FAX		

C. PETITIONER INFORMATION			
NAME	Steven Garrett, Lucido and Associates		
STREET ADDRESS	701 E Ocean Blvd		
CITY	Stuart		
STATE	FL	ZIP	34994
PHONE	772-220-2100	FAX	
SIGNATURE OF OWNER OR AGENT	_____ Date 10/22/2018		

D.	SUBMITTAL REQUIREMENTS (9 sets of all documents)					
	SITE PLAN		LANDSCAPE PLAN		TRAFFIC ANALYSIS	
	BOUNDARY SURVEY		LEGAL DOCUMENTS DEMONSTATING UNIFIED CONTROL		ARCHITECTURAL ELEVATIONS	
	ZONING MAP EXTRACT		FUTURE LAND USE MAP EXTRACT		AFFIDAVIT PERMITTING REPRESENTATION	
	DATE OF PRE-APPLICATION				LIST OF SURROUNDING PROPERTY OWNERS WITHIN 300ft	

BRIEF EXPLANATION OF PROPOSAL

The request is to establish a land use designation of 'Commercial' to 3 parcels of land recently annexed into the City of Stuart from Martin County. The previous Martin County land use designation is 'Low Density'. A City of Stuart Land Use is currently listed as 'To Be Determined'. An application for a CPUD zoning is provided under separate cover to create a commercial development for this property.

Ron DeSantis
GOVERNOR

FLORIDA DEPARTMENT of ECONOMIC OPPORTUNITY

Dane Eagle
SECRETARY

June 25, 2021

The Honorable Eula R. Clarke
Mayor, City of Stuart
121 SW Flagler Avenue
Stuart, Florida 34994

Dear Mayor Clarke:

The Department of Economic Opportunity ("Department") has reviewed the City of Stuart's proposed comprehensive plan amendment (Amendment No. 21-02ESR), received on May 28, 2021, pursuant to the expedited state review process in Section 163.3184(2)(3), Florida Statutes (F.S.). We have identified no comment related to adverse impacts to important state resources and facilities within the Department's authorized scope of review.

We are, however, providing two technical assistance comments consistent with Section 163.3168(3), F.S. The technical assistance comments will not form the basis of a challenge. They are offered either as suggestions which can strengthen the City's comprehensive plan in order to foster a vibrant, healthy community or are technical in nature and designed to ensure consistency with the Community Planning Act in Chapter 163, Part II, F.S. The technical assistance comments are:

- The development requested by the applicant is less dense and intense than the maximums allowed by the requested Future Land Use Map designation. Prior to adoption, DEO recommends that if the City is relying on the proposed development densities and intensities requested in the Comprehensive Plan amendment for it's planning purposes, then limitations on the development's densities and intensities should be included within the body of the City's Comprehensive Plan. Alternatively, the City should plan for and evaluate the impacts of the maximum development potential allowed pursuant to the proposed Future Land Use Map designation.

- The Department strongly encourages the City of Stuart to coordinate with the South Florida Water Management District on all matters pertaining to regional water supply, water conservation, water supply planning, and water use permitting.

The City should act by choosing to adopt, adopt with changes, or not adopt the proposed amendment. For your assistance, we have enclosed the procedures for adoption and transmittal of the comprehensive plan amendment. In addition, the City is reminded that:

An equal opportunity employer/program. Auxiliary aids and service are available upon request to individuals with disabilities. All voice telephone numbers on this document may be reached by persons using TTY/TTD equipment via the Florida Relay Service at 711.

- Section 163.3184(3)(b), F.S., authorizes other reviewing agencies to provide comments directly to the City. **If the City receives reviewing agency comments and they are not resolved, these comments could form the basis for a challenge to the amendment after adoption.**

- **The second public hearing,** which shall be a hearing on whether to adopt one or more comprehensive plan amendments, **must be held within 180 days** of your receipt of agency comments or the amendment shall be **deemed withdrawn** unless extended by agreement with notice to the Department and any affected party that provided comment on the amendment pursuant to Section 163.3184(3)(c)1., F.S.

- **The adopted amendment must be rendered to the Department.** Under Section 163.3184(3)(c)2. and 4., F.S., the **amendment effective date** is 31 days after the Department notifies the City that the amendment package is complete or, if challenged, until it is found to be in compliance by the Department or the Administration Commission.

If you have any questions concerning this review, please contact Melissa Corbett, Planning Analyst, by telephone at (850) 717-8505 or by email at Melissa.Corbett@deo.myflorida.com.

Sincerely,

James D. Stansbury, Chief
Bureau of Community Planning and Growth

JDS/ mc

Enclosure(s): Procedures for Adoption

cc: Tom Reetz, Senior Planner, City of Stuart
Thomas Lanahan, Executive Director, Treasure Coast Regional Planning Council

SUBMITTAL OF ADOPTED COMPREHENSIVE PLAN AMENDMENTS

FOR EXPEDITED STATE REVIEW

Section 163.3184(3), Florida Statutes

NUMBER OF COPIES TO BE SUBMITTED: Please submit electronically using the Department's electronic amendment submittal portal "**Comprehensive Plan and Amendment Upload**" (*https://floridajobs.secure.force.com/cp/*) **or** submit three complete copies of all comprehensive plan materials, of which one complete paper copy and two complete electronic copies on CD ROM in Portable Document Format (PDF) to the State Land Planning Agency and one copy to each entity below that provided timely comments to the local government: the appropriate Regional Planning Council; Water Management District; Department of Transportation; Department of Environmental Protection; Department of State; the appropriate county (municipal amendments only); the Florida Fish and Wildlife Conservation Commission and the Department of Agriculture and Consumer Services (county plan amendments only); and the Department of Education (amendments relating to public schools); and for certain local governments, the appropriate military installation and any other local government or governmental agency that has filed a written request.

SUBMITTAL LETTER: Please include the following information in the cover letter transmitting the adopted amendment:

_____ State Land Planning Agency identification number for adopted amendment package;

_____ Summary description of the adoption package, including any amendments proposed but not adopted;

_____ Identify if concurrency has been rescinded and indicate for which public facilities. (Transportation, schools, recreation and open space).

_____ Ordinance number and adoption date;

_____ Certification that the adopted amendment(s) has been submitted to all parties that provided timely comments to the local government;

_____ Name, title, address, telephone, FAX number and e-mail address of local government contact;

_____ Letter signed by the chief elected official or the person designated by the local government.

ADOPTION AMENDMENT PACKAGE: Please include the following information in the amendment package:

_____ In the case of text amendments, changes should be shown in strike-through/underline format.

_____ In the case of future land use map amendments, an adopted future land use map, **in color format,** clearly depicting the parcel, its future land use designation, and its adopted designation.

_____ A copy of any data and analyses the local government deems appropriate.

Note: If the local government is relying on previously submitted data and analysis, no additional data and analysis is required;

_____ Copy of the executed ordinance adopting the comprehensive plan amendment(s);

Suggested effective date language for the adoption ordinance for expedited review:

> "The effective date of this plan amendment, if the amendment is not timely challenged, shall be 31 days after the state land planning agency notifies the local government that the plan amendment package is complete. If the amendment is timely challenged, this amendment shall become effective on the date the state land planning agency or the Administration Commission enters a final order determining this adopted amendment to be in compliance."

_____ List of additional changes made in the adopted amendment that the State Land Planning Agency did not previously review;

_____ List of findings of the local governing body, if any, that were not included in the ordinance and which provided the basis of the adoption or determination not to adopt the proposed amendment;

_____ Statement indicating the relationship of the additional changes not previously reviewed by the State Land Planning Agency in response to the comment letter from the State Land Planning Agency.

TREASURE COAST REGIONAL PLANNING COUNCIL

M E M O R A N D U M

To: Council Members AGENDA ITEM 4B10

From: Staff

Date: June 25, 2021

Subject: Local Government Comprehensive Plan Review
Draft Amendment to the City of Stuart Comprehensive Plan
Amendment No. 21-02ESR

Introduction

The Community Planning Act, Chapter 163, *Florida Statutes*, authorizes the regional planning council to review local government comprehensive plan amendments prior to their adoption. The regional planning council review and comments are limited to adverse effects on regional resources or facilities identified in the Strategic Regional Policy Plan (SRPP) and extrajurisdictional impacts that would be inconsistent with the comprehensive plan of any affected local government within the region. Council must provide any comments to the local government within 30 days of the receipt of the proposed amendments and must also send a copy of any comments to the state land planning agency.

The amendment package from the City of Stuart was received on May 28, 2021 and contains one Future Land Use Map (FLUM) amendment. This report includes a summary of the proposed amendment and Council comments.

Summary of Proposed Amendment

The proposed amendment is to revise the future land use designation on 4 parcels totaling 48.99 acres of undeveloped land annexed by the City from a Martin County designation of Low Density Residential, which allows up to 5 dwelling units per acre, to a City designation of Neighborhood/Special District. Under the Neighborhood/Special District land use category, it is required that more than 30% and less than 90% of the site be developed as residential with a maximum density of no more than 15 dwelling units per acre. Under the proposed land use designation, the maximum residential development potential is 734 dwelling units, an increase of development potential of 490 dwelling units from the County's designation. For commercial development, the maximum potential is 2,987,606 square feet under the proposed designation.

As part of the proposed land use designation amendment, the applicant is requesting a Commercial Planned Unit Development (CPUD) zoning designation and site plan approval. It is proposed that the CPUD will consist of 162,020 square feet of retail, bulk merchandise, and automobile repair services; a stand-alone kiosk and fuel facility; 398 residential apartment units

within four 4-story buildings; and retail and restaurant buildings. The proposed residential development has a gross density of just over 8 units per acre.

The subject property is located along State Road 76/Kanner Highway to the west; along Willoughby Boulevard to the east; and is approximately 2,400 feet north of Indian Street. Adjacent Future Land Use designations are County Low Density Residential to the north; County General Institutional across Willoughby Boulevard to the east; County Mobile Home and County Commercial Waterfront across Kanner Highway to the west; and City Institutional and Multi-Family Residential to the south.

The staff report indicates the proposed project will be served by City of Stuart Utilities for water and sanitary sewer services. The report also includes transportation and environmental reports that contain recommendations for development of the property. To that end, the City's ordinance contains conditions of approval that require all development activities to comply with the City's Concurrency Management System prior to the issuance of building permits; and to require that regulatory agency permits (state and federal) be obtained prior to the commencement of any phase of development activities.

Regional Impacts

No adverse effects on regional resources or facilities have been identified.

Extrajurisdictional Impacts

Council requested comments from local governments and organizations expressing an interest in reviewing the proposed amendment on June 8, 2021. No extrajurisdictional impacts have been identified. Correspondence was received from the public related to the proposed amendment. Due to the extensive volume of materials received, all public comment correspondence is being provided as a supplement on Council's website.

Conclusion

No adverse effects on regional resources or facilities and no extrajurisdictional impacts have been identified.

Recommendation

Council should approve this report and authorize its transmittal to the City of Stuart and the Florida Department of Economic Opportunity.

Council Action – July 23, 2021

Mayor Foley from the Town of Indian River Shores moved approval of the staff report. Commissioner Linden from the Town of Lake Park seconded the motion, which carried unanimously.

Attachments

List of Exhibits

1	General Location Map
2	Location Map
3	Existing Future Land Use Map
4	Proposed Future Land Use Map

Exhibit 1
General Location Map

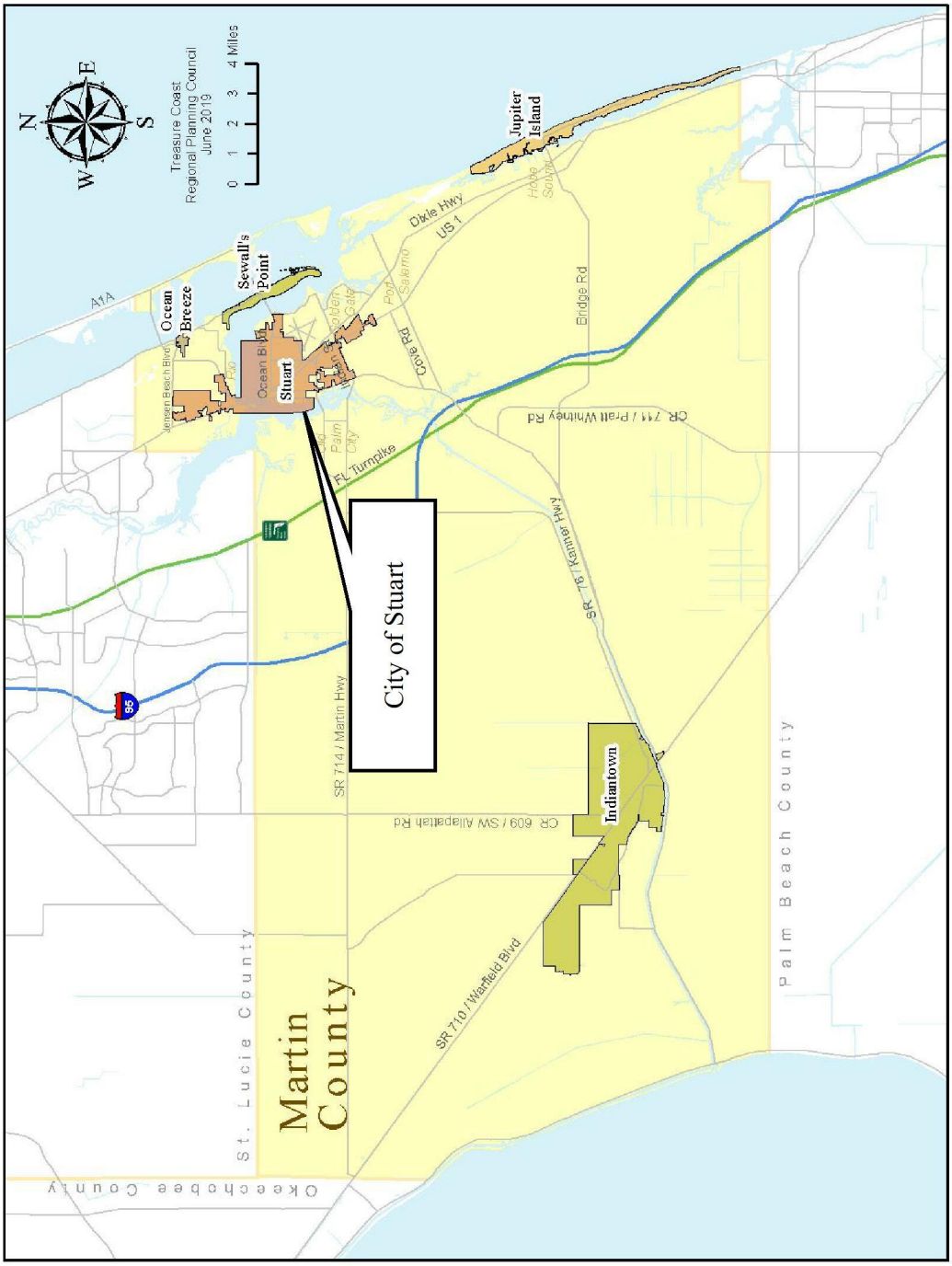


Exhibit 2
Location Map

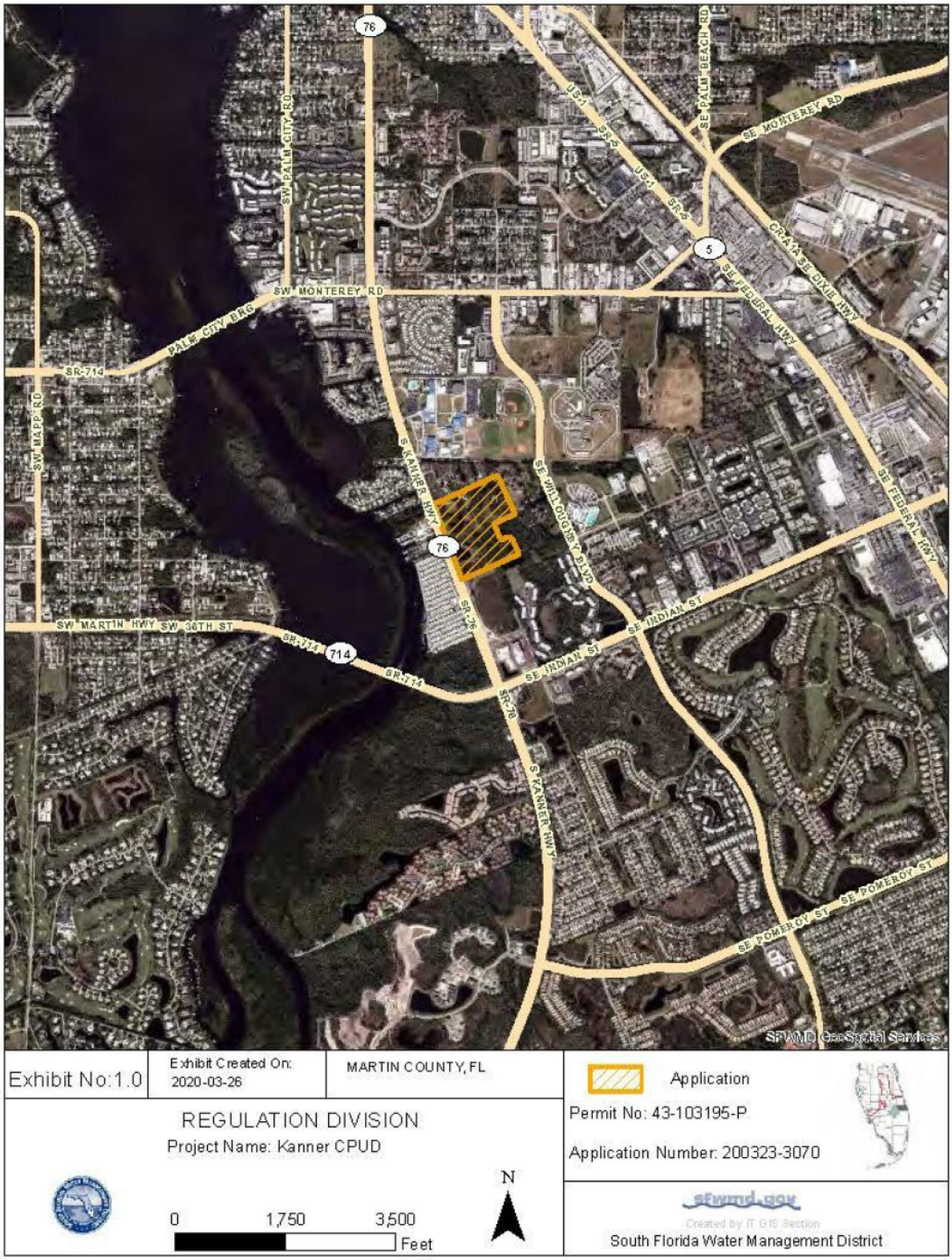


Exhibit No:1.0	Exhibit Created On: 2020-03-26	MARTIN COUNTY, FL

REGULATION DIVISION

Project Name: Kanner CPUD

0 1,750 3,500 Feet

N

Application

Permit No: 43-103195-P

Application Number: 200323-3070

sfwmd.gov

Created by IT GIS Section

South Florida Water Management District

Exhibit 3
Existing Future Land Use Map

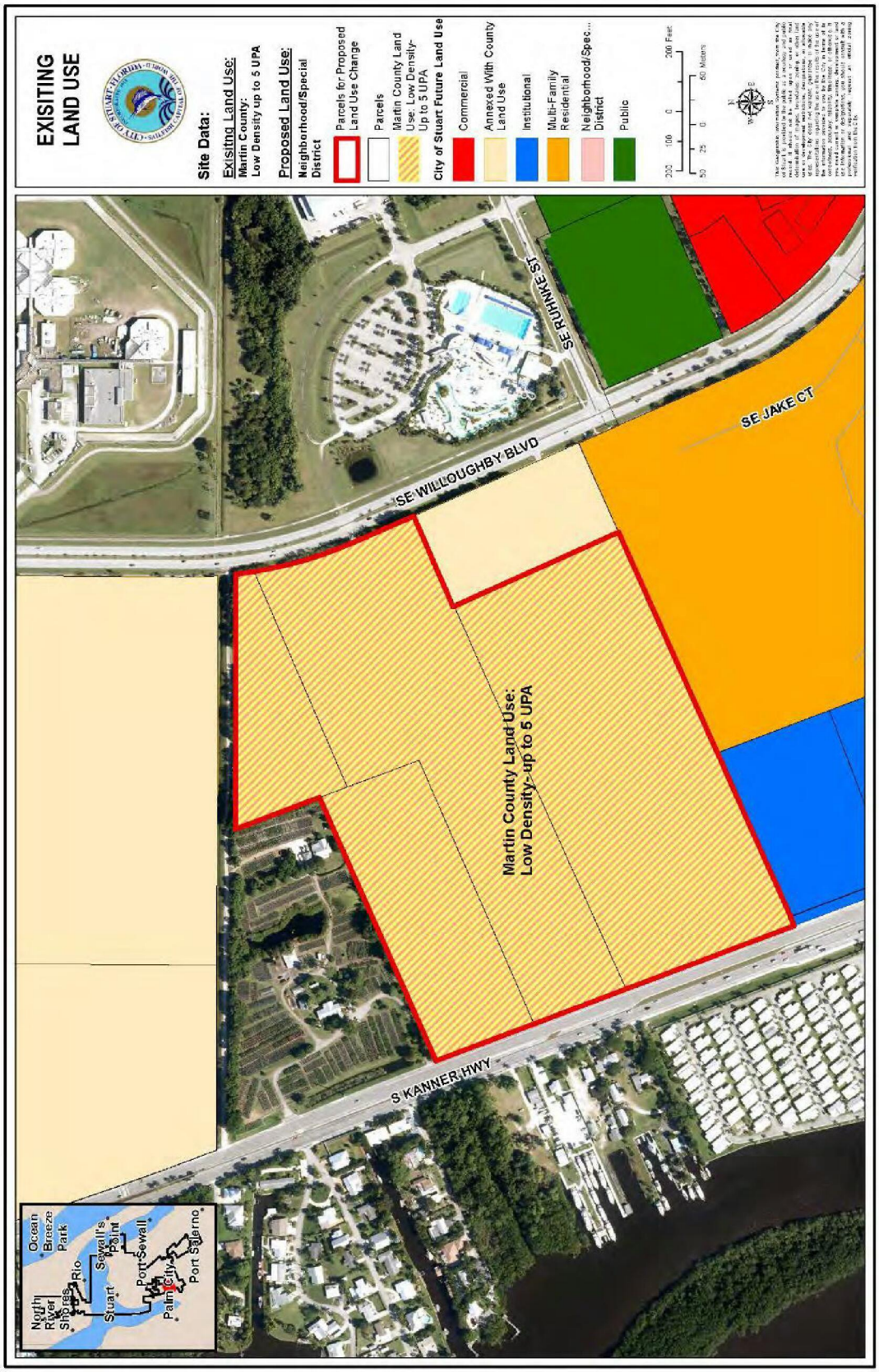
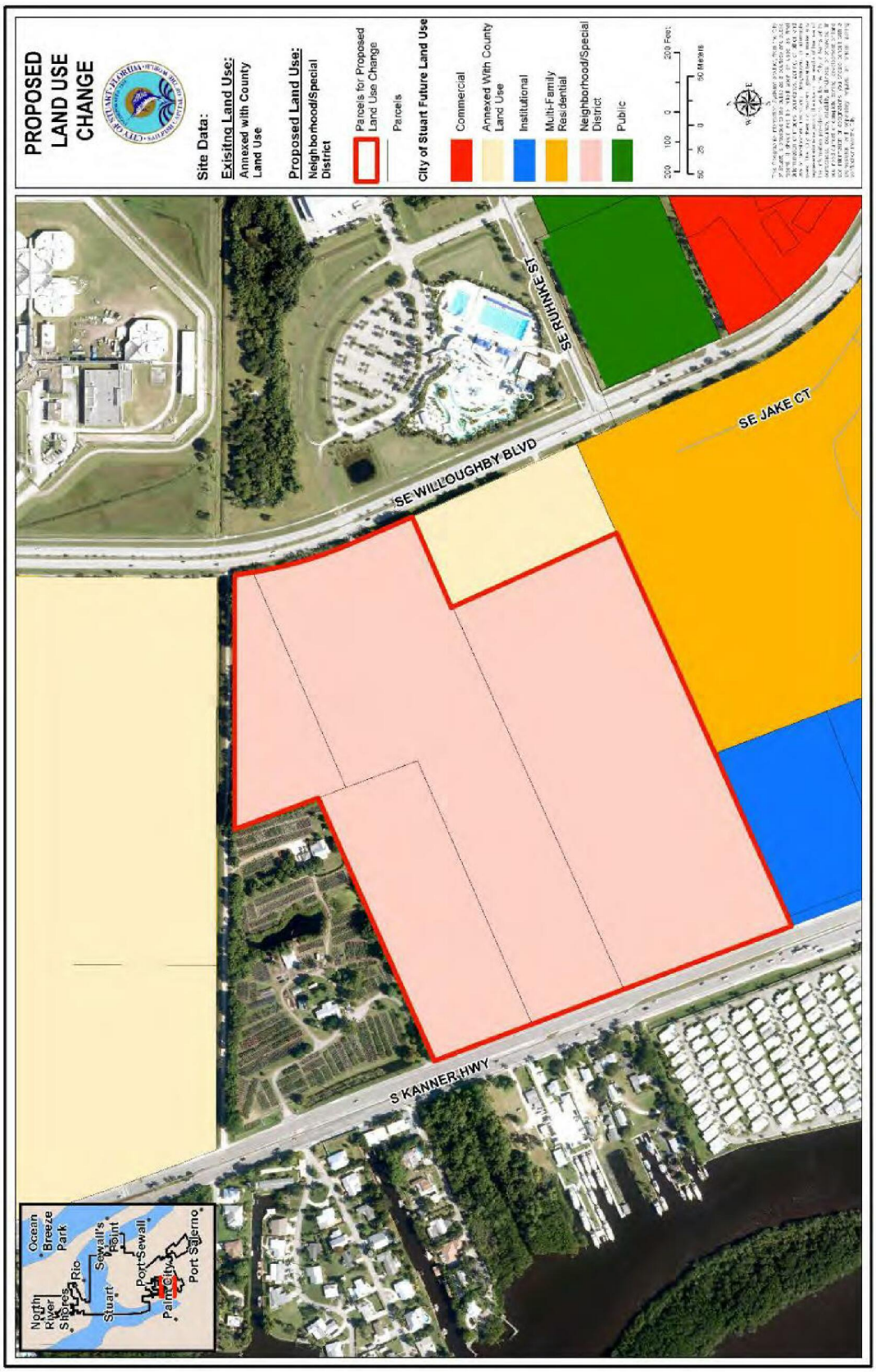


Exhibit 4
Proposed Future Land Use Map



lucido & associates
Land Planning / Landscape Architecture

July 8, 2021

Mr. Tom Reetz
Senior Planner, Development Department
City of Stuart
121 SW Flagler Avenue
Stuart, FL 34994

Sent via email: treetz@ci.stuarrt.fl.us

RE: Kanner CPUD – Response to 1st Reading Conditions of Approval

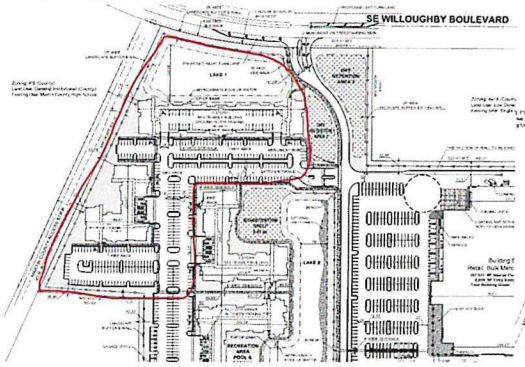
Dear Mr. Reetz:

In response to the conditions of approval placed upon the project at the first reading by the Commission, please accept this letter, attached exhibits and revised plans documenting how we have addressed each item. Upon your review, if you have any questions, please do not hesitate to contact me directly.

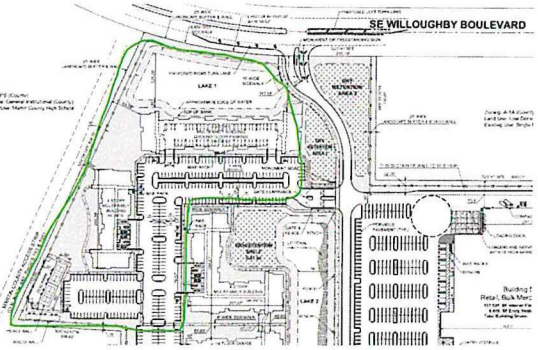
First reading Commission Conditions:

1. 5% Density Reduction.
   Total multi-family dwelling units were reduced by (20) one-bedroom units bringing the new total to (378) units versus the previous (398) units. The change occurred in the northeastern portion of the site at buildings 3 and 4 by actually revising the building design to facilitate not only the reduction in units/density but an increase in landscape area and open space provided; Refer to revised site plan provided;

Previous Site Plan:

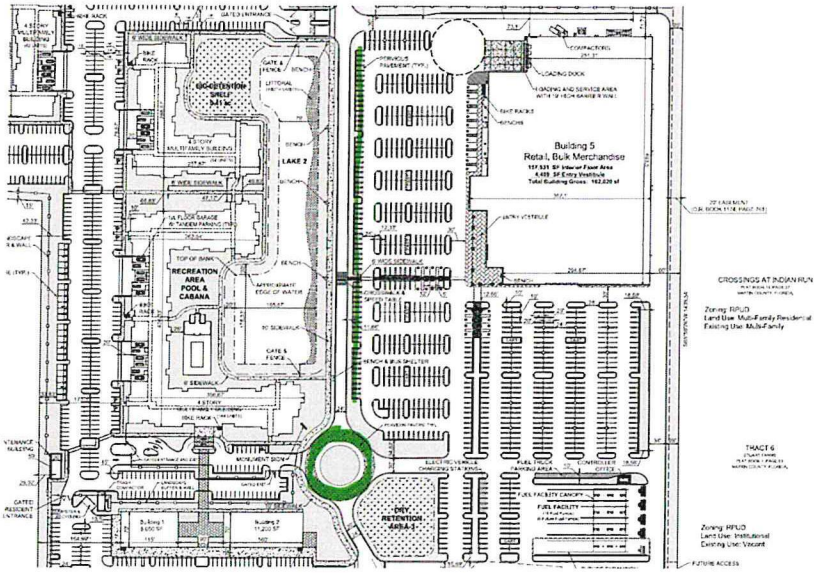


Revised Site Plan:



2. Fertilizer use
   Condition #33 has been added within the Ordinance and addresses this item by prohibiting the use of herbicides with Glyphosate.
   "The use of herbicides with Glyphosate active ingredient is prohibited on the S. Kanner CPUD property."

3. Pervious Parking
The site plan had been amended to reflect the use of pervious pavers within the Costco parking area adjacent to the 'connector' road as well as within the proposed 'connector' road roundabout. Refer to revised site plan as well as highlighted exhibit below;



4. Oaks/Shade trees
Shade trees are required a minimum of 50% whereas we are providing 83% with the amended landscape plan. In addition, we have proposed the use of Pidgeon Plum trees within the parking diamonds. Pidgeon Plums are native trees which will provide canopy while being well suited for spaces which are more confined such as the diamonds.

5. Fountains in Lakes
Applicant has agreed to add fountains to the proposed lakes to further enhance both the aesthetics and functionality of the lake system.

6. Fence in front of Lake 2 removed
Applicant agreed to remove the previously proposed fence adjacent to the 'connector' road (northside) which will create a more open 'feel' and experience along the 'connector' road. Refer to revised site plan.

7. Irregular shape + Littoral planting to Lakes
Applicant continues to provide irregular shaped lakes with the addition of littoral plants within the proposed lakes. The lake system in conjunction with the 'connector' road and pedestrian system is envisioned as a public greenway providing not only linkage (point A to point B) but also providing the public usable areas to sit, read an interpretive sign about the additional stormwater measures and use of native plants, and other passive uses.

8. Roadway not named Costco Blv'd
Applicant agrees and notes that 'Costco Blvd.'. was merely a placeholder for purposes of reference. Applicant agrees and supports a name for the 'connector' road which relates to and is appropriate to the City of Stuart. Applicant welcomes suggestions by the Commission.

9. Decorative Roundabout feature
Applicant is proposing a significant aesthetic feature within the roundabout consisting of natural caprock, water features and landscaping. The design approach is to extend the natural/native landscape palette and 'water' experience (lakes and stormwater improvements) within the connector road greenway THROUGH the roundabout so that the roundabout becomes visually integrated within the greenway and is the primary focal point and sense of 'arrival' within the entire project. We want to create an experience of driving through the greenway and being immersed.



10. No credit for fill in respect of tree replacement/stormwater
Applicant agrees and no credit is being requested.

11. Full breakdown of Tree mitigation
Please refer to the provided revised landscape plans on sheet LA-1 for the full mitigation calculations. In summary (below) we are proposing to meet 100% of the required mitigation on-site through the use of new plantings and innovative stormwater improvements. One of the primary goals was to replace on an inch for inch basis the hardwoods and softwoods removed from the site with new hardwood and softwoods (almost 60% of the required mitigation) prior to utilizing other creditable elements such as innovative stormwater improvements.

Total Mitigation Required (DBH):	**24,704**
Total Mitigation Provided (DBH):	**26,675**
Hardwood DBH Provided:	3,280
Pine DBH Provided:	11,184
Shrub DBH Provided:	5,724
Site Improvement DBH Provided:	6,487

12. Stormwater function - monitoring/reporting
Condition #22(c) within the Ordinance addresses this item (below):
c. Prior to initiating construction of the S. Kanner CPUD, one water quality sampling event will be conducted collecting runoff water that is leaving the site during or immediately after a rainfall event that generates sufficient runoff. The sample will be analyzed for nutrients (nitrogen series, phosphorus

(dissolved and total), suspended solids, and total dissolved solids. After completion of the S. Kanner CPUD stormwater management system construction and annually thereafter, a sample of runoff water that is leaving the site during or immediately after a rainfall event that generates sufficient runoff will be collected at the final outfall location. The sample will be analyzed for the same parameters as the pre-development samples. A report comparing water quality data findings will be provided to the City annually.

Attachments (via CD/USB drive and (1) printed set):

A. Revised Master Site Plan;
B. Revised Landscape Plan (with detailed mitigation calculations);
C. Revised Traffic Analysis for Kanner CPUD (378 apartments);
D. Land Use Plan Amendment Traffic analysis;
E. Signal Warrant Analysis;
F. Residential Multifamily Plans and Elevations; (will be provided under separate cover)
G. Phasing Plan;
H. Preliminary Engineering Plans and Specifications;
I. Kanner CPUD Garbage Truck Turning Exhibit;
J. Kanner CPUD Fire Truck Turning Exhibit;
K. Photometric plans;

Respectfully,

Steven D. Garrett, RLA
Vice President

Kimley»Horn

To: Tom Reetz
Planning Division
City of Stuart Development Department

From: Alex R. Memering, P.E.
Kimley-Horn and Associates, Inc. ARM

Date: July 28, 2021

Re: **Kanner CPUD Site**
Review of Traffic Analysis

Kimley-Horn has performed a review of the Site-Specific Traffic Analysis (dated June 25, 2021) and Signal Warrant Analysis (dated June 25, 2021) prepared by O'Rourke Engineering & Planning related to the above-mentioned project. An updated Land Use Plan Amendment Traffic Analysis was not provided. Please find below our review comments pertaining to the impacts to transportation facilities:

Land Use Plan Amendment Traffic Analysis

1. Please update the **Table 2b** to include the correct AM peak hour directional split for ITE LUC 857 (Discount Club).

2. Please update **Table 6a and Table 6b** for roadway segments to show Willoughby Blvd from Salerno Rd to Pomeroy St as a 2-Lane undivided roadway per the Martin County Roadway LOS Inventory Report.

3. Please revise language within the "Five-Year Analysis -2025" and "Conclusion" sections of the report to include the updated trip generation potential for the site.

4. Please include the Allowable Pass-By Calculations within Appendix C of the site-specific report in the land-use plan amendment traffic analysis.

Thank you for the opportunity to assist the City of Stuart in reviewing this project. Please contact us if you have any questions or need additional information.

Response: An updated LUPA report was provided to the City dated April 21, 2021. Items 1 through 3 were addressed in that report. The pass-by calculations were included in the Concurrency report and are attached to this response.

Allowable Pass-By Calculation

Segment	From	To	Existing 2019 AADT	Existing 2019 2-Way Peak Hour Trips	Growth Rate	2024 Daily Trips	Daily Pass-By Allowed	2024 2-Way Peak Hour Trips	Peak Hour Pass-By Allowed
Kanner Hwy	Indian St	Monterey Rd	21116	1631	1.005	21649	2164.9	1672	167.2
Willoughby Blvd	Indian St	Monterey Rd	11100	1280	1.037	13311	1331.1	1535	153.5
Indian St	Kanner Hwy	Willoughby Blvd	29306	2771	1.047	36871	3687.1	3486	348.6
						Total:	7183		669

Kimley»Horn

To: Tom Reetz
Senior Planner
City of Stuart Development Department

From: Kevin Roberson, P.E.
Kimley-Horn and Associates, Inc.

Date: July 28 2021

Re: **Kanner CPUD – Stuart, Florida**
Kanner CPUD Response to 1st Reading Comments Review – Engineering

---

Dear Mr. Reetz,

Kimley-Horn has reviewed the submittal of the Kanner CPUD Response to First Reading Comments and the associated documents, that were provided on July 21, 2021 prepared by Lucido and Associates for the above referenced project. Please find below our review comments pertaining to the following items listed within the application:

Response Letter

Comment 11 – How is the DBH value of the site improvement DBH determined. In prior submittal, a value of $150 at 2.5" was used. Please provide back up for the DBH provided value of 6487. The City Development Director will need to approve the value accepted for tree replacement credit.

Comment 12 - How will the annual submittal of the water quality data findings be enforced? The applicant needs to establish a consistent date for the submittal of the annual report so that the City can track when it is due. In the event water quality is found to decline when compared to the prior year's report, what type of remedial action will be implemented?

Tree Mitigation Memo

1. The bottom of Page 2 indicates the BMP Trains exhibit is attached but it was not included. Please provide so the nitrogen and phosphorus removal rates can be verified.
2. Provide a summary of how the total cost of $575,204.50 translates to 6487 DBH of credit outlined in comment response letter item 11.

Thank you for the opportunity to assist the City of Stuart in reviewing the noted project. By conducting this limited evaluation, Kimley-Horn is not assuming responsibility for the content and accuracy of the plans, which remain the sole responsibility of the Engineer of Record. Please contact us if you have any questions or need additional information.

Sincerely,

Kimley-Horn and Associates, Inc.



Kevin M. Roberson, P.E.
Senior Vice President

RESPONSE TO KIMLEY HORN REVIEW COMMENTS ON APPLICATNS RESUBMITTAL TO 1ST READING CONDITIONS.

Date: July 28 2021

Re: **Kanner CPUD – Stuart, Florida**
Kanner CPUD Response to 1st Reading Comments Review – Engineering

---

Response Letter

Comment 11 – How is the DBH value of the site improvement DBH determined. In prior submittal, a value of $150 at 2.5" was used. Please provide back up for the DBH provided value of 6487. The City Development Director will need to approve the value accepted for tree replacement credit.

The mitigation value has been a consistent monetary amount of $187.50 per tree credit as noted on the landscape plan set / sheet 2.

Comment 12 - How will the annual submittal of the water quality data findings be enforced? The applicant needs to establish a consistent date for the submittal of the annual report so that the City can track when it is due. In the event water quality is found to decline when compared to the prior year's report, what type of remedial action will be implemented?

In working with staff, a specific condition (as written below or similar and agreed to by both applicant and City will be added to the project (pending commission approval).

The annual water quality data findings shall be submitted on an annual basis with the first data collection period commencing upon the date the City issues the Certificate of Occupancy for Phase IA of the CPUD. The first annual water quality data findings shall be submitted one (1) year from the City's issuance of the Phase IA Certificate of Occupancy and annually thereafter for a time period ending no earlier than five (5) years after issuance of the Certificate of Occupancy for the final phase of construction. The results of any annual water quality data findings shall not constitute acknowledgment by the developer or the City that the proposed system is deficient, or causing and/or contributing to a water quality violation. Rather, the annual water quality data findings shall be provided only as informational purposes to the City as it relates to performance of the proposed stormwater best management practices.

-

Tree Mitigation Memo

1. The bottom of Page 2 indicates the BMP Trains exhibit is attached but it was not included. Please provide so the nitrogen and phosphorus removal rates can be verified.

   We have provided the requested BMP Trains exhibit as well as verifying that the latest provided '2021-07-16 Revised Tree Mitigation Stormwater Letter' from EDC is the information being reviewed and evaluated.

2. Provide a summary of how the total cost of $575,204.50 translates to 6487 DBH of credit outlined in comment response letter item 11.

The total cost of credit for the use of Innovative Stormwater BMP's per both the Revised Tree Mitigation Letter by EDC and the provided Landscape Plans by Lucido & Associates is $486,712. This amount is then calculated or converted into DBH inches by taking the total creditable cost $486,712 dividing it by the value of (1) mitigation tree credit $187.50 which will provide the number of "trees" or tree credit provided (2,595). We take this quantity of "trees" 2,595 and multiply it by the minimum size in DBH that the City will accept for mitigation purposes which is 2.5" finally providing us with the total DBH being provided through this mitigation conversion of 6,487".

DAILY LAW JOURNAL

public hearing

pear at said meeting or comment through the Public Comment portal on the City's website to be heard with respect to this Ordinance. Should this Ordinance be vetoed, it will be reagendaed at the subsequent City Commission meeting.

BY ORDER OF THE CITY COMMISSION
HAZELINE F. CARSON, MMC
City Clerk
7-30/2021

0000652496-01

CITY OF WEST PALM BEACH
NOTICE OF PROPOSED RESOLUTION

The following Resolution described by title only will be placed on Public Hearing at the regularly scheduled meeting of the City Commission of the City of West Palm Beach, Florida on the hold on Monday, August 9, 2021 at 5:00 P.M. or as soon thereafter as possible and continuing from time to time and place to place as necessary at City Hall, 401 Clematis Street, West Palm Beach, Florida.

RESOLUTION NO. 178-21

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF WEST PALM BEACH, FLORIDA, APPROVING A MAJOR AMENDMENT TO THE HULETT ENVIRONMENTAL SERVICES COMMERCIAL PLANNED DEVELOPMENT, LOCATED AT 7670 OKEECHOBEE BOULEVARD, TO ALLOW FOR THE CONSTRUCTION OF A 22,684 SQUARE FOOT OFFICE BUILDING; DECLARING THIS AMENDMENT CONSISTENT WITH THE COMPREHENSIVE PLAN OF THE CITY; PROVIDING AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

Should any party seek to appeal any decision made by the City Commission with respect to any matter considered at such meeting or hearing, such person will need to insure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. Said Resolution may be inspected at the Office of the City Clerk at City Hall or by request to cityclerk@wpb.org. Interested parties may appear at said meeting or comment through the Public Comment portal on the City's website to be heard with respect to this Resolution. Should this Resolution be vetoed, it will be reagendaed at the subsequent City Commission meeting.

BY ORDER OF THE CITY COMMISSION
HAZELINE F. CARSON, MMC
City Clerk
7-30/2021

0000652497-01

NOTICE OF BUDGET HEARING
THE BOARD OF SUPERVISORS OF
THE CYPRESS GROVE COMMUNITY
DEVELOPMENT DISTRICT

The Board of Supervisors of the Cypress Grove Community Development District hereby gives notice of a public hearing to be held on the District's budget for fiscal year 2021-2022. The hearing, to take place at 8756 Boynton Beach Boulevard, Suite 2100, Florida 33472, shall occur on August 16, 2021, at 8:00 a.m. Any written comments from the public should be submitted at least 3 days in advance to Peter L. Breton, District Secretary, 2427 Ashbury Circle, Cape Coral, FL 33991 or by email to peter@rbtcm.law. At this hearing, the Board shall hear any objections to the budget as proposed and may make such changes as the Board deems necessary. A copy of the proposed budget can be obtained by contacting the secretary of the District at (954) 231-9659.

If a person decides to appeal any decision made by the Board with respect to any matter considered at such meeting, he/she will need a record of the proceedings and that, for such purpose, he/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.

CYPRESS GROVE COMMUNITY
DEVELOPMENT DISTRICT
Signed: Charles C. Walsey, Chair
Board of Supervisors
7-30, 8-6/2021

0000651820-01

NOTICE OF ***CANCELLATION*** OF THE
BOYNTON BEACH CRA ADVISORY
BOARD AUGUST 5, 2021 MEETING

You are hereby notified that the Boynton Beach CRA Advisory Board's August 5, 2021 meeting has been CANCELLED.

The CRA Advisory Board's meetings will resume as scheduled with the September meeting being held on Thursday, September 2, 2021 @ 6:30 pm and every first Thursday of the month thereafter at City Chambers, 100 E. Ocean Avenue, Boynton Beach, FL 33435

Michael Simon, Executive Director
Boynton Beach Community
Redevelopment Agency
100 E. Ocean Avenue, 4th Floor
Boynton Beach, FL 33435
561-737-3256

NOTICE

IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE CRA BOARD WITH RESPECT TO ANY MATTER CONSIDERED AT THIS MEETING, HE/SHE WILL NEED A RECORD OF THE PROCEEDINGS AND, FOR SUCH PURPOSE, HE/SHE MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDING IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED. (F.S. 286.0105)

THE CRA SHALL FURNISH APPROPRIATE AUXILIARY AIDS AND SERVICES WHERE NECESSARY TO AFFORD AN INDIVIDUAL WITH A DISABILITY AN EQUAL OPPORTUNITY TO PARTICIPATE IN AND ENJOY THE BENEFITS OF A SERVICE, PROGRAM, OR ACTIVITY CONDUCTED BY THE CITY. PLEASE CONTACT THE CRA AT (561) 737-3256 AT LEAST TWENTY-FOUR HOURS PRIOR TO THE MEETING/PROGRAM OR ACTIVITY IN ORDER FOR THE CRA TO REASONABLY ACCOMMODATE YOUR REQUEST.
7-30/2021

0000652684-01

NOTICE OF PUBLIC HEARING
THE CYPRESS GROVE COMMUNITY
DEVELOPMENT DISTRICT

The Board of Supervisors of Cypress Grove Community Development District hereby gives notice of a public hearing to adopt a non-ad valorem assessment roll for Fiscal Year 2021-2022 pursuant to Sec. 197.3632, Fla. Statutes. The hearing, to take place at 8756 Boynton Beach Boulevard, Suite 2100, Florida 33472, shall occur on August 16, 2021, at 8:00 a.m. The non-ad valorem assessment shall be at the proposed rate of $75.39 per acre of property and shall be levied upon all of the lands within the boundaries of the District (as set forth in Rule 42O-1.002, Fla. Admin. Code). The assessment shall be collected by the Palm Beach County Tax Collector. All owners of the property to be assessed may appear before the Board and be heard and may file written objections within 20 days of the publication of this notice.

If a person decides to appeal any decision made by the Board with respect to any matter considered at such meeting, he/she will need a record of the proceedings, and that, for such purpose, he/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.

CYPRESS GROVE COMMUNITY
DEVELOPMENT DISTRICT
Signed: Charles C. Walsey, Chair
Board of Supervisors
7-30/2021

0000651819-01

public notice

CITY OF STUART
NOTICE OF PROPOSED ORDINANCE

NOTICE is hereby given as required by Chapter 166.041 Florida Statutes that the following Ordinance will be produced in writing and adopted at a meeting of the City Commission of the City of Stuart, at City Hall, 121 SW Flagler Avenue on August 9, 2021 at 4:00 p.m. A full copy of said Ordinance, entitled hereafter, may be inspected at the Office of the City Clerk during regular business hours from this date forward. All interested parties may attend said meeting and be heard or send comments to the office mentioned above.

ORDINANCE No. 2466-2021 AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, AMENDING THE FUTURE LAND USE MAP OF THE CITY'S COMPREHENSIVE PLAN, THEREBY ASSIGNING A FUTURE LAND USE DESIGNATION OF "NEIGHBORHOOD SPECIAL DISTRICT" TO THE 49+/- ACRE PROPERTY OWNED BY NEHME HOLDINGS, LLC AND WILLOUGHBY GROUP, LLC LOCATED ALONG SR-76 KANNER HIGHWAY, SOUTH OF MARTIN COUNTY HIGH SCHOOL AND ABUTTING LYCHEE TREE NURSERY; SAID LAND, ANNEXED BY ORDINANCE NO. 2327-2016 AND ORDINANCE NO. 2337-2017, BEING MORE FULLY DESCRIBED IN EXHIBIT "A" ATTACHED, AND CONCURRENTLY ASSIGNING "CPUD" ZONING TO SAID LAND ON THE CITY'S OFFICIAL ZONING MAP; ESTABLISHING THE KANNER CPUD COMMERCIAL PLANNED UNIT DEVELOPMENT, CONSISTING OF 162,020 SQUARE FEET OF RETAIL, BULK MERCHANDISE, AND AUTOMOBILE REPAIR SERVICES BUILDING FOOTPRINT WITH A STAND ALONE KIOSK AND FUEL FACILITY; 378 RESIDENTIAL APARTMENT UNITS AND RETAIL AND RESTAURANT PADS PREVIOUSLY FOUND APPROVAL OF A MASTER SITE PLAN; PROVIDING FOR CERTAIN CONDITIONS, INCLUDING A TIMETABLE OF DEVELOPMENT; DISCLOSING THAT IT TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN, PROVIDING DIRECTIONS TO THE CITY CLERK; REPEALING ALL ORDINANCES IN CONFLICT HEREWITH; PROVIDING A SEVERABILITY CLAUSE; PROVIDING AN EFFECTIVE DATE, PROVIDING FOR ACCEPTANCE BY THE APPLICANT AND FOR OTHER PURPOSES.

Any person deciding to appeal any decision made by the Commission at the public hearing will need to ensure that a verbatim record of the proceedings is made, including the testimony and evidence with the Applicable Rules of Florida law. The public hearing will be conducted in accordance with the provisions of Florida law. The public hearing and meeting may be continued to a date, time, and place to be specified on the record at the meeting. There may be occasions when Board Supervisors or District Staff may participate by speaker telephone.

Any person requiring special accommodations at this meeting because of a disability or physical impairment should contact the District Manager's Office at least forty-eight (48) hours prior to the meeting. If you are hearing or speech impaired, please contact the Florida Relay Service by dialing 7-1-1, or 1-800-955-8771 (TTY) / 1-800-955-8770 (Voice), for aid in contacting the District Manager's Office.

Each person who decides to appeal any decision made by the Board with respect to any matter considered at the public meeting or meeting is advised that person will need a record of proceedings and that accordingly, the person may need to ensure that a verbatim record of the proceedings is made, including the testimony and evidence upon which such appeal is to be based.

Meetings may be cancelled from time to time without advertised notice.

District Manager
GULFSTREAM POLO
COMMUNITY DEVELOPMENT DISTRICT
www.gulfstreampolocdd.org
7-30, 8-6/2021

0000652208-01

Notice of Public Hearing and
Regular Board Meeting of the
CityPlace Community
Development District

The Board of Supervisors (the "Board") of the CityPlace Community Development District (the "District") will hold a Public Hearing and Regular Board Meeting ("Meetings") on August 13, 2021, at 4:00 p.m., or as soon thereafter as can be heard, in the Conference Room of the Chamber of Commerce of the Palm Beaches located at 401 North Flagler Drive, West Palm Beach, Florida 33401.

The purpose of the Public Hearing is to receive public comment on the Fiscal Year 2021/2022 Proposed Final Budget of the District. The purpose of the Regular Board Meeting is for the Board to consider any business which may properly come before it. A copy of the Budget and/or the Agenda may be obtained from the District's website or at the offices of the District's Manager, Special District Services, Inc., 2501A Burns Road, Palm Beach Gardens, Florida 33410, during normal business hours. The Meetings are open to the public and will be conducted in accordance with the provisions of Florida law for Special Districts. Meetings may be continued as found necessary to a time and place specified on the record.

There may be occasions when one or more Supervisors will participate by telephone; therefore, a speaker telephone will be present at the meeting location so that Supervisors may be fully informed of the discussions taking place.

In accordance with the provisions of the Americans with Disabilities Act, any person requiring special accommodations or an interpreter to participate at these meetings should contact the District Manager at (561) 630-4922 and/or toll-free at 1-877-737-4922, at least seven (7) days prior to the date of the meeting.

If any person decides to appeal any decision made with respect to any matter considered at this Public Hearing and Regular Board Meeting, such person will need a record of the proceedings and such person may need to ensure that a verbatim record of the proceedings is made at their own expense and which record includes the testimony and evidence on which the appeal is based.

Meetings may be cancelled from time to time without advertised notice.

CITYPLACE COMMUNITY
DEVELOPMENT DISTRICT
www.cityplacecdd.org
7-23, 7-30/2021

0000651021-01

NOTICE OF PUBLIC MEETING

The Loxahatchee River Environmental Control District announces the following Workshop: August 19, 2021 at 3:00 pm - LREC's Environmental and Administrative Facilities. Meetings will be held at the District Administrative Building, 2500 Jupiter Park Dr., Jupiter, FL 33458 (561) 747-5700. Schedule is subject to change. All meetings are open to the Public.
7-30/2021

0000652161-01

Everything old is new again!
Check our Classified merchandise ads.

public notice

WELLINGTON COUNCIL
NOTICE OF PUBLIC HEARINGS

Wellington Council will hold a public hearing on the following Ordinance:

AN ORDINANCE OF WELLINGTON, FLORIDA'S COUNCIL AMENDING THE DATE FOR THE CANDIDATE QUALIFYING PERIOD FOR WELLINGTON'S 2022 MUNICIPAL ELECTION; AND PROVIDING AN EFFECTIVE DATE.

Said public hearing will be held as follows:

WELLINGTON COUNCIL
Location: Wellington Village Hall
12300 Forest Hill Blvd.
Wellington, FL 33414
Date: August 10, 2021 (Second Reading)
Time: The meeting will be held at 7:00 P.M. or as soon thereafter as may be heard in the orderly course of business. The hearing may be continued from time to time as may be found necessary.

All interested parties are invited to attend and be heard with respect to the proposed ordinance. Copies of all documents pertaining to the proposed ordinance are available at the address listed below and can be reviewed by the public Monday through Friday between the hours of 8:00 a.m. and 5:00 p.m.

Clerk's Office
12300 Forest Hill Boulevard,
Wellington, Florida, 33414
(561) 791-4000

Appeals: If a person decides to appeal any decision with respect to any matter considered at such hearing, he/she will need a record of the proceedings and for such purpose may need to ensure that a verbatim record of the proceedings is made which record includes the testimony and evidence upon which the appeal is to be based.

Pursuant to the provision of the Americans With Disabilities Act (ADA) any person requiring special accommodations to participate in these meetings, because of a disability or physical impairment, should contact Wellington Manager's Office (561) 791-4000 at least five calendar days prior to the Hearings.

Dated: 15th day of July 2021
7-30/2021

0000653605-01

court docket

FAMILY

502008DR009989XXXXNB - NB - PERHAM, JENNIFER vs PERHAM, JENNIFER, DISSOLUTION, atty: SPICER, DAVID WILLIAM ESQ

502010DR006769XXXXMB - MB - GREENFIELD, JOHNATHAN vs GREENFIELD, DANIELLE LEE, DISSOLUTION, atty: FRUMKES, MELVIN B ESQ

502010DR006769XXXXMB - MB - GREENFIELD, JOHNATHAN vs GREENFIELD, DANIELLE LEE, DISSOLUTION, atty: DANIELLE LEE, DISSOLUTION, atty: SHELEY, NATHAN E

502010DR006769XXXXMB - MB - GREENFIELD, JOHNATHAN vs GREENFIELD, DANIELLE LEE, DISSOLUTION, atty: LEIGH, KENNY ESQUIRE

502010DR006769XXXXMB - MB - GREENFIELD, JOHNATHAN vs GREENFIELD, DANIELLE LEE, DISSOLUTION, atty: NOLAN, STEFAN K

502010DR006769XXXXMB - MB - GREENFIELD, JOHNATHAN vs GREENFIELD, DANIELLE LEE, DISSOLUTION, atty: SIDDIQUE, NAUMAN

502010DR006769XXXXMB - MB - GREENFIELD, JOHNATHAN vs GREENFIELD, DANIELLE LEE, DISSOLUTION, atty: VALENCIA, CHRISTINA GREGOIRE

502016DR005848XXXXNB - NB - STIMPHONT, MARCUS WATSON vs ,, STIMPHONT, MARCUS WATSON vs ,, NAME CHANGE

502017DR007085XXXXNB - NB - MAKI, DEBORAH vs MAKI, JANNE MIKA, DISSOLUTION, atty: INSKEEP, THOMAS ALAN

502019DR005065XXXXNB - NB - PEREZ RAMOS, YADIEL vs RAMOS DELGADO, NAIVY YAILEM, DISSOLUTION, atty: NIETO, LUZ DAMARIZ

502019DR010706XXXXSB - SB - DA COSTA FERNANDES, MARIANA vs DE OLIVEIRA TERCEIRO, JOAO, DISSOLUTION

502019DR010706XXXXSB - SB - DA COSTA FERNANDES, MARIANA vs FORNECEDORA CORPORATION,, DISSOLUTION

502020DR000622XXXXMB - MB - CRILL, ROBERT CARSON vs CLARK, PATRICIA C, PATERNITY

502020DR006239XXXXMB - MB - BUNNER, JOSHUA vs FLEMAL, TIFFANY, PATERNITY

502020DR006345XXXXMB - MB - KELLAR, SHANNON vs KELLAR, KEVIN, DISSOLUTION, atty: MILLOCH II, THEODORE CHARLES

502020DR008724XXXXSB - SB - GONCALVES JUNIOR, CLAUDIO vs MARTINS DOS SANTOS, LIDIA, DISSOLUTION

502020DR009832XXXXMB - MB - SINCERE, REBECCA vs SINCERE, CERGILE, DISSOLUTION

502020DR010444XXXXSB - SB - DEMAJ, JANI ARTUR vs ,, NAME CHANGE

502021DR001886XXXXNB - NB - AMADOR, DALIANA vs FERRER SOTO, EMILIO, DISSOLUTION

502021DR003999XXXXMB - MB - LAM, THONG H vs NGUYEN, PA Y H, DISSOLUTION, atty: EFFMAN, STEVEN W

502021DR004705XXXXSB - SB - DAVIDSON, JEROME W vs DAVIDSON, NICOLE, DISSOLUTION

502021DR005633XXXXSB - SB - PIERRE MICHEL, ZAMENE vs MICHEL, JEAN YVON, SIMPLIFIED DISSOLUTION

502021DR005770XXXXNB - NB - CRAIG, VANDY vs WELCH, TAMEKA, PATERNITY

502021DR006110XXXXMB - MB - LEWIS, TREASURE vs PRINCE, PIERRE, PATERNITY

502021DR006119XXXXNB - NB - WONGVATHANA, THIRACHART vs ,, NAME CHANGE

502021DR006121XXXXMB - MB - GARCIA, ELIZABETH vs CONTRERAS, JUAN ALBERTO, DISSOLUTION

502021DR006127XXXXSB - SB - CANCADO, ALESSANDRA F vs GOMEZ, OSCAR E, DISSOLUTION

502021DR006128XXXXMB - MB - CASIANO, MARCUS vs LOGUE, TERES KATHLEEN, PATERNITY, atty: HARDING TYLER WAYNE

502021DR006130XXXXSB - SB - WASHINGTON, CHANTEL vs WASHINGTON, DAIAVNE D, DISSOLUTION, atty: BROWN, DEAIRA MELISHA

502021DR006131XXXXMB - MB - MAGYAR, BRIAN vs MAGYAR, LYNSEY, DISSOLUTION, atty: GISONDO, GRANT J

502021DR006132XXXXMB - MB - RODRIGUEZ BONILLA, ANDREA ISABEL vs GUTIERREZ FUENMAYOR, ALEJANDRO ENRIQUE, SIMPLIFIED DISSOLUTION

502021DR006133XXXXMB - MB - PHILLIPS, DAVID vs LETOURNEAU, DANIELLE, PATERNITY, atty: SINCKLER, NATASHA A

502021DR006134XXXXSB - SB - HODGE, LEE vs HODGE, LEONELA, DISSOLUTION

502021DR006135XXXXNB - NB - PRITCHARD, ZACHARIAH vs PRITCHARD, JULIE, SIMPLIFIED DISSOLUTION

502021DR006136XXXXNB - NB - GHELBER, CORINNE vs GHELBER, SORIN, DISSOLUTION, atty: HABER, LINDSAY BETH

court docket

502021DR006137XXXXNB - NB - BOYLEN, MARIA PILAR vs BOYLEN, TERRENCE, DISSOLUTION, atty: SEARHART, SHAWN CARL

502021DR006138XXXXSB - SB - PARKINS, ALICIA BERKLEY vs MILLION, MARK, DISSOLUTION

502021DR006139XXXXSB - SB - BURBIN, MEGAN ELIZABETH vs ,, NAME CHANGE

502021DR006140XXXXSB - SB - CONDON, ALEXANDER DAVID vs ,, NAME CHANGE

502021DR006141XXXXNB - NB - JIMENEZ GASPAR, JOSE vs ,, NAME CHANGE, atty: LABBE, JENNIFER NICOLE

502021DR006142XXXXMB - MB - BURRELL, SCHLEEN E vs BURRELL, ROYON, DISSOLUTION

502021DR006143XXXXMB - MB - CARTER NELSON, ASHLEY vs MCCRAY, MICHAEL CHAD, REGISTRATION OF ORDER

502021DR006144XXXXNB - NB - DIFEO, JOSEPH C vs DIFEO, ADRIANA, DISSOLUTION, atty: GREEN, JAMES LAWRENCE

502021DR006145XXXXMB - MB - AZZARELLO, LAUREN vs NOLAN, RYAN P, CUSTODY (DOMESTIC RELATIONS)

502021DR006146XXXXMB - MB - DAVIS, ASHLEY vs DAVIS, ROBERT, REGISTRATION OF ORDER

502021DR006147XXXXWB - WB - MOORE, JERRON vs MUIRHEAD, APHLYN, DISSOLUTION

502021DR006149XXXXNB - NB - HASEGAWA, REILLY vs HASEGAWA, ROSS TADOA, SIMPLIFIED DISSOLUTION

502021DR006151XXXXNB - NB - ADOLPH, JONAE vs SAINTE-SHAGUNTON, DISESTABLISHMENT OF PATERNITY, atty: CRIPPS, STEVEN

502021DR006152XXXXNB - NB - GUERRIER, ELVIRE vs BONAVENTURE, JEAN URBIN, DISSOLUTION

502021DR006153XXXXNB - NB - VAILUCAS, MARIA SANDRA vs VELASQUEZ-JOAQUINA LUCAS, CUSTODY (DOMESTIC RELATIONS)

502021DR006154XXXXSB - SB - NGUYEN, NHAN TRONG vs THI HOANG MINH DUYEN, SIMPLIFIED DISSOLUTION

502021DR006155XXXXMB - MB - MORENO, JULIAN RICARDO vs MORENO, ANA LEIDY, DISSOLUTION, atty: CULLEN, MARITERE

502021DR006156XXXXNB - NB - IVESMARCUM, KELLAN ELAINE vs ,, NAME CHANGE

502021DR006157XXXXSB - SB - LAVALLII, AUSTIN LESLIE vs ,, NAME CHANGE

502021DR006158XXXXNB - NB - WAGNER, JOSEPH G vs WAGNER, HELEN, DISSOLUTION, atty: CALEBRESE, VICTORIA

502021DR006159XXXXMB - MB - GURR, DAVID vs GURR, CORTNEY VAUGHN, DISSOLUTION, atty: BLASS, STACEY COHEN

502021DR006160XXXXMB - MB - LAWRENCE, JOSHUA vs LAWRENCE, AMANDA, DISSOLUTION

502021DR006162XXXXNB - NB - CHAPARRO, MICHAEL vs OSHEA CHAPARRO, MELANIE LYNN, DISSOLUTION, atty: WALD, JONATHAN DANIEL

502021DR006163XXXXMB - MB - SERNA, ISAIAH vs MALDONADO, KARIAN, PATERNITY, atty: INSKEEP THOMAS A

502021DR006164XXXXSB - SB - TERENTIEFF, SARAH vs TERENTIEFF, JEFFREY, DISSOLUTION, atty: SADDIK, DAWN MICHELE

502021DR006166XXXXSB - SB - TSORIEV, TAYMURAZ vs SULTANOVA ELENA, DISSOLUTION, atty: WISE, TODD ANDREW

502021DR006168XXXXSB - SB - QUALLO, ANGELA LEE vs QUALLO, MARK A, SIMPLIFIED DISSOLUTION

502021DR006170XXXXMB - MB - CONSTANZA LOPEZ, DALILA vs CONSTANZA AMBROCIO, SANTOS GONZALO, CUSTODY (DOMESTIC RELATIONS), atty: WEISS, JAN P

502021DR006170XXXXMB - MB - CONSTANZA LOPEZ, DALILA vs LOPEZ Y LOPEZ, MARIA FRANCISCA, CUSTODY (DOMESTIC RELATIONS), atty: WEISS, JAN P

502021DR006171XXXXNB - NB - MORVAN, GLENNYS Y vs MORVAN, ROGER, DISSOLUTION, atty: COHEN, ABIGAIL MORRISON

502021DR006172XXXXMB - MB - LOUIS, ESDEMA vs LOUIS DESHOMMES, MARLINE, DISSOLUTION

502021DR006174XXXXNB - NB - RICHMOND, MICHAEL vs FAUSTO, KATARZYNA, DISSOLUTION, atty: GALLER, JONATHAN MICHAEL

PROBATE

502021CP002418XXXXNB - NB - ANNE MARIE AMADO

502021CP003039XXXXSB - SB - LOUISE NEWBERY

502019CP005859XXXXSB - SB - CHRISTINE MARIE SAUL

502019CP003724XXXXSB - SB - ROCHELLE CATAPANO

502020CP004601XXXXNB - NB - NICHOLAS MASSIMINO

502020CP004882XXXXMB - MB - DAVID A SCHWARTZ

502021CP002355XXXXMB - MB - MARK

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FLAHERTY

502021CP003532XXXXSB - SB - NANCY MIGDAL BERLINER

502021CP002999XXXXNB - NB - SILVIA ELENA STRADI

502021CP003328XXXXSB - SB - COREY E LEVINE

502021CP003493XXXXNB - NB - ANDREA K FEIRSTEIN

502022CP002917XXXXNB - NB - CHRISTINE L

502022CP005148XXXXNB - NB - DOLORES SCULLY

502021CP000170XXXXNB - NB - BETTY FRY AHEARN

GENERAL JURISDICTION

502022CA009139XXXXMB - MB - TALEB, LEANNE MAZZEI vs TOWER HILL PRIME INSURANCE COMPANY, CONTRACT & DEBT, atty: MINTZ, MARK J

502022CA009140XXXXMB - MB - GLADES FIRST CENTRE LLC vs BANYAN TREATMENT AND RECOVERY LLC, CONTRACT & DEBT, atty: VITTO, ALBERT J

502022CA009141XXXXMB - MB - LAVALLE, BROWN AND RONAN PA, vs HOLLAND, JAMES, CONTRACT & DEBT, atty: BROWN, ANTHONY

502022CA009142XXXXMB - MB - LOUGHREN, KATHY J vs LEISY MD, ADAM, MEDICAL MALPRACTICE, atty: DOYLE JR, RICHARD B

502022CA009142XXXXMB - MB - LOUGHREN, KATHY J vs PARAGON CONTRACTING SERVICES LLC, MEDICAL MALPRACTICE, atty: DOYLE JR, RICHARD B

502022CA009142XXXXMB - MB - LOUGHREN, KATHY J vs WEST BOCA MEDICAL CENTER INC, MEDICAL MALPRACTICE, atty: DOYLE JR, RICHARD B

502022CA009143XXXXMB - MB - HARTMAN, NIKKI vs BRUNNER, MICHAEL DONALD, BUSINESS TRANSACTION, atty: STEINBERG, ADAM J

502022CA009143XXXXMB - MB - HARTMAN, NIKKI vs GRANITE LOAN MANAGEMENT, LLC, BUSINESS TRANSACTION, atty: STEINBERG, ADAM J

502022CA009143XXXXMB - MB - HARTMAN, NIKKI vs HAPPY HOUSE HOROLD REPAIRS LLC, BUSINESS TRANSACTION, atty: STEINBERG, ADAM J

502022CA009143XXXXMB - MB - HARTMAN, NIKKI vs U.S. BANK, NATIONAL ASSOCIATION,, BUSINESS TRANSACTION, atty: STEINBERG, ADAM J

502022CA009144XXXXMB - MB - LEO ROOFING AND CONSTRUCTION, vs LEO PREMIER HOMES LLC D/B/A LEO ROOFING AND CONSTRUCTION,, CONTRACT & DEBT, atty: SCHWARTZ, WAYNE H

502022CA009144XXXXMB - MB - LEO ROOFING AND CONSTRUCTION, vs LEO, FRANK ANTHONY, CONTRACT & DEBT, atty: SCHWARTZ, WAYNE H

502022CA009144XXXXMB - MB - LEO ROOFING AND CONSTRUCTION, vs VESLEY, SCOTT, CONTRACT & DEBT, atty: SCHWARTZ, WAYNE H

502022CA009145XXXXMB - MB - MAROTTA, STEPHEN vs UNITED PROPERTY AND CASUALTY INSURANCE COMPANY, CONTRACT & DEBT, atty: KNOERR, LINDA M

502022CA009146XXXXMB - MB - GREENBERG, SOLOMON vs RANGER CONSTRUCTION INDUSTRIES INC,, PREMISES LIABILITY COMMERCIAL, atty: CARLSEN, DAVID

502022CA009147XXXXMB - MB - CHERISMA, BERGENICK vs ROSEN, JASON, DENTAL NEGLIGENCE, atty: PHILLIPS, DENNIS

502022CA009148XXXXMB - MB - DBE MANAGEMENT INC, vs BOARD OF COUNTY COMMISSIONERS PALM BEACH COUNTY FL, CONTRACT & DEBT, atty: LIBANOFF, IRA

502022CA009149XXXXMB - MB - GOLDMAN, EDITH vs HARTFORD INSURANCE COMPANY OF THE MIDWEST, INC,, AUTO NEGLIGENCE

502022CA009150XXXXMB - MB - BLAIR, MARIA vs UNIVERSAL PROPERTY AND CASUALTY INSURANCE COMPANY, CONTRACT & DEBT, atty: REGUEYRA, ALBERTO M

502022CA009151XXXXMB - MB - TD BANK N.A., vs BLUEFLAME WEB MARKETING LLC, CONTRACT & DEBT, atty: BRENNAN, JOHN M

502022CA009151XXXXMB - MB - TD BANK N.A., vs COHEN, JUSTIN, CONTRACT & DEBT, atty: BRENNAN, JOHN M

502022CA009152XXXXMB - MB - DAVILA, RAFAEL vs GE MONEY BANK A FEDERAL SAVINGS BANK, CONTRACT & DEBT, atty: HURST, RONALD ANDERSEN JR

502022CA009152XXXXMB - MB - DAVILA, RAFAEL vs MORTGAGE ELECTRONIC REGISTRATION SYSTEMS INC, AS NOMINEE FOR GE MONEY BANK, A FEDERAL SAVINGS BANK,, CONTRACT & DEBT, atty: HURST, RONALD ANDERSEN JR

502022CA009152XXXXMB - MB - DAVILA, RAFAEL vs US BANK NATIONAL ASSOCIATION AS TRUSTEE FOR THE REGISTERED HOLDERS OF ABFC 2007-WMC1 TRUST ASSET BACKED FUNDING CORPORATION ASSET BACK CERTIFICATES, SERIES 2007-WMC1,, CONTRACT & DEBT, atty: HURST, RONALD ANDERSEN JR

502022CA009153XXXXMB - MB - WARD, SARAI vs CLARK, ANTHANESSIA, EJECTMENT, atty: SOSA, HORACIO

502022CA009154XXXXMB - MB - RUBIN, RONALD vs LEHRMAN, ROBERTA, LIBEL/SLANDER, atty: TAYLOR, JAKE

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502021CA009155XXXXMB - MB - ASHBY, RAYMOND vs OKEELANTA CORPORATION,, PREMISES LIABILITY COMMERCIAL, atty: SIMON, STEVEN CHARLES ESQ

502021CA009159XXXXMB - MB - LEON, CARLOS vs PALM BEACH COUNTY SHERIFFS OFFICE,, AUTO NEGLIGENCE, atty: LIPINSKI, JENNIFER M

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs ANY AND/OR UNKNOWN HEIRS DEVISEES GRANTEES CREDITORS AND ANY UNKNOWN PERSONS OR SPOUSES CLAIMING BY THROUGH AND UNDER FOSTER-SCHMID INSURANCE INC OR ALBERT H SCHMID OR E RANDOLPH DEW JR., OTHER RP ACTIONS = < $50K, atty: CIOFFI, JAMES A

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs ANY AND/OR UNKNOWN HEIRS DEVISEES GRANTEES CREDITORS AND ANY UNKNOWN PERSONS OR SPOUSES CLAIMING BY THROUGH AND UNDER FOSTER-SCHMID INSURANCE INC OR ALBERT H SCHMID OR E RANDOLPH DEW JR., OTHER RP ACTIONS = < $50K, atty: CIOFFI, JAMES A

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs FOSTER- SCHMID INSURANCE INC AN INVOLUNTARILY DISSOLVED FLORIDA CORPORATION AND ITS FORMER OFFICERS AND DIRECTORS ALBERT H SCHMID DECEASED AND E RANDOLPH DEW JR DECEASED., OTHER RP ACTIONS = < $50K, atty: CIOFFI, JAMES A

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs FOSTER- SCHMID INSURANCE INC AN INVOLUNTARILY DISSOLVED FLORIDA CORPORATION AND ITS FORMER OFFICERS AND DIRECTORS ALBERT H SCHMID DECEASED AND E RANDOLPH DEW JR DECEASED., OTHER RP ACTIONS = < $50K, atty: CIOFFI, JAMES A

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs PALM BEACH COUNTY, OTHER RP ACTIONS = < $50K, atty: CIOFFI, JAMES A

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs PALM BEACH COUNTY, BUSINESS TRANSACTION, OTHER RP ACTIONS = < $50K, atty: FLECK, WILLIAM ANDREW

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION,, OTHER RP ACTIONS = < $50K, atty: CIOFFI, JAMES A

502021CA009157XXXXMB - MB - HOTEL DURANT LLC, vs STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION,, OTHER RP ACTIONS = < $50K, atty: FLECK, WILLIAM ANDREW

502021CA009158XXXXMB - MB - GREENBERG, SOLOMON vs ARCADIS US INC,, PREMISES LIABILITY COMMERCIAL, atty: CARLSEN, DAVID

502021CA009158XXXXMB - MB - GREENBERG, SOLOMON vs LEO ROOFING AND CONSTRUCTION, vs LEO PREMIER HOMES LLC D/B/A LEO ROOFING AND CONSTRUCTION,, CONTRACT & DEBT, atty: SCHWARTZ, WAYNE H

502021CA009158XXXXMB - MB - GREENBERG, SOLOMON vs DICKERSON FLORIDA INC,, PREMISES LIABILITY COMMERCIAL, atty: CARLSEN, DAVID

502021CA009158XXXXMB - MB - GREENBERG, SOLOMON vs GLATER GROUP ACQUISITIONS LLC,, PREMISES LIABILITY COMMERCIAL, atty: CARLSEN, DAVID

502021CA009158XXXXMB - MB - GREENBERG, SOLOMON vs MOSLEY AND SON CONSTRUCTION INC,, PREMISES LIABILITY COMMERCIAL, atty: CARLSEN, DAVID

502021CA009158XXXXMB - MB - GREENBERG, SOLOMON vs RANGER CONSTRUCTION INDUSTRIES INC,, PREMISES LIABILITY COMMERCIAL, atty: CARLSEN, DAVID

502021CA009158XXXXMB - MB - GREENBERG, SOLOMON vs THOMAS ENGINEERING GROUP LLC, PREMISES LIABILITY COMMERCIAL, atty: CARLSEN, DAVID

502021CA009159XXXXMB - MB - FEINBERG, ASHER vs FINANCIAL INDUSTRY REGULATORY AUTHORITY INC, SECURITIES LITIGATION, atty: SIMMS, JOELLE A

502021CA009160XXXXMB - MB - KNOWLTON, LAURENCE H vs FINANCIAL INDUSTRY REGULATORY AUTHORITY INC, SECURITIES LITIGATION, atty: SIMMS, JOELLE A

502021CA009161XXXXMB - MB - MILL CITY MORTGAGE LOAN TRUST 2019 1 WILMINGTON SAVINGS FUND SOCIETY, FSB, AS TRUSTEE, vs ACUNA, GRETAL, HR FORECLOSURE > $50K, < $250K, atty: KISER, AMY M.

502021CA009161XXXXMB - MB - MILL CITY MORTGAGE LOAN TRUST 2019 1 WILMINGTON SAVINGS FUND SOCIETY, FSB, AS TRUSTEE, vs ACUNA, JONATHAN, HR FORECLOSURE > $50K, < $250K, atty: KISER, AMY M.

502021CA009161XXXXMB - MB - MILL CITY MORTGAGE LOAN TRUST 2019 1 WILMINGTON SAVINGS FUND SOCIETY, FSB, AS TRUSTEE, vs ACUNA, KARLA, HR FORECLOSURE > $50K, < $250K, atty: KISER, AMY M.

502021CA009161XXXXMB - MB - MILL CITY MORTGAGE LOAN TRUST 2019 1 WILMINGTON SAVINGS FUND SOCIETY, FSB, AS TRUSTEE, vs ACUNA, OSCAR, HR FORECLOSURE > $50K, < $250K, atty: KISER, AMY M.

502021CA009161XXXXMB - MB - MILL CITY MORTGAGE LOAN TRUST

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF STUART, FLORIDA, AMENDING THE FUTURE LAND USE MAP OF THE CITY'S COMPREHENSIVE PLAN, THEREBY ASSIGNING A FUTURE LAND USE DESIGNATION OF "NEIGHBORHOOD SPECIAL DISTRICT" TO THE 49+/- ACRE PROPERTY, OWNED BY NEHME HOLDINGS, LLC AND WILLOUGHBY GROUP, LLC LOCATED ALONG SR-76 KANNER HIGHWAY, SOUTH OF MARTIN COUNTY HIGH SCHOOL AND ABUTTING LYCHEE TREE NURSERY; SAID LAND, ANNEXED BY ORDINANCE No. 2327-2016 AND ORDINANCE No. 2337-2017, BEING MORE FULLY DESCRIBED IN EXHIBIT "A" ATTACHED; AND CONCURRENTLY ASSIGNING "CPUD" ZONING TO SAID LAND ON THE CITY'S OFFICIAL ZONING MAP; ESTABLISHING THE KANNER CPUD COMMERCIAL PLANNED UNIT DEVELOPMENT, CONSISTING OF 162,020 SQUARE FEET OF RETAIL, BULK MERCHANDISE, AND AUTOMOBILE REPAIR SERVICES BUILDING FOOTPRINT WITH A STAND ALONE KIOSK AND FUEL FACILITY, 398 RESIDENTIAL APARTMENT UNITS AND RETAIL AND RESTAURANT PADS PROVIDING FOR APPROVAL OF A MASTER SITE PLAN; PROVIDING FOR DEVELOPMENT CONDITIONS, INCLUDING A TIMETABLE OF DEVELOPMENT; DECLARING THE PROJECT TO BE CONSISTENT WITH THE CITY'S COMPREHENSIVE PLAN; PROVIDING DIRECTIONS TO THE CITY CLERK; REPEALING ALL ORDINANCES IN CONFLICT HEREWITH; PROVIDING A SEVERABILITY CLAUSE; PROVIDING AN EFFECTIVE DATE, PROVIDING FOR ACCEPTANCE BY THE APPLICANT AND FOR OTHER PURPOSES.

STIPULATION REGARDING QUASI-JUDICIAL HEARING FOR SECOND READING

The parties have agreed to enter the following stipulation in order to provide a concise statement regarding their expectations and requirements for adequate due process to be followed for the second reading of Ordinance 2466-2021. This stipulation is limited to the Second Reading of Ordinance 2466-2021 and is not intended to create a policy or precedence regarding future quasi-judicial hearings.

1. ***Appearances:*** The names listed on behalf of each party shall be designated to call witnesses, cross examine witnesses, introduce evidence, raise objections, provide summary statements and otherwise address the Commission on behalf of the party without being asked questions on the witness stand.
    a. Applicant: Robert Raynes, Esquire
    b. Intervenor 1: Linda Kay Richards
    c. Intervenor 2: Brian DiVentura
2. ***Time allotted***: The parties stipulate and agree that each intervenor shall be afforded 60 minutes and the Applicant shall be afforded 90 minutes.
    a. The applicant believes that it should be entitled to equal time as the intervenors. However, it reserves the issue regarding the additional 30 minutes and will raise it during the hearing if it becomes necessary.
    b. The parties agree that time shall be calculated during their respective presentations as well as when they are questioning other witnesses. Any time spent questioning other witnesses will be reduced from the time afforded for presentation.

c. Questions by commissioners and the answers from the witnesses will not be counted toward the respective parties' allotted time.

3. ***Witnesses:*** The parties all agree that the names of all witnesses to be called shall be provide no later than 5:00 p.m. on July 23, 2021.
    a. The failure to provide the name of a witness by the deadline will preclude the witness from being called during the hearing.
    b. Any experts intending to provide opinion testimony must provide their report before 5:00 p.m. on July 23, 2021. The failure to provide the report by the deadline will preclude the report from being submitted during the hearing, considered as evidence by the board and preclude the witness from rendering opinion testimony as it will not be considered competent due to the fact that the other parties were not afforded an opportunity to meaningfully verify the document and its assertions.
4. ***Public Comment***: The parties hereby stipulate that the public comment period should be limited to the extent that a single person shall only be allowed to provide public comment once.
    a. The City Commission will allow public comment at the beginning of the meeting – during "public comment on non-agenda items. Public comment regarding Ordinance 2466-2021will be allowed during the "non-agenda items". However, once a person has provided public comment, they will not be afforded a second opportunity even if new issues arise.
    b. Public Comment will also be taken at the conclusion of the evidence. Anyone who did not give public comment earlier will be allowed to provide public comment during this time period.
5. ***August 9, 2021 Meeting***:
    a. Meeting is scheduled to begin at 4:00 p.m.
    b. Public comment shall be pre-set to begin at 5:00 pm.
    c. The Second Reading for Ordinance 2466-2021 shall begin immediately following Public Comment.
6. ***Introduction of Ordinance 2466-2021***
    a. The City will provide the initial testimony by describing the location, size and general attributes of the project. The City will also describe the requests being made by the applicant.
    b. The City will provide the Department of Economic Opportunity Response.
7. ***Opening Statements***: Each party will be afforded 3 minutes to provide an unsworn introduction of the issues they intend to address during the hearing.
    a. Applicant: 3 minutes to describe their request for approval of Ordinance 2466-2021.
    b. Linda Kay Richards: 3 min to identify objections to the project and address why the applicant is not entitled to approval.
    c. Brian DiVentura: 3 min to identify objections to the project and address why the applicant is not entitled to approval.
8. ***Close of Evidence.*** At the conclusion of the presentations, the City Commission will close the hearing. This will be the last opportunity to introduce any evidence or illicit any competent testimony.
9. ***Public Comment.*** At the close of the evidence, the Public shall be allowed to provide comments to the board.

a. Each public comment shall be limited to three minutes.
b. Only one public comment per individual shall be allowed.
c. Public Comment can not be assigned, reserved or transferred to another individual.
d. If a person provided public comment during the public comment period at the beginning of the meeting, they shall be precluded from providing any further public comment.

10. ***Summation.*** After public comment, the parties listed in paragraph 1 shall be allowed to provide a summary of their position to the board in reverse order of the presentations. There will not be any new evidence introduced and no new witnesses shall testify. The summary is to allow the parties to identify competent substantial evidence that was previously introduced during the hearing. Competent substantial evidence has been described as sufficiently relevant and material that a reasonable mind would accept it as adequate to support the conclusion reached.
    a. The summary shall be limited to five (5) minutes.
    b. Brian DiVentura shall provide the first summary.
    c. Linda Kay Richards shall provide the second summary.
    d. Robert Raynes shall provide the final summary.
11. ***Motion/Deliberation.*** Following the summations, the Commission will entertain any motions. If no motion is made, the matter shall fail for lack of a second. If a motion is made and a second is received, the Commission shall publicly deliberate and vote on the motion.
12. ***Waiver.*** The parties agree that the terms and conditions in the stipulation provide them with sufficient time to present their case and question the witnesses and evidence presented. Further, they agree that it would be unjust to allow the introduction of witnesses and exhibits that were not disclosed and provided to the other parties prior to 5:00 pm on July 23, 2021.
13. ***Objections.*** The applicant continues to object to the intervenor's standing and is agreeing to the stipulation with the understanding that it does not constitute a waiver of the objections to standing.

_____

Robert Raynes Date:

_____

Linda Kay Richards Date:

_____

Brian DiVentura Date:

APPLICATION FOR INTERVENOR STATUS

RECEIVED
MAY 12 2021
BY: M. Kindel - Clerk

INFORMATION ABOUT THE PETITIONER	For Office Use Only
APPLICATION FEE: $400.00 (LDR) 11.03.06	Check # 19356 $400.00
FILE NAME:	
FIRST NAME: Linda Kay	LAST NAME: RICHARDS
MAILING ADDRESS	
STREET: 166 SW CABANA PT CIR	CITY: STUART STATE: FL ZIP: 34994
CONTACT INFORMATION	
WORK PHONE	EMAIL: LINDAKAYRICHARDS@GMAIL.COM
CELL PHONE: 772-485-2323	

PETITIONER'S REPRESENTATIVE IF APPLICABLE

FIRM/ORGANIZATION NAME:	
FIRST NAME:	LAST NAME:
MAILING ADDRESS	
STREET	CITY STATE ZIP
CONTACT INFORMATION	
WORK PHONE	EMAIL
CELL PHONE	

LIST OBJECTIONS TO BE INCLUDED IN AGENDA:

① Amending the future land use map of the city's comprehensive plan, thereby assigning a Future Land Use Designation of "Neighborhood Special District.

② Assigning "CPUD" zoning to said land on the city's official zoning map; Establishing the KANNER CPUD

③ The use of city staff to create loopholes using the Future Land Use.

Signature: [signature] Date: 5/12/2021

PROXIMITY ANALYSIS OF KANNER CPUD

Lee Harding, MA, GISP MapsFlorida.com

Property parcels of CPUD project, buffered to 1 mile, were used to select addresses, which represent accurate locations of residential, other units (points of service).
These are in use via Martin County GIS, their REST service url is:
https://geoweb.martin.fl.us/arcgis/rest/services/geocoding/address_points/MapServer/0
These were selected out via the 1 mile buffer, and joined to data regularly posted by Martin County Property Appraiser, in order to determine property use (residential, commecial, etc.), their url is:
https://www.pa.martin.fl.us/tools-downloads/data-downloads

We are looking at 6,452 addresses, units within one mile of project.
Although an additional sizable number of addresses (400+/-) over the bridges in Palm City fell within the 1 mile buffer, those were removed from analysis. Resulting in the 6,452 addresses studied herein.

Of these 6,452 addresses,
5,282 are residential units, single family homes, apartments, condos, etc. Households.

Within 1 mile of the project.

These 5282 residential units within 1 mile of the project represent 12,677 persons, as the County averages 2.4 Persons Per Household.

1155 residences, 2,772 persons, are what I consider, as a geographer, adjacent, within 1000 yards / 0.6 of a mile of, and directly affected by, the eventual land use of the project.
These are specifically within what I'll call the CORRIDOR,
from Indian St north to Monterey Rd, from the River east to Willoughby Blvd.
Commercial use, typically low intensity, is clustered at the major intersections and along Monterey Rd.
This type of proximity analysis is always used to notify residents of proposed changes, in my case I personally received a letter from the City to let me know of this project. Hence the further analysis. The nature of such notification is legislatively mandated and an intended courtesy to allow affected residents and business owners the opportunity to comment to decision makers about such projects.

A web application was made available to review data sources, and the url is:
https://mapsflorida.maps.arcgis.com/apps/View/index.html?appid=49abe54221fb41c393374eb8ad1d5e9e

Comment / Conclusions:
Aside from the adjacent High School, a plant nursery, some commercial like two gas stations on the corner, some marinas, a burger place, new health care facilities,
the CHARACTER of this corridor is overwhelmingly RESIDENTIAL.
With 2.4 persons per household, that results in
2,772 residents, defacto adjacent, in the CORRIDOR affected directly,
NEGATIVELY affected, in a DIRECT MANNER, due to their proximity to this intense development.
The proposed Kanner CPUD does not fit the character of adjacent land use, a cornerstone of the ever-changing interpretations of land development code, the Local Government Comprehensive Planning and Land Development Act of 1985.

STATEMENT TO BE DELIVERED TO THE CITY OF STUART CITY COMMISSION May 24,2021
By Jim Snedeker, 4369 S.E. Frazier Court, Stuart

Thank you for your service to our community.

My name is Jim Snedeker and my background is risk management and law enforcement. While in risk management I worked with a team whose focus was modeling windstorms and related weather issues.

When it comes to such modeling the industry best practices and standard is to always model on the basis of a 1 in one hundred year event. Anything less than this can create a bogus result.

All modeling today considers a 100 year event. But the developer in its application used a one in 25 year event.

This is a huge problem since it means they have intentionally designed retention ponds smaller than they should be.

That is, to calculate rainfall and the size of the retention ponds they have used a factor of 2.5 inches of rain per hour for a one in 25 year event. But, they should have used 4.8 inches which is the amount of rain for a one in one hundred year event..

Again, this means that the retention ponds are ½ the size of what they should be.

Since the ponds are ½ the size of what they should be, in the event of a large rain storm there will be significant overflow into the St. Lucie River.

If this overflow was clean water it would be OK but, here's where you have been given wrong information.

Now that I've carefully reviewed their written documents and listened to their verbal representations, I've identified one glaring problem that relates to this run off.

The developer contends that any run-off from impervious surfaces containing oil drippings, transmission fluid and other pollutants from trucks and cars will immediately sink to the bottom of the retention ponds. They have stated that the pollutants can not run into the St. Lucie river. …. Period full stop.

BUT, this is flat out wrong since oil and transmission fluids do not decompose and form into globs when they drip from a truck or car and gather on a parking lot. They only form such masses after an extended period of being in water and then only after, at the earliest, 5 days.

Oils and transmission fluids will form a slick that floats on top of the water and will dump into the St. Lucie River. They will not form globs that sink to the bottom of the retention ponds.

So the take-aways are:
Firstly, that the retention ponds are almost ½ the size of what they should be
And
Secondly, the oils, transmission fluids and other pollutants will flow into the St. Lucie River and make its water problems worse.

Due to the above, I urge you to reject this application and require the developer to properly account for the water run off by doubling the footprint of the retention ponds. Going deeper won't work since the site is only 4 to 5 feet above sea level and the ponds are already this deep so that's why the footprints must be expanded.

In the unlikely event that this project is approved the Commissioners of the City of Stuart, and considering the developers representation that no pollutants will flow into the St. Lucie and other navigable waterways from the

projects impervious surfaces, that it is clear that such Commissioners have a Fiduciary responsibility to the citizens to require the developer to assume all liability for clean-up and damages caused by any pollutants including oil, transmission fluid etc that originate from this project's impervious surfaces and that such liability for all clean-up and damages should continue in perpetuity.

Thank you,

May 12, 2021

City Commission
121 SW Flagler Avenue
Stuart, FL 34994

SUBJECT: Proposed Costco, Retail and Residential Site on Kanner Highway

Dear Commission:

I am forwarding this letter to provide information to the Commission regarding the proposed CPUD development that will include a Costco Retail outlet, 398 apartments and a separate retail center on 48.99 Acres. I previously presented these facts at the LPA Meeting on April 29 and, like many others, believed that the LPA was dismissive of not only the facts and the violations presented, but also dismissive of the presenters that were residents of both the City of Stuart and of Martin County. Residents of Martin County have a vested interest in this project as the project, though technically located in a newly annexed area of the City of Stuart, will have an impact on Martin County in many areas including:

- Ingress and egress from the site onto both Kanner Highway and Willoughby Blvd
- The proposed internal roadway that impacts traffic patterns in the County and near MCHS
- The proximity of the project (bordering on) MCHS
- An increase of the population of Stuart by nearly one half percent with not a single dedication to the City or to the County to offset the negative externalities of the project, of which there are many
- An increase of traffic flow in the County on a major roadway with no provision for the traffic.

Some specific concerns, though there are many more:

1. The site, bordering Kanner Highway on approximately 1200 linear feet, plans for three entrances. The center entrance is planned to have a traffic light and has a deceleration lane of approximately 250'. The northern entrance which will serve only the residential community has a deceleration lane of approximately 250'. The southern entrance – the entrance that will serve the bulk haulers, tankers and up to 18 wheelers to serve Costco and the Costco 18, future to be 24, lane fuel facility does not have a deceleration lane. It can be fully expect that the right lane of Kanner Highway will be perpetually blocked. Always. Kanner Highway just 2 years ago was widened to make it a fully functioning 6 lane arterial to the City and to the County. The Costco site would end its full use and interrupt traffic.

2. The internal roadway in the site plan is a nightmare. All bulk haulers and tankers will have to exit via the traffic circle – as will all traffic leaving Costco. That traffic circle serves all traffic into the Costco site with the exception of a very small amount of the residential traffic that can use the northern entrance. There is only one right turn lane from the center entrance on to Kanner Highway to service all of Costco traffic, almost all of the residential traffic. There is no acceleration lane on a right turn to Kanner – meaning that due to the speed of traffic on Kanner highway, all traffic would necessarily be waiting for a green light. I understand that the internal roadway is "internal", but the poor design of that roadway impacts the traffic flow of both Kanner Highway and Willoughby Blvd. Perhaps it is the best that could be done leading to the core issue of putting so much on such a small site – there is not sufficient area to support all that is planned including the 398 apartments.
3. As you I am sure know, the residential density exceeds the allowable limits by your won code. There are 398 housing units for this site. These housing units are planned on 14.70 acres of the site. This comes to 27 housing units per acre. The residential acreage and the number of units come directly from the site plan submitted. The City Ordinance and Commission approved as law that the residential density will be based on the Residential Acreage – yet the developer and planner based their calculation on total acreage. They say 8.1 units per acre. The City law says 27 units per acre. Allowable is 15 units per acre for a CPUD. This is not in question, it is the law.
4. The use of a PUD (in this case a CPUD) is in itself a variance to normal zoning criteria. The purpose of a PUD is to improve land use, not to abuse land use. There are a number of violations of the spirit and the intent of using a PUD for this project. In summary the use of a PUD is a violation because of the total lack of synergy between 398 high density residential apartments and a destination "big box" store. Section 2.07.00 of your code explains in significant detail that a PUD is used to improve land use and enhance the locale of the PUD involved. In the Costco site, the PUD is used to bypass zoning restrictions to "put a square peg in a round hole" and at the same time to grossly violate existing codes. It is an impossibility for the Commission to declare that both 398 residential units, a 24 pump gas station and a destination box store simultaneously "provide a variety of natural features and scenic areas, efficient and economical land use, improved amenities, orderly and economical development and the protection of adjacent existing and future development" as demanded by your own code.
5. It is quite possible that the entire site design, particularly the residential area, does not meet NFPA criteria making it a fire hazard disaster. It is possible, though not certain, that the hose reach requirement may be met, but only marginally if at all. However, any review of the parking areas in the residential

area will substantiate that it will be impossible for Fire Rescue to respond to fires due to parked cars resulting in substandard turning radii and also an inability to actually access hydrants in real life. No Fire Marshall in his right mind would approve this site plan given the limited ingress and egress available for response and the inability to maneuver to respond due to parked vehicles. And this is without even considering the lack of places for trash dumpsters apparently conveniently left from the plan due to lack of space and access. The City will take on a huge fire liability if this site is approved according to this plan.

6. There is at this time no "Unified Control" of this PUD, in fact there is not even unified land ownership, and this is a violation of Florida State Law. The ability to accept deviations from normal zoning requirements is granted because there is legally unified control, meaning that one person or one entity has the requirement to enforce the provisions of the PUD which become a City Ordinance. The City has to hold one person or one entity responsible for the enforcement of the PUD provisions. To not do this is not only to violate the spirit of the State Law and the City Codes it is in legal violation of the law to approve this PUD. "Unified Control" documents were requested at the LPA meeting. That request was ignored.
7. It is normal that if a PUD is granted, there is a dedication of something to the granting entity, in this case the City, to overcome the negative externalities of the PUD. In this case, the developer is asking for the addition of 398 residential units. This results in an increase of approximately one half of a percent increase in the population of the City of Stuart. Yet not one square foot of land of this site or PUD is granted for public access or facilities. Not a square foot of parks, of usable open space, no trails not recreation facility – nothing for the City, only advantages to the developers. This is not only unusual for any form of PUD involving residential increases, it borders on disrespect that the Commission would be so dismissive of the City residents. One must certainly begin to wonder the motive behind supporting such a site.

It the City Commissioners were to approve this plan it is a signal to the City and the County residents that the Commissioners ca NOT be trusted with the future development of the land of the City, with the trust of the residents or with proper planning to insure that the desires of the community will be met. Approval of this plan says to all living in the City that the Commission will not hesitate to violate not only the spirit and the intent but also the codes and ordinances in order to provide ill planned growth.

Jerry Kyckelhahn
jerry@traks.com
772-708-5627

We the undersigned are residents of Cabana Point Circle which will be directly affected by the Kanner CPUD development. We believe this development will adversely affect our quality life by increasing traffic, noise pollution, and light pollution and will compromise the safety and security of our children walking to school.

Name	Address	Phone Number
Pat Tiemeyer	296 SW Cabana Point Circle	772-220-1802
Jane Lumley	255 SW Cabana Point Circle	" 287 1047
Nancy Bates/JM	195 SW Cabana Point Circle	631-5229
Lora, Steve, Chloe Hoffman	176 SW Cabana Point Circle	772-78-0513
Katelyn Bowie	25 SW Cabana Point Circle	(734) 718 0567
Catherine Wood	36 SW Cabana Point Circle	772-287-0835
[illegible]	30 SW Cabana Point Circle	772-634-2450
[illegible]	45 SW Cabana Point Circle	772 678 9999
Mary Beth Heuertz	266 SW Cabana Point Circle	
[illegible]	165 SW Cabana Point Circle	407-7[illegible]-4906
Tad Marshall	175 SW Cabana Point Circle	561-386-1480
WALTER & EMILY LOYD	150-3 SW Cabana Point Circle	754-224-9349
Masters, Thomas	196 SW Cabana Point Circle	954-547-9551
Hewson, Thomas	146 SW Cabana Point Circle	561-389-0029
Jeffery Seima	235 SW Cabana Point Circle	772-708-7312
[illegible]	266 SW Cabana Point Circle	719-580-0528
[illegible]	265 SW Cabana Point Circle	561-427-3180
JOHN MACLEOD	66 SW Cabana Point Circle	954-798-2581
Maria Plata	85 SW Cabana Point Circle	772-[illegible]-634-5582
Howard Toth	86 SW Cabana Point Circle	305-986-4892
WILSON	96 SW Cabana Point Circle	603-553-0864
RON FATZINGER	95 SW Cabana Point Circle	772 349-3335
Rob James	116 SW Cabana Point Circle	954-249-8716
Bobby [illegible]	150-2 SW Cabana Point Circle	
[illegible]	146-2 SW Cabana Point Circle	772 215 1360
Matthew J Morrison	105 SW Cabana Point Circle	772-631-2698
Teresa A. Barton	106 SW Cabana Point Circle	301-335-2722
Zoey Wilson	35 SW Cabana Point Circle	561-512-7009
Linda King Richards	166 SW Cabana Point Circle	772-485-2323
	SW Cabana Point Circle	
	SW Cabana Point Circle	
	SW Cabana Point Circle	
	SW Cabana Point Circle	
	SW Cabana Point Circle	
	SW Cabana Point Circle	
	SW Cabana Point Circle	

Application Review
Proposed COSTCO CPUD
Stuart, Florida









Prepared for
The City of Stuart
and
Linda Kay Richards
by
D. Greg Braun
Sustainable Ecosystems International
July 28, 2021

I. Introduction and Background

After receiving public comments and lengthy discussion at their meeting on May 25-26, 2021, the Stuart City Commission voted unanimously to transmit to the Florida Department of Economic Opportunity a proposal by M&M Realty Partners to develop a retail and 398-unit residential project on approximately 50 acres of undeveloped land near the City's southwestern boundary. The project, known as the COSTCO CPUD would include a 162,020-square-foot COSTCO warehouse store, an 18-pump gas station, an apartment complex with more than 375 units and retail and restaurant space.

The project site, which is bounded by SE Kanner Highway on the west and SE Willoughby Blvd on the east, is north of Indian Street and South of Martin County High School and the Lychee Tree Nursery.

In considering the application, City Commissioners and staff relied on information provided by the applicant, including an Environmental Assessment report dated March, 2021 developed by EW Consultants.

The State of Florida's Fish and Wildlife Conservation Commission (FWC) maintains, and routinely updates a list of animals that are protected pursuant to State and Federal regulations. The list, entitled "FLORIDA'S ENDANGERED AND THREATENED SPECIES" was most recently updated in June 2021 and is available on the web at: https://myfwc.com/media/1945/threatened-endangered-species.pdf Prior to this very recent revision, the version that had been in use while documents for the COSTCO CPUD project were being developed and being reviewed was a December 2018 version, which remains accessible on the web at: https://myfwc.com/media/1945/threatend-endangered-species.pdf Both versions identify animal species that are designated by the State of Florida as "Endangered" and "Threatened".

Conducting surveys for species on this list and determining the potential impact of a project on these species is typically the responsibility of the environmental consultant that is working for and with the development team. Strict protocols have been developed by FWC for conducting surveys for endangered and threatened species only for a few key species (e.g., scrub-jays, gopher tortoises etc.). In general, environmental consultants, who have been retained by the owner, developer or project team, have the autonomy to evaluate vegetative communities on a given project site, and then conduct property-specific surveys for endangered and threatened species based on the unique conditions on the subject property. Data are collected, analyzed, and integrated into a report that is provided to governmental entities for their analysis during the development review process. Governmental reviewers (e.g., City, County, Water Management Districts) rely on the information provided by or on behalf of the owner/developer to be accurate,

thorough and factually correct. It is not the responsibility of stakeholders, neighbors or third-party entities to conduct surveys or collect field data, but stakeholders do frequently become engaged when they have reason to believe that the information being considered by governmental reviewers may not be thorough, accurate or complete.

In the instance of the COSTCO CPUD project, interested members of the community, including neighboring property owners who have unique knowledge of the property, expressed concern about the extent to which the baseline environmental information being reviewed by the City of Stuart was thorough, accurate and complete. Wetlands, ten of which had been identified on the property were all disparaged as having such low environmental value that they could be destroyed and mitigated elsewhere. The dismissal of low wetland value for birds seemed inappropriate to people familiar with the property, who have frequently observed wading birds in the area, for years, some even for decades.

On a separate, but similar track, the State of Florida maintains a database of plant species that are thought to be in potential danger of extinction. The Florida Department of Agriculture and Consumer Services (FDACS) maintains a list of plants that are designated as Endangered, Threatened and Commercially Exploited. The list is codified in Section 5B.4.0055, of the Florida Administrative Code, and is available to environmental consultants and the general public at: https://www.fdacs.gov/Forest-Wildfire/Our-Forests/Forest-Health/Florida-Statewide-Endangered-and-Threatened-Plant-Conservation-Program

As described previously for the protection of animals that are protected pursuant federal and state endangered species regulations, conducting surveys for plant species that are on this list and determining the potential impact of a project on these species is typically the responsibility of the environmental consultant that is working with the development team. Environmental consultants, who have been retained by the owner, developer or project team, have the autonomy to evaluate vegetative communities on a given project site, and then conduct property-specific surveys for endangered and threatened plant species based on the unique conditions on the subject property. Data are collected, analyzed, and integrated into a report that is provided to governmental entities for their analysis during the development review process. Governmental reviewers (e.g., City, County, Water Management Districts) rely on the plant information provided by or on behalf of the owner/developer to be accurate, thorough and factually correct. It is not the responsibility of stakeholders, neighbors or third-party entities to conduct surveys or collect field data on the presence, absence and/or abundance of protected plants, but stakeholders can become engaged when they have reason to believe that the information being considered by governmental reviewers may not be thorough, accurate or complete.

Regarding the COSTCO CPUD project, concerned residents were aware that plant species that are designated as Threatened, Endangered and Commercially Exploited are known to be present in the vicinity, and in habitats that are present on the site of the proposed COSTCO CPUD

project. When they became aware that these "listed" (i.e., Endangered, Threatened and Commercially Exploited) species were known to be present on the nearby Kiplinger Preserve, a County-owned property located less than 0.6 miles from the COSTCO CPUD site, and on the Bridgeview property, less than 0.3 miles from the COSTCO CPUD site, and they reviewed the permitting files for the COSTCO CPUD project, they became concerned that these same species could be present on the COSTCO CPUD site, but that their presence had not been discovered or disclosed in project-related documents.

Sustainable Ecosystems International (SEI) was asked by a consortium of residents who are concerned about the environmental impacts of the proposed project to review the Environmental Assessment Report on the COSTCO CPUD and render opinions as to the extent that the report accurately describes conditions on the site related to threatened and endangered species and evaluations of wetlands.

SEI is an ecological consultancy with extensive experience in Martin County and the Treasure Coast. SEI's owner, D. Greg Braun, is a Certified Environmental Professional, who was initially certified by the American Board of Certified Environmental Professionals in the area of Environmental Documentation in 2003. This certification has been renewed annually through the present. SEI specializes in avian and estuarine ecology and has extensive work experience with species of flora and fauna that are designated by the state of Florida and/or the federal government as Endangered and Threatened. Mr. Braun's work in this regard has included surveys for endangered and threatened species at dozens of sites in Martin County, and included floristic surveys and threatened and endangered species surveys on 13 conservation parcels owned and managed by Martin County, development of management plans for conservation lands and participation on land management review committees for various state parks and wildlife management areas.

SEI's ecological investigations often includes both a desk-top literature search and on-site field investigations. For this project, SEI's desktop investigation included a query of the databases maintained by the Florida Natural Areas Inventory (FNAI) and other on-line publicly accessible information. Because the FNAI database indicates the potential presence of several additional threatened and endangered species in the vicinity, it is possible that detailed surveys for threatened and endangered species on the subject tract would reveal that populations of additional protected species are also present on the site.

SEI was also escorted on a cursory site visit by a neighboring property owner who has first-hand knowledge of the property, as it had previously been owned by a family member.

This report, therefore, uses information that was gathered during the literature search, the results of a cursory field visit and authentication of photographic records taken by a game camera that recorded the presence of various wildlife species, primarily birds, on the subject property.

II. Results of Literature Search

II.a Threatened and Endangered Species

SEI's desktop investigation included a query of the FNAI database. FNAI serves as a clearinghouse for protected species sightings that are reported to them by various state and federal agency personnel, and after reportings by private individuals are reviewed for accuracy by knowledgeable individuals. FNAI refers to their protected species database, which is separated into hundreds of one-mile-square blocks located throughout the State as their Biodiversity Matrix. The one-mile-square block that includes the site of the proposed COSTCO CPUD is Matrix # 67464, which extends west to the South Fork of the St. Lucie River and south into Martin County's Kiplinger Preserve tract. A map showing the boundaries of this Matrix Unit and the results are included as Appendix A. FNAI indicates the likely presence of five noteworthy species or habitats and the potential presence of 20 additional species, which include a variety of plants, birds, and reptiles.

Because FNAI's database does not include detailed positioning for observational sightings, it is typically used as a preliminary, reconnaissance-level tool which alerts scientists to the potential presence of species of note, which, in the case of environmental impact analyses, allows field biologists to develop species-specific protocols for surveying for threatened and endangered species.

One of the vegetative communities that FNAI tracks is "Scrub" - areas of dry sandy soils that provide habitat for a variety of endangered and threatened species. FNAI notes the presence of scrub within the one-mile-square block that includes the COSTCO CPUD site. FNAI's database also identifies several species of plants and animals that occur in scrub that are designated by the State of Florida or the federal government as endangered or threatened that potentially exist in the area. A thorough site investigation conducted at the COSTCO CPUD site would have included searches for these species, particularly when polygons of scrub were found to be present on the site.

The Environmental Assessment Report does identify the presence of gopher tortoises (*Gopherus polyphemus*) on the site. No mention is made in the Environmental Assessment report as to whether or not surveys for threatened and endangered plants were made.

III. Cursory Field Investigation

A cursory field investigation conducted by SEI in June 2021 and analysis of photographs taken on the subject property by a game camera confirmed the presence of a population of gopher tortoises, revealed the presence of two species of birds that are designated by the State as

threatened, populations of at least four plant species that are designated by the State of Florida as Endangered or Threatened, and one plant species that is designated as "Commercially Exploited". These species are identified and described hereafter, and photos taken on the subject site are included.

Birds protected pursuant to the Florida Wildlife Code, Chapter 68, Florida Administrative Code.

Little Blue Herons (*Egretta caerulea*) (Photo 1), which are designated by the State of Florida as a Threatened species, have been documented to forage in wetlands on the subject property.



Photo 1
Little Blue Heron on herbaceous islet surrounded by water at the site of the proposed COSTCO CPUD
Date of Photo: June 10, 2021

Little blue herons and other wading birds consume aquatic organisms (e.g., small fish, crayfish etc.). They forage in wetlands when the wetland has enough community structure to provide habitat for small fish and other prey items. Little blue herons often nest in locations near wetlands that provide reliable sources of prey.

Tricolored herons (*Egretta tricolor*) (Photo 2), which are designated by the State of Florida as a Threatened species, have been documented to forage in wetlands on the subject property.



Photo 2
Tricolored heron foraging in a wetland on the site of the proposed COSTCO CPUD that was described in the Environmental Assessment Report as being "degraded" and offering "minimal ecological functions for fish and wildlife".
Date of Photo: July 18, 2021

Similar to little blue herons, tricolored blue herons also consume aquatic organisms (e.g., small fish, crayfish etc.). They forage in wetlands when the wetland has enough community structure to provide habitat for small fish and other prey items and they often nest in locations near wetlands that provide reliable sources of prey.

Plant species protected pursuant to the Section 5B-4.0055, of the Florida Administrative Code

Tillandsia utriculata

Populations of (Giant Airplant) (Photo 3) were observed in the portion of the site mapped as scrub. *Tillandsia utriculata* is designated by the State of Florida as Threatened (See 5B-40.0055 Florida Administrative Code). Its presence was not revealed to the City of Stuart, so when City planners and staff described the project to commissioners, and City Commissioners voted to recommend the project to DEO, they were relying on information that was inaccurate or incomplete.



Photo 3
Tillandsia utriculata on the site of the proposed
COSTCO CPUD
Date of Photo: June 10, 2021

Conradina grandiflora

Populations of (Largeflower Falserosemary) (Photo 4) were observed in the portion of the site mapped as scrub. *Conradina grandiflora* is designated by the State of Florida as Threatened (See 5B-40.0055 F.A.C.). Its presence was not revealed to the City of Stuart, so when City planners and staff described the project to commissioners, and City Commissioners voted to recommend the project to DEO, they were relying on information that was inaccurate or incomplete.



Photo 4
Conradina grandiflora on the on the site of the proposed
COSTCO CPUD
Date of Photo: June 10, 2021

Tillandsia balbisiana

Populations of *Tillandsia balbisiana* (Northern Needleleaf) (Photo 5) were observed in the portion of the site mapped as scrub. *Tillandsia balbisiana* is designated by the State of Florida as Threatened (See 5B-40.0055 F.A.C.). Its presence was not revealed to the City of Stuart, so when City planners and staff described the project to commissioners, and City Commissioners voted to recommend the project to DEO, they were relying on information that was inaccurate or incomplete.



Photo 5
Tillandsia balbisiana on the site of the proposed COSTCO CPUD
Date of Photo: June 10, 2021

Lechea cernua

Populations of *Lechea cernua* (Scrub Pinweed) (Photo 6) were observed in the portion of the site mapped as scrub. *Lechea cernua* is designated by the State of Florida as Threatened (See 5B-40.0055 F.A.C.). Its presence was not revealed to the City of Stuart, so when City planners and staff described the project to commissioners, and City Commissioners voted to recommend the project to DEO, they were relying on information that was inaccurate or incomplete.



Photo 6
Lechea cernua on the site of the proposed COSTCO CPUD
Date of Photo: June 10, 2021

FDACS regulations also include a list of plant species that are vulnerable to potential population reductions and extinction due to the unauthorized collection of specimens from the wild. Species on this list, which is included in Section 5B-40.0055(c) are designated as "Commercially Exploited". A population of one plant species (*Osmunda regalis*) that is designated as commercially exploited has been determined to be present on the site of the COSTCO CPUD property.



Photo 7
Osmunda regalis on the site of the proposed COSTCO CPUD
Date of Photo: June 10, 2021

IV. City Regulatory Protections for Endangered and Threatened Species and Native Vegetative Communities

Policy 5.A6.1 of the City of Stuart's Comprehensive Growth Management Plan states that:

"All endangered and threatened plant and animal populations shall be protected. Of Special concern, are all species listed as endangered, threatened, of special concern or rare by the Federal government, the State of Florida or the Florida Committee on Rare and Endangered Plants and Animals."

By approving the COSTCO CPUD without requiring the protection of the aforementioned threatened and endangered species (and perhaps others whose presence was also not disclosed to the City) the City's action to approve the project without conditions that protect populations of endangered and threatened is not consistent with this Policy of the City's Comprehensive Plan.

Additionally, Policy 5.A5.8. states that:

"The City shall protect native vegetative communities by requiring that existing native vegetation constituting up to 25% of a development site shall be preserved."

The Site Plan, Figure 1, below, indicates that there will be 12.28 acres "of Native Vegetation Area". However, because the Environmental Assessment Report indicates that existing vegetative communities have been impacted by the colonization of pest plants, it appears that the 12.28 acres do not coincide with the location where the aforementioned endangered and threatened species on the site exist. Approval of the proposed project without the requirement that 25% of the portion of the site where endangered and threatened plants and animals are present would not be consistent with the intent of the City of Stuart's Comprehensive Plan, which is to preserve the portion of the property where the endangered and threatened species are known to exist.

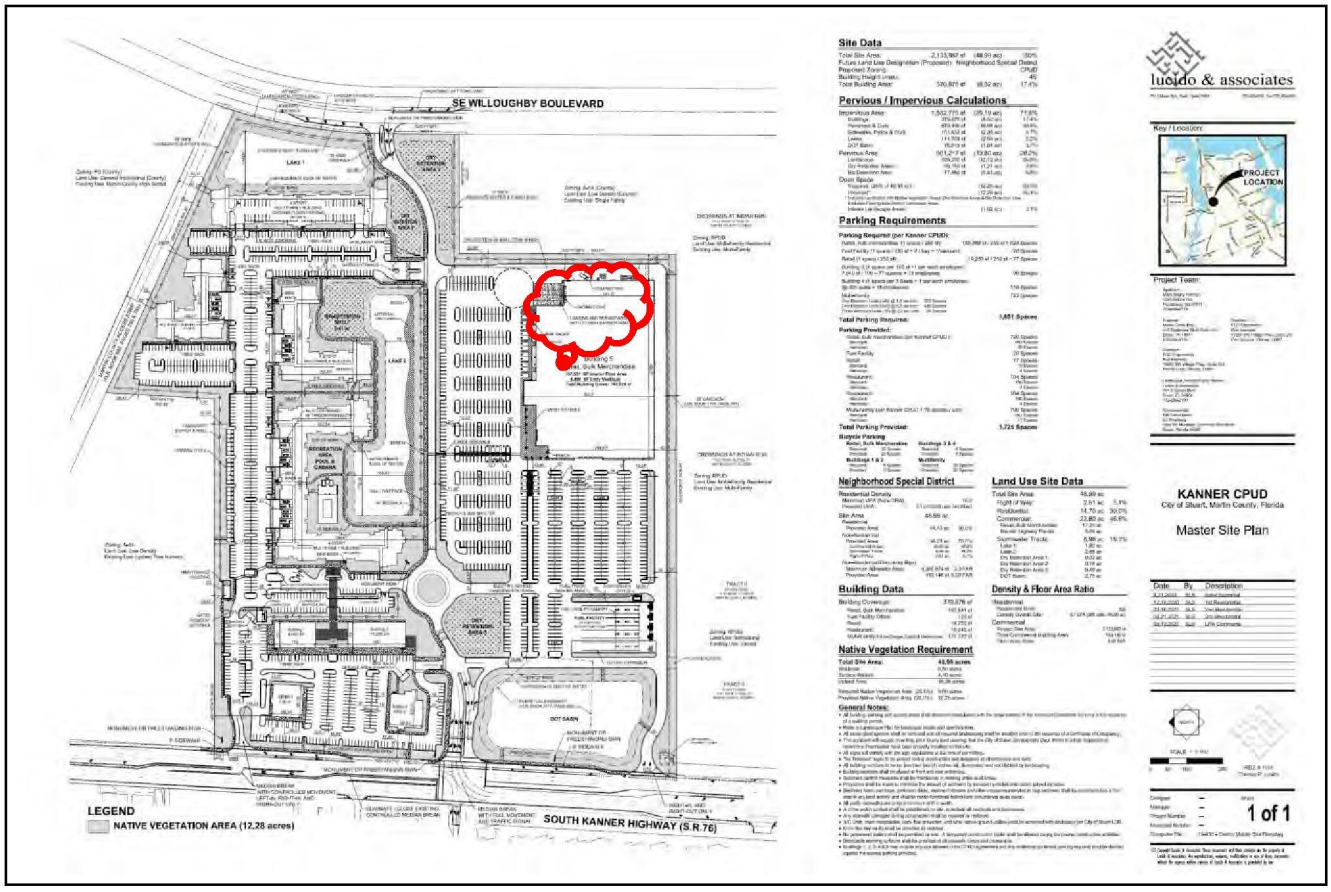


Figure 1 - Proposed Site Plan
Source: Lucido and Associates
Approximate location of populations of endangered and threatened species (in red) added by SEI

V. Wetland Protection

Policy 5.A5.5 of the City's Comprehensive Growth Management Plan states that:

" wetlands shall be protected and conserved by restricting direct and indirect development impacts according to Policies 5A5.5 and 5A5.6. Conservation land use designations, conservation easements, open space requirements and other goals, objectives and policies of this plan. "

Policy A5.5.E.vii of this Section further elucidates that:

"The developer shall ensure that site development activities do not degrade on-site or adjacent surface waters or wetlands. Wetlands shall not be used as primary sediment traps during development or for stormwater retention beyond historic hydrologic regime after development."

The Environmental Assessment Report indicates that ten wetlands exist on the site (Figure 2), and that these areas include freshwater marshes (1.5 acres), wet prairies (1.2 acres), willow and elderberry (3.5 acres), exotic wetland hardwoods (0.3 acres), ditches (0.4 acres) and reservoirs less than 10 acres in size. The Environmental Assessment report suggests that because these wetlands have been degraded due to the establishment of invasive pest plant species, they are expendable and that the City should allow them to be mitigated through the purchase of credits at a mitigation site in St. Lucie County.

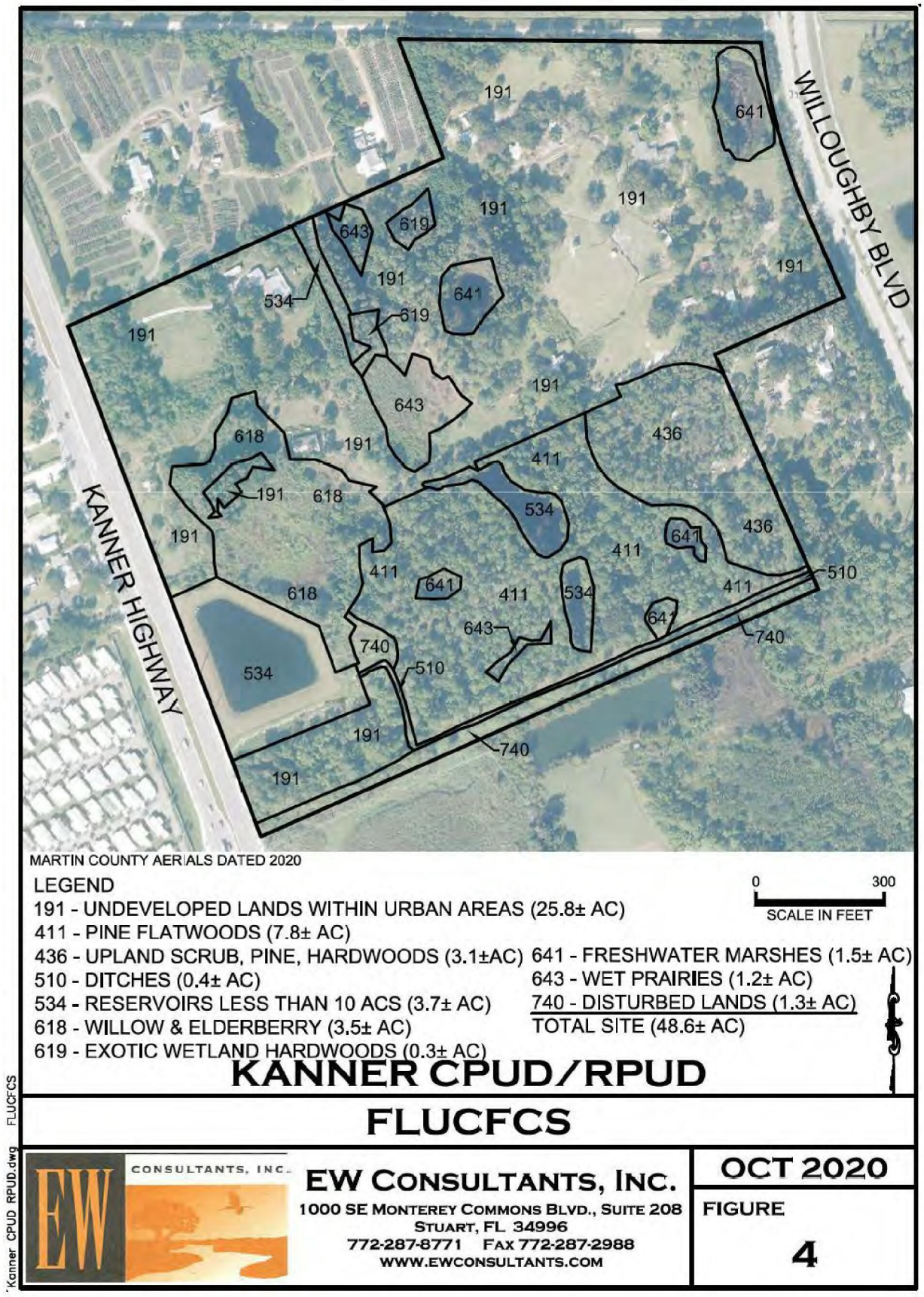


Figure 2 - FLUCFS Map
Source: EW Consultants – Environmental Assessment Report

In contradiction to this perspective, independent cursory inspections of these areas suggest that they are thriving, biologically productive habitats. This condition is evidenced by the presence of a variety of high trophic-level species, including foraging wading birds, including the little blue heron and tricolored heron previously described and shown in Photos 1 and 2, and great egrets (Photo 8), great blue herons (Photo 9) and black-crowned night herons (Photo 10).



Photo 8
Great Egret foraging at the site of the proposed COSTCO PUD
Date of Photo: June 10, 2021



Photo 9
Great Blue Heron with caught fish at the site of the proposed COSTCO PUD
Date of Photo: July 8, 2021



Photo 10
Black-crowned night-heron at the site of the proposed COSTCO PUD
Date of Photo: July 27, 2021

It is not surprising that no nesting sites were observed when the surveys were performed during the field work that led to the development of the Environmental Assessment Report, as they were conducted during the non-nesting season for most bird species. However, the presence of waterfowl and wading birds mentioned above during the nesting season, suggests that more comprehensive surveys that would be conducted during the nesting season may yield different results. While the results of a bird survey that is conducted during the non-nesting season does provide some insight into the habitats and condition of vegetative communities, it is the results of nesting season surveys that provide additional insight into avian use of a property. Unfortunately, a nesting season survey was apparently not conducted at the site of the proposed COSTCO CPUD, so City staff , decision-makers and stakeholders were unaware of the extent of use of the property by nesting birds at the time when the project was considered by the City Commission.

Recent game camera photos have also documented the presence of a pair of wood ducks (Photo 11) during that species' nesting season. The presence of these waterfowl provide further evidence that these wetlands provide habitat for the aquatic prey upon which these, and other wetland-dependent species rely, and is contradictory to the information relied on by the City. The Environmental Assessment Report states, incorrectly in my opinion, that:

> "These wetlands are degraded by historic hydrologic alterations and invasive species encroachment and thus offer minimal ecological functions for fish and wildlife."



Photo 11
Male and female wood ducks in a wetland on the COSTCO CPUD site that was described as offering "minimal ecological functions for fish and wildlife".
Date of Photo: July 1, 2021

Additionally, the Environmental Assessment report suggests that other than gopher tortoises (which are proposed to be relocated offsite), "wading birds are the only other listed species that may potentially utilize portions of the property for foraging. Any such use by these species would be transient in nature and no roosting or nesting areas have been observed on the site."

The presence of a male and a female wood duck during the nesting season suggests the likely nesting of this species, which offers further evidence that these wetlands are productive.

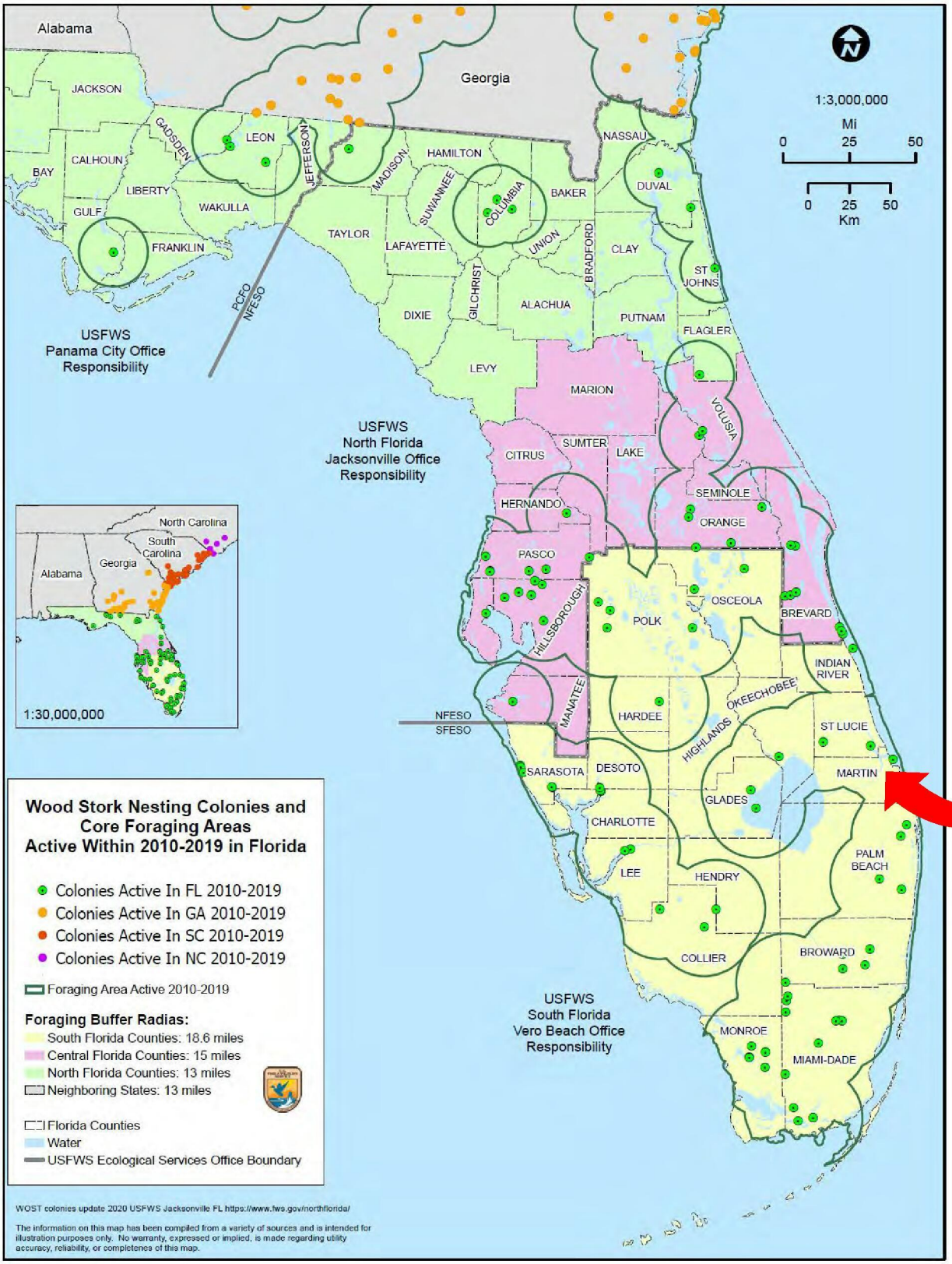
Short-hydroperiod wetlands are particularly important to wading birds in general and wood storks (*Mycteria americana*) in particular. Wood Storks are designated as a "threatened" species by the State of Florida and the Federal government (Endangered Species Act, as Amended). The U.S. Fish and Wildlife Service (FWS) has designated that nesting wood storks in south Florida have a "Core Foraging Area" (CFA) of 18.6 miles, which means that wetlands that provided suitable foraging habitat for wood storks are of comparatively higher value for wood storks if they are present within 18.6 miles of a nesting colony. The shallow, open-water wetlands on the COSTCO CPUD site are suitable foraging habitat for wood storks and are within the CFA on not one but two wood stork nesting colonies (Figures 3).

SEI found no evidence that the City was informed that wetlands on the site appear to be suitable foraging habitat for wood storks, that the on-site wetlands are within the Core Foraging area of

two wood stork colonies, and so members of the City Commission (and previously the Local Planning Agency) may not have considered these facts when they rendered an opinion on the project.

When City planners and staff analyzed application information and described the project to members of the Local Planning Agency and Commissioners, and when City Commissioners voted to recommend the project to DEO, they were relying on information that was inaccurate or incomplete. Allowing the destruction of these wetlands, even if they are mitigated for at some off-site location, is not consistent with the City's environmental ethos and the CGMP which states that all wetlands will be protected. The loss of wetlands within the City also deprives City residents of the ability to enjoy the bird life that the wetlands presently support.

The City's economic and environmental health are directly linked to the quality and condition of its wetlands, waters and waterways. The City is expending significant resources on surface water management projects to rectify long-standing water quality woes. Allowing the intentional destruction of viable wetlands whose value could be enhanced through the removal of pest plants is contradictory to the City's stated philosophy of stewardship of natural resources and protection of the environment.



Basemap Source: https://www.fws.gov/northflorida/WoodStorks/WOST_Data/2020-WOST_colonies_map_2010-2019_update_20200410.pdf

VI. Summary of Findings

1. Prior to the consideration of M&M Partners application for approval of the COSTCO CPUD project by the Stuart City Commission, the City was not informed about the presence of populations of at least one species of bird and four species of plants that have been designated by the State of Florida as Endangered or Threatened species pursuant to the Florida Wildlife Code and Section 5B-4.0055 FA.C., which are administered by the Florida Department of Agriculture and Consumer Services, respectively. Populations of these species have been documented to be present in portions of the property that are proposed to be developed.

   The City's regulations require the protection of state-listed endangered and threatened species. Approval of the proposed project without conditions that would require that endangered and threatened species be protected would be inconsistent with the City's regulations.

2. Objective A5. of the City of Stuart's Comprehensive Growth Management Plan and Land Development Regulations states that wetlands within the City shall be protected. The City does have the authority to determine that wetlands can be destroyed and mitigated elsewhere if the wetlands are determined to be of low quality. In general, lower quality wetlands that are not biologically productive are more likely to be sacrificed and mitigated elsewhere. Higher quality wetlands which support a diversity of wetland-dependent species, including high-trophic level species such as wading birds, are less likely to be allowed to be destroyed.

   The value of wetlands on the proposed COSTCO site appear to have been understated and/or mis-represented in the Environmental Assessment Report, so City staff, decision-makers and the public were unable to base their decision-making process on thorough, accurate and complete data.

Information and Literature Cited

Environmental Assessment Report, EW Consultants, March 2021

Florida Wildlife Code, Chapter 68, Florida Administrative Code.

Florida Fish and Wildlife Conservation Commission, Florida's Endangered and Threatened Species Version December, 2018

Florida Fish and Wildlife Conservation Commission, Florida's Endangered and Threatened Species Version June, 2021

Section 5B-4.0055, of the Florida Administrative Code, Rules of the Florida Department of Agriculture and Community Services

United States, Fish and Wildlife Service, Wood Stork Colonies Map, 20200410.pdf

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

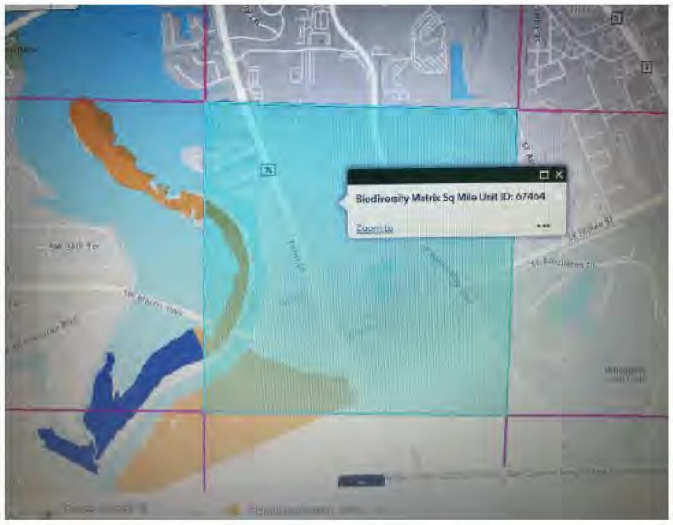
UNOFFICIAL REPORT

Created 7/26/2021

(Contact FNAI Data Services Coordinator for an official **Standard Data Report**)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 67464



Descriptions

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

LIKELY - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Matrix Unit ID: 67464

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

5 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Aphelocoma coerulescens Florida Scrub-Jay	G2	S2	LT	FT
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Scrub	G2	S2	N	N
Trichechus manatus West Indian Manatee	G2	S2	LE	FE

Matrix Unit ID: 67464

20 **Potential** Elements for Matrix Unit 67464

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Acipenser oxyrinchus oxyrinchus Atlantic Sturgeon	G3T3	S1	LE	FE
Coelorachis tuberculosa Piedmont Jointgrass	G3	S3	N	T
Conradina grandiflora Large-flowered Rosemary	G3	S3	N	T
Ctenogobius stigmaturus Spottail Goby	G2	S2	N	N
Elytraria caroliniensis var. angustifolia Narrow-leaved Carolina Scalystem	G4T2	S2	N	N
Eretmochelys imbricata Hawksbill Sea Turtle	G3	S1	LE	FE
Eugenia confusa Tropical Ironwood	G4G5	S2S3	N	E
Forestiera segregata var. pinetorum Florida Pinewood Privet	G4T2	S2	N	N
Glandularia maritima Coastal Vervain	G3	S3	N	E
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Halophila johnsonii Johnson's Seagrass	G2	S2	LT	E
Jacquemontia reclinata Beach Jacquemontia	G1	S1	LE	E
Lechea cernua Nodding Pinweed	G3	S3	N	T
Linum carteri var. smallii Small's Flax	G2T2	S2	N	E
Polygala smallii Tiny Polygala	G1	S1	LE	E
Rallus longirostris scottii Florida Clapper Rail	G5T3?	S3?	N	N
Rivulus marmoratus Mangrove Rivulus	G4G5	S3	SC	SSC
Sceloporus woodi Florida Scrub Lizard	G2G3	S2S3	N	N
Setophaga discolor paludicola Florida Prairie Warbler	G5T3	S3	N	N
Trichomanes punctatum ssp. floridanum Florida Filmy Fern	G4G5T1	S1	E	E

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a Standard Data Request option for those needing certifiable data.

The Negative Health and Environmental Impacts of the Costco Development in Stuart, Florida

Dr. Roy M. Speiser

V.P. CWR, Environmental

Stuart, Florida

The Costco development will daily generate numerous toxic contaminants including volatile organic chemicals and ultrafine particles that will negatively impact the health of school children and residents in proximity to the site.

Exhausts from thousands of automobiles and trucks daily, will generate large amounts of Ultrafine particles PM 0.1 in size that are the main constituents of airborne particulate matter. UFP's have more serious health impacts than larger particles PM10 and PM2.5 size.

Because of their nanoparticle size, UFPs are easily able to enter the body's circulation system and distribute to various organs, including the lungs, brain -- causing inflammation and affecting the cardiovascular and central nervous system, wreaking havoc on your health. (1,2,3)

According to a study in **The Journal of Epidemiology** a one year increase in pollution exposure of ten thousand nano particles per cubic centimeter – the approximate difference between a quiet street and busy city streets increases brain cancer greater than 10%. (4)

"Microscopic particles generated by fossil fuels get into our body directly through the nose into the brain," said University Professor Caleb Finch at the USC Leonard Davis School of Gerontology. "Cells in the brain treat these particles as invaders and react with inflammatory responses, which over the course of time, appear to exacerbate and promote Alzheimer's disease." (5)

The Costco development jeopardizes the quality and quantity of the city's water resources for the community. Increased water usage will cause several negative health impacts because the increased use of hundreds of thousands of gallons of water per day for commercial and residential use creates more air stripping of VOCs into the air that will increase air pollution.

As stated in the 2020 Water Quality Report, there are 35 potential sources of contamination that can affect the City of Stuart water supply. Increasing pumping of water will draw in more contaminants to the well water requiring more treatment. The PFOS/ PFOA chemicals detected in the city water supply are the most toxic emerging unregulated chemicals listed by the EPA. This project along with other large residential projects planned for the City of Stuart will jeopardize the safety and availability of the future water supply

References:

1. Osunsanya T., et al. 2001. "Acute Respiratory Effects of Particles: Mass or Number?" *Occupational & Environmental Medicine* 58 (3):459. doi:10.1136/oem.58.3.154. PMC 1740106. PMID 11171927.

2. Schraufnagel, Dean E. 2020. "The Health Effects of Ultrafine Particles." *Experimental and Molecular Medicine* 52:311-317.

3. Ostro B., Hu J., Goldberg D., et al. June 1, 2015. "Associations of Mortality with Long Term Exposures to Fine and Ultrafine Particles, Species and Sources: Results from the California Teachers Cohort Study." *Environmental Health Perspectives* Vol. 123, No. 6.

4. Weichenthal S., Olanyan T., et al. March 31, 2020. "Within-city Spatial Variations in Ambient Ultrafine Particle Concentration and Incident Brain Tumors in Adults." *Epidemiology* (2):177-18.

5. The air pollution study, the Women's Health Initiative and WHIMS are collectively supported by the National Institute on Aging of the National Institutes of Health; the Southern California Environmental Health Sciences Center funded by the National Institute of Environmental Health Sciences; the National Heart, Lung, and Blood Institute; the U.S. Department of Health and Human Services; Wyeth Pharmaceuticals Inc.; St. Davids, PA, and the Wake Forest School of Medicine; and the Cure Alzheimer's Fund.

GUNSTER
FLORIDA'S LAW FIRM FOR BUSINESS

Client/Matter Number: 47014.00002
Writer's Direct Dial: (772) 223-2218
Writer's E-Mail Address: rraynesjr@gunster.com

July 28, 2021

VIA EMAIL ONLY

City of Stuart Development Department
Atn: Mr. Tom Reetz, Senior Planner
121 SW Flagler Avenue
Stuart, FL 34994

Re: Kanner CPUD

Dear Mr. Reetz:

Pursuant to the Stipulation Regarding Quasi-Judicial Hearing for Second Reading, executed by me and the intervenors, please find enclosed a Memorandum, prepared by Mr. Edward R. Weinberg, of EW Consultants, Inc., regarding the listed vegetation species on the Kanner CPUD site.

We are hereby requesting that the attached Memorandum from Mr. Weinberg be submitted as part of the recorded and included as part of the documents submitted for the August 9, 2021, Second Reading before the City of Stuart City Commissioners.

Please do not hesitate to contact me should you have any questions or require any additional information regarding this request.

Sincerely,

Robert S. Raynes, Jr.
Enclosure
cc: client (via email)
Kevin Freeman, City of Stuart Development Director (via email)
David Dyess, City of Stuart Manager (via email)
Michael Mortell, Esq., City of Stuart Attorney (via email)
Linda Kay Richards, (via email)
Virginia P. Sherlock, Esq. (via email)
Brian A. DiVentura (via email)

EW Consultants, Inc.
Natural Resource Management, Wetland, and Environmental Permitting Services

MEMORANDUM

TO: Robert S. Raynes

FROM: Ed Weinberg Edward R. Weinberg Digitally signed by Edward R. Weinberg Date: 2021.07.22 12:08:45 -04'00'

DATE: July 22, 2021

RE: Kanner CPUD; Listed Vegetation Species

The following memorandum is being provided in response to comments and/or questions provided to the City of Stuart by the Intervener, Linda Kay Richards in relation to "protected" species of vegetation on the Kanner CPUD site. Rather than responding to specific assertions in the June 16, 2021 correspondence from the Intervener to the City Commission, this memorandum provides background as to the regulatory status of listed vegetation species as well as site specific information in that regard.

Listed vegetation species (as contrasted with listed wildlife species) have a specific and unique regulatory framework, which is described in detail as follows.

Federal Regulatory Framework -

At the Federal level, Section 9 of the Endangered Species Act (ESA) provides legal protection for rare plants, under limited and specific circumstances. On Federal lands, it is illegal to "remove and reduce to possession" or "maliciously damage or destroy" any listed plant. The Kanner CPUD property is not "Federal lands" and thus this provision does not apply.

On private lands (as is the case with the Kanner CPUD property), the provisions of the ESA (specifically 16 U.S.C.§1538(a)(2)(B)) make it illegal to ***"remove, cut, dig up, or damage or destroy"*** a listed plant ***"in knowing violation of any law or regulation of any state."***. Note that this provision defers to laws or regulations of the State of Florida. As such, the Federal ESA does not impose any restrictions, aside from those in Florida law, regarding the removal or destruction of listed plants on private property.

Although important for background purposes, any potential Federal restrictions are not applicable, as several years of multiple site reconnaissance reviews, including a systematic survey of the site most recently in July 2021, did not find any Federally listed Endangered or Threatened plant species to be present.

State of Florida Regulatory Framework -

At the state level, legal protection for native plant species are provided by the Preservation of Native Flora of Florida Statute (PNFFS), F.S. Section 581.185, and associated Endangered Plant Advisory Council statute, F.S. §581.186. The stated goal of the PNFFS is to ***"protect the native flora from unlawful harvesting on both public and privately owned lands"*** and prevent ***"wanton exploitation or destruction of native plant populations"***.

Three categories of protected native plant species are defined by the PNFFS, which include "commercially exploited", "Threatened", and "Endangered". These three categories and the species that fall within them are listed in the "Regulated Plant Index" promulgated by the State of Florida. By reference, and specific listing of those species known to occur in Florida, the Regulated Plant Index includes all plants listed as endangered or threatened under Section 4 of the Federal Endangered Species Act (1973 as amended). As previously stated, no Federally listed Endangered or Threatened plant species have been found to be present on the Kanner CPUD property.

The Regulated Plant Index includes additional species under the three categories as stated above. Although previously observed during multiple site reviews, a systematic survey of the site conducted in July 2021 catalogued the occurrence of several species listed in the Regulated Plant Index, which are specified by category as follows.

State Endangered –

Giant Wild Pine (*Tillandsia utriculata)*
Florida Royal Palm (*Roystonea regia*)

State Threatened –

Large flower False Rosemary (*Conradina grandiflora*)
Giant Sword Fern (*Nephrolepis biserrata*)

State Commercially Exploited –

Saw Palmetto (*Serenoa repens*)
Nodding Club-Moss (*Lycopodiella cernua*)
Royal Fern (*Osmunda regalis*)

The PNFFS specifies that the harvest or willful destruction of regulated plants requires obtaining the written permission of the landowner or legal representative of the landowner and in some cases, a permit from the Florida Department of Agriculture and Consumer Services (FDACS) for transporting plants for the purpose of "sale, selling, or offering for sale". The PNFFS provides an exemption under F.S. Section 581.185(8)(b) stating that "***No provision of this section shall apply to:*** **[...]** ***The clearing or removal of regulated plants from a canal, ditch, survey line, building site, or road or other right-of-way by the landowner or his or her agent.***"

Under this explicit exemption, a landowner clearing their private property for permitted development is not restricted from removal of regulated plants. The landowner's actions do not require further authorization from the Florida Department of Agriculture and Consumer Services (FDACS) and are presumed to be in compliance with the provisions of the PNFFS.

This exemption was further clarified in 1997 when the legislature added the following clause under F.S. Section 581.185(12) :

> ***(12) REGULATED PLANT INDEX. — The Regulated Plant Index is to be used solely to restrict unlawful harvesting of native flora without the authorization of the landowner. The Regulated Plant Index is not to be used to regulate construction or other land alteration activities on any property.***

In summary, the State of Florida regulates unlawful harvest of protected vegetation species, but specifically does not regulate activities of landowners regarding listed vegetation species on private property.

<u>City of Stuart Regulatory Framework –</u>

The City of Stuart Comprehensive Plan, under Objective A.6. Wildlife Protection, mentions protection of endangered and threatened plant and animal populations and goes on to cite Federal and State protections. The limitations of existing Federal and State protections have been fully summarized above.

Neither the Comprehensive Plan nor the Land Development Code include specific requirements for preservation of listed plant species on private property beyond those allowed for by State statute and rules.

<u>Summary –</u>

Private landowners in Florida are not restricted in their disposition of listed plant species within their property. Further, Florida Statute prohibits regulation of construction or land alteration based on occurrence of plants listed in the Regulated Plant Index. As such, although there are occurrences of State listed vegetation species on the Kanner CPUD site, their disposition is at the discretion of the property owner.

RECEIVED
JUN 02 2021
BY: MK Clerk

APPLICATION FOR INTERVENOR STATUS

INFORMATION ABOUT THE PETITIONER	For Office Use Only
APPLICATION FEE: $400.00 (LDR) 11.03.06	
FILE NAME:	
FIRST NAME: Brian	LAST NAME: DiVentura
MAILING ADDRESS	
STREET: 377 NW Canna Way	CITY: Jensen Beach, FL 34957 STATE: ZIP:
CONTACT INFORMATION	
WORK PHONE: 772-485-9674	EMAIL: 2diventuras@comcast.net
CELL PHONE:	

PETITIONER'S REPRESENTATIVE IF APPLICABLE	
FIRM/ORGANIZATION NAME:	
FIRST NAME:	LAST NAME:
MAILING ADDRESS	
STREET:	CITY: STATE: ZIP:
CONTACT INFORMATION	
WORK PHONE:	EMAIL:
CELL PHONE:	

LIST OBJECTIONS TO BE INCLUDED IN AGENDA:

By cross examination of Staff and/or the Applicant demonstrate the project described in Ordinance 2466-2021 is not consistent with Comprehensive Growth Management Plan, Conservation Element, Policies such as 5.A5.5 and 5.A5.6 Also, portions of the Land Development Code.

Signature: 6/2/2021 Date:

Florida Attorney General
Advisory Legal Opinion

Number: AGO 94-102
Date: December 6, 1994
Subject: County not prohibited from regulating dev. of wetlands

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Ms. Noreen Dreyer
Martin County Attorney
2401 Southeast Monterey Road
Stuart, Florida 34996

RE: ENVIRONMENTAL PROTECTION, DEPARTMENT OF--WATER MANAGEMENT DISTRICTS--WATER--COUNTIES--LOCAL GOVERNMENT--LAND USE AND PLANNING--county not prohibited by statute from regulating development of wetlands under county comprehensive growth management plan. s. 373.414; Part IV, Ch. 373, Fla. Stat. (1994 Supp.).

Dear Ms. Dreyer:

You ask substantially the following question:

Does section 373.414(1)(b), Florida Statutes, prohibit a local government from prohibiting development of wetland areas under its county comprehensive growth management plan when the water management district or the Department of Environmental Protection has granted a permit that would allow development of the wetlands subject to mitigation requirements?

In sum:

Section 373.414(1)(b), Florida Statutes, does not preempt the ability of a local government to prohibit development of wetland areas under the county comprehensive growth management plan when the Department of Environmental Protection or the appropriate water management district has issued a permit allowing development of wetlands subject to mitigation requirements.

You state that the Martin County Comprehensive Growth Management Plan prohibits the alteration and development of viable wetland areas except in certain circumstances. Such circumstances include, for example, when no upland alternative exists, for certain riparian uses, and to avoid a total taking of property.

A question has arisen as to whether section 373.414(1)(b), Florida Statutes, preempts a local government from prohibiting the development of wetland areas if the Department of Environmental Protection (department) or the appropriate water management district (district) has issued a permit allowing development in the wetland area subject to mitigation requirements.

Section 373.413(1), Florida Statutes, provides that with certain exceptions, the department or governing board of a district may require permits and impose such reasonable conditions as are necessary to assure that the construction or alteration of any stormwater management system, dam, impoundment, reservoir, appurtenant work, or works will adhere to the provisions of Part IV, Chapter 373, Florida Statutes, and rules adopted thereunder and will not be harmful to the water resources of the district. Persons seeking to construct or alter such a system are required to apply to the department or governing board of the district.[1]

Provisions for mitigation and mitigation banking are provided in section 373.4135, Florida Statutes, as means of offsetting or minimizing the adverse impacts of such construction or alteration. Section 373.414(1)(b), Florida Statutes, which provides additional criteria for such activities in surface waters and wetlands, states in pertinent part:

"If mitigation requirements imposed by a local government for surface water and wetland impacts of an activity regulated under this part cannot be reconciled with mitigation requirements approved under a permit for the same activity issued under this part, the mitigation requirements for surface water and wetland impacts shall be controlled by the permit issued under this part."

While there are provisions in Part IV, Chapter 373, Florida Statutes, that are preemptive, nothing in section 373.414, Florida Statutes, indicates an intent to preempt local governments from prohibiting or regulating the development of wetlands or from imposing mitigation requirements when such development is permitted. The language of section 373.414, Florida Statutes, itself recognizes that the statute is not preemptive by stating that those local mitigation requirements that cannot be reconciled with the requirements of the Part IV, Chapter 373, Laws of Florida, must give way to the state requirements.[2]

In contrast, for example, section 373.421, Florida Statutes, which provides methods for delineating wetlands, specifically states:

"Subsequent to legislative ratification, the wetland definition in s. 373.019(17) and the adopted wetland methodology shall be binding on the department [of Environmental Protection], the water management districts, local governments, and any other governmental entities. Upon ratification of such wetland methodology, the Legislature preempts the authority of any water management district, state or regional agency, or local government to define wetlands or develop a delineation methodology to implement the definition and determines that the exclusive definition and delineation methodology for wetlands shall be that established pursuant to s. 373.019(17) and this section. . . ."[3]

No such preemptive language exists in section 373.414, Florida Statutes, nor does the statute or chapter appear to be so pervasive as to completely occupy the field, thereby preventing local regulation.[4] In fact, with certain exception such as section 373.421, supra, Part IV, Chapter 373, Florida Statutes, appears to contemplate the existence of local regulations.[5]

According to your letter, the county's growth management plan prohibits the development of wetlands with certain limited exceptions. The purpose of the growth management plan is to guide and control future development. [6] Such a plan is necessary so that local governments can preserve and enhance present advantages and encourage the most advantageous use of land, water and resources, consistent with the public interest.[7] Section 163.3167(1), Florida Statutes, in setting forth the scope of the Local Government Comprehensive Planning and Land Development Regulation Act, states that counties have the power and responsibility, among other things, "[t]o plan for their future development and growth" and "[t]o adopt and amend comprehensive plans, or elements or portions thereof, to guide their future development and growth." Among the elements required of such a plan is:

"A conservation element for the conservation, use, and protection of natural resources in the area, including air, water, water recharge areas, *wetlands,* waterwells, estuarine marshes, soils, beaches, shores, flood plains, rivers, bays, lakes, harbors, forests, fisheries and wildlife, marine habitat, minerals, and other natural and environmental resources. . . . The land use map or map series in the future land use element shall generally identify and depict the following:
1. Existing and planned waterwells and cones of influence where applicable.
2. Beaches and shores, including estuarine systems.
3. Rivers, bays, lakes, flood plains, and harbors.
4. Wetlands.
5. Minerals and soils. . . ."[8] (e.s.)

I find nothing in section 373.414(1)(b), Florida Statutes, that seeks to alter the power of a local government pursuant to its comprehensive plan to control growth and development within its boundaries. Rather, the provisions of section 373.414, Florida Statutes, would appear to apply only to those instances in which development of wetlands is permitted subject to mitigation.

Section 373.441(1)(e), Florida Statutes, provides that the Department of Environmental Protection, after consultation with the water management districts, adopt rules by December 1, 1994, to guide the participation of counties, municipalities, and local pollution control programs in an efficient system. Thus, the statute requires that provisions be made for ensuring the consistency of permit applications with local comprehensive plans. In addition, section 373.441(2), Florida Statutes, provides that "[n]othing in this section affects or modifies land development regulations adopted by a local government to implement its comprehensive plan pursuant to chapter 163."

Section 373.414(1)(b), Florida Statutes, thus appears to apply when local government regulations permit the development of wetlands and there is a conflict between state and local mitigation requirements. In such cases, the state mitigation requirements will prevail over any mitigation requirements adopted by the local government that cannot be reconciled with those of Part IV, Chapter 373, Florida Statutes. Where, however, as in the instant inquiry, development of wetlands is not permitted under the

local government's comprehensive growth plan, the statute would appear to be inapplicable.

Accordingly, I am of the opinion that section 373.414, Florida Statutes, does not prohibit a local government from prohibiting development of wetland areas under its comprehensive growth management plan.

Sincerely,

Robert A. Butterworth
Attorney General

RAB/tjw

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[1] Section 373.413(2), Fla. Stat. (1993).

[2] *And see* s. 373.430(1)(b), Fla. Stat. (1993) (it shall be a violation of Part IV, Chapter 373, and it shall be prohibited for any person to, among other things, fail to comply with any rule, regulation, order or permit issued by local government pursuant to their lawful authority under Part IV, Chapter 373).

[3] Section 373.421(1), Fla. Stat. (1994 Supp.).

[4] *See Hillsborough County v. Florida Restaurant Association, Inc.*, 603 So. 2d 587 (Fla. 2d DCA 1992), in which the court recognized two types of preemption, an express preemption by a specific statement of preemption and an implied preemption whereby the legislative scheme must be so pervasive that it completely occupies the field.

[5] *See, e.g.*, s. 373.414, Fla. Stat. (1994 Supp.) (in the event of a conflict between local and state mitigation requirements, the state requirements will control); s. 373.430(1)(b), *supra*; s. 373.441(1)(b), Fla. Stat. *Cf.* s. 373.023, Fla. Stat., stating that all the waters of the state are subject to the provisions of the chapter unless exempted by law and that no state or local government agency may enforce, except as to water control, and rule or order affecting such waters unless such rule or order has been filed with the department except as provided therein.

[6] *See* s. 163.3161(2), Fla. Stat. (1993), setting forth the intent and purpose of the Local Government Comprehensive Planning and Land Development Act.

[7] Section 163.3161(3), Fla. Stat. (1993).

[8] Section 163.3177(6)(d), Fla. Stat. (1993).

Wetland Rapid Assessment Procedure
Field Data Sheet

Wetland Area		Date	Wetland Type		Evaluators
W1	Impact	1/13/2020	641	FLUCCS	EW Consultants, Inc.
Permit #					SFWMD J. Huffman/J. Philips

Wildlife Utilization		Wetland Overstory		Wetland Ground Cover		Adjacent Upland/Buffer	
Existing	1	Existing	n/a	Existing	1	Existing	1
Proposed	0	Proposed	n/a	Proposed	0	Proposed	0

Wetland Hydrology		Land Use (LU)		Pre-Treatment (PT)		WQIT (LU + PT)/2	
Existing	2	Existing	2.150	Existing	0	Existing	1.075
Proposed		Proposed	0	Proposed	0	Proposed	0

WRAP Score	
Existing	0.41
Proposed	0.00

Comments

Wildlife Utilization:
Existing; Limited by disturbed uplands surrounding the wetland
Proposed: Direct impact

Wetland Overstory:
Existing; N/A Naturally a non-forested wetland invaded by some Melaleuca & Casuarina spp.
Proposed: N/A

Wetland Groundcover:
Existing; Some native graminoids; Invaded by L. peruviana, Salix spp., and Pennisetum spp.
Proposed: Direct impact

Upland Buffer:
Existing; Dominated by exotic vegetation and non natural habitats
Proposed: Direct impact

Wetland Hydrology:
Existing; Impacted by former agricultural drainage; still supports wetland conditions.
Proposed: Direct impact

Land Use:
Existing; Low density residential, some natural areas, improved pasture/mowed grasses
Proposed: Direct impact

Pre-Treatment:
Existing; None. Water inflows from offsite nursery and uplands disturbed by trash dumping/ORVs.
Proposed: Direct impact

Wetland Rapid Assessment Procedure
Field Data Sheet

Wetland Area		Date	Wetland Type		Evaluators
W2	Impact	4/23/2020	641	FLUCCS	EW Consultants, Inc.
Permit #					

Wildlife Utilization		Wetland Overstory		Wetland Ground Cover		Adjacent Upland/Buffer	
Existing	1	Existing	n/a	Existing	1	Existing	1
Proposed	0	Proposed	n/a	Proposed	0	Proposed	0

Wetland Hydrology		Land Use (LU)		Pre-Treatment (PT)		WQIT (LU + PT)/2	
Existing	1	Existing	2.1	Existing	0	Existing	1.025
Proposed		Proposed	0	Proposed	0	Proposed	0

WRAP Score	
Existing	0.34
Proposed	0.00

Comments

Wildlife Utilization:
Existing; Limited by adjacent landuse and dense exotic vegetation cover
Proposed: Direct impact

Wetland Overstory:
Existing; N/A Naturally a non-forested wetland, invaded by Melaleuca spp.
Proposed: N/A

Wetland Groundcover:
Existing; Minimal due to melaleuca overstory. Dominated by swamp ferns and barren.
Proposed: Direct impact

Upland Buffer:
Existing; Dominated by exotic vegetation and non natural habitats
Proposed: Direct impact

Wetland Hydrology:
Existing; Impacted by former agricultural drainage.
Proposed: Direct impact

Land Use:
Existing; Previously agricultural, now vacant in transition
Proposed: Direct impact

Pre-Treatment:
Existing; None. Adjacent to nursery and disturbed uplands w/ ORV activity.
Proposed: Direct impact

Wetland Rapid Assessment Procedure
Field Data Sheet

Wetland Area		Date	Wetland Type		Evaluators
W3	Impact	4/23/2020	641	FLUCCS	EW Consultants, Inc.
Permit #					

Wildlife Utilization		Wetland Overstory		Wetland Ground Cover		Adjacent Upland/Buffer	
Existing	1.5	Existing	n/a	Existing	1	Existing	1
Proposed	0	Proposed	n/a	Proposed	0	Proposed	0

Wetland Hydrology		Land Use (LU)		Pre-Treatment (PT)		WQIT (LU + PT)/2	
Existing	1.5	Existing	2.3	Existing	0	Existing	1.125
Proposed		Proposed	0	Proposed	0	Proposed	0

WRAP Score	
Existing	0.41
Proposed	0.00

Comments

Wildlife Utilization:
Existing; Limited by disturbed uplands surrounding the wetland and apparent ORV activity.
Proposed: Direct impact

Wetland Overstory:
Existing; N/A Naturally a non-forested wetland
Proposed: N/A

Wetland Groundcover:
Existing; Limited diversity and sparse due to ORV ativity. 50/50 native/invasive exotic
Proposed: Direct impact

Upland Buffer:
Existing; In part natural pine flatwoods, but dominated by exotic vegetation and non natural habitats
Proposed: Direct impact

Wetland Hydrology:
Existing; Impacted by former agricultural drainage.
Proposed: Direct impact

Land Use:
Existing; Previously agricultural, now vacant in transition
Proposed: Direct impact

Pre-Treatment:
Existing; None. Extensive ORV impacts.
Proposed: Direct impact

Wetland Rapid Assessment Procedure
Field Data Sheet

Wetland Area		Date	Wetland Type		Evaluators
W4	Impact	4/23/2020	641	FLUCCS	EW Consultants, Inc.
Permit #					

Wildlife Utilization		Wetland Overstory		Wetland Ground Cover		Adjacent Upland/Buffer	
Existing	0.5	Existing	n/a	Existing	0.5	Existing	1
Proposed	0	Proposed	n/a	Proposed	0	Proposed	0

Wetland Hydrology		Land Use (LU)		Pre-Treatment (PT)		WQIT (LU + PT)/2	
Existing	0.5	Existing	2.1	Existing	0	Existing	1.0625
Proposed		Proposed	0	Proposed	0	Proposed	0

WRAP Score	
Existing	0.24
Proposed	0.00

Comments

Wildlife Utilization:
Existing; Limited by adjacent landuse and dense exotic vegetation cover
Proposed: Direct impact

Wetland Overstory:
Existing; N/A Naturally a non-forested wetland; Invaded by Casuarina spp. and thespesia spp.
Proposed: N/A

Wetland Groundcover:
Existing; Nearly barren, covered in needles, scattered ferns.
Proposed: Direct impact

Upland Buffer:
Existing; Dominated by exotic vegetation and non natural habitats
Proposed: Direct impact

Wetland Hydrology:
Existing; Impacted by adjacent ditch excavation for agricultural drainage.
Proposed: Direct impact

Land Use:
Existing; Previously agricultural, now vacant in transition
Proposed: Direct impact

Pre-Treatment:
Existing; None. Adjacent to nursery and disturbed uplands w/ ORV activity.
Proposed: Direct impact

Wetland Rapid Assessment Procedure
Field Data Sheet

Wetland Area		Date	Wetland Type		Evaluators
W5	Impact	4/23/2020	641	FLUCCS	EW Consultants, Inc.
Permit #					

Wildlife Utilization		Wetland Overstory		Wetland Ground Cover		Adjacent Upland/Buffer	
Existing	1.5	Existing	n/a	Existing	1.5	Existing	2.5
Proposed	0	Proposed	n/a	Proposed	0	Proposed	0

Wetland Hydrology		Land Use (LU)		Pre-Treatment (PT)		WQIT (LU + PT)/2	
Existing	1.5	Existing	2.5	Existing	0	Existing	1.25
Proposed		Proposed	0	Proposed	0	Proposed	0

WRAP Score	
Existing	0.55
Proposed	0.00

Comments

Wildlife Utilization:
Existing; Limited by disturbed upland habitats surrounding the site and ORV activity.
Proposed: Direct impact

Wetland Overstory:
Existing; N/A Naturally a non-forested wetland
Proposed: N/A

Wetland Groundcover:
Existing; Native; Diversity and density appropriate for this wetland system.
Proposed: Direct impact

Upland Buffer:
Existing; Dominated by pine flatwoods, but encroached exotic vegetation (earleaf acacia)
Proposed: Direct impact

Wetland Hydrology:
Existing; Near normal; potentially affected by nearby drainage ditch.
Proposed: Direct impact

Land Use:
Existing; Previously agricultural, now vacant in transition
Proposed: Direct impact

Pre-Treatment:
Existing; None. Impacted by ORVs.
Proposed: Direct impact

Wetland Rapid Assessment Procedure
Field Data Sheet

Wetland Area		Date	Wetland Type		Evaluators
W6	Impact	4/23/2020	641	FLUCCS	EW Consultants, Inc.
Permit #					

Wildlife Utilization		Wetland Overstory		Wetland Ground Cover		Adjacent Upland/Buffer	
Existing	1.5	Existing	n/a	Existing	1	Existing	2
Proposed	0	Proposed	n/a	Proposed	0	Proposed	0

Wetland Hydrology		Land Use (LU)		Pre-Treatment (PT)		WQIT (LU + PT)/2	
Existing	2	Existing	2.5	Existing	0	Existing	1.25
Proposed		Proposed	0	Proposed	0	Proposed	0

WRAP Score	
Existing	0.52
Proposed	0.00

Comments

Wildlife Utilization:
Existing; Limited by disturbed uplands surrounding the wetland and apparent ORV activity.
Proposed: Direct impact

Wetland Overstory:
Existing; N/A Naturally a non-forested wetland
Proposed: N/A

Wetland Groundcover:
Existing; 100% native monoculture likely due to previous ORV activity that deepened the wetland
Proposed: Direct impact

Upland Buffer:
Existing; Pine flatwoods, but dominated by exotic vegetation and non natural habitats
Proposed: Direct impact

Wetland Hydrology:
Existing; Impacted by former agricultural activities and ORV activity.
Proposed: Direct impact

Land Use:
Existing; Previously agricultural, now vacant in transition
Proposed: Direct impact

Pre-Treatment:
Existing; None. Extensive ORV impacts.
Proposed: Direct impact

Wetland Rapid Assessment Procedure
Field Data Sheet

Wetland Area		Date	Wetland Type		Evaluators
W7	Impact	1/13/2020	643	FLUCCS	EW Consultants, Inc.
Permit #					SFWMD J. Huffman/J. Philips

Wildlife Utilization		Wetland Overstory		Wetland Ground Cover		Adjacent Upland/Buffer	
Existing	1.5	Existing	n/a	Existing	1	Existing	1
Proposed	0	Proposed	n/a	Proposed	0	Proposed	0

Wetland Hydrology		Land Use (LU)		Pre-Treatment (PT)		WQIT (LU + PT)/2	
Existing	2	Existing	2.3	Existing	0	Existing	1.125
Proposed		Proposed	0	Proposed	0	Proposed	0

WRAP Score	
Existing	0.44
Proposed	0.00

Comments

Wildlife Utilization:
Existing; Limited by disturbed uplands surrounding the wetland.
Proposed: Direct impact

Wetland Overstory:
Existing; N/A Some Annona spp. , naturally a non-forested, invaded by melaleuca spp. and Salix spp.
Proposed: N/A

Wetland Groundcover:
Existing; Limited diversity and sparse. 50/50 native/invasive exotic
Proposed: Direct impact

Upland Buffer:
Existing; In part natural pine flatwoods, but dominated by exotic vegetation and non natural habitats
Proposed: Direct impact

Wetland Hydrology:
Existing; Impacted by former agricultural drainage; still supports wetland conditions.
Proposed: Direct impact

Land Use:
Existing; Previously agricultural, low density residential, now vacant in transition
Proposed: Direct impact

Pre-Treatment:
Existing; None. Impacted by trash dumping and abandoned motor vehicles.
Proposed: Direct impact

In assessing the likelihood of use of a site by listed species, the sufficiency of proposed survey methodology, and any information provided as reasonable assurance under this section, the Agency will consider comments and recommendations received from the FWC, the U.S. Fish and Wildlife Service, comments from the applicant, and other water-resource related public comments. Scientific literature, and technical assistance documents such as the "*Florida Wildlife Conservation Guide*" at: myfwc.com/conservation/value/fwcg/ (2011), management plans, recovery plans, and habitat and conservation guidelines also will be considered.

10.2.2.1 Compliance with **sections 10.2.2 through 10.2.3.7 and 10.2.5 through 10.3.8, below,** will not be required for regulated activities in isolated wetlands less than one half acre in size, unless:

(a) The wetland is used by endangered or threatened species;

(b) The wetland is located in an area of critical state concern designated pursuant to Chapter 380, F.S.;

(c) The wetland is connected by standing or flowing surface water at seasonal high water level to one or more wetlands, and the combined wetland acreage so connected is greater than one half acre; or

(d) The Agency establishes that the wetland to be impacted is, or several such isolated wetlands to be impacted are cumulatively, of more than minimal value to fish and wildlife.

10.2.2.2 Alterations in wholly-owned ponds that were entirely constructed in uplands and that are less than one acre in area and alterations in drainage ditches that were constructed in uplands will not be required to comply with the provisions of **sections 10.2.2 through 10.2.2.3, 10.2.3 through 10.2.3.7, and 10.2.5 through 10.3.8 below**, unless those ponds or ditches provide significant habitat for endangered or threatened species. This means that, except in cases where those ponds or ditches provide significant habitat for endangered or threatened species, the only environmental criteria that will apply to those ponds or ditches are those included in **sections 10.2.2.4 and 10.2.4 through 10.2.4.5, below.** This provision shall only apply to those ponds and ditches that did not require a permit under Part IV, Chapter 373, F.S., or that were constructed for purposes other than mitigation pursuant to a permit under Part IV, Chapter 373, F.S. This provision does not apply to ditches constructed to divert natural stream flow.

10.2.2.3 The assessment of impacts expected as a result of proposed activities on the values of functions will be based on a review of scientific literature, ecologic and hydrologic information, and field inspection. When assessing the value of functions that any wetland or other surface water provides to fish, wildlife, and listed species, the factors that the Agency will consider are:

(a) Condition – this factor addresses whether the wetland or other surface water is in a high quality state or has been the subject of past alterations in hydrology, water quality, or vegetative composition. However, areas impacted by activities in violation of an Agency rule, order, or permit adopted or issued pursuant to Chapter 373, F.S., or Part VIII of Chapter 403, F.S. (1984 Supp.) as amended, will be evaluated as if the activity had not occurred;

(b) Hydrologic connection – this factor addresses the nature and degree of off-site connection, which may provide benefits to off-site water resources through detrital export, base flow maintenance, water quality enhancement or the provision of nursery habitat;

From: Reetz, Thomas
To: "dfitzwater@lucidodesign.com"
Cc: "rraynes@gunster.com"
Subject: FW: Costco signal, Kanner Hwy, Stuart, fl
Date: Monday, June 7, 2021 11:57:00 AM

Doug and Bob, FYI

Tom Reetz | Senior Planner | Development
City of Stuart | 121 SW Flagler Ave. Stuart Fl. 34994
772-600-1284

-----Original Message-----
From: Jeff or Cindy Deziel <florida2waterview@gmail.com>
Sent: Monday, June 7, 2021 11:19 AM
To: Reetz, Thomas <treetz@ci.stuart.fl.us>
Cc: d4accessmanagement@dot.state.fl.us
Subject: Costco signal, Kanner Hwy, Stuart, fl

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Good morning Tom, this is a follow-up to a conversation we had about a week and a half ago.
During the last few months of the Costco development approval my wife and I often heard from the developer M and M Realty. The discussions centered around the traffic light location; and alignment with our driveway. Three or four weeks ago M and M sent out Doug Fitzwater, a planner with Lucido associates, to listen and address all our concerns. He thought he could neatly put them in a plan and get it back to us for comment. On May 23, the day before the May 24 city approval meeting, one of the owners of M and M Realty stopped by our property but did not have Doug's plan with him. Since then we have not heard from Doug, nor have we heard from the developer.

We would like to go on record with the City of Stuart, and the Florida Department of Transportation, regarding the latest plan, showing the opening of our driveway directly aligning the three Costco development exit lanes is not acceptable with us.

As I mentioned to you, we may be difficult to reach over the next couple months, please let us know if we need to do anything else other than this to prevent an approval without our knowledge.

Thank you, Jeff and Cindy Deziel

cc: Dania Hernandez, FDOT
Gerry O'Reilly, FDOT District 4 Secretary
3400 W. Commercial Blvd, Ft Lauderdale, Fl. 33309-3421

From: Kindel, Mary
To: Freeman, Kevin; Reetz, Thomas
Subject: FW: Kanner CPUD Environmental Assessment Report
Date: Friday, June 18, 2021 10:48:58 AM
Attachments: image001.jpg
image004.jpg

Per the last paragraph, please add this to the Kanner CPUD file.

Thank you,

Mary Kindel, CMC | City Clerk | City of Stuart
City Clerk's Department
Phone: 772.288.5306 | Email: mkindel@ci.stuart.fl.us
121 SW Flagler Avenue, Stuart, Florida 34994

From: Linda Kay Richards <lindakayrichards@gmail.com>
Sent: Wednesday, June 16, 2021 3:48 PM
To: Clarke, Eula <eclarke@ci.stuart.fl.us>; Matheson, Merritt <mmatheson@ci.stuart.fl.us>; Meier, Mike <mmeier@ci.stuart.fl.us>; McDonald, Troy <tmcdonald@ci.stuart.fl.us>; Bruner, Becky <bbruner@ci.stuart.fl.us>; Mortell, Michael <mmortell@ci.stuart.fl.us>; Kindel, Mary <mkindel@ci.stuart.fl.us>; Dyess, David <ddyess@ci.stuart.fl.us>; shetherington@martin.fl.us; hjenkins@martin.fl.us; eciampi@martin.fl.us; sheard@martin.fl.us; dsmith@martin.fl.us; Virginia Sherlock <vsherlock@lshlaw.net>; Howard Heims <hheims@lshlaw.net>
Subject: Kanner CPUD Environmental Assessment Report

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June 16, 2021

The City of Stuart City Commission
121 SW Flagler Avenue
Stuart, FL 34994

Dear Mayor Clarke, Vice Mayor Matheson, Commissioner Meier, Commissioner McDonald, Commissioner Bruner,

As an Intervenor in the approval process for the Kanner CPUD (Costco) application and as an owner of adjacent property, I am very familiar with the project site and have documented several protected species which the City of Stuart Comprehensive Plan requires you to survey.

The applicant failed to report the presence of Tillandsia balbisiana, Conradina grandiflora, Lechea, Royal Fern and other plants which are identified on state or federal endangered or threatened species lists. And although gopher tortoise were identified on the property by

the applicant, no mention was made of blue heron which have been seen foraging in the wetlands as well as other wildlife that must be protected. This alone discredits E.W. Consultants, Inc Environmental Assessment Report and it should be rejected as an adequate study for this project.

Policy A6.2 of the Comprehensive Plan provides that when there is evidence of the presence of protected species, a survey of a development site for endangered or threatened plant and animal species shall be conducted by a qualified government ecologist prior to approval of development activities. If there is no government ecologist on staff, the applicant is required to obtain a City-approved professional consultant at the applicant's expense to survey the property.

Please consider this letter a request that you direct staff to retain a neutral professional ecologist to survey the Costco site for endangered and threatened plant and animal populations as required by Policy A6.2 of the Comprehensive Plan.

I am aware of similar issues on the Bridgeview project site, where endangered plant species were located by Sustainable Ecosystems International. A "plant rescue" was recently conducted by the local chapter of the Florida Native Plant Society to try to save as many of the endangered and threatened species as possible from the Bridgeview site before development commences. It is unfortunate that a survey was not conducted prior to approval of the Bridgeview application.

Please don't repeat this error on the Costco site.

Sustainable Ecosystems International is operated by Greg Braun, who is familiar with the area and is an expert in plant and animal species identification as well as wetlands and surface water issues.

Most residents were surprised to learn at the Commission meeting on the Costco project that all of the eight wetlands on the site will be destroyed along with other surface waters that are not identified as wetlands. This, of course, is inconsistent with requirements of the Comprehensive Plan that provide:

– "Land use planning and site design shall support development patterns that avoid or minimize the impact of development on wetlands" (Policy A5.5.A.iii)

– "Allow wetland losses only where all practicable measures have been applied" to avoid damage to wetlands (Policy A5.5.A.i)

– "New development shall not be allowed in wetlands, i.e., development shall occur outside of the wetland" (Policy A5.5.B.iii.)

– "The developer shall ensure that site development activities do not degrade on-site or adjacent surface waters or wetlands" (Policy A5.5.B.vii.)

Objective A1. of the Comprehensive Plan protects "the quality of all surface waters within the City Limits", regardless of whether they are designated as wetlands.

Please honor your obligations to comply with the provisions of the Comprehensive Plan and to protect and preserve water quality, native plants and wildlife which remain in the City despite massive development that has been approved in recent years.

Stuart can grow in a reasonable, responsible manner that does not destroy the character of the community or cherished – and irreplaceable – natural resources.

I request this letter be part of the record in the Kanner CPUD application proceedings. A hard copy will be sent to the City of Stuart Development Office and the City Attorney's office.

Sincerely,
Linda Kay Richards

Cc:
Michael Mortell
Mary Kendal
David Dyess
Stacey Hetherington
Herald Jenkins
Ed Ciampi
Sarah Heard
Doug Smith
Virginia Sherlock
Howard Heims

Cc: (hard copy)
City of Stuart Development Office
City Attorney's Office



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From: Paul Schilling
To: Reetz, Thomas; Freeman, Kevin
Subject: FW: Please Reject "Kanner CPUD" Comp Plan Amendment Stuart 21-02ESR
Date: Wednesday, June 9, 2021 5:50:44 PM

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Good afternoon Tom,

I did not see you included on this email.

Thank you,

Paul Schilling
Director
Growth Management Department
Martin County Board of County Commissioners
772-288-5473

From: Tom Loyd <loydb@bellsouth.net>
Sent: Wednesday, June 9, 2021 3:07 PM
To: ray.eubanks@deo.myflorida.com
Cc: Mark.Weigly@fldoe.org; Plan.Review@dep.state.fl.us; Jason.Aldridge@DOS.MyFlorida.com; CompliancePermits@dos.myflorida.com; FWCConservationPlanningServices@myfwc.com; Stacy.Miller@dot.state.fl.us; John.Krane@dot.state.fl.us; sheidt@tcrpc.org; tmanning@sfwmd.gov; Paul Schilling <pschilli@martin.fl.us>; mventura@tji.martin.fl.us; MBerger@sewallspoint.org
Subject: Please Reject "Kanner CPUD" Comp Plan Amendment Stuart 21-02ESR

"Kanner CPUD" Comp Plan Amendment Stuart 21-02ESR

TO: Ray Eubanks, Processing Administrator for the Department of Economic Opportunity: In reference to "Kanner CPUD" Comp Plan Amendment **Stuart 21-02ESR**

FROM: Walter T. Loyd – Martin County Resident
Mr. Eubanks: I reside at 150 SW Cabana Point Circle, Apt. #3, Stuart, FL, 34994 in the residential community of Cabana Point. Our residential community is one of many along Kanner Highway -SR76 Between I-95 (to the South) & Federal Highway (to the North) which will experience the direct impact of the proposed amendment not to mention the departure from the spirit and letter of the law of the Comprehensive Plan which was in place when many of us moved here to Martin County.

Prior to the changes, the Comprehensive Plan stipulated rules for land use & densities which

reflected much of the spirit of this history and culture as is noted by the very first **Goal Statement A** - which reads: Maintain and Enhance Stuart's **Quality of Life, Natural Beauty and Small-Town Waterfront Character, It's Stable Residential Neighborhoods**, and its status as the commercial/institutional hub for greater Martin County.

Objective A6 – Neighborhood Stability : states "**Established residential neighborhoods shall be PROTECTED FROM INTRUSION of competing intense uses through adherence to the Future Land Use Map, densities and intensities established in the Future Land Use Element**, etc…

Evidenced and available in the public record, they are deviating from the above by circumventing the Martin County Comprehensive Plan and land use codes in a deliberate process of annexation by the City of Stuart with intent to change the land use by way of PUD. If you follow the evolution and timelines for modifications made to the City of Stuart Comprehensive Plan compared with the communications (emails, etc..) by the City of Stuart representatives & staff with the developers it will be obvious as to the intent to allow for this deviation in the plans behind the scenes with minimal public knowledge.

Please reject this application to assign **CPUD zoning** and a **Neighborhood Special District land use** designations to the property being considered in this amendment.

Further points for consideration:

1. If the State approves this amendment prior to the meeting for the second reading planned for the City of Stuart Commission, it will eliminate the voices of the residences which were not given proper representation and input at the first reading meeting on May 24th 2021.
   Please review (hold down <CTRL Key> +<Left Mouse button>) on the following links :
   https://www.facebook.com/groups/2257651887813310
   City of Stuart Commission Meeting May 24, 2021:
   https://stuartfl.new.swagit.com/videos/121936
   It is clear we have not been represented at the Local level and therefore the State is our only hope in this process for representation. So far the developer has presented their experts, so we need the State to scrutinize this process at all levels.
2. There are petitions available for rejection of this project.
3. There are no Final Site Plans and School Capacity Analysis were not presented, which is a deviation from normal planning process in the City of Stuart most importantly the School Capacity Analysis shows that there is not adequate capacity at the Elementary & High school levels.
4. It is reasonable to assume that the citizens which are proponents of this project would be just as happy if Costco were in a more appropriate location (and many exist). If this is the case it means we should not amend the Comprehensive Plan and everyone wins.

Please let me know if I can be of any assistance in providing answers or data which would support our position in this appeal.

Best regards,

Walter Loyd

150 SW Cabana Point Circle, Apt. #3, Stuart, FL. 34994
Cell: (754) 224-9349
EMAIL: loydb@bellsouth.net

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From: Freeman, Kevin
To: Reetz, Thomas
Subject: FW: The Costco debacle on Kanner
Date: Wednesday, July 14, 2021 11:49:40 AM

For the file.

From: elf6023@gmail.com <elf6023@gmail.com>
Sent: Wednesday, July 14, 2021 11:40 AM
To: Dyess, David <ddyess@ci.stuart.fl.us>; Freeman, Kevin <kfreeman@ci.stuart.fl.us>; Mortell, Michael <mmortell@ci.stuart.fl.us>; McDonald, Troy <tmcdonald@ci.stuart.fl.us>; Bruner, Becky <bbruner@ci.stuart.fl.us>; Meier, Mike <mmeier@ci.stuart.fl.us>; Matheson, Merritt <mmatheson@ci.stuart.fl.us>; Clarke, Eula <eclarke@ci.stuart.fl.us>; ptobin@cityofpsl.com; MBerger@sewallspoint.org; mventura@tji.martin.fl.us; pschilli@martin.fl.us <pschilli@martin.fl.us>; tmanning@sfwmd.gov; sheidt@tcrpc.org; John.Krane@dot.state.fl.us; Stacy.Miller@dot.state.fl.us <Stacy.Miller@dot.state.fl.us>; Jason.Aldridge@DOS.MyFlorida.com; Mark.Weigly@fldoe.org
Subject: The Costco debacle on Kanner

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I am a citizen of Stuart. I care about the quality of life we have in our community. Stuart is a wonderful place to live . However if you do not care about Stuart and our community then I suggest you leave. Because any individual who would allow a monstrocity like COSTCO to come to our community obvivioulsy does not care about the impact this would have.

I live on Kanner. And the traffic has increased just in last 5 years that I have lived on Kanner. And now you want to add a COSTCO. We already have issues with flooding. Have you even considered how this will affect ambulance and fire trucks. What about the high school?

I truly do not believe any consideration has been given regarding the affects, except the greed that lines your pockets.

Do we really need another gas station, restaurant or ugly strip mall? And I can assure you COSTCO will not bring any additional jobs, they hire/transfer from within. And if you want to ruin the small businesses, well then COSTCO will do that as well.

Please re-evaluate this is not in the best interest of community and our citizens. If I wanted to live down south then I would. I never could understand, people move to an area because they have an affinity for the area, and then they want to change it. Why?

By the way if you have figured it out I am against COSTCO on Kanner Hwy.

Thank you for your time. Please do the right thing. And say no to COSTCO!
Elena Falco

Sent from Mail for Windows 10

From:	Jeff or Cindy Deziel
To:	D4 Access Management
Cc:	Overton, Jonathan; Plass, Mark; Castro, Tony; Olson, John; Harden, Nesa
Subject:	Re: Application for signal; Kanner Highway, Costco, Stuart, FL
Date:	Thursday, June 10, 2021 4:38:32 AM

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At this time we are not in agreement with the alignment of the Costco drives with our drive. We had cited several concerns with the developer months ago and they have not been resolved. Some of which dealt with the increased noise, visual and audible,
Increase traffic of unauthorized vehicles potentially creating more crime on our private property, The cut and paste look of modifying 50-60' of our entry, mailboxes, and turn around for mailperson, garbage location, debris pile location, and increased taxes.

Thank you for your follow up.
Jeff and Cindy Deziel

> On Jun 9, 2021, at 3:33 PM, D4 Access Management <D4AccessManagement@dot.state.fl.us> wrote:
>
> Good Afternoon Jeff and Cindy,
>
> Thank you for your email. Nesa Harden, copied, will notify you once the Permit application for the Costco traffic signal is received.
>
> Attached is the latest concept for the proposed Costco signalized entrance provided by the applicant. In this concept, the driveway to your property is aligned with the Costco entrance, and all turning movements are under signal control. Please let me know if you have any concerns regarding the attached conceptual design.
>
> Thank you,
>
> Dalila Fernandez, P.E.
> District Access Management Manager
> FDOT District 4 Consultant
> 3400 West Commercial Blvd.
> Fort Lauderdale, FL 33309-3421
> Email: D4AccessManagement@dot.state.fl.us
> Phone: 954-777-4363
>
> -----Original Message-----
> From: Jeff or Cindy Deziel <florida2waterview@gmail.com>
> Sent: Tuesday, June 8, 2021 6:16 AM
> To: D4 Access Management <D4AccessManagement@dot.state.fl.us>
> Cc: Overton, Jonathan <Jonathan.Overton@dot.state.fl.us>
> Subject: Application for signal; Kanner Highway, Costco, Stuart, FL
>
> Attention Dalila Hernandez,
>
> Good morning, this is a follow-up to the letter we copied you on yesterday to the city of Stuart regarding the above Florida Department of transportation signal. It is our understanding and application has not been put in yet however you have been discussing various options with the developer. Is there anyway if the signal application is

within 150 feet of our driveways, we could be notified?
> Our properties are 3300, 3310, 3320 South Kanner Highway, Stuart, FL. Although these are three separate tax IDs there are only two access driveways off of Kanner Highway.
> We are concerned if the main drive which is in front of 3320, is behind the stop bar of this new signal our guests, residents, and boaters will be trapped and unable to safely exit. We did mention to the developer we would be in agreement of aligning with the easement on the south property line. This would have minimal affect as the widening of our drive would be on state easement property which will require reworking anyway.
>
> Please let us know FDOT thoughts and or what options we may have?
>
> Thank you for your help and keeping us informed as to the location of this signal.
>
> Sincerely, Jeff and Cindy Deziel
>
> <DRIVEWAY REVISED-05-24-21-VF.pdf>

From:	ceramics45
To:	Clarke, Eula; mmatheson@ci.stiart.fl.us; Meier, Mike; Bruner, Becky; McDonald, Troy; Reetz, Thomas; Freeman, Kevin
Subject:	Costco
Date:	Friday, July 30, 2021 10:01:56 PM

This message has originated from an [EXTERNAL EMAIL ADDRESS]. Please use proper judgment and caution when opening attachments, clicking links, or responding to this email. If it shows as being from someone within the City, please contact the City's Technology Services personnel.

Please DO NOT SUPPORT the Costco on Kanner. For many reasons, increased traffic in a residential area, school overcrowding, environmental etc.

The apartment project on Indian Street, just east of Federal Highway, will bring an increase in traffic and school enrollment.

The citizens of Stuart do NOT want overcrowding as is the case in south Florida.

Please vote No to Costco development.

Sincerely,

Margaret M. Hall
1949 SE Talbot Place

Sent from my iPhone

From: Chadwick Miner
To: Reetz, Thomas
Subject: Costco
Date: Friday, July 30, 2021 7:41:16 PM

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I would like to formally email you and your constituents my personal disapproval of the proposed Costco.

It will forever change our town and your name will be attached to that change. Please do not turn our town into the north lake equivalent which is low rent, transient and high crime.

We do not need thru traffic by the thousands egressing Costco in direct paths of thousands of new drivers at Martin County High School, or endangering teenagers walking home.

This will not be a positive for our community in the long run. The infrastructure we have in place even with Kanner Hwy amended to the south will not smoothly handle the influx of traffic let alone the north, east and west routes. This is a very narrow minded proposition and a wrong move for our citizens of Stuart and Palm City.

Please withdraw this proposition indefinitely.

Sincerely,

Chad Miner

From: Matt Tarashuk
To: Clarke, Eula; Matheson, Merritt; Bruner, Becky; McDonald, Troy; Reetz, Thomas; Freeman, Kevin
Subject: PLEASE VOTE NO!! Stuart 21-02ESR (Kanner CPUD)
Date: Friday, July 30, 2021 7:32:34 PM

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Dear Commissioners,

I am writing this email to implore all of you to vote NO on this project. This property is not zoned for this type of project and if voted yes, this will forever change the landscape of Stuart. How many wetlands are you all going to allow to be drained and built on? This property should never have been allowed to be annexed to Stuart. We have been fighting for adequate water quality, infrastructure free of failure, fighting against sea rise, and environmental preservation. By voting yes on this project, you will be going against all that we have been fighting for.

Sincerely,

Matt Tarashuk

From: Charlene Roddy
To: Reetz, Thomas
Subject: Proposed Costco development
Date: Saturday, July 31, 2021 7:39:24 AM

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Good morning,

I won't take up too much of your time, but I wanted to share my concerns of the current location of the Costco and large apartment community on Kanner Highway. With COVID and young unvaccinated children at home, I have not been able to attend any meetings on the topic.

This is not a good location for such a large-scale development project; we only recently had Kanner widened due to local traffic needs and I can't imagine what it will look like during rush hour or during school zone times with people traveling from all of Martin, St. Lucie, and north Palm Beach counties to shop. There are residential communities already established on Kanner that will be impacted by this traffic, and more importantly Martin County High School, where my oldest son will be a student in just a few short years. This increased traffic is a danger to every student at the school, from the walkers who cannot ride the bus due to living within 2 miles of the school to the freshly licensed drivers with less road experience then you and I.

There are ripple effects to consider as well-how is this traffic getting to Kanner? Already busy roads such as 714 in Palm City will be impacted (as well as putting increased traffic past a middle school with a large number of walkers and bike riders), and all feeder streets to Kanner will have traffic increases. This also puts a good deal of strain on our local law enforcement and rescue department, from traffic patrol to accidents and to having almost 400 additional residential units created and the needs that come with those. I also cringe at the thought of the destruction of wetlands to have this project come to fruition; change happens everywhere every day, but it makes me sad to see the immense growth happening throughout this county and loss of natural beauty and peacefulness in the process.

Your role is to serve the city and the people who reside there, making decisions to support the majority's best interests and protect all, but I feel approving a project like this in its current location does not fulfill your elected role. Costco would be a great addition, but simply not in this location.

Thank you so much for your time,
Charlene Roddy
Resident-Lexington Lakes

From:	Caitlyn
To:	Reetz, Thomas; McDonald, Troy; Bruner, Becky; Meier, Mike; Matheson, Merritt
Subject:	Proposed development
Date:	Friday, July 30, 2021 7:47:55 PM

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Hello,

I appreciate your time. This Costco overdevelopment is going to ruin the reason why Stuart is such a great town. We live here because it's not Palm Beach or Broward. It is a terrible location to consider putting a Costco development of this size. I am not anti-Costco but anti-location. Build it west of Stuart exit 101 off of I-95. The traffic around the school zone would be a challenge and unsafe. The intersection at Kanner and Monterey is congested enough as it is. I love Staurt and Martin County and we need commissioners on our side protecting its residents quality of life.

Thank you