

CASE A: PD19-62429-BOS

STAFF REPORT

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BONITA SPRINGS, FLORIDA
COMMUNITY DEVELOPMENT DEPARTMENT
ZONING DIVISION
STAFF REPORT

TYPE OF CASE: REZONE – MIXED-USE PLANNED DEVELOPMENT
CASE NUMBER: PD19-62429-BOS
HEARING DATE: August 4, 2020
PLANNERS: Jacqueline Genson, AICP

APPLICATION SUMMARY:

- A. Applicant: Bonita Grande Drive MPD
- B. Agent: Hole Montes, Inc.
Coleman, Yovanovich & Koester, P.A.
- C. Request: A request to rezone 67.5 +/- acres from Commercial Planned Development (CPD) to a Mixed-use Planned Development (MPD) to allow for a maximum of 482 multi-family dwelling units (inclusive of an Assisted Living Facility) and a 165-room hotel at a maximum building height of 65 feet/6 habitable floors; and up to 315,000 square feet of commercial/retail at a maximum building height of 55 feet/5 habitable floors.
- D. Location: 27800, 27910, 27940, 27960 Bonita Grande Drive and 27800, 27897, 27901, 27931, and 27937 Eagle Ridge Road, Bonita Springs, FL 34135.
- E. Future Land Use Map Designation: Interchange Commercial and Density Reduction Groundwater Resource (DRGR)
- F. Current Zoning: Commercial Planned Development (CPD), Zoning Ordinance No. 08-09 and located within the Interchange Zone of the Bonita Beach Road Corridor Overlay.
- G. Current Land Use: Vacant commercial

By this reference, the Applicant's application in its entirety and correspondence is made part of this record and is available at the City Clerk's and Community Development's Offices.

BACKGROUND:

History and Overview

The subject properties are currently part of the Eagle Trust CPD, approved by Bonita Springs Zoning Ordinance ZO-08-09 in June of 2008. The original approval (reviewed by Lee County Community Development) permitted 350,000 square feet of commercial development, of which up to 45,000 square feet could be office space and the remaining 305,000 square feet could be in the form of a shopping center (big box retail) with outparcels.

It should be noted that per City of Bonita Springs Land Development Code (LDC) Section 4-303(a), the duration of rights of a planned development are five years from the date of approval by City Council. However, if the developer obtains a development order for a substantial portion of the project prior to the expiration, the rights remain conferred beyond the five-year mark. This project did not receive development order approval and remains undeveloped. As a result, the applicant is now requesting a new zoning designation of Mixed-use Planned Development (MPD) and is proposing a new master concept plan with new uses and new development regulations, for consideration.

A portion of the proposed project is located within the Bonita Beach Road Corridor Overlay, in which the regulations were adopted pursuant to Ordinance 19-10. Part of the stated purpose and intent of the overlay is to foster urbanized development patterns that focus on interconnectivity, mobility, human scale, and various design and architectural standards, among other items. Of the four zones created by the overlay, that portion of the project is within the Interstate Zone, also known as the "Gateway Zone."

Part of the review criteria for an MPD application states that mixed-use developments over two acres that contain residential uses should be designed to capture [within the development] a substantial percentage of the vehicular trips that are projected to be generated by those uses at the project's build out. This directly relates to the urbanized development pattern that is support by the Bonita Beach Road Corridor Overlay regulations. To this end, the narrative and concept plans provided by the applicant provide for an internal system of sidewalks, bike paths, and shared use paths, as well as roads and drives to accommodate vehicular traffic. These connections aid in providing multiple means of travel from the residential portions to the commercial portions of the project, and vice versa. The internal system is connected by a proposed shared-use path along the north side of Bonita Beach Road that spans the project frontage along that portion of the corridor.

Development regulations are contained later in this report as part of **Condition 2b**, and **Exhibit "C"** and are conditioned to keep human scale in mind, as supported by the overlay.

Additional conditions were designed to regulate architectural concepts, transportation, flood requirements, drainage/stormwater management, and other items as outlined below.

Uses

Requested uses are included in **Attachment "B,"** which includes Residential (multiple-family dwellings), an assisted living facility, a 165-room hotel, and up to 315,000 square feet of retail use uses. The uses are generally consistent with what would be permitted by right and special exception within the Interstate Zone of the Bonita Beach Road Corridor Overlay. Staff's recommendations on the requested uses are enumerated in **Condition 2a**. Staff has slightly modified the Applicant's requested uses where necessary to correlate to specific Condition or Schedule of Use Note (i.e. Note 2).

Property Development Regulations and Deviations

All development is required to develop in accordance with the Land Development Code (LDC) Chapters 3 (Development Standards) and Chapter 4 (Zoning). Conditions and deviations set forth in the adopted zoning ordinance may augment the standard development regulations such as development standards, buffering, deviations and any associated conditions of approval.

The development regulations are included in **Condition 2b** and reflected in **Exhibit “C”**. Deviations may be requested during the review process in accordance with [LDC 4-326](#) and [LDC 3-81\(b\)](#). The current planned development request includes ten (10) deviations. All deviations and associated justifications by the Applicant are included in the Applicant’s Analysis in Attachment “B”. Staff’s analysis and recommendation on the deviation requests are included later in this staff report.

Comprehensive Plan Considerations

This project was reviewed for compliance with the City of Bonita Springs Comprehensive Plan, including future land use, transportation, conservation/coastal management, and infrastructure elements. The project is located within the Interchange Commercial and the Density Reduction Groundwater Resource (DRGR) categories. Additional Staff Analysis is included in **Attachment “A”**. The Applicant’s Analysis is included in **Attachment “B”**.

Transportation Summary Analysis

The project is designed to provide multiple modes of transportation, including shared-use paths, sidewalks, bike lanes, and vehicular roads. There is also a proposed shared-use path along the project-frontage of Bonita Beach Road. Roads, drives and paths will be developed consistent with the City’s vision for the Bonita Beach Road Corridor Overlay. Staff does not object to the applicant’s analysis regarding consistency with the transportation element of the comprehensive plan.

Conservation/Coastal Management Summary Analysis

The applicant has indicated that approximately 9.4 acres of the project are being set aside as indigenous vegetation preserve. Additional Open space will be provided throughout the development. Water treatment/retention is being provided, as required. No density is being calculated as part of the wetland area. Off-site mitigation credits have been purchased for wetland impacts. Historic hydrology cannot be restored due to regional drainage projects that have occurred in the area. Overall, the stormwater management system will be designed in accordance with South Florida Water Management District regulations, which focuses on flood protection, drainage, and water quality treatment. Staff does not object to the applicant’s analysis of the project’s consistency with the conservation/coastal management element of the comprehensive plan.

Infrastructure Summary Analysis

The City’s utility franchise, Bonita Springs Utilities, has reviewed the request and did not raise any concerns regarding potential burdens on infrastructure, or infrastructure availability. Additionally, the portion of the project located in the DRGR is providing stormwater management, consistent with this element. As a result, it is the staff opinion that the project is consistent with the infrastructure element of the comprehensive plan.

CONCLUSIONS:

The following conclusions are based upon the Applicant's Application being reviewed for compliance with the City of Bonita Springs comprehensive plan and the LDC. **Attachment "A,"** which is attached hereto and made a part hereof, demonstrates the type of analysis that was done. The Applicant's application materials and exhibits are included in **Attachment "B."**

Pursuant to the City's LDC, the Applicant is required to hold two (2) neighborhood meetings. The first meeting was held on July 23, 2019, with 57 members of public present. The Applicant held their second meeting on June 29, 2020. Additional methods of public notice included mailed notices to properties within 375 feet of the property, rezoning property posting signs along Bonita Beach Road and Bonita Grande Mine Drive, a legal ad in the Fort Myers Newspress that ran on June 29, 2020 for the Zoning Board public hearing.

The rezoning request was evaluated by Community Development for planning, zoning, engineering, environmental, and transportation impacts. DPZ CoDesign, Lee County, Bonita Springs Fire Control and Rescue District, and Bonita Springs Utilities also reviewed the request. The proposed development, as conditioned, is consistent with the requirements and standards of the City of Bonita Springs Comprehensive Plan and LDC. A detailed City Staff analysis is included in **Attachment "A"** of the Staff Report.

RECOMMENDATION:

Staff recommends **APPROVAL** of Petition PD19-62429-BOS Bonita Grande Drive Mixed-use Planned Development (MPD), which proposes to rezone 67.53 +/- acres from Commercial Planned Development (CPD) to a Mixed-use Planned Development (MPD) to allow for a maximum of 482 dwelling units (inclusive of an Assisted Living Facility) and a 165-room hotel at a maximum building height of 65 feet/6 habitable floors; and up to 315,000 square feet of commercial/retail at a maximum building height of 55 feet/5 habitable floors. This recommendation of APPROVAL is subject to the following conditions:

Conditions:

1. The project shall be consistent with the Master Concept Plan and Urban Design Plan Overlay stamped received June 2, 2020 and titled "Midtown at Bonita" prepared by Robau & Associates and Urban Arts, Inc., and attached hereto (**Exhibit "B,"** Sheets 1-3 and UD-1), except as modified by the conditions below.

The approved development intensities allows for a maximum of 482 multiple family dwelling units (inclusive of an Assisted Living Facility) and a 165-room hotel at a maximum building height of 65 feet/6 habitable floors; and up to 315,000 square feet of commercial/retail at a maximum building height of 55 feet/5 habitable floors. For the purposes of this project "multiple family" is defined as duplex, multiple-family, townhouse, and two family attached dwelling units.

The developer must provide a cumulative land development summary table as a part of any local development order application.

2. The following limits apply to the project and uses:
 - a. Schedule of Uses:

Tract C:

Accessory uses and structures
Administrative offices
Animals: Clinic, no outdoor cages, pens, runs, or exercise facilities
Control center (including Humane Society)
Assisted living facility
ATM (automatic teller machine)
Auto parts store
Automobile service stations
Auto repair and service (4-408(c)(2)), all groups
Bait and tackle shop
Banks and financial establishments (4-408(c)(3)): Group I
Bar or cocktail lounge, subject to Note (1)
Boat parts store (no outdoor display)
Boat repair and service (within an enclosed building)
Boat sales (no outdoor display)
Building material sales (4-408(c)(4)) no outdoor display
Business services (4-408(c)(5)): Group I
Car wash
Cleaning and maintenance services (4-408(c)(7))
Clothing stores, general (4-408(c)(8))
Clubs: Commercial; fraternal, membership organization; Private
Cold storage, pre-cooling, warehouse and processing plant, subject to Note (2)
Community Gardens
Computer and data processing services
Consumption on premises, subject to Note (1)
Contractors and builders (4-408(c)(9)), Groups I and II
Convenience food and beverage store, limited to 24 self-service fuel pumps
Day care center, child, adult
Department store
Drive-through facility for any permitted use
Drugstore, pharmacy
Essential services
Essential service facilities (4-408(c)(13)): Group I
Excavation: Water retention with off-site removal of material, limited to 150,000 cubic yards for the MPD subject to **Condition 8**
Fences, walls
Food and beverage service, limited
Food stores (4-408(c)(16)): Group I
Freight and cargo handling establishments (4-408(c)(17)), subject to Note (2)
Furniture and fixtures (4-408(c)(18))
Gift and souvenir shop
Hardware store
Health care facilities (4-408(c)(19)): Groups I-IV, VI
Hobby, toy and game shops (4-408(c)(20))
Hotel/motel, limited to 165 rooms
Household and office furnishings (4-408(c)(21)), all groups
Laundry or dry cleaning (4-408(c)(22)): Groups I and II
Lawn and garden supply stores, outdoor display areas will be enclosed with decorative enclosure
Leather products (4-408(c)(23)): Group I

Library

Manufacturing – indoor only, no open storage, subject to Note (2):

Lumber and wood products(4-408(c)(24)): Group I

Measuring, analyzing and controlling instruments (4-408(c)(26)

Novelties, jewelry, toys and signs (4-408(c)(27)), all groups

Paper and allied products (4-408(c)(29)): Group I

Stone, clay, glass and concrete products (4-408(c)(45)): Group I

Micro-breweries

Night clubs

Nonstore retailers (4-408(c)(28)), all groups

Parcel and express services

Package store

Paint, glass and wallpaper

Parks (4-408(c)(30)): Groups I and II

Parking Lot: Accessory; garage, public parking; temporary

Personal services (4-408(c)(31)): Groups I and II

Pet services

Pet shop

Pharmacy

Photofinishing laboratory

Plant nursery

Printing and publishing (4-408(c)(33))

Real estate sales office

Recreation facilities, commercial (4-408(c)(35)): Groups I and IV; Personal;

Private—On and off-site

Rental or leasing establishment (4-408(c)(36)): Groups I and II, outdoor display

will be limited to bikes during hours of operation

Repair shops (4-408(c)(37)): Groups I and II, indoor only

Research and development laboratories (4-408(c)(38)): All groups

Restaurant, fast food

Restaurants (4-408(c)(40)): Groups I and III, Group IV

Schools, commercial and noncommercial

Self-service fuel pumps, limited to 24

Signs in accordance with chapter 6 or Deviation 10 subject to **Condition 6**

Social services (4-408(c)(43)): Group I

Specialty retail store (4-408(c)(44)): All groups, Note (3)

Storage: Indoor

Studios (4-408(c)(46))

Temporary uses

Theater, indoor

Used merchandise stores (4-408(c)(51)): Groups I & II

Variety store

Warehouse: Mini, private, public, subject to Note (2)

Wholesale establishment, Group III

Tract C-1:

All uses permitted in Tract C

Community residential home

Continuing care facilities

Dwelling unit: Multiple-family building, townhouse

Entrance gates and gatehouse

Models: Display center and model unit
Residential accessory uses (4-408(c)(39))

Tract P (Preserve and Open Space):

Active and passive recreation areas, such as boardwalks, fishing piers or observation decks, kayak/canoe launches, or pedestrian and nature trails
Excavation: Water retention, as shown on the MCP, with off-site removal of fill, limited to 150,000 cubic yards for the MPD subject to **Condition 8**
Signs, informational

Notes:

- (1) If within 500 feet of a religious facility, school (noncommercial), day care center (child), park, or dwelling unit, if outside of the MPD, outdoor consumption of alcohol must meet the following criteria:
 - a. Live outdoor entertainment is permitted Wednesday-Sunday only, unless a special event permit is obtained.
 - b. Musicians and entertainers shall only be permitted to use the speaker system provided by the establishment.
 - c. Speakers are to be oriented in such a way so as to generally not face residential communities.
 - d. Hours of operation of outdoor seating areas shall be Noon – 10 PM, Sunday through Thursday, and Noon – Midnight, Friday and Saturday.
- (2) Limited to a maximum building area of 100,000 sq. ft. Prohibited from locating along Bonita Beach Road. Additional square footage may be approved through the special exception process.
- (3) Outdoor display associated with a specialty retail store may be approved administratively provided display areas do not face Bonita Beach Road.

b. The Development Regulations: See **Exhibit “C”**

3. All auto oriented uses located along the Bonita Beach Road frontage as defined on the Urban Design Overlay Plan (Sheet 4 of **Exhibit “B”**) shall be designed so that buildings are oriented along the frontage with drive-thru and associated stacking located along the side and rear property lines. Fueling and charging station pumps shall be oriented behind a building and not visible from the Bonita Beach Road frontage.
4. Illustrative Plan. The project shall be designed generally consistent with preliminary Illustrative Master Plan attached hereto as **Exhibit “D”** except as modified herein.
5. Architectural: The project elevations shall be designed generally consistent with preliminary artistic concepts attached hereto as **Exhibit “E”** except as modified herein.
6. Signage. Signage for this project shall be consistent with the regulations of LDC Chapter 6, unless modified by Deviation 10 and as outlined below:
 - a. Ground signs along the Bonita Beach Road and Bonita Grande Drive Intersection shall be placemaking only, identifying only the name of the project, insignia or motto. No tenant panel signage will be permitted on placemaking signs that abut the Bonita Beach Road/Bonita Grande Drive intersection.

- b. All signage is subject to administrative review by the City Architect during the permitting process, at which time additional modifications may be incorporated. Additionally, staff retains the right to confirm all ground signage (temporary or permanent) both internal and external to the site, for vehicle visibility requirements.
 - c. Any other sign type not listed in the proposed “Prohibited Sign Types” section, but does appear in the prohibited section of LDC Chapter Six, remains prohibited, unless specifically modified or stated herein.
- 7. Duration of rights. Pursuant to Section 4-303(a)(2) of the Land Development Code, the MCP will expire within 5 years of the date of approval unless, within such time frame, the Developer obtains development orders for construction of the master infrastructure (roadways, utilities, perimeter landscape buffers, stormwater lakes, and floodplain compensation lakes) serving the project. The master infrastructure may be phased so long as the development order for the final phase is obtained within said 5-year period.
- 8. Excess Spoil. In the event the Applicant elects to excavate lakes with a lake depth greater than 12’:
 - a. When the floodplain compensation lakes are being excavated adjacent to and combined with the existing Kehl canal, additional testing and/or a monitoring plan may be required to ensure that all proper BMPs are in effect, as set forth in the Storm Water Pollution Prevention Plan (SWPPP) approved by the South Florida Water Management District (SFWMD).
 - b. Reference **Exhibit F**: Conditions for removal of excavated materials offsite. This exhibit must be submitted at time of local development order.
 - c. Excavation must be concurrent with Phase 1 of the Development.
 - d. All excavation involved in the construction of the flood plain compensation lakes must be completed within 2 years of the start of any site development activities for the excavation.
 - e. Egress and ingress for removal of the excavated material from lakes shall only occur off Bonita Grande Drive, as permitted by LCDOT.
 - f. The floodplain compensation lakes and the water quality lakes shall be protected by a permeant easement recorded with the Lee County Clerk of the Court. Said easement can only be removed, vacated or otherwise amended by an action of the City of Bonita Springs City Council.
- 9. Environmental
 - a. Prior to local development order approval, the landscape plans must include an open space table and an open space exhibit detailing how the required open space, as shown on the MCP, is being provided within the overall planned development. A minimum of 10% open space must be provided within each tract.
 - b. If any archaeological/historical sites are uncovered during development activities, all work in the immediate vicinity of such sites will cease. The Developer will immediately contact the Florida Department of State, Division of Historical Resources, and the City of Bonita Springs and advise them of the discovery. The Developer will have a State-certified archaeologist determine the significance of the findings and recommend appropriate mitigation actions if necessary.

- c. Twenty-two heritage trees found on the project site shall be mitigated for onsite per the Heritage Tree Impacts – Justification & Mitigation Plan dated 12/9/19 including 22 twenty foot trees and three strata of native plantings for wetland areas that interface along the Kehl Canal which will include 22 native cypress trees.
 - d. At the time of local development order, littoral planting area plans shall be sloped at a minimum of 6:1 or a less steep ratio for enhanced survivability.
 - e. When lakes are not proposed to be sinuous per LDC Sec. 3-331(d)(4) or 3-420 per approved Deviations, littoral planting shelves that mimic sinuosity shall be provided.
 - f. At the time of local development order, the Applicant shall design the stormwater treatment system to use a treatment train (multiple-method) approach incorporating multiple Best Management Practices (BMPs) per CCME Policy 9.3.1 to ensure the maximum potential treatment of stormwater before discharge into the Imperial River.
 - g. At time of local development order, the Applicant shall calculate the nutrient loading removal associated with the final lake depth, which will be at 12 ft or 20 ft. The nutrient reduction shall be calculated by using the federally and state accepted Harvey Harper methodology.
10. Engineering. At the time of local development order, the Applicant shall provide or meet the following criteria:
- a. The use of gutters, downspouts and bubblers/yard drains may be required to properly channelize and direct runoff to a suitable outfall.
 - b. To achieve both prevention of erosion and proper stormwater quality, the Applicant may be required to utilize the following: (1) Swale and berms surrounding the perimeter of the lakes and/or, (2) flatter slopes (as flat as a 6:1 slope) than currently required (4:1 slope) for lake banks and littoral planting areas (3) A greater quantity of littoral plantings than currently required and/or, (4) if necessary, other shoreline stabilization methods, such as bulkheads or rip rap.
 - c. Solid waste and recycling: The Applicant must comply with Lee County Solid Waste's requirements for solid waste and recycling service; and the solid waste compactor shall be oriented internal to the site with the disposal pick up area oriented towards the parking lot and not the main entrance. Additionally, the compactor area must provide sufficient space required for recyclable collection. The calculation for solid waste for a dumpster versus the compactor will need to be provided at time of local development order.
11. Flood Hazard Reduction
- a. FEMA Letter of Map Revision Case No. 19-04-5595P revising the floodway boundary received preliminary approval on May 22, 2020 and is currently pending the required 90-day technical challenge period (began on June 12, 2020). Until the LOMR is effective (approximately October 13, 2020) the revised flood hazard determination may be changed. Prior to the approval of a local development order, FEMA Letter of Map Revision Case No. 19-04-5595P must be approved and in effect. Should the flood hazard determination presented in LOMR-APP dated May 22, 2020 the MPD must be revised.

- b. Due to the presence of a floodway on the property, the Applicant shall comply with all provisions of the Land Development Code relating to flood hazard reduction at the time of local development order.
12. Transportation and Multimodal
- a. Approval of this zoning request does not address mitigation of the project's vehicular or pedestrian traffic impacts. Additional conditions for on-site improvements consistent with the City of Bonita Springs Land Development Code may be required to obtain local development order; and
 - b. Less the deviations and/or exceptions provided by this MPD approval, at the time of local Development Order, all required multimodal facilities (infrastructure, crossings, amenities, furnishings, access points, easements, etc.) both internal and external to the site, shall meet or exceed the intent of the design standards provided by Chapter 3 of the City of Bonita Springs Land Development Code, the City of Bonita Springs Bicycle Pedestrian Master Plan (PATH), the Bonita Beach Road Corridor Design Standards, and all applicable design standards except as modified herein and as required by the Bonita Springs Fire Control and Rescue District and National Fire Protection Area (NFPA).
 - c. Prior to securing the first local development order for the project, the Applicant shall coordinate with LCDOT to determine the feasibility and county desire for implementing traffic calming features, such as a roundabout, in lieu of conventional turn lanes and potential signalization (when and if warranted) at the entrances along Bonita Grande Drive.
13. Lee Tran. At time of local development order, the Applicant shall coordinate with LeeTran on placement of a transit facility within the development. If an area is not immediately identified, an easement for a future LeeTran facility near the one of the project's entrances shall be identified and dedicated should demands change in the future; and
14. Lee County Department of Transportation (LCDOT)
- a. The developer is required to enter into an agreement for the fair share contribution towards a traffic signal at the intersection of Bonita Beach Road and the western access drive.
 - b. The County reserves the right and authority to modify or restrict access, turning movements, median openings and use of traffic control devices on or affecting Bonita Beach Road and Bonita Grande Drive as it deems necessary to address operational and safety issues.
 - c. A Lee County Type 'D' Limited Review Development Order (LDO) will be required for the offsite improvements within the County maintained rights-of-way (i.e., Bonita Beach Road and Bonita Grande Drive) to mitigate the traffic impacts from the proposed development. The applicant will provide the offsite improvement plans with construction level details for review and approval of the County LDO. Additional comments and revisions may be necessary for the offsite improvements on Bonita Beach Road and Bonita Grande Drive to meet the Lee County LDC requirements. Access and Interconnectivity
 - d. To provide connectivity between the project site and neighboring properties to the west, the northern potential interconnection to the western properties should not be limited to gated-egress only. At time of local development order, the site plan shall provide full ingress / egress interconnection.

15. Access. To maintain and provide access to adjacent property owners, the Applicant shall provide
- a. An access easement over the proposed entrance road off of Bonita Beach Road for use of the property owners, to the west this development, whose access is modified or otherwise impaired by this proposal; and
 - b. Provide two 50-foot wide interconnection easements servicing the properties to the west of this development and east of the City Mattress Property.
 - i. The Centerline of the 1st easement shall line up with the North line of LOT 16, Block 4 unit 1, Suncoast Estates unrecorded as depicted by STRAP# 31-47-26-B3-00704.0160. Approximately 527 feet north of the south property line.
 - ii. The Centerline of the 2nd easement shall line up with the North line of LOT 16, Block 2, Sun Coast Lakes #1 unrecorded as depicted by STRAP# 31-47-26-B3-00702.0150. Approximately 219 feet north of the south property line.
 - c. Provide a 50-foot wide easement servicing the properties to the west of this development along its Northern border. The Centerline of this easement shall line up with the North line of LOT 10, Block 10, Sun Coast Lakes an unrecorded subdivision as depicted by STRAP# 31-47-26-B3-00610.0100. Said easement shall run from the eastern boundary of lot #10 and its northerly extension to the western right-of-way line of Bonita Grande Road.
16. The Applicant shall plat the property concurrent with the approval of the local development order. The plat shall address all required easements, including a perpetual easement in favor of the City of Bonita Springs over and across the water quality lakes. Additionally, the Applicant shall prepare property owner association documents in compliance with the City's Plat Code. These covenants and restrictions shall provide for the perpetual maintenance of the water quality lakes in perpetuity.
17. This Master Concept Plan is subject to conditions set forth herein and the rules, regulations laws and codes in place at the time of Development Order and Constructions Plan approval. Approval of this Planned Development is not a guarantee of future approvals.

Deviations:

Deviations may be requested during the review process in accordance with [LDC 4-326](#). The Zoning Board may recommend to approve, approve with modification or reject each requested deviation based upon a finding that each item:

1. Enhances the achievement of the objectives of the planned development; and
2. Preserves and promotes the general intent of this chapter to protect the public health, safety and welfare.

The city manager or designee is also authorized to grant deviations from the technical standards for specific sections in LDC Chapter 3 based on review criteria established in [LDC 3-81\(b\)](#). In those instances, Staff has evaluated those deviations as a part of this review process and may approve, approve with conditions or reject the Applicants request. The Applicant must ensure that the following criteria have been met:

1. The proposed alternative is based on sound engineering practices; and
2. The proposed alternative is no less consistent with the health, safety and welfare of abutting landowners and the general public than the standard from which the deviation is being requested; and
3. For division 7 of article III of this chapter, Public Transit, the required facility would unnecessarily duplicate existing facilities; and
4. The granting of the deviation is not inconsistent with any specific policy directive of the city council, any other ordinance, or any city comprehensive plan provision; and
5. The granting of the deviation is not inconsistent with in the intent of the bicycle and pedestrian master plan, Bonita Beach Road Visioning Study, and the complete streets policy.

The current planned development request includes ten (10) deviations. All deviations and associated justifications by the Applicant are included in the Applicant's Analysis in Attachment "B". Staff's analysis and recommendation on the deviation requests are included later in this staff report.

1. Deviation (1) requests relief from LDC Section 3-289(a), Special access provisions for Bonita Beach Road, which requires a minimum connection separation of 660 feet for any access to Bonita Beach Road, to allow a minimum connection separation of 597.6 feet.

Justification: This deviation request will allow both access points to be designed to line up with existing roadways across Bonita Beach Road to the south (Trade Way Two and Trade Way Three), which would create the opportunity to provide a signalized intersection to facilitate pedestrian crossings. The proposed access point is approximately 597.6 feet west of Bonita Grande Drive and is centrally located to the MPD. There are full median openings already existing so the connection will allow for improved site circulation and provide a direct route from development to the south. Additionally, there is sufficient distance from the intersection of Bonita Grande Drive and Bonita Beach Road for cars to decelerate safely to access the site. The proposed access points have already been coordinated with Lee County Department of Transportation, which owns and maintains Bonita Beach Road right-of-way. Public health, safety and welfare considerations are still met with this deviation request.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL** of the deviation request.

2. Deviation (2) requests relief from LDC Sec. 3-331(d)(1)a.3., Setbacks for water retention or detention excavations, which requires a minimum setback of fifty (50) feet from any private property line under separate ownership, to allow a zero (0) foot setback from the property line where Lakes 1 and 2 are adjacent to the Kehl Canal and a 20-foot setback from the property line for Lake 2 (as shown on the Master Concept Plan). This deviation request is from the technical standards for specific sections in LDC Chapter 3 and can be approved administratively.

Justification: This deviation request is necessary to provide connection of the floodplain compensation lakes (storage) with the Kehl canal, and off-site flood plain areas. This requires that the water management lakes be directly adjacent to, and connected to the offsite flood plain, therefore resulting in a zero foot minimum separation. There will be a littoral shelf that will be placed between the floodplain compensation lakes and Kehl canal, which will provide runoff filtration. A portion of Lake 2 will be set back the width of the lake maintenance easement, 20 feet.

Public health, safety and welfare considerations are still met with this deviation request.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL** of the deviation request subject to **Condition 9c**.

3. Deviation (3) requests relief from LDC Sec. 3-303(b)(iii), Typical street design, to allow the street design as shown on the MCP. This deviation request is from the technical standards for specific sections in LDC Chapter 3 and can be approved administratively.

Justification: This deviation request is to slightly modify the priority elements of local roadway cross sections. The MCP Sheet 3 of 3 depicts the applicants requested roadway cross-sections. The requested widths can still accommodate all users within the slightly reduced dimensions and meet the intent of Section 3-303, which is to provide a multi-modal street system that encourages pedestrian and bicycle activity.

The multimodal features being provide by the Applicant have been designed to allow for multimodal users (cyclists and pedestrians) in, through, and out of the site via a systems of internalized infrastructure (sidewalks and multiuse pathways) providing for greater user safety (via modality separation and lower speed environments) than would be achieved by having these required facilities directly abutting external (higher speed / great volume) roadways. This clear health/safety consideration and the ability to provide direct access to site amenities and business via the internal multimodal infrastructure being proposed will provide a benefit to the merchants, residents and general public visiting the site.

Offsite improvements on Bonita Grande Drive and Bonita Beach Road will tie into the internal bicycle/pedestrian facilities, accommodating these users through the site.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL** of the deviation request subject to **Condition 12**.

4. Deviation (4) requests relief from LDC Sec. 3-418(d)(3) Buffer requirements, which requires a minimum 10-foot wide Type A buffer between commercial uses, to allow no landscape buffer between uses internal to the property.

Justification: City Staff agrees with the Applicant's justification. This buffering standard is typically associated with suburban style development. The Applicant is creating a project embodied in urban design principles, which promotes a mixture of uses and more emphasis on design and interaction with the pedestrian experience.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL**.

5. Deviation (5) requests relief from LDC Sec. 3-418(d)(3) Buffer requirements, which requires a minimum 15-foot-wide Type D buffer along rights-of-way, to allow no landscape buffer along internal rights-of-way adjacent to lakes and a five-foot wide Type A landscape buffer in other locations along internal rights-of-way.

Justification: City Staff agrees with the Applicant's justification. This buffering standard is typically associated with suburban style development. The Applicant is creating a project embodied in urban design principles, which promotes a mixture of uses and more emphasis on design and interaction with the pedestrian experience.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL**.

6. Deviation (6) requests relief from LDC Sec. 3-268(a) Provision of container spaces, which establishes minimum required square footages for garbage and recyclable collection, to allow for reduced square footages, if compactors are provided and approval from Lee County Solid Waste Division is obtained at time of development order.

Justification: This deviation request will allow the Applicant to have the capability to utilize compactors, which take up less area than that required by dumpster enclosures. Public health, safety and welfare considerations are still met with this deviation request.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL** of the deviation request subject to **Condition 10**.

7. Deviation (7) requests relief from LDC Sec. 4-899(a), Property development regulations, to allow a maximum block size of 601' x 658' with a maximum perimeter of 2,553' as shown on the "Option B" Master Concept Plan.

Justification: City Staff agrees with the Applicant's justification. This project was reviewed by DPZ CoDesign and incorporates important design elements supportive of urban forms of development. The Master Concept Plan and Urban Design Overlay Plan depict a block

layout and urban form that meets the intent of the Bonita Beach Road Vision and Bonita Beach Road Land Use Report.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL** of the deviation request subject to **Conditions 1, 4, and 5**.

8. Deviation (8) requests relief from LDC Sec. 3-331(d)(4), Excavations for water retention and detention, to allow Lake 4 to be configured as shown in Tract C-1 on Option B of the Master Concept Plan.

Justification: This deviation request will apply to only one surface water management lake, located in the southern portion of Tract C-1. The Applicant will utilize littoral zones to aid in replacement of sinuosity. Due to the compact, urban design of the proposed development, the retention lake is shaped in a way that best utilizes the available space while still providing the appropriate surface water management area. Public health, safety and welfare considerations are still met with this deviation request.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL** of the deviation request subject to **Condition 9e**.

9. Deviation (9) requests relief from LDC Sec. 4-899(a), Property development regulations, to allow a maximum building height of 65 feet with no more than six stories without the additional setback required by LDC Sec. 4-1874(3)(a).

Justification: City Staff agrees with the Applicant's justification. This project was reviewed by DPZ CoDesign and incorporates important design elements that support this urban form of development.

Therefore, Staff has no objections to the Applicant's deviation request and justification and recommends **APPROVAL** subject to **Conditions 1, 4, and 5**.

10. Deviation (10)– Project Signage must be developed consistent with LDC Chapter 6, Signs, except as specifically modified by this approval.

Signage design shall be carefully integrated with site and building design to enhance the village theme for the total property without a repetitive and uniform emphasis. Creativity in the design of signs is encouraged in order to emphasize the unique character of the Bonita Grande project. The Bonita Grande MPD shall be permitted to deviate from the LDC, by permitting the following:

a. Project Identification Signs

1. One project directory sign, with a maximum of 250 square feet of sign copy per side and a maximum sign height of 25 feet, shall be permitted at the corner of Bonita Beach Road and Bonita Grande Drive. The project directory sign will feature the project name, insignia or motto of the development and up to two tenant panels.
2. Project identification signs with a maximum of 120 square feet of sign copy per side and a maximum sign height of 15 feet, shall be permitted at each project entry. Project identification signs shall be monument or wall mounted signs and feature

only the project name, insignia or motto of the development and up to four tenant panels.

3. No minimum setback shall be required, except that no sign shall be located so as to create vehicular line of site obstructions.

b. Freestanding Use Monument Signs

1. Each freestanding use shall be permitted one monument sign per public road or private drive frontage.
2. Maximum permissible sign copy shall be 100 square feet per side for public road frontage and 80 square feet for private road frontage.
3. For public road frontage, the maximum height of the sign copy shall be 10 feet above finished grade. Architectural details of the sign structure may project above the 10-foot height; however, no part of the sign structure shall exceed 12 feet in height above finished grade.
4. For private drive frontage, the maximum height of the sign copy shall be 8 feet above finished grade. Architectural details of the sign structure may project above the 8-foot height; however, no part of the sign or sign structure shall exceed 10 feet in height above finished grade.

c. Permitted Sign Types

1. Wall – A sign affixed directly to or painted directly on an exterior wall or fence. Maximum sign area – Façade width by 2.50 feet. Max. sign width shall not exceed 80 percent of the width of the unit or building.
2. Projecting – Any sign which projects from and is support by a wall of a building with the display of the sign perpendicular to the building wall. Maximum sign area – the façade width by 2.5 feet up to a maximum of 100 square feet. Theatre signage may be a maximum of 200 square feet.
3. Window – A sign painted or applied to or behind a window or windows. The maximum of the aggregate sign area shall be 30 percent of the area of the window(s) where the sign will be placed.
4. Hanging – A sign attached to and located below any eave, arcade, canopy, or awning. Maximum sign area – 20 square feet (two faces of 20 square feet each).
5. Awning – A sign or graphic attached to or printed on an awning. Maximum sign area – 30 percent of the area of the awning.
6. Monument – A sign secured to a base, which is built directly upon the ground. Maximum sign area – 80 square feet, exclusive of the base.
7. Marquee – A sign usually projecting from the face of a theater or cinema, which contains changeable text to announce events. Sign area shall be compatible with the design of the theater building. Minimum height above grade – 10 feet. Minimum distance from curb – 4 feet.
8. Sandwich boards – A portable sign comprised of two sign panels hinged together at the top. Maximum sign area – 12 square feet (two faces of 12 square feet each). Sandwich board signs shall be displayed only during hours of operation for the associated business.
9. Banners – Fabric panels projecting from light, flag or banner poles. Maximum sign area – shall be proportional to the height of the pole. Banner poles shall be no more than 16 feet in height and 15 sq. ft. max (two faces of 15 sq. ft. each).
10. Temporary special event signs – a temporary window, hanging, awning, portable or banner sign utilized in conjunction with a special event within the MPD.

d. General Standards

1. Sign area: the area of any sign shall be the area of a rectangle, which encloses all elements of the sign (excluding poles and brackets) including all text and any symbols or logos.
2. Mounting height: no part of a sign which projects from a building or is mounted on a pole or bracket shall be less than 8 feet above grade.
3. Illumination: signs may be illuminated by external spot lighting or internally illuminated. Lighting shall be designed and shielded so as not to cause glare onto adjacent properties or the public right-of-way.
4. Material: signs shall be constructed of durable materials suitable to the sign type. The long-term appearance of the sign shall be a major consideration in the selection of materials.
5. Color: the color of signs shall be compatible with the colors and style of the building to which they are attached or otherwise associated. No more than three complementary colors not including white, which will not be considered a color, permitted per sign.
6. All sign structures may feature architectural treatments which shall be permitted to extend above the maximum height of the sign specified herein.

e. Prohibited Sign Types

1. Portable or mobile signs except sandwich boards;
2. Flashing or animated signs;
3. Cabinet signs;
4. Pole signs; and
5. Billboards.

Justification: The applicant has provided the following justification: *The proposed project will become a community destination and requires strong placemaking via strong, consistent urban design. The requested deviation will result in signs that will be architecturally consistent with the overall design of the project, creating a visual connection to Bonita Beach Road and establishing a sense of place between the project and the street. The enhanced signage increases accessibility, attracts people, and visually connects the project to the surrounding area. The proposed signs along the adjacent roadways, while larger than those allowed by the LDC, will allow combining what could be multiple signs in order to reduce visual clutter. The sign at the hard corner will be an attractive identifying feature and is consistent with signage as designed for high-end multi-use complexes such as Mercato and Waterside. The applicant will provide consistent signage for better wayfinding and artistic branding referencing Bonita near the I-75 interchange, helping to establish an identity and presence for the City. The permitted sign types are meant to invoke a more urban streetscape while prohibiting sign types that would detract from the quality of the overall development design. The proposed signage enhances the planned development by preserving the aesthetic quality of the development and protects public health, safety, and welfare by maintaining safe routing through clear signage.*

Staff is in agreement with the justification provided by the applicant. Separately, it's important to note that residential signage and commercial signage are treated differently in the existing sign code, each with their own specific set of standards. In a mixed-use project like the one proposed, having a uniform code that would apply across the entire

project can help to provide a sense of consistency. Staff recommends approval of this deviation, subject to the modifications listed below, and in **Condition 6**.

1. Ground signs along the Bonita Beach Road and Bonita Grande Drive Intersection shall be placemaking only, identifying only the name of the project, insignia or motto. No tenant panel signage will be permitted on placemaking signs that abut the Bonita Beach Road/Bonita Grande Drive intersection.
2. All signage is subject to administrative review by the City Architect during the permitting process, at which time additional modifications may be incorporated. Additionally, staff retains the right to check all ground signage (temporary or permanent) both internal and external to the site, for vehicle visibility requirements.
3. Any other sign type not shown in the proposed "Prohibited Sign Types" section but does appear in the prohibited section of LDC Chapter Six, remains prohibited, unless specifically modified or called out within the proposed sign requirements.

SUBJECT PROPERTY:

The Applicant indicates the STRAP numbers are:

31-47-26-B300601.0010
31-47-26-B3-00601.0020
31-47-26-B3-00601.0070
31-47-26-B3-00601.0800
31-47-26-B3-00601.0160
31-47-26-B3-00602.0040
31-47-26-B3-00602.0070
31-47-26-B3-00602.0090
31-47-26-B3-00602.0100
31-47-26-B3-00602.0110
31-47-26-B3-00602.0130
31-47-26-B3-00602.0140
31-47-26-B3-00602.0160
31-47-26-B3-00603.0010
31-47-26-B3-00603.0040
31-47-26-B3-00603.0110
31-47-26-B3-00603.0140
31-47-26-B3-00603.0150
31-47-26-B3-00603.0160
31-47-26-B3-00604.0010
31-47-26-B3-00604.0030
31-47-26-B3-00604.0050
31-47-26-B3-00604.0060
31-47-26-B3-00604.0090
31-47-26-B3-00604.0110
31-47-26-B3-00604.0120
31-47-26-B3-00604.0150
31-47-26-B3-00706.0010

EXHIBITS:

- A. Legal Description and Sketch of the Subject Property stamped received March 20, 2020
- B. Master Concept Plan stamped received June 2, 2020
- C. Property Development Regulations
- D. Illustrative Plan
- E. Artistic Renderings
- F. Excess Spoil Removal Plan

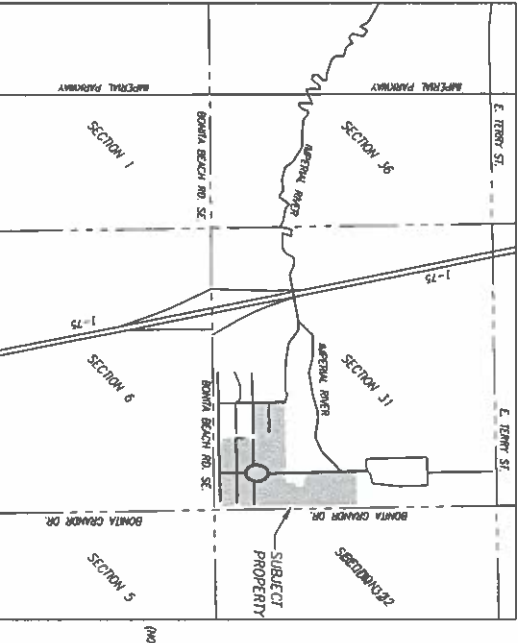
ATTACHMENTS:

- A. Staff Informational Analysis
 - i. Background and Informational Analysis
- B. Applicant's Informational Analysis
 - i. Application
 - ii. Map for Mailing Labels for Parcels within 375 feet
 - iii. Project Request, Comprehensive Plan, and LDC Consistency Narrative
 - iv. Listed Species Survey and Inspection-Bonneted Bat
 - v. FLUCFCS Description
 - vi. Environmental Mapping
 - vii. Preserve Area and Protected Species Management Plan
 - viii. Heritage Tree Impacts
 - ix. Cultural Resource Information
 - x. Future Land Use, Surrounding Uses and Zoning Maps
 - xi. Current Zoning, Zoning Ordinance No 08-09
 - xii. Lee County Correspondence
 - xiii. Topographic Elevation Data Map
 - xiv. Traffic Impact Statement
 - xv. Schedule of Uses
 - xvi. Property Development Regulations
 - xvii. Schedule of Deviations
 - xviii. Surface Water Management Plan
 - xix. FEMA Application Information
 - xx. Nutrient Loading Information
 - xxi. Pre-filing and Post-sufficiency Neighborhood Meeting Information

TITLE COMMITMENT SCHEDULE "B"-JIT EXCEPTIONS

ITEM #	DESCRIPTION
1	SCHEDULE B OF THE POLICY OR POLICIES TO BE ISSUED WILL CONTAIN EXCEPTIONS TO THE FOLLOWING MATTERS UNLESS THE SAME ARE DEPOSED OF TO THE SATISFACTION OF THE COMRADE:
2	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 288, PAGE 452, IN OFFICIAL RECORDS BOOK 216, PAGE 2160, AND IN OFFICIAL RECORDS BOOK 281, PAGE 1311, - (AS TO PARCELS 12)
3	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 288, PAGE 453, - (AS TO PARCELS 10)
4	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 619, - (AS TO PARCELS 11)
5	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 620, - (AS TO PARCELS 19)
6	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 621, - (AS TO PARCELS 21)
7	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 622, - (AS TO PARCELS 22)
8	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 623, - (AS TO PARCELS 23)
9	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 624, - (AS TO PARCELS 18)
10	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 625, - (AS TO PARCELS 17)
11	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 626, - (AS TO PARCELS 16)
12	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 627, - (AS TO PARCELS 15)
13	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 628, - (AS TO PARCELS 14)
14	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 629, - (AS TO PARCELS 13)
15	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 290, PAGE 630, - (AS TO PARCELS 12)
16	RULES REGULATIONS AND ASSESSMENTS OF THE EAST BOWLA DRAINAGE DISTRICT AS ENFORCED BY FINAL DECREE CREATING AND INCORPORATING A DRAINAGE DISTRICT RECORDED IN OFFICIAL RECORDS BOOK 310, PAGE 683, AS AMENDED BY AMENDED FINAL DECREE CREATING AND INCORPORATING A DRAINAGE DISTRICT RECORDED IN OFFICIAL RECORDS BOOK 311, PAGE 689, - (AS TO ALL PARCELS)
17	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 314, PAGE 544, - (AS TO PARCELS 1)
18	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 201, PAGE 443, AND IN OFFICIAL RECORDS BOOK 215, PAGE 1807, - (AS TO PARCELS 8)
19	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 331, PAGE 445, - (AS TO PARCELS 7)
20	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 328, PAGE 517, AND IN OFFICIAL RECORDS BOOK 324, PAGE 1131, - (AS TO PARCELS 2)
21	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 329, PAGE 288, IN OFFICIAL RECORDS BOOK 325, PAGE 517, AND IN OFFICIAL RECORDS BOOK 291, PAGE 275, - (AS TO PARCELS 5)
22	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 332, PAGE 827, AND IN OFFICIAL RECORDS BOOK 303, - (AS TO PARCELS 3)
23	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 340, PAGE 421, - (AS TO PARCELS 6)
24	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 372, PAGE 10, - (AS TO PARCELS 9)
25	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 376, PAGE 348, - (AS TO PARCELS 11)
26	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 379, PAGE 101, AND IN OFFICIAL RECORDS BOOK 360, PAGE 593, - (AS TO PARCELS 5)
27	RESERVATION OF ROAD AND CULVERT EXISTENTS AS DESCRIBED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 590, PAGE 428, - (AS TO PARCELS 13)
28	EASEMENT GRANTED TO FLORENCE POWER & LIGHT COMPANY AND ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 184, PAGE 1481, - (AS TO PARCELS 21)
29	RESERVATION OF ROAD AND CULVERT EXISTENTS CONTAINED IN WARRANTY DEEDS RECORDED IN OFFICIAL RECORDS BOOK 1372, PAGE 1871, IN OFFICIAL RECORDS BOOK 1377, PAGE 1871, IN OFFICIAL RECORDS BOOK 1526, PAGE 514, AND IN OFFICIAL RECORDS BOOK 1528, PAGE 516, - (AS TO PARCELS 14)
30	WARRANTY EASEMENT GRANT TO LET COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA, ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 2881, PAGE 1381, - (AS TO PARCELS 18)
31	WARRANTY EASEMENT GRANT TO LET COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA, ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 2882, PAGE 1388, - (AS TO PARCELS 17, 20 AND 23)
32	WARRANTY EASEMENT GRANT TO BOWLA SPRINGS UTILITIES, INC., A FLORIDA NOT-FOR-PROFIT CORPORATION, ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 3497, PAGE 638, - (AS TO PARCELS 16, 17, 20 AND 23)
33	EASEMENT OF UTILITY EASEMENT (GRASS STRIP) TO BOWLA SPRINGS UTILITIES, INC., A FLORIDA NOT-FOR-PROFIT CORPORATION, ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 3497, PAGE 638, - (AS TO PARCELS 12)
34	EASEMENT OF TEMPORARY CONSTRUCTION EASEMENT TO BOWLA SPRINGS UTILITIES, INC., A FLORIDA NOT-FOR-PROFIT CORPORATION, ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 3497, PAGE 638, - (AS TO PARCELS 14, 17, 20 AND 23)
35	EASEMENT OF UTILITY EASEMENT TO BOWLA SPRINGS UTILITIES, INC., A FLORIDA NOT-FOR-PROFIT CORPORATION, ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 3173, PAGE 518, - (AS TO PARCELS 13)
36	EASEMENT OF UTILITY EASEMENT TO BOWLA SPRINGS UTILITIES, INC., A FLORIDA NOT-FOR-PROFIT CORPORATION, ITS SUCCESSORS AND ASSIGNS, RECORDED IN OFFICIAL RECORDS BOOK 3173, PAGE 518, - (AS TO PARCELS 18)
37	RESOLUTION NO. 99-08-04 BY THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF FLORIDA, FOR THE ACCEPTANCE OF EASEMENT AS PUBLIC ROAD, RECORDED IN OFFICIAL RECORDS BOOK 3173, PAGE 518, - (AS TO PARCELS 14, 17, 20 AND 23)
38	LOT OF ROAD OF PUBLIC ACCESS TO THE LAND WITH THE EXCEPTION OF THOSE PARCELS ABUTTING THE RIGHTS-OF-WAY OF BOWLA BEACH ROAD AND BOWLA BEACH ROAD NORTH.
39	NOTES OF TOWNships AND/OR PARCELS IN POSSESSION, AND ANY PARTS CLAIMED, BY THROUGH OR UNDER SAID TOWNSHIP OR PARCELS IN POSSESSION, AS TO ANY INTERESTS OR RIGHTS OF RECORD.
40	NOTE: SOUTH FLORIDA WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT NOTICE RECORDED IN OFFICIAL RECORDS INSTRUMENT NO. 2006000007594, - (AS TO ALL PARCELS)

**ALTA/NSPS LAND TITLE SURVEY
A PORTION OF THE SOUTHEAST 1/4
LYING IN SECTION 31, TOWNSHIP 47 SOUTH, RANGE 26 EAST,
BOWLA SPRINGS, LEE COUNTY, FLORIDA**



VICINITY SKETCH
(NOT TO SCALE)

**NOTE:
THIS SURVEY CONTAINS MULTIPLE SHEETS
AND IS NOT FULL AND COMPLETE
WITHOUT ALL OF ITS SHEETS**

Digitally signed by David S. Dagostino
PSM 5762 State of Florida
Date: 2020.02.03 10:23:40 -05'00'

**RECEIVED
CITY OF BOWLA SPRINGS
MAR 20 2020
COMMUNITY DEVELOPMENT
DEPARTMENT**

DRAWING SHEET INDEX

SHEET NO.	DESCRIPTION:
1	COVER SHEET
2	LEGAL DESCRIPTIONS
3	SHEET INDEX - OVERALL LAYOUT
4	ALTA/NSPS LAND TITLE SURVEY (SOUTH PORTION)
5	ALTA/NSPS LAND TITLE SURVEY (NORTH PORTION)

FLOOD ZONE INFORMATION
THIS PARCEL LIES IN FLOOD ZONE "X" BASED ON FEMA FLEAD MAP PARCEL 120710387C, DATED AUGUST 28, 2008, WITH A BASE FLOOD ZONE OF CRT OR BOWLA SPRINGS FLOODWAY, NORTH AMERICAN VERTICAL DATUM OF 1980 (NAVD 1980).

SURVEYOR'S NOTES

- BENCHMARKS SHOWN HEREON ARE EXACT BENCHMARKS BASED UPON THE NORTH AMERICAN DATUM OF 1983, 1980 ADJUSTMENT (NAVD/80) FLORIDA EAST ZONE, DISTANCES SHOWN ARE GROUND DISTANCES MEASURED BY FIELD CORRECTIONS SHOWN ARE GROUND CORRECTIONS
- NO UNDERGROUND IMPROVEMENTS OR FOUNDATIONS WERE LOCATED UNDER THE SCOPE OF THIS SURVEY.
- BENCHMARK INFORMATION SHOWN HEREON IS BASED UPON THE RECORD DATA AND OLD METRIC MEASUREMENTS, THIS SURVEY IS BASED UPON THE METRIC MEASUREMENTS. THE METRIC MEASUREMENTS WERE OBTAINED FROM THE METRIC MEASUREMENT LOGS (P/MS) FILE NUMBER ENCL. WITH AN EFFECTIVE DATE OF MAY 24, 2019 AT 8:00 AM, REVISED AUGUST 21, 2019 01:25 PM.
- THE STREET ADDRESS IS:
2780 BOWLA GRANDE DRIVE
BOWLA SPRINGS, FLORIDA 34115
- EXISTING SPRAWL HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1980 (NAVD 1980) DISTANCES ARE BASED UPON THE METRIC MEASUREMENTS (MRS) (ROUND POSITIONING SYSTEM) (GPS) REFERENCE METHOD.
- THE PARCEL CONTAINS 67118 ACRES MORE OR LESS
- NO RETIRED DELIMITATION MARKERS WERE OBSERVED DURING THE FIELDWORK PROCESS OF THIS SURVEY.
- OTHER IMPROVEMENTS MAY EXIST BUT NOT LOCATED UNDER SCOPE OF SERVICES
- NO BUILDING WERE OBSERVED AT TIME OF SURVEY.

CERTIFICATION

I, THE UNDERSIGNED AT BOWLA GRANDE, LEE, HAVE OFFICES OF THIS A. E. LESTER, P.E., OLD METRIC MAPWORK TITLE INSURANCE COMPANY

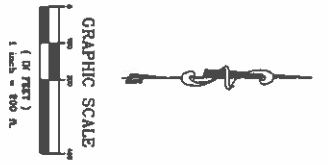
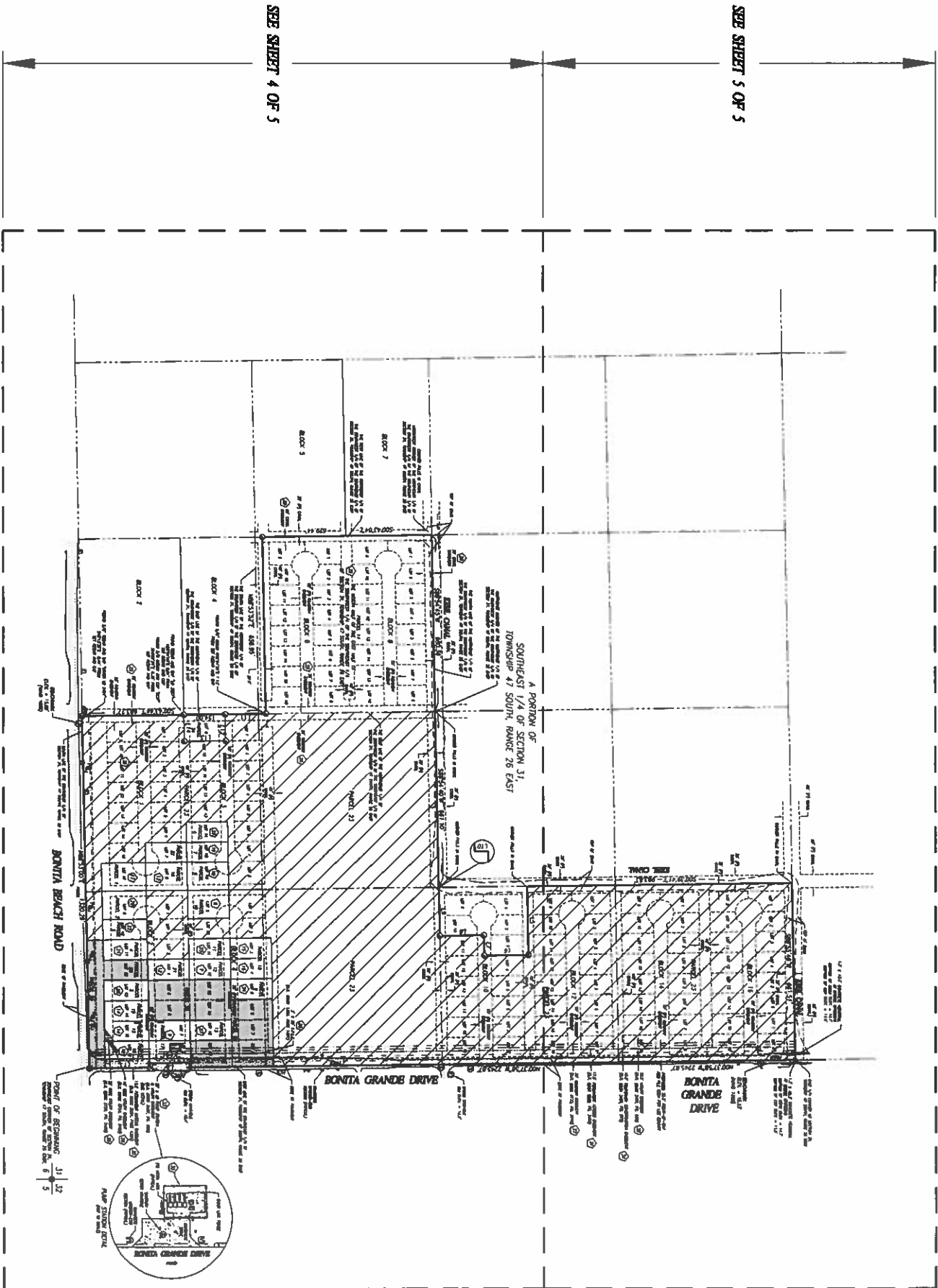
THIS IS TO CERTIFY THAT THE MAP OR PLAN AND THE SURVEY OR MAP THEREON ARE BASED UPON THE RECORD DATA AND THE SURVEYOR'S OWN MEASUREMENTS AND HAVE BEEN CORRECTED FOR ALL ALTA/NSPS LAND TITLE SURVEYING ERRORS AND DEFICIENCIES AND APPROVED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 11, 12, 14, 15, 16, 18 & 19 OF TITLE I. THEREFORE, THE FELDWORK WAS COMPLETED ON 12/27/18

DATE OF PLAN OR MAP: 02/01/2020

[Signature]
DAVID S. DAGOSTINO, PSJ
FL PSJ REG. NO. 5762

<p>This map prepared by: DAVID S. DAGOSTINO, PSM Professional Surveyor & Mapper Fla. License No. 5762</p>	<p>D&W DAGOSTINO & WOOD, INC. Professional Surveying & Mapping 5415 Joeger Road Suite A Naples, FL 34109 Phone: (239) 352-6085 Website: www.dwsurveys.com</p>	<p>CERTIFIED TO: 19-059 1 OF 5</p>
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**ALTA/NSPS LAND TITLE SURVEY
A PORTION OF THE SOUTHEAST 1/4
LYING IN SECTION 31, TOWNSHIP 47 SOUTH, RANGE 26 EAST,
BONITA SPRINGS, LEE COUNTY, FLORIDA**



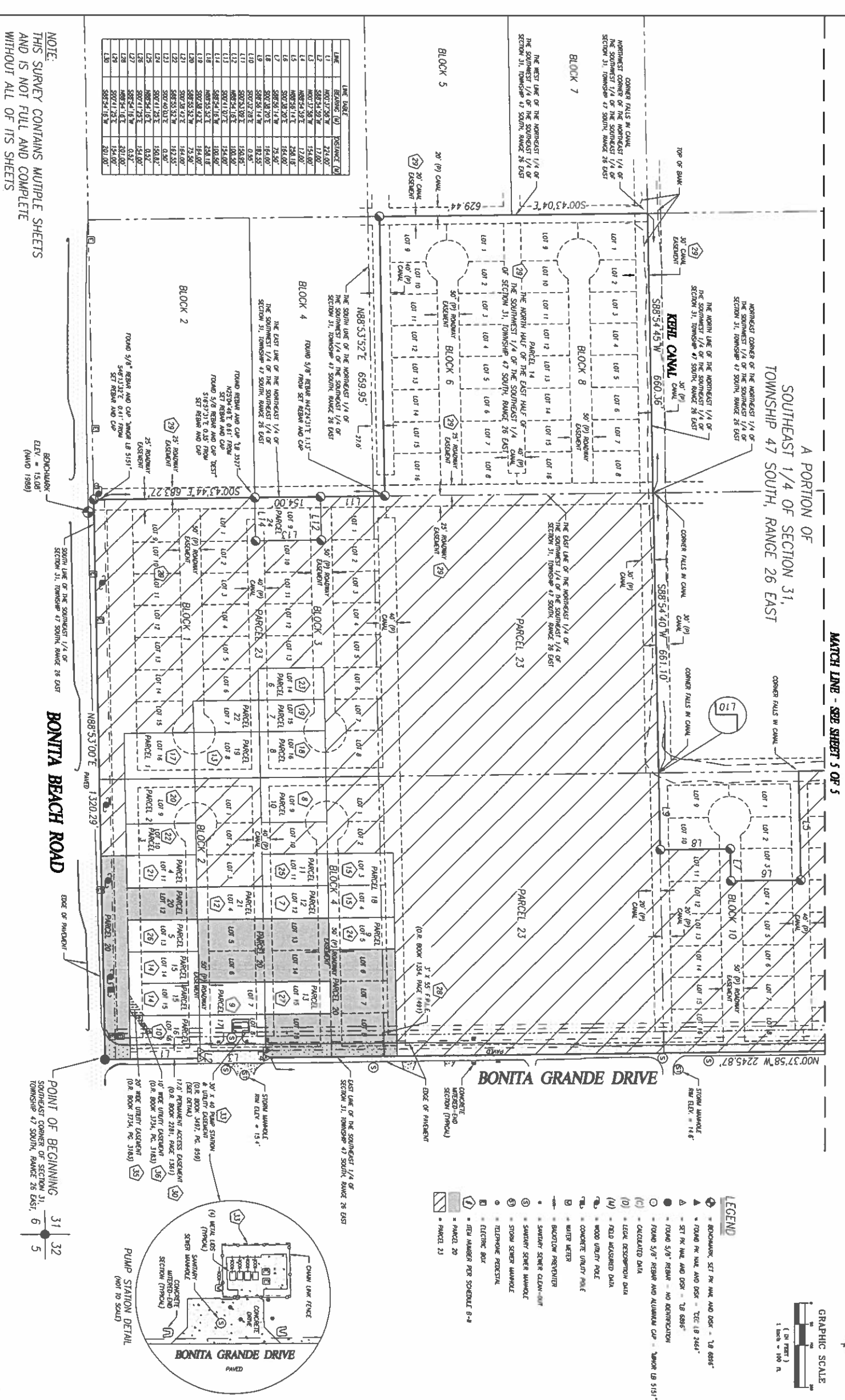
NOTE:
THIS SURVEY CONTAINS MULTIPLE SHEETS
AND IS NOT FULL AND COMPLETE
WITHOUT ALL OF ITS SHEETS

This map prepared by: <small>CERTIFICATE OF AUTHORIZATION NO. LB 6896 NOT VALID WITHOUT THE SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER</small>	DAVID S. DAGOSTINO, PSM. <small>Professional Surveyor & Mapper Fla. License No. 5782</small>	<small>SURVEY FILE: 19059.DWG</small> <small>SURVEY DATE: 1-28-19</small> <small>REVISION DATE: 02/01/2020</small>	<small>DRAWING SCALE: 1"=200'</small> <small>REVISION DATE:</small> <small>REVIEW BY:</small>	DAGOSTINO & WOOD, INC. <small>Professional Surveying & Mapping 5415 Jaeger Road Suite A Naples, FL 34109 Phone: (239) 352-6085 Website: www.dwsurveys.com</small>	<small>SCALE BY: TM</small> <small>CHECKED BY: DSD</small> <small>FIELD BOOK: N/A</small>	CERTIFIED TO: 	<small>JOB NO.:</small> 19-059 <small>SHEET NO.:</small> 3 OF 5
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**ALTA/NSPS LAND TITLE SURVEY
A PORTION OF THE SOUTHEAST 1/4
LYING IN SECTION 31, TOWNSHIP 47 SOUTH, RANGE 26 EAST,
BONITA SPRINGS, LEE COUNTY, FLORIDA**

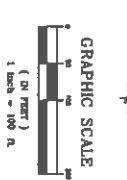
A PORTION OF
SOUTHEAST 1/4 OF SECTION 31,
TOWNSHIP 47 SOUTH, RANGE 26 EAST

MATCH LINE - SEE SHEET 5 OF 5

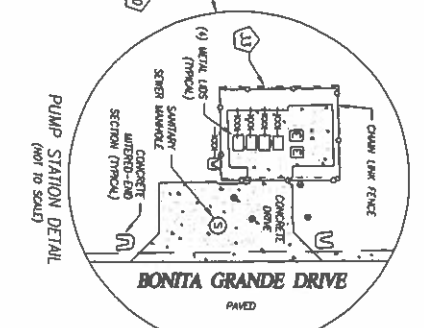


LINE	BEARING (D)	DISTANCE (D)
L1	N88°53'52"E	274.60'
L2	N88°53'52"E	173.80'
L3	N88°53'52"E	173.80'
L4	N88°53'52"E	258.48'
L5	S89°28'20"E	164.60'
L6	S89°28'20"E	75.50'
L7	S89°28'20"E	182.25'
L8	S89°28'20"E	182.25'
L9	S89°28'20"E	0.95'
L10	S89°28'20"E	158.65'
L11	S89°28'20"E	182.80'
L12	S89°28'20"E	182.80'
L13	S89°28'20"E	182.80'
L14	S89°28'20"E	182.80'
L15	S89°28'20"E	182.80'
L16	S89°28'20"E	182.80'
L17	S89°28'20"E	182.80'
L18	S89°28'20"E	182.80'
L19	S89°28'20"E	182.80'
L20	S89°28'20"E	182.80'
L21	S89°28'20"E	182.80'
L22	S89°28'20"E	182.80'
L23	S89°28'20"E	182.80'
L24	S89°28'20"E	182.80'
L25	S89°28'20"E	182.80'
L26	S89°28'20"E	182.80'
L27	S89°28'20"E	182.80'
L28	S89°28'20"E	182.80'
L29	S89°28'20"E	182.80'
L30	S89°28'20"E	182.80'

NOTE:
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AND IS NOT FULL AND COMPLETE
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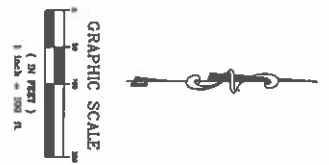


- LEGEND**
- ▲ BENCHMARK, SET BY M&L AND OSK - TA 6895'
 - ▲ BENCHMARK, SET BY M&L AND OSK - TC 18 2661'
 - ▲ SET BY M&L AND OSK - TA 6895'
 - FOUND 5/8" REBAR - NO IDENTIFICATION
 - FOUND 5/8" REBAR AND ALUMINUM CAP - MARK LB 5151'
 - (1) CALCULATED DATA
 - (M) LEGAL DESCRIPTION DATA
 - (H) FIELD MEASURED DATA
 - WOOD UTILITY POLE
 - CONCRETE UTILITY POLE
 - WATER METER
 - BLOWDOWN PREVENTER
 - SWARTHY SCOPER CLEAN-OUT
 - SWARTHY SCOPER MOUND
 - STORM SEWER MOUND
 - TELEPHONE PENETRATOR
 - ELECTRIC BOX
 - REAR NUMBER PER SCHEDULE B-4
 - PARCEL 20
 - PARCEL 21



This map prepared by: DAVID S. DAGOSTINO, PSM. CERTIFICATE OF AUTHORIZATION NO. LB 4898 NOT VALID WITHOUT THE SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER	COMPUTER FILE: 19-059-001 PROJECT NAME: 1-28-19 DRAWING DATE: 02/01/2020 REVISION DATE: REVISIONS: REVISIONS:	ORIGINAL SCALE: 3/8" = 1'-0" REVISION SCALE: D&W DAGOSTINO & WOOD, INC. Professional Surveying & Mapping 5415 Jaeger Road Suite A Naples, FL 34109 Phone: (239) 352-6085 Website: www.dwsurveys.com	CERTIFIED TO: JOB NO.: 19-059 SHEET NO.: 4 OF 5
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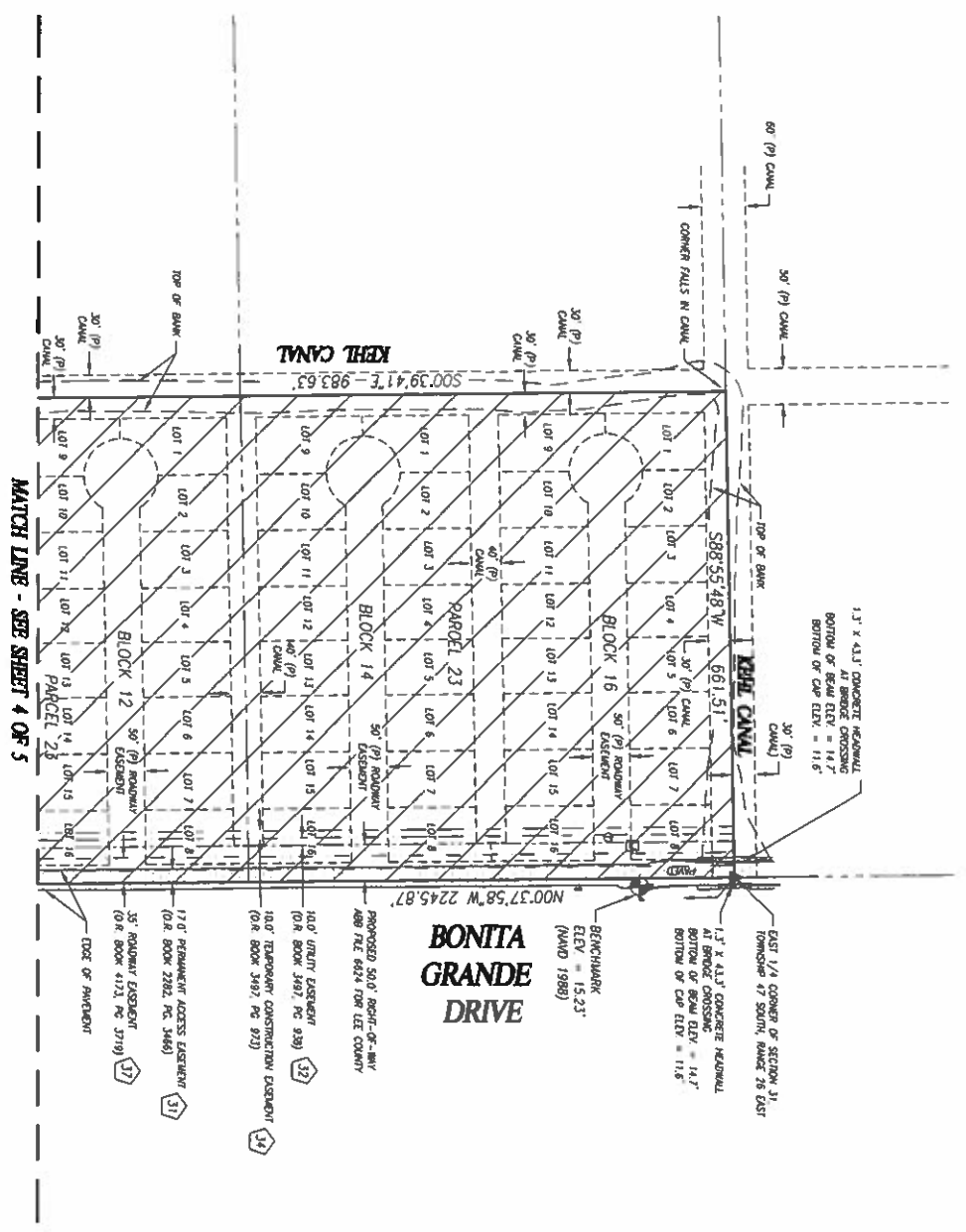
**ALTA/NSPS LAND TITLE SURVEY
A PORTION OF THE SOUTHEAST 1/4
LYING IN SECTION 31, TOWNSHIP 47 SOUTH, RANGE 26 EAST,
BONITA SPRINGS, LEE COUNTY, FLORIDA**



LEGEND

- = BENCHMARK, SET BY M&W AND DSW - TB 6896'
- ▲ = FOUND BY M&W AND DSW - YCC LB 2464'
- △ = SET BY M&W AND DSW - TB 6896'
- = FOUND 5/8" REBAR - NO CONSTRUCTION
- = FOUND 5/8" REBAR AND ALUMINUM CAP - TYPICAL LB 5151'
- (C) = CALCULATED DATA
- (D) = LEGAL DESCRIPTION DATA
- (M) = FIELD MEASURED DATA
- ⊕ = WOOD UTILITY POLE
- ⊕ = CONCRETE UTILITY POLE
- ⊕ = WATER METER
- ⊕ = BACKFLOW PREVENTER
- ⊕ = SWAMPY SENSITIVE CLEAN-OUT
- ⊕ = SWAMPY SENSITIVE MANHOLE
- ⊕ = STORM SEWER MANHOLE
- ⊕ = TELEPHONE PERSPECTIVE
- ⊕ = ELECTRIC BOX
- ⊕ = TRV NUMBER PER SCHEDULE B-4
- ▭ = PARCEL 20
- ▭ = PARCEL 21

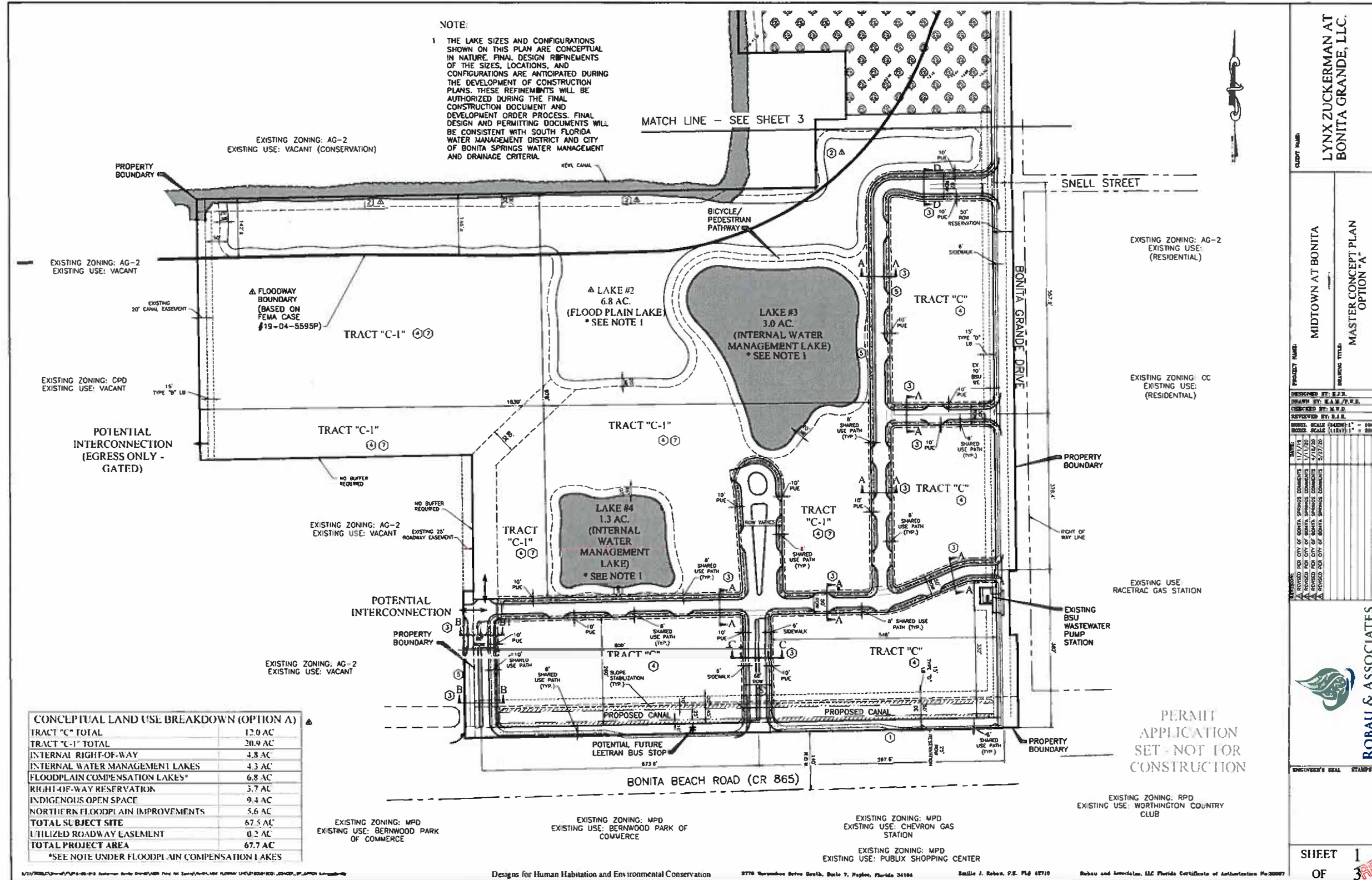
LINE	BEARING (D)	DISTANCE (D)
L1	N00°17'36"W	274.00'
L2	S88°54'58"W	172.00'
L3	N69°31'58"W	154.00'
L4	N68°54'14"E	254.00'
L5	S00°00'00"E	164.00'
L6	S00°00'00"E	75.50'
L7	S00°00'00"E	164.00'
L8	S00°00'00"E	164.00'
L9	S00°00'00"E	182.55'
L10	S00°00'00"E	0.55'
L11	S00°00'00"E	158.95'
L12	N00°00'00"E	104.50'
L13	S00°00'00"E	150.50'
L14	S00°00'00"E	20.50'
L15	N00°00'00"E	258.10'
L16	S00°00'00"E	164.00'
L17	S00°00'00"E	164.00'
L18	S00°00'00"E	164.00'
L19	S00°00'00"E	74.50'
L20	S00°00'00"E	164.00'
L21	S00°00'00"E	164.00'
L22	S00°00'00"E	164.00'
L23	S00°00'00"E	164.00'
L24	S00°00'00"E	0.50'
L25	S00°00'00"E	150.00'
L26	S00°00'00"E	154.00'
L27	S00°00'00"E	154.00'
L28	S00°00'00"E	201.00'
L29	S00°00'00"E	154.00'
L30	S00°00'00"E	201.00'



NOTE:
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AND IS NOT FULL AND COMPLETE
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This map prepared by: DAVID S. DAGOSTINO, PSM. <small>Professional Surveyor & Mapper Fla. License No. 5762</small>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>COMPUTER FILE: DSW-D13001</td> <td>DRAWING SCALE: 1" = 40'</td> </tr> <tr> <td>SURVEY DATE: 1-28-19</td> <td>REVISION DATE:</td> </tr> <tr> <td>PRINT DATE: 02/09/2020</td> <td>REVIEW BY:</td> </tr> </table>	COMPUTER FILE: DSW-D13001	DRAWING SCALE: 1" = 40'	SURVEY DATE: 1-28-19	REVISION DATE:	PRINT DATE: 02/09/2020	REVIEW BY:	DAGOSTINO & WOOD, INC. Professional Surveying & Mapping 5415 Jaeger Road Suite A Naples, FL 34109 Phone: (239) 352-6085 Website: www.dwsurveys.com	CERTIFIED TO: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>JOB NO.:</td> <td>19-059</td> </tr> <tr> <td>SHEET NO.:</td> <td>5 OF 5</td> </tr> </table>	JOB NO.:	19-059	SHEET NO.:	5 OF 5
COMPUTER FILE: DSW-D13001	DRAWING SCALE: 1" = 40'												
SURVEY DATE: 1-28-19	REVISION DATE:												
PRINT DATE: 02/09/2020	REVIEW BY:												
JOB NO.:	19-059												
SHEET NO.:	5 OF 5												

Exhibit B PD19-62429-BOS



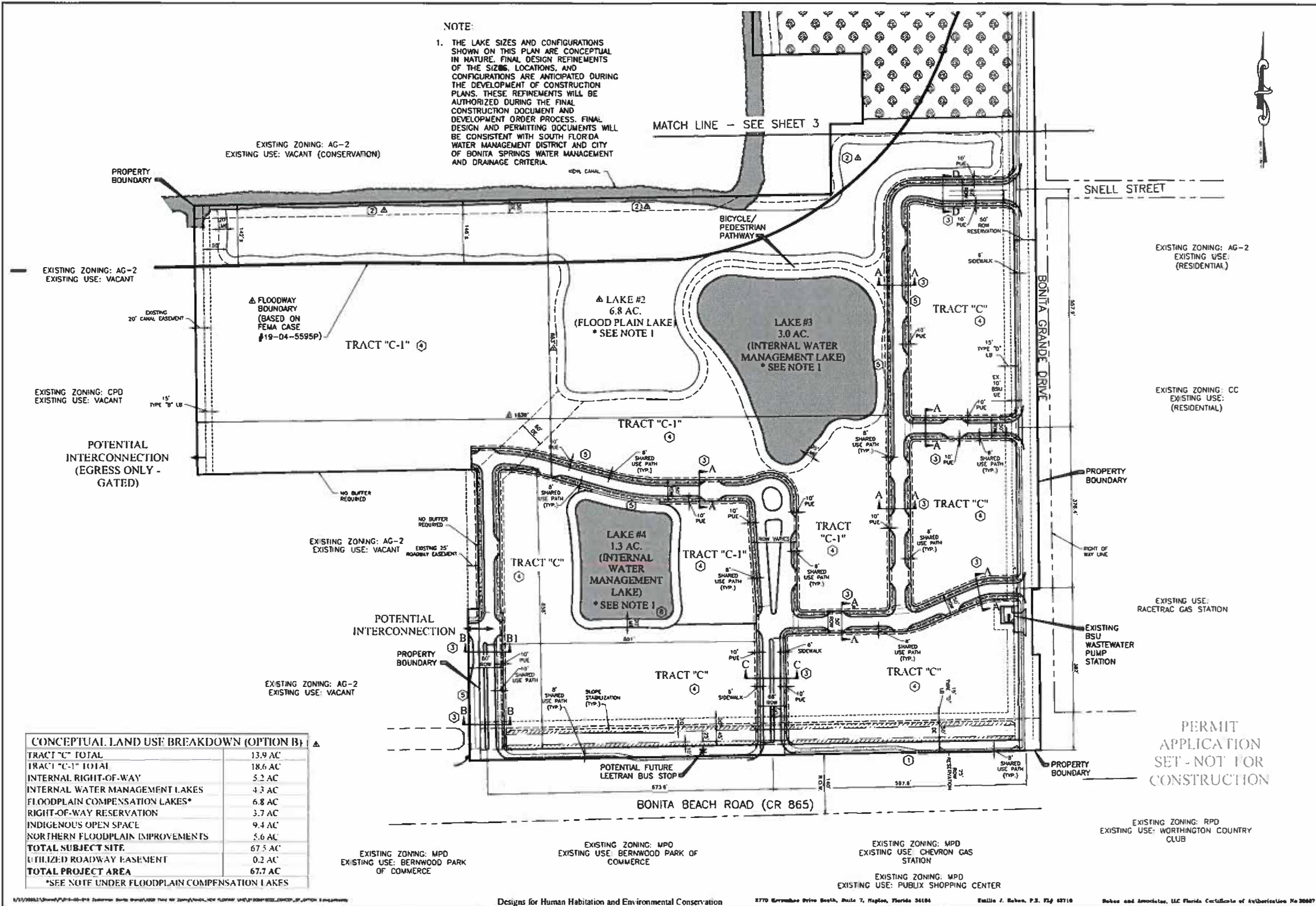
LYNX ZUCKERMAN AT
BONITA GRANDE, LLC.

MIDTOWN AT BONITA
MASTER CONCEPT PLAN
OPTION "A"

ROBAU & ASSOCIATES

SHEET 1
OF 3

RECEIVED
CITY OF BONITA SPRINGS
JUN 02 2020
COMMUNITY DEVELOPMENT
DEPARTMENT



NOTE:
 1. THE LAKE SIZES AND CONFIGURATIONS SHOWN ON THIS PLAN ARE CONCEPTUAL IN NATURE. FINAL DESIGN REFINEMENTS OF THE SIZES, LOCATIONS, AND CONFIGURATIONS ARE ANTICIPATED DURING THE DEVELOPMENT OF CONSTRUCTION PLANS. THESE REFINEMENTS WILL BE AUTHORIZED DURING THE FINAL CONSTRUCTION DOCUMENT AND DEVELOPMENT ORDER PROCESS. FINAL DESIGN AND PERMITTING DOCUMENTS WILL BE CONSISTENT WITH SOUTH FLORIDA WATER MANAGEMENT DISTRICT AND CITY OF BONITA SPRINGS WATER MANAGEMENT AND DRAINAGE CRITERIA.

CONCEPTUAL LAND USE BREAKDOWN (OPTION B)	
TRACT "C" TOTAL	13.9 AC
TRACT "C-1" TOTAL	18.6 AC
INTERNAL RIGHT-OF-WAY	5.2 AC
INTERNAL WATER MANAGEMENT LAKES	4.2 AC
FLOODPLAIN COMPENSATION LAKES*	6.8 AC
RIGHT-OF-WAY RESERVATION	3.7 AC
INDIGENOUS OPEN SPACE	9.4 AC
NORTHERN FLOODPLAIN IMPROVEMENTS	5.6 AC
TOTAL SUBJECT SITE	67.5 AC
UTILIZED ROADWAY EASEMENT	0.2 AC
TOTAL PROJECT AREA	67.7 AC

*SEE NOTE UNDER FLOODPLAIN COMPENSATION LAKES

LYNX ZUCKERMAN AT BONITA GRANDE, LLC.

MIDTOWN AT BONITA

MASTER CONCEPT PLAN OPTION "B"

ROBAU & ASSOCIATES

SHEET 2 OF 3

PROJECT SUMMARY	
PARCEL DATA:	
SUBJECT PARCELS TO:	
10353408, 10353407, 10353408, 10353410, 10353411, 10353412, 10353413, 10353414, 10353415, 10353420, 10353421, 10353422, 10353423, 10353424, 10353428, 10353429, 10353430, 10353431, 10353432, 10353433, 10353434, 10353437, 10353439, 10353507, 1044688, 10557317.	
PROJECT SIZE: ----- 87.7 Acres	
FUTURE LAND USE: ----- INTERCHANGE COMMERCIAL OR	
EXISTING ZONING: ----- EAGLE TRUST CPO EXPIRED	

REQUEST
 REQUEST TO ALLOW UP TO 482 AF UNITS AND/OR EQUIVALENT AF UNITS, 163 HOTEL ROOMS, AND UP TO 315,000 SF OF COMMERCIAL USES.

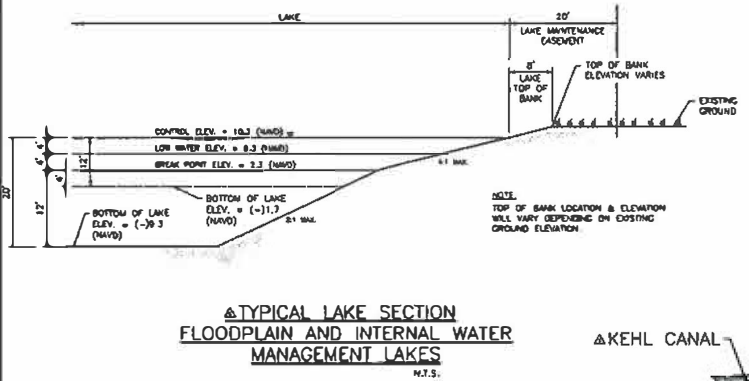
ADJACENT PROPERTY LAND USE/ZONING		
ZONING	USE	
NORTH	AG-2	VACANT (CONSERVATION)
SOUTH	MPO	COMMERCIAL / GAS STATION / SHOPPING CENTER
EAST	AG-2, CC, MPO	RESIDENTIAL / GAS STATION / BS FIRE STATION
WEST	AG-3	VACANT / SINGLE FAMILY RESIDENTIAL

PROJECT DENSITY	
FUTURE LAND USE CATEGORY: INTERCHANGE COMMERCIAL	
MAXIMUM DENSITY: 10 UNITS/ACRE	
MAXIMUM UNITS: 482	
FUTURE LAND USE CATEGORY: BIUR	
MAXIMUM DENSITY: 1 UNIT/10 ACRES	
MAXIMUM UNITS: 1	

PROPERTY DEVELOPMENT REGULATIONS		
	TOWNHOUSE	ALL OTHERS
MINIMUM SETBACKS		
STREET (FRONT)	20 FEET	20 FEET
INTERNAL ACCESSWAYS	5 FEET	5 FEET
SIDE	40 FEET	15 FEET
REAR	15 FEET	20 FEET
WATERBODY	25 FEET	25 FEET
PRESERVE	30 FEET	30 FEET
PERMITTER BOUNDARY	WIDTH OF THE REQUIRED LANDSCAPE BUFFER OR 1/2 THE BUILDING HEIGHT, WHICHEVER IS GREATER	
NOTES	1. PARKING TO BE PROVIDED PER CODE REQUIREMENTS 2. ACCESSORY USES AND STRUCTURES MUST COMPLY WITH SETBACKS PER LDC SECTION 4-623 ET SEQ. 3. ADDITIONAL REQUIREMENTS DEPICTED ON THE URBAN DESIGN OVERLAY PLAN.	

MINIMUM LOT AREA AND DIMENSIONS	
TOWNHOUSES	ALL OTHERS
AREA: 1,440 SQUARE FEET	AREA: 10,000 SQUARE FEET
WIDTH: 18 FEET	WIDTH: 100 FEET
DEPTH: 80 FEET	DEPTH: 100 FEET

	TOWNHOUSES	ALL OTHERS
MAXIMUM LOT COVERAGE	60%	40%
MAXIMUM BUILDING HEIGHT	45 FEET MAX, 3 STORIES OR 2 STORIES OVER PARKING	65 FEET, 6 STORIES OR 5 STORIES OVER PARKING (HOTEL/MOTEL, MULTI-FAMILY, ASSISTED LIVING FACILITIES) 55 FEET, MAX. 5 STORIES (ALL OTHER BUILDINGS)

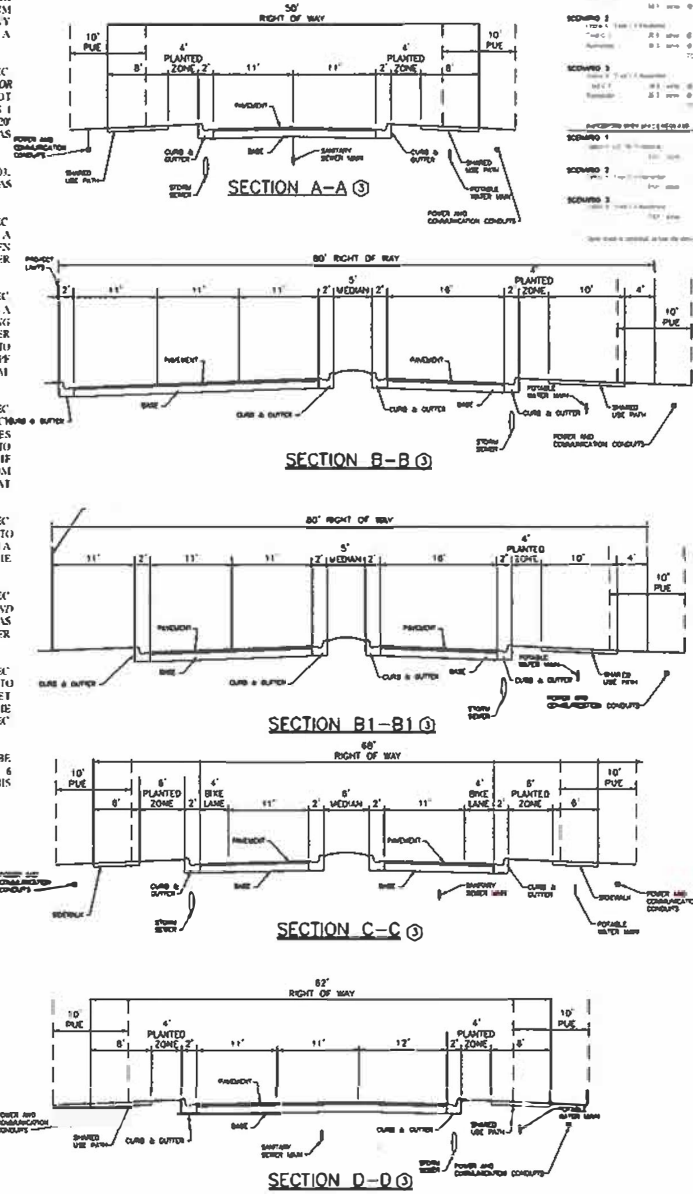


SCHEDULE OF DEVIATIONS
BONITA GRANDE MPO

- DEVIATION (1) REQUESTS RELIEF FROM LDC SECTION 3-203(A) SPECIAL ACCESS PROVISIONS FOR BONITA BEACH ROAD, WHICH REQUIRES A MINIMUM CONNECTION SEPARATION OF 660 FEET FOR ANY ACCESS TO BONITA BEACH ROAD. TO ALLOW A MINIMUM CONNECTION SEPARATION OF 597.60 FEET.
- DEVIATION (2) REQUESTS RELIEF FROM LDC SEC 3-310(D)(1)(3), SETBACKS FOR WATER RETENTION OR DETENTION EXCAVATIONS, TO ALLOW A ZERO FOOT SETBACK FROM THE PROPERTY LINE WHERE LAKES 1 AND 2 ARE ADJACENT TO THE KEHL CANAL AND A 20' SETBACK FROM THE PROPERTY LINE FOR LAKE 2 AS SHOWN ON THE MASTER CONCEPT PLAN.
- DEVIATION (3) REQUESTS RELIEF FROM LDC SEC 3.101, TYPICAL STREET DESIGN, TO ALLOW STREET DESIGN AS SHOWN ON THE MCP.
- DEVIATION (4) REQUESTS RELIEF FROM LDC SEC 3-410(D)(1) BUFFER REQUIREMENTS, WHICH REQUIRES A MINIMUM 10-FOOT-WIDE TYPE A BUFFER BETWEEN COMMERCIAL USES TO ALLOW NO LANDSCAPE BUFFER BETWEEN USES INTERNAL TO THE PROPERTY.
- DEVIATION (5) REQUESTS RELIEF FROM LDC SEC 3-410(D)(3) BUFFER REQUIREMENTS, WHICH REQUIRES A MINIMUM 15-FOOT-WIDE TYPE D BUFFER ALONG RIGHTS-OF-WAY, TO ALLOW NO LANDSCAPE BUFFER ALONG INTERNAL RIGHTS-OF-WAY ADJACENT TO LAKES AND A FIVE-FOOT WIDE TYPE A LANDSCAPE BUFFER IN OTHER LOCATIONS ALONG INTERNAL RIGHTS-OF-WAY.
- DEVIATION (6) REQUESTS RELIEF FROM LDC SEC 3-263(A) PROVISIONS OF CONTAINER SPACES, WHICH REQUIRES ESTIMATED MINIMUM REQUIRED SQUARE FOOTAGES FOR GARAGE AND RECYCLABLE COLLECTION, TO ALLOW FOR REDUCED SQUARE FOOTAGES, IF COMPACTORS ARE PROVIDED AND APPROVAL FROM LEE COUNTY SOLID WASTE DIVISION IS OBTAINED AT TIME OF DEVELOPMENT ORDER.
- DEVIATION (7) REQUESTS RELIEF FROM LDC SEC 4-499(A) PROPERTY DEVELOPMENT REGULATIONS, TO ALLOW A MAXIMUM BLOCK SIZE OF 501' x 657' WITH A MAXIMUM PERIMETER OF 2,537' AS SHOWN ON THE "OPTION B" MASTER CONCEPT PLAN.
- DEVIATION (8) REQUESTS RELIEF FROM LDC SEC 3-310(D)(4) EXCAVATIONS FOR WATER RETENTION AND DETENTION, TO ALLOW LAKE 4 TO BE CONFIGURED AS SHOWN IN TRACT "C-1" ON OPTION B OF THE MASTER CONCEPT PLAN.
- DEVIATION (9) REQUESTS RELIEF FROM LDC SEC 4-499(A) PROPERTY DEVELOPMENT REGULATIONS, TO ALLOW A MAXIMUM BUILDING HEIGHT OF 45 FEET WITH NO MORE THAN SIX STORIES WITHOUT THE ADDITIONAL SETBACK REQUIRED BY LDC SEC 4-1574(B)(A).
- DEVIATION (10) - PROJECT SIGNAGE MUST BE DEVELOPED CONSISTENT WITH LDC CHAPTER 6 EXCEPT AS SPECIFICALLY MODIFIED BY THIS APPROVAL.

PUBLIC TRANSIT

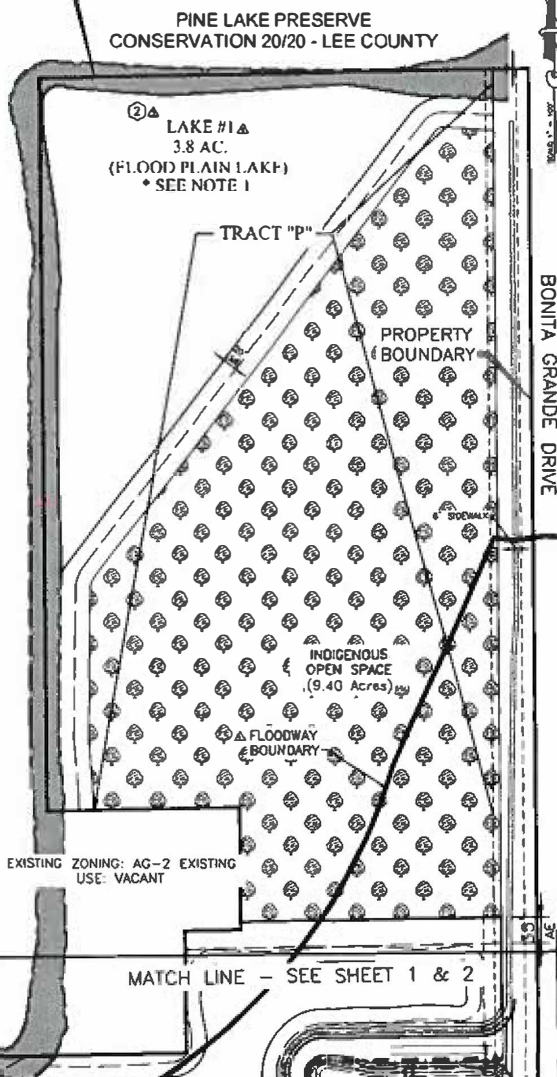
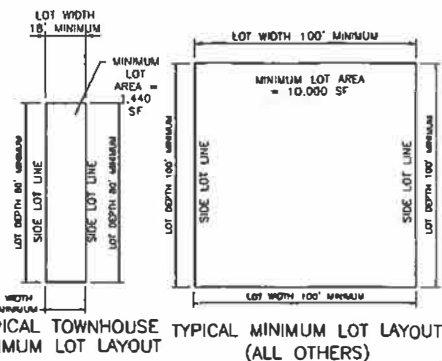
THERE IS AN EXISTING LETTMAN STOP ALONG BONITA BEACH ROAD, APPROXIMATELY 0.28 MILES WEST, AND AN EXISTING LETTMAN STOP ALONG BONITA GRANDE DRIVE APPROXIMATELY 0.08 MILES SOUTH.



GENERAL NOTES

- TREES AND PALMS WITHIN RIGHT-OF-WAY BUFFERS, BOTH EXTERNAL AND INTERNAL TO THE SITE, MAY BE CLUSTERED TO ADD DESIGN FLEXIBILITY IN ORDER TO REDUCE CONFLICTS BETWEEN TREES AND SITE VISIBILITY, OVERHEAD UTILITIES, LIGHTING, AND SIGNAGE.
- AT THE TIME OF LOCAL DEVELOPMENT ORDER APPLICATION, THE APPLICANT SHALL SUBMIT PROPOSED FINISHED FLOOR ELEVATIONS FOR EACH STRUCTURE WITHIN THE PROPOSED DEVELOPMENT.

SCENARIO	SCENARIO 1	SCENARIO 2	SCENARIO 3
SCENARIO 1	482 UNITS	482 UNITS	482 UNITS
SCENARIO 2	482 UNITS	482 UNITS	482 UNITS
SCENARIO 3	482 UNITS	482 UNITS	482 UNITS



PERMIT APPLICATION SET - NOT FOR CONSTRUCTION

MATCH LINE - SEE SHEET 1 & 2

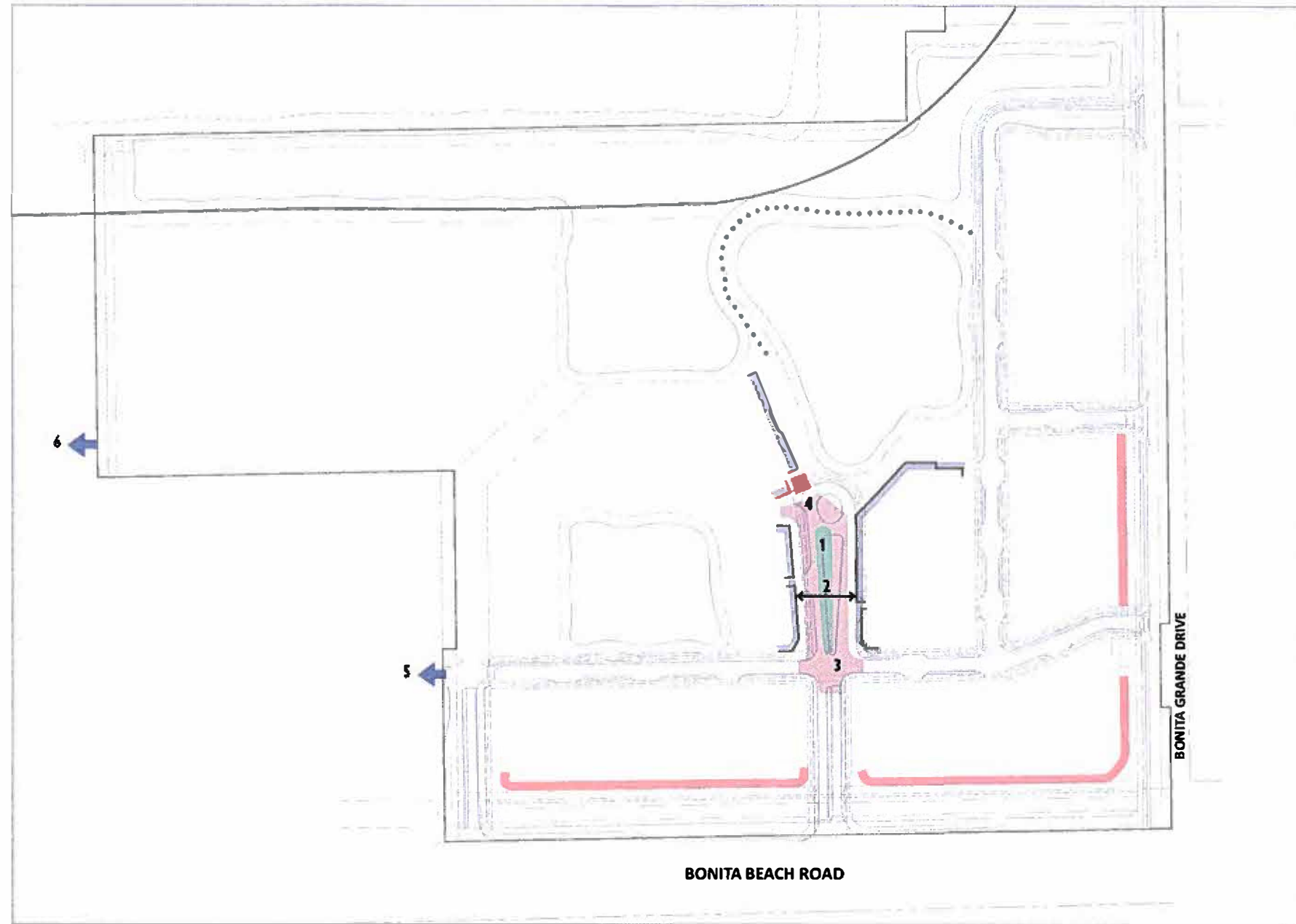
LYNX ZUCKERMAN AT BONITA GRANDE, LLC.

MIDTOWN AT BONITA

DATE	REVISION
11/17/20	1. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	2. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	3. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	4. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	5. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	6. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	7. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	8. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	9. PREPARED FOR THE CITY OF BONITA GRANDE
11/17/20	10. PREPARED FOR THE CITY OF BONITA GRANDE

ROBAU & ASSOCIATES

SHEET 3 OF 3



LEGEND

- A-FRONTAGE
 - BONITA BEACH ROAD (BBR) FRONTAGE
 - GREEN
 - PLAZA
 - FEATURED ARCHITECTURAL ELEMENT
 - FUTURE STREET CONNECTION
- NOTE: REFER TO MCP PLAN FOR SIDEWALKS

ANNOTATIONS (refer to #'s on Plan Diagram)

- 1 A linear green runs north/south from the first intersection to the lake. The open space is defined by buildings on both sides with parking behind the buildings. The central green-space should be simply designed as a flat plane, with grass and/or ground cover, and pavers. Trees and excessive landscaping should be avoided as they inhibit use of the open space and obstruct views of the water (trees occur on the sidewalk side of the street). The space may be used as a quiet passive space or be programmed at certain times to accommodate markets, music, etc.
- 2 To maintain a sense of enclosure in the linear green, the building-to-building dimension should not exceed 130ft (2 times the allowable building height).
- 3 Traffic calming achieved by using an alternative paving material for the public space to signify its importance and signal cars to slow down. The sidewalk can be raised or flush with the street and separated by planters and bollards.
- 4 A vertical "tower" element to terminate the street view and frame the view of the lake. The vertical element may be free-standing or incorporated into the corner of the building.
- 5 Future street connection to western parcels.
- 6 Gated egress only.

FRONTAGES

A-FRONTAGE:
The A-Frontage is the most critical frontage that combines an A-grade facade design with an attractive streetscape including generous sidewalks, shade trees, seating and thoughtful landscaping. Parking along this frontage is limited to on-street parking, ideally in the form of parallel parking. Off-street surface parking lots are to be located behind the buildings. Buildings are generally located close to the sidewalk, except where notched to accommodate entries and outdoor dining. The frontage may be composed of multiple buildings with gaps between buildings not to exceed 20% of the frontage. The sidewalk extends to the building storefronts where there is retail/commercial use. Residential uses on this frontage may have a shallow landscape area between the sidewalk and the building, which should not exceed ten feet in depth.

BONITA BEACH ROAD FRONTAGE:
The Bonita Beach Road (BBR) Frontage is intended to provide an attractive frontage along the major arterial with the understanding that the context favors automobile dependent uses. Buildings should be located as close as possible to the street. Parking is to be located along the sides and behind the buildings. Parking spaces are not permitted between the building and BBR (or Bonita Grande Drive where applicable), but drive lanes are permitted. Outdoor dining areas are encouraged on the front and sides of the building.

URBAN DESIGN OVERLAY PLAN

Intent: The Urban Design Overlay Plan, including associated diagrams, drawings and text, prepared by Urban Arts Inc., is intended to identify important urban design elements of the proposed development plan to ensure that the overall vision of the plan will be maintained while still allowing reasonable flexibility as the project is implemented and responds to market conditions.

MARCH 2020 / Urban Arts Inc.

Revised: May 2020

**PROPERTY DEVELOPMENT REGULATIONS
BONITA GRANDE MPD**

NOTE: Additional requirements depicted on the Urban Design Overlay Plan.

COMMERCIAL OR MULTI-FAMILY BUILDINGS:

Minimum Lot Area and Dimensions:

Area: 10,000 square feet
Width: 100 feet
Depth: 100 feet

Minimum Setbacks:

Street: 20 feet
Internal Accessways: 5 feet
Side: 15 feet
Rear: 20 feet
Water Body: 25 feet
Preserve: 30 feet
Perimeter boundary: Width of the required landscape buffer or ½ the building height, whichever is greater

Accessory uses and structures must comply with setbacks per LDC Section 4-923 et seq.

Maximum Lot Coverage: 40%

Maximum Building Height: 65 feet, max. 6 stories or 5 stories over parking (hotel/motel, multi-family, assisted living facilities)
55 feet, max. 5 stories (all other buildings)

TOWNHOUSE:

Minimum Lot Area and Dimensions:

Area: 1,440 square feet
Width: 18 feet
Depth: 80 feet

Minimum Setbacks:

Street: 20 feet
Internal Accessways: 5 feet
Side: none
Rear: 15 feet
Water Body: 25 feet

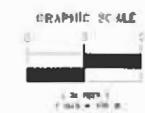
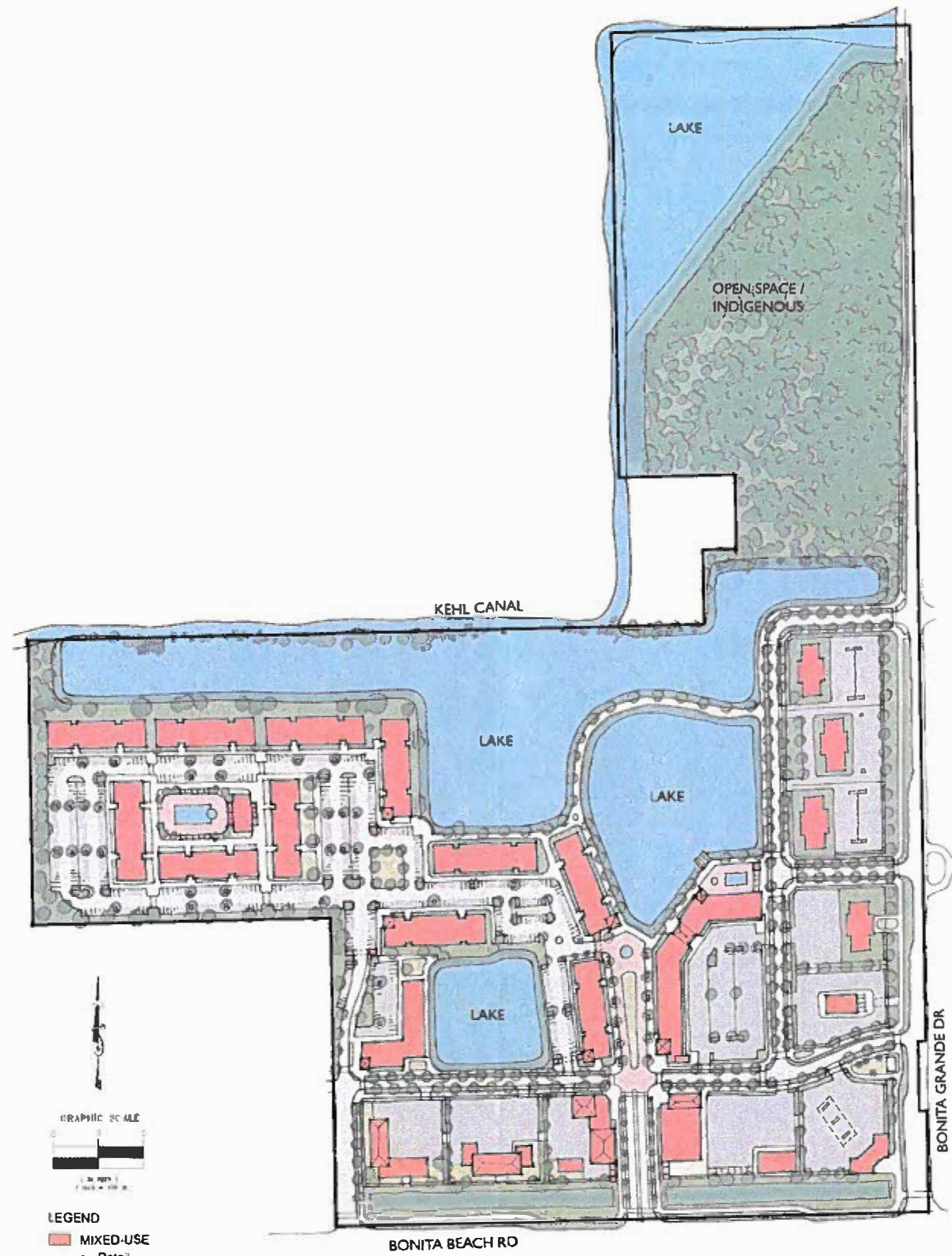
Preserve: 30 feet
Perimeter boundary: Width of the required landscape buffer or ½ the building height,
whichever is greater

Accessory uses and structures must comply with setbacks per LDC Section 4-923 et seq.

Maximum Lot Coverage: 60%

Maximum Building Height: 45 feet, max. 3 stories or 2 stories over parking

Exhibit D
PD19-62429-BOS



- LEGEND
- MIXED-USE
 - Retail
 - Restaurant
 - Commercial
 - Office
 - Hotel
 - Multi-family
 - ALF
 - Townhomes

MIDTOWN AT BONITA MIXED-USE COMMUNITY

PRELIMINARY ILLUSTRATIVE MASTER PLAN

JULY 17, 2019
REVISED NOV 4, 2019
REV.#3 MAY 26, 2020

RECEIVED
CITY OF BONITA SPRING
JUN 02 2020
COMMUNITY DEVELOPMENT
DEPARTMENT



Preliminary - Artist Concept, For Illustrative Purposes Only

RECEIVED
CITY OF BONITA SPRINGS

JUN 02 2020

COMMUNITY DEVELOPMENT
DEPARTMENT



Preliminary - Artist Concept, Illustrative Purposes ONLY

MIDTOWN
at BONITA

RECEIVED
CITY OF BONITA SPRINGS
JUN 02 2020
COMMUNITY DEVELOPMENT
DEPARTMENT



Preliminary - Artist Concept, Illustrative Purposes ONLY

EXCESS SPOIL REMOVAL PLAN

In addition to the Development Order submittal requirements, an Excess Spoil Removal Plan must be submitted and approved prior to the removal of excavated materials off site. The Plan must be prepared by and signed and sealed by a Florida Professional Engineer.

1. Provide a statement of the purpose for removing excavated material offsite.
2. Provide the approximate size and location of the area to be excavated relative to all property lines, easements, rights-of-way, and existing and proposed structures.
3. Provide lake typical cross section showing slopes, the maximum and average depth, and the controlled water elevation in the excavated area.
4. Provide the total estimated quantity excavated and quantity of material that will be hauled off-site.
5. Identifying the location of the on-site excavated material stockpiles and truck staging areas prior to leaving site.
6. Installation of the floodplain compensation lakes (Lake #1 and Lake #2 and downstream, drainage infrastructure as identified on the MCP) shall be included in the first Development Order for the project and shall be completed prior to issuance of the first Certificate of Occupancy or Certificate of Completion, as applicable, for the residential and commercial buildings.
7. The petitioner shall video tape the existing condition of the segments of Bonita Beach Road and Bonita Grande Road adjacent to the property prior to the export of any fill material. The petitioner shall video tape the condition of the segments of Bonita Beach Road and Bonita Grande Road adjacent to the property upon the completion of each lake excavation phase. Should in the course of conducting the fill export activities, the City of Bonita Springs substantiates damage to the segments of Bonita Beach Road and Bonita Grande Road adjacent to the project resulting from the fill export activities, the City of Bonita Springs shall notify the petitioner and the petitioner shall repair damage and return the roadway to conditions documented by the pre-export activity per the video tape documentation within six months of such notice, with reasonable extension due to force majeure delays.
8. Stockpile height will be determined by its proximity and impact on surrounding waterbodies, and the elevation of onsite preserves and roadways.
9. Erosion Control: Provide a Stormwater Pollution Prevention Plan (SWPPP) which includes the proposed methods to control dust, mud and debris along the proposed haul route.
10. Verify compliance with all conditions of the SFWMD ERP and water use permits relative to dewatering and excavation activities.
11. Acknowledge that all trucks must be covered when transporting spoil to offsite locations and check tailgates are secured before leaving the site.
12. A tire wash facility shall be provided at each access point.
13. 40T off-road dump trucks and on-road spoil trucks will be used to move spoil material between sites in the construction corridor.
14. Create and maintain a master property owner association or sub property owner association or community development district with the responsibility of operating and maintaining the water management system in accordance with South Florida Water Management District permit conditions and City of Bonita Springs permit conditions.
15. Trucks entering and exiting the site for the purpose of removing excavated material shall only do so from a location that is agreed between applicant and the community development reviewer. Each ingress and egress point approved for the use of trucks

removing excavated material shall have a concrete apron at the edge of public access road. Said concrete apron shall be at least 30 feet wide and run from the edge of the pavement to a point 35 feet into the property. Access points must be approved by owner of the ROW, which in this case would be Lee County DOT.

16. A traffic and road impact analysis/mitigation plan will be made by the applicant to address the following:
 - a. The proposed truck traffic volume in trips per day.
 - b. The export of fill material will be conducted in off-peak hours. Peak hours are hereby defined as weekdays between the periods of 4-6 PM.
 - c. A complete hauling route and a detailed Maintenance of Traffic (MOT) Plan shall be specified for each phase of the project. Demonstrate LCDOT approval of proposed haul routes.
 - d. Identifying the project's zone of influence, that is, the distance from the site that traffic is either generated from or attracted to.
 - e. The existing condition of the road system within the excavation project's zone of influence.
 - f. The capacity of the road system within the zone of influence to handle existing traffic, normal growth in the traffic, and additional traffic generated from the excavation project in consideration of the time frame of the traffic generation and the wheel loadings of such traffic.
 - g. The site-specific road work within the zone of influence which is necessary prior to the start of the project and which will be necessary during the project to assure that premature road failure and/or severe road damage will not occur.
 - h. All truck traffic for the removal and transportation of excess spoils should be limited to arterial roadways unless approval is granted by the City of Bonita Springs.
 - i. Installing off-site turn lanes and other on-site roadway improvements may be required.
17. Any other information deemed reasonably necessary by the Director. This includes the ability to impose additional conditions that are necessary to ensure compliance with the requirements of the Excess Spoil Removal Plan.
18. Performance guarantee requirements:
 - a. Excavations performed in conjunction with a planned unit development or subdivision development where excavated materials are removed from the boundary of the development and the excavation plan has been approved by the City manager or designee shall provide a performance bond by:
 - i. a cash deposit or certificate of deposit assigned to the City of Bonita Springs.
 - ii. an irrevocable letter of credit or surety bond. Unless otherwise approved by the City manager or designee, certificate assignments or letters of credit shall be documented on forms provided by the City of Bonita Springs.The performance guarantee posted for on-site excavation activities shall be in an amount of no less than \$25,000.00, nor more than \$1,000,000.00 computed at the rate of \$20.00 for sand and \$100.00 for rock per cubic yard of excavation to ensure compliance with the provisions of this article. Such performance guarantee shall not act to limit any guarantees required for off-site road impacts that may be necessary. The City may require this performance guarantee to be recomputed at any time during the project construction for completed, approved lakes and/or the additional excavated material.
 - b. The performance guarantee shall be executed by a person or entity with a legal or financial interest in the property and shall remain in effect until the excavation is completed in conformance with the Land Development Code and any conditions of the planned developments approval. Performance guarantees may be recorded in the official records of the Lee County Florida, and title to the property shall not be transferred until the performance guarantee is released by the City manager or designee.

- c. All performance guarantees shall be kept in continuous effect and shall not be allowed to terminate without the written consent of the City manager or designee.
- d. Should the City find it necessary to utilize the performance guarantee to undertake any corrective work related to the excavation, or to complete the excavation under the terms of this article, or to correct any off-site impacts of the excavation, the permittee shall be financially responsible for all legal fees and associated costs incurred by the City of Bonita Springs in recovering its expenses from the firm, corporation or institution that provided the performance guarantee.

ATTACHMENT “A”

BACKGROUND AND INFORMATIONAL ANALYSIS

Introduction/Synopsis

The purpose and intent of the various planned development districts is to further implement the goals, objectives and policies of the Comprehensive Plan by providing some degree of flexibility in planning and designing developments as defined in [Land Development Code \(LDC\) 4-200\(2\)](#). According to LDC Sec. 4-737(g), the MPD mixed use planned development district permits planned developments with a mixture of uses in accordance with section 4-400(2) as set forth in this chapter and the Bonita Plan in order to reduce the number of vehicular trips on the arterial and collector road network.

The standard of review conducted by staff and other review agencies provides the basis for staff's recommendation of the rezoning request as outlined in [LDC 4-131\(d\)\(3\)](#) and [LDC 4-299\(a\)\(2\) and \(4\)](#). This recommendation is presented to the Zoning Board where they will receive presentations by the Applicant and staff and comments from the public, prior to making a recommendation to the City Council whom has the final decision making authority.

The subject property consists of multiple parcels totaling 68+/- acres in the northwest quadrant of Bonita Beach Road and Bonita Grande Drive. The properties act as a gateway into eastern Bonita Springs and has high visibility from two major traffic thoroughfares. The properties are vacant commercial, with a zoning district designation of Commercial Planned Development (CPD), which included a two-option Master Concept Plan for a big box retailer and commercial out-parcel development. This request is to rezone all property into a Mixed-use Planned Development (MPD) for a maximum density of 482 multi-family dwelling units (inclusive of an Assisted Living Facility) and a 165-room hotel, and up to 315,000 square feet of commercial/retail uses. The request also includes a two-option Master Concept Plan, development standards, and proposed schedule of uses.

Master Concept Plan

The Master Concept Plan is a 4-page plan and is referenced as **Exhibit “B”**. The Plan was last submitted on June 2, 2020.

Just like the current Master Concept Plan for the current CPD, the proposed Master Concept Plan includes two development options (Option “A” and Option “B”). It also includes an Urban Design Overlay Plan. The summary below identifies the key elements of each page.

1. Sheet 1-Option “A.”

The first option for the tract and infrastructure layout of the southern portion of the project. The tracts fronting Bonita Beach Road and Bonita Grand Drive are proposed as commercial uses (Tract C). Vertical mixed-use or single-use commercial buildings (55’,

5 stories over parking) may occur along the main boulevard in the Tract C-1 areas (I.E. Similar to Mercato), in addition to hotel or an assisted living facility (55'-65', 5 to 6 stories over parking). Other uses the C-1 tracts along Lake #2 are intended for multiple-family (55'-65', 5 or 6 stories over parking) or townhouse (45', 3 stories over parking) development.

2. Sheet 2-Option "B."

This second option depicts a slightly different tract and infrastructure layout of the southern portion of the project. The main difference in this development option is the tract layout surrounding Lake #4. Similar uses for the Tract C and Tract C-1 areas are anticipated in both development option scenarios.

3. Sheet 3- Northern portion of the project. Sheet 3 remains the same for both Option A and B development scenarios. This area contains the indigenous open space and preserve areas. It is also a component of the Kehl canal.

4. Urban Design Overlay Plan. Intended to identify important urban design elements of the proposed development to ensure that the overall vision of the plan will be maintained while still allowing flexibility.

The Applicant's urban design consultant worked with DPZ CoDesign on key elements of this project. The Urban Design Overlay Plan demonstrates the Applicant's commitment to meeting the intent of the Bonita Beach Road Corridor Overlay and the Bonita Beach Road Land Use Report. The access points, lakes, and key elements of the Urban Design Overlay Plan are the same under both the Option "A" and Option "B" plans.

The Applicant is requesting a maximum of 482 multi-family dwelling units (inclusive of an Assisted Living Facility), a 165-room hotel, and up to 315,000 square feet of commercial/retail. Based on the Conceptual Artistic Renderings it is anticipated that the majority of the height and intensity will be internal to the site and focused surrounding the plaza and adjacent C-1 Tracts. City Staff understands that the Applicant is intending to develop a community destination with shopping/entertainment for eastern Bonita Springs.

Durations of Rights

Pursuant to LDC Sec. 4-303(a)(2), all development rights conferred by an adopted master concept plan are valid for five years from the date the planned development was approved by the city council. It also states that:

An Applicant must acquire a development order for a substantial portion of the project within five years of the date of the approval of the planned development, unless a greater time is approved in accordance with the provisions below. The development order must be submitted before the master concept plan expires. A substantial portion of the project is defined as no less than 20 percent of the lots, dwelling units, square feet, or other

applicable measurements of intensity as applicable, unless a lesser percentage is approved by the city council.

Due to the size of the project and current market conditions, the Applicant is requesting a condition (**Condition 7**) that defines a substantial portion to meet the “other applicable measurements of intensity as applicable” standard. The Applicant is requesting the following condition:

Pursuant to Section 4-303(a)(2) of the Land Development Code, the MCP will expire within 5 years of the date of approval unless, within such time frame, the Developer obtains development orders for construction of the master infrastructure (roadways, utilities, perimeter landscape buffers, stormwater lakes, and floodplain compensation lakes) serving the project. The master infrastructure may be phased so long as the development order for the final phase is obtained within said 5-year period.

City Staff has no objection to the request; however, this condition requires city council approval.

Schedule of Uses and Building Orientation

The types of uses proposed by the Applicant are enumerated in the schedule of uses (see Attachment B). These uses are further defined in [LDC 4-408-Use activity groups](#) and [LDC Table 4-470-Use regulations table](#). The schedule of uses identifies specific uses for the three different development tracts (Tract C, Tract C-1, and Tract P). The Applicant worked very closely with City Staff to address concerns with uses on Tracts C and C-1. A majority of the project is based on urban form based principles, which focus on form rather than use. The Urban Design Overlay Plan and the existing LDC regulations address the building form and orientation along these highly visible corridors. The Applicant has further committed to limiting the mass and scale of certain warehouse/distribution uses as well as limiting outdoor display and open storage uses. Staff has also recommended conditions relative to building orientation, consistent with the Bonita Beach Road Corridor Overlay. Other architectural standards are also included in [LDC 3, Article IV, Design Standards for Commercial Buildings and Developments](#) relative to these same uses, the location and buffering of service function areas and facilities, and other design elements such as overhead doors. All of these factors evaluate the proposed mix of uses and whether or not they are appropriate at the subject location.

Surrounding Land Use

<u>Existing Zoning & Land Use</u>	<u>Future Land Use Map</u>
Subject Parcel: Commercial Planned Development (CPD), Zoning Ordinance No. 08-09	Interchange Commercial and Density Reduction Groundwater Resource (DRGR)
North: Kehl Canal, and then Agriculture (AG-2), Conservation lands (Pine Lake Preserve and Bonita Springs Nature Place)	DRGR
East: Bonita Grande Drive, then Lee County CC Commercial and AG-2 Agriculture, an Automobile Service Station with fuel and residential uses; CFPD, Fire Station.	DRGR and Lee County General Interchange
South: Bonita Beach Road; then CPD/MPD, shopping center	Interchange Commercial
West: AG-2, mixture of vacant and single family homes; and CPD, City Mattress Distribution Center and vacant commercial	Interchange Commercial

The surrounding area is in transition and is mainly comprised of commercial/warehouse, vacant commercial, and vacant residential. Other areas include the Worthington Community (residential and golf course community), the Bernwood Park of Commerce shopping center (aka Southlinks), the Bonita Springs Fire District, and a RaceTrac Fuel automobile service station with fuel sales. The current proposal is anticipated to have a lower traffic impact than the current CPD. It is also promoting a community shopping/entertainment experience for eastern Bonita Springs and those future residents within the MPD.

Environmental Considerations

Site Summary

Historical aerials show that portions of the 67.5-acre site were partially cleared and several agricultural ditches were dug throughout. A cypress head is located in the middle of the site and was surrounded with ditches leading off the property and to the Kehl canal to the north. The agricultural uses eventually stopped, and vegetation regrew throughout the site. The site was

designated Planned Development in 2008 and permitted for development by the South Florida Water Management District. Jurisdictional wetlands were found in the cypress head and habitats to the west. An updated jurisdictional determination showed the wetland had reduced to a size of 0.12 acres – a small area of willow and pop ash dominant land cover within the former cypress head. This was likely due to the ditches intersecting and surrounding the wetlands causing the site to drain. The rest of the site is a variety of upland and drained wetland land covers, most of which are heavily infested with invasive exotics. A 9.4-acre upland area will be preserved and restored for the site's indigenous vegetation requirement.

Wildlife

A listed species survey was conducted, and gopher tortoises were found on primarily the east side of the property and along the western border. All are proposed to be relocated off-site. Several tree cavities in the northern portion of the site were surveyed for bonneted bats and no calls were identified in the recorded acoustic survey.

Heritage Trees

Twenty-two heritage trees were found throughout the southern area of the site to be developed. An updated survey will be required for Lake 1 when the Development Order is submitted. Three Florida slash pines and 19 live oaks were found and the Tree Advisory Board approved their removal and replacement per the Applicant's Mitigation Plan, which includes a 20 foot replacement tree for each heritage tree removed to be planted within the site's landscaping and three strata planting for wetland areas that interface along the Kehl Canal including a minimum of 22 cypress trees.

Wellfield Protection Zones

A small portion of the northwest corner of the site overlaps a Wellfield Protection Zone. If any storage, handling, use or production of any regulated substances will occur in this area, a Wellfield Protection Permit will be required. Storage, handling, use or production of regulated substances above the amounts specified in the Land Development Code are prohibited.

Perimeter Buffers

Perimeter landscape buffers will be provided on all boundaries of the project except for the west property line that will be encumbered with a roadway and the portion adjacent to vacant AG-2 lands. A 15' Type B landscape buffer will be provided in the northwest area adjacent to existing residential uses and 15' Type D landscape buffers will be provided along Bonita Beach Road and Bonita Grande Drive. Additionally, street trees will eventually be added within the Bonita Beach Road Gateway Zone. A deviation is requested to have no landscape buffer between commercial uses per the Master Concept Plan. General and parking area trees will still be required.

Lake Management

A portion of the site adjacent to the Kehl canal is within the 100-year floodplain so lakes 1 and 2 were designed for floodplain compensation while the other lakes are designed for stormwater management. Littoral shelves are required for storm water ponds and a deep lake management plan will only be required if the lakes be deeper than 12'. All but one of the lakes will comply with the Land Development Code for sinuosity. The Applicant has requested an exception for Lake 4

in the form of a deviation. Additional plantings will be installed along the Kehl canal as previously discussed.

Water Quality

The site will be expected to comply with the City's fertilizer ordinance and provide an additional 50% of water quality volume above the SFWMD base requirement per the Bonita Plan. The project will provide water storage in excess of typical projects due to the Floodplain compensation lakes which will provide more volume for nutrients collected from on and off-site stormwater runoff. Plantings above and beyond requirements will be installed in locations between the Kehl canal and the Floodplain compensation lakes which will assist with nutrient uptake and turbidity of the surrounding waterways. Additionally, conditions have been proposed to further water quality of the lakes by having the Applicant apply methods not currently required at time of local development order for both water quality and erosion control and provide best management practices prescribed by the Conservation and Coastal Management Element.

Archeological

Most of the site is located in an Archeological Sensitivity Level 2 area. A cultural resource assessment survey was conducted in 2006 and no archaeological sites were discovered. A review of the Florida Master Site File indicated that no archaeological sites have been recorded within or adjacent to the project area.

Traffic

The City's transportation analyst and the Lee County Department of Transportation (LCDOT) reviewed a detailed traffic impact analysis as a part of this request. This request results in a lower trip generation than the current CPD (Big box supercenter use with various commercial out-parcels). The proposed MPD encourages internal capture by providing people the ability for live, work, recreate, and patronize in one development. The project includes multiples access points along Bonita Beach Road and Bonita Grand Drive and an egress interconnection in the northwest area of the project, which assists in trip distribution and relief at major arterial intersections. The project also includes access interconnections to existing lands under separate ownership to the west and an egress access interconnection in the northwest area of the project.

The Applicant is required to provide a detailed traffic impact statement in accordance with the Traffic Impact Statement Guidelines. Several conditions are recommended by City Staff and LCDOT to address traffic impacts. A culmination of development will require the installation of a traffic signal on Bonita Beach Road; therefore, the Applicant will be required to enter in an agreement for its proportionate share of impacts. City Staff is encouraging coordination with LCDOT on implementation of alternative traffic calming/control devices, such as roundabouts, at access points along Bonita Grand Drive should warrants indicate intersection improvements.

Access

Condition 7 of ZO-08-09 set forth parameters for access to property owners west of the development and east of the interstate that needed access to Trade Way. City Staff's proposed

recommended conditions address these same concerns based on the current Master Concept Plan proposals, which would have inhibited access to approximately 25 parcels, west of this development.

Floodplain Management

The project is located in the mapped special flood hazard area (100-year flood zone) identified as zones AE with a Regulatory Floodway. The delineation of the flood hazard boundaries on the application reflect the revised boundaries related to the FEMA Letter of Map Revision Case No. 19-04-5595P-120680 expected to go into effect October 2020.

Lakes 1 and 2 will be located in the regulatory floodway and are presented as floodplain compensation areas interacting with the Kehl Canal water tables. The proposed alteration of the watercourse must meet the SFWMD design requirements and reviewed by FEMA according to 44 CFR 60.3 (b)(6) assuring that the flood carrying capacity of the watercourse will be maintained. The Conditional Letter of Map Revision (C-LOMR) approved by FEMA shall be required prior to any development located within the regulatory floodway. The C-LOMR approval is an independent review by FEMA's technical experts assuring the project, if built according to plan, will not have a negative impact. At the project's completion, the as-built documentation must be provided to FEMA to validate the project was built according to plan.

Proposed structures, utilities and equipment shall be reviewed for elevation and flood design compliance at time of permit application.

Stormwater/Drainage

Existing Runoff Characteristics of the Property

The 67.5-acre undeveloped property includes wetlands, uplands, ditches and other surface waters. The runoff discharges in an uncontrolled manner at approximately 0.25 cfs/acre. The site has one ditch that traverses the midpoint of the site that has historically accepted offsite flows. Attached to this north-south running ditch is a collection of internal ditches, which are originally from a prior agricultural operation. These ditches collect the offsite flows that are run through the property and eventually all route to the Kehl Canal and headwaters of the Imperial River.

Proposed Drainage

The Applicant provided a conceptual surface water management plan and narrative, which summarized the following: existing runoff and drainage of the site; proposed drainage concept and how it will function during peak storm events; and lastly, how historic flow and existing watercourses will be maintained.

The drainage concept proposed will be designed to reduce the post development peak discharge rates to amounts significantly below the predevelopment discharge rates. The discharge will be through control structures. The site will be isolated from discharging in an uncontrolled manner

through the construction of a perimeter berm that will be set at the 100-year peak elevation of the internal water management system lakes.

Historic flows will still be maintained from the adjacent property and transmitted through the property via a planned box culvert that accepts flows from the ditch along the Bonita Beach Road frontage and into the flood plain compensation lakes that are directly connected to the Kehl Canal and headwaters of the Imperial River.

The Applicant provided two optional bottom depths on the Master Conceptual Water Management Master Plan, 12 feet and 20 feet.

An extensive amount of littoral zones will be designed to enhance the aesthetic qualities of the proposed water management lakes and provide additional nutrient uptake performance of the water management facilities.

At time of local development order

At time of local development order, the Applicant shall provide additional engineering detail and an ICPR drainage analysis to demonstrate adequate control of stormwater runoff within the property and that the existing drainage flows onto and across the site. Any drainage impediments identified during the modeling process must be addressed in the drainage plan. Additionally, the City reserves the right to request additional modeling of other storm events upon review of the data. The drainage system shall be designed to meet or exceed the requirements of SFWMD and shall provide for the attenuation/retention of stormwater prior to discharge. Consistent with the City of Bonita Springs Comprehensive Plan, an additional 50% of water quality volume above SFWMD base requirement must also be provided.

Stormwater system and Floodplain compensation

The lakes encroach into the regulatory floodway adjacent to the flood plain and the Kehl Canal and will interact with the canal as the water tables and canal flows in and out of the designated flood plain compensation lakes. These lakes that are outside of the perimeter isolation berm will be available to compensate for encroachment into the federally designated flood plain. The proposed floodplain compensation lakes will be designed in accordance with the SFWMD Environmental Resource Permit Information guidance for floodplain mitigation and the design will be above and beyond the minimum required.

Excess Spoil and Harvey-Harper Methodology for Water Quality Treatment

For fill being generated from the site, the Applicant provided a master concept plan with two scenarios analyzed: Lake depth at 12 ft below control and lake depth at 20 ft below control. The analysis includes calculations for the two water quality treatment scenarios that estimate the potential public benefit of nutrient removal provided by the lakes excavated to 12 ft below control and 20 ft below control. The Applicant is requesting that a maximum of 150,000 cubic yards can be excavated and majority of that fill to leave site to be utilized for other construction projects. **The Conditions for the Removal of Excavation Materials Off Site: Exhibit F** of this staff report outlines the requirements of the Applicant for removing fill offsite, which is to be provided at time of local development order.

The Applicants justification for the proposed export of fill request is to remove excess material off the site that is generated due to the requirement to provide flood plain mitigation, which has been provided in excess as a public benefit to the Imperial River Basin. The Applicant has requested that the City recognize the significant water quality treatment public benefit that can be obtained by increasing the depth of the compensation lakes from 12 ft. to 20 ft. Using the federally and state accepted Harvey Harper methodology for water quality treatment a significant reduction in nitrogen can be obtained in the Imperial River basin. This additional pollutant reduction would help the City move closer to the goals set forth in the Basin Management Action Plan established by the State in 2012.

Comprehensive Plan Considerations

Policy 1.1.15: Interchange Commercial (Future Land Use Element) - *Intended for uses that serve the traveling public such as automobile service/gas stations, hotel/motel, restaurants and gift shops; and a broad range of tourist-oriented, general commercial, light industrial, commercial office, and multi-family residential up to 10 dwelling units per acre.*

- a. *If affordable housing is provided, residential density may be increased by up to five additional dwelling units per acre.*
- b. *Maximum allowable height of structures shall be 75 feet from the base flood elevation to the eaves.*
- c. *Nonresidential uses shall be limited to a maximum floor area ratio (FAR) of 1.2.*

Policy 1.1.21: Density Reduction Groundwater Resource (DRGR) (Future Land Use Element) - *Intended to recognize geographic areas that provide significant recharge to aquifer systems associated with existing potable water wellfields or future wellfield development. Land uses in these areas must be compatible with maintaining surface and groundwater levels at their historic levels. Allowable land uses are limited to conservation uses; agriculture; residential uses at a maximum density of one dwelling unit per 10 gross acres within the approximately 4,230 acres of gross land area in the land use category (approximate acreage includes annexed Lee County DRGR lands); public uses; non-profit recreational uses and essential services needed for the health safety and general welfare of the community such as lift stations, utility lines, equipment and appurtenances necessary for such systems to furnish adequate levels of service. Policy 1.1.21 does not apply to those annexed DRGR lands that have not yet been assigned a City of Bonita Springs future land use category. Those annexed areas are subject to Policy 1.1.10.3.*

The property is located at the northeast quadrant of Bonita Beach Road and Bonita Grande Drive. The area planned for development is entirely contained in the Interchange Commercial category. The request is for a maximum density of 482 multi-family dwelling units (inclusive of an Assisted Living Facility) and a 165-room hotel, and up to 315,000 square feet of commercial/retail uses, which is consistent with the maximum allowable density of 10 dwellings units per acre and a 1.2 floor are ratio for non-residential uses. Open space preserve and water management areas are proposed in the areas designated as DRGR, which are consistent uses within this category. The

request is **consistent** with **Policy 1.1.15 and 1.1.21** of the Future Land Use Element of the City of Bonita Springs.

Objective 1.11 (Future Land Use Element)- *Development orders and permits for new development or redevelopment shall be issued only if public facilities and services necessary to meet the City's adopted Level of Service (LOS) standards are available concurrent with the impacts of the development.*

Policy 1.11.1 (Future Land Use Element)- *Refers to the availability of public facilities and services necessary to support development concurrent with its impacts prior to the issuance of a development order or permit.*

The application was distributed to Bonita Springs Utilities, Bonita Springs Fire Control and Rescue District, Lee County School District, Public Works, and the Community Development Engineer and Transportation Engineer. These review disciplines had no objections to the request.

Water, sewer, and solid waste capacity is available to the site. Storm water management, minor utility improvements, and other relevant issues are required to be addressed at time of local development order review.

The request as conditioned is **consistent** with **Policy 1.11.1** of the City of Bonita Springs Comprehensive Plan Future Land Use Element.

Future Land Use Element Policy 1.16.2: *Provide for the protection and enhancement of viewsheds along Bonita Beach Road through design features and elements that emphasize the gateway character of this corridor.*

The Applicant's urban design consultant worked with DPZ CoDesign on key elements of this project. The Applicant has provided an Urban Design Overlay Plan (Sheet 4 of **Exhibit B**) as part of their Master Concept Plan to demonstrate their commitment to meeting the intent of this Policy and the Bonita Beach Road Land Use Report. Portions of their plan exceed regulations that the City adopted as part of the Bonita Beach Road Corridor Overlay for the Interchange Zone regulations approved in 2019. Additional gateway features are illustrated in their Artistic Renderings. The request as conditioned is **consistent** with **Policy 1.16.2** of the City of Bonita Springs Comprehensive Plan Future Land Use Element.

Future Land Use Element Policy 1.16.4: *Promote use of aesthetically pleasing architectural standards, accessory structures, and additional hardscape and landscape features to create a strong sense of place along Bonita Beach Road.*

The Applicant has submitted an Aerial View and Conceptual Artistic Renderings, **Exhibit "E"** that include a vision for the project. The exhibits depict the desired urban form along Bonita Beach Road and the interior main street boulevard interior to the project. The project includes inviting multi-modal provisions along Bonita Beach Road and internal to the site. As previously

mentioned, the Applicant has also committed to an Urban Design Overlay as part of their Master Concept Plan. Additionally, existing LDC regulations require auto oriented uses to be designed so that buildings are oriented along the frontage with drive-thru and associated stacking located along the side and rear property lines. The request as conditioned is **consistent** with **Policy 1.16.4** of the City of Bonita Springs Comprehensive Plan Future Land Use Element.

Future Land Use Element Policy 1.16.5: New development and redevelopment projects shall be designed and developed to coordinate land uses, site design, access, and required infrastructure improvements with the mobility network identified in the Bonita Beach Road Vision Study.

And

Transportation Element Goal 2: To implement a multi-modal transportation system along Bonita Beach Road using complete streets principles that ensures the safety of all users; equitable accommodation of all modes of transportation; the interconnection of the built and natural environment with transportation infrastructure; and facilitates a grid street network that mitigates congestion and links neighborhoods.

The project allows for vertical and horizontal mixed-use development. The project includes multi-modal provisions along Bonita Beach Road, Bonita Grand Drive, and throughout the site along the internal roadway and parts of the water management system. The project includes multiple access points along Bonita Beach Road and Bonita Grand Drive. The project will include access interconnection to properties to the west (residential lots under separate ownership) and an egress to the St. James CPD to the west. The LCDOT recommends that the interconnection to the west

Policy 1.7.4 (Transportation Element)- The City shall review requests for development orders and building permits for compliance with the Bikeways/Walkways Facilities Plan and the bikeways and pedestrian ways requirements in the Land Development Code.

The multimodal features being provided by this application have been designed to allow for multimodal users (cyclists and pedestrians) in, through, and out of the site via a system of internalized infrastructure (sidewalks and multiuse pathways) providing for greater user safety (via modality separation and lower speed environments) than would be achieved by having these required facilities directly abutting external (higher speed / great volume) roadways. This is a clear health/safety consideration and the ability to provide direct access to site amenities and business via the internal multimodal infrastructure being proposed will provide a benefit to the merchants, residents and general public visiting the site. The request as conditioned is **consistent** with **Policy 1.7.4** of the City of Bonita Springs Comprehensive Plan Transportation Element.

Objective 1.1 (Stormwater Management/Aquifer Recharge Sub-Element): Investigate alternatives in providing City stormwater services.

If the Applicant is approved to remove fill offsite and have an increased depth of the compensation lakes from 12 ft. to 20 ft there will be a significant water quality treatment public benefit that can be obtained. By utilizing the Harvey Harper methodology for water quality treatment a significant reduction in nitrogen can be obtained in the Imperial River basin. This additional pollutant reduction would help the City move closer to the goals set forth in the Basin Management Action Plan established by the State in 2012.

The request as conditioned is **consistent** with **Objective 1.1** of the City of Bonita Springs Comprehensive Plan Stormwater Management/Aquifer Recharge Sub-Element.

Goal 7: Resource Protection (Conservation /Coastal Management Element). To manage the City's wetland and upland ecosystem so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.

Goal 15: Wetlands (Conservation/Coastal Management Element). The City shall maintain and enforce a regulatory program for development in wetlands that is cost-effective, complements federal and state permitting processes, and protects the fragile ecological characteristics of wetland systems.

The site's vegetation and wetlands were carefully reviewed by staff and an updated wetland jurisdictional determination was provided to determine the native habitats to be preserved for consistency with this goal. With the small size of the wetland and its isolation in the center of the project site, the larger upland area to be preserved better meets this goal. The request as conditioned is **consistent** with **Goal 7 and 15** of the City of Bonita Springs Comprehensive Plan Conservation /Coastal Management Element.

Planned Development Analysis, Formal Findings LDC 4-131 and LDC 4-299

Review criteria	Yes – Mostly - Partly - No
Demonstrate compliance with the Bonita Plan, this Land Development Code, and any other applicable code or regulation; and	Yes – The request is consistent with the densities, intensities, and design principles of the mixed-use planned development criteria. The Applicant has coordinated with DPZ CoDesign on the implementation of their conceptual design and have committed to an Urban Design Overlay Plan as part of their Master Concept Plan. Portions of their plan exceed regulations that the City adopted as part of the Bonita Beach Road Corridor Overlay for

	the Interchange Zone regulations approved in 2019.
The request meets or exceeds performance and location standards set forth for the proposed uses; and	Non-applicable. This is a carry-over provision from Lee County where performance and location standards are evaluated as a part of the Lee Plan.
Including the use of TDR or affordable housing bonuses are the densities or intensities (general uses) consistent with the Comprehensive Plan; and	Yes – The request includes a maximum density of 482 multi-family dwelling units (inclusive of an Assisted Living Facility) and a 165-room hotel, and up to 315,000 square feet of commercial/retail uses, which is consistent with the density of 10 dwellings units per acre and a 1.2 floor are ratio. Open space, preserve and water management are proposed in the areas designated as DRGR.
The request is compatible with existing or planned uses in the surrounding area; and	Yes – The request and proposed Master Concept Plan follow and exceed some the design principles as set forth in the Interchange Commercial and DRGR Future Land Use Categories.
Approval of the request will not place an undue burden upon existing transportation or planned infrastructure facilities and will be served by streets with the capacity to carry traffic generated by the development; and	Yes – This project is bound by roads owned and maintained by Lee County. The Applicant will be responsible for its proportionate share of signalization and intersection improvements at time of local development order. Additional conditions by Lee County are included as a part of the recommended conditions. A detailed traffic analysis will be reviewed at time of local review development order in accordance with the City’s LDC.
Will the request adversely affect environmentally critical areas and natural resources; and	No – The environmentally sensitive lands are 0.12 acres of isolated wetlands that can be mitigated off-site. 9.4 acres of pine flatwoods will be preserved and restored on site.
Public facilities are, or will be, available and adequate to serve the proposed land use; and	Yes - Public facilities will be available and/or provided to the site at the Applicant’s expense.
The proposed use or mix of uses is appropriate at the subject location; and	Yes – The development includes a mixture of uses that provides the opportunity for internal capture and the ability for live, work, recreate,

	and patronize in one development. The project meets the intent of the Bonita Beach Road Overlay.
The recommended conditions to the concept plan and other applicable regulations provide sufficient safeguards to the public interest; and	Yes –Conditions for building form, access and interconnection, water management (water quantity, quality, and stabilization), transportation and multimodal, and other infrastructure requirements are included in the recommended conditions.
The recommended conditions are reasonably related to the impacts on the public's interest created by or expected from the proposed development; and	Yes
Deviations enhance the achievement of the objectives of the planned development and preserves and promotes the general intent of this chapter to protect the public health, safety and welfare	Yes



NEIGHBORHOOD MEETING REQUIREMENT

Community Development Dept. | 9220 Bonita Beach Road, Ste. 111 | Bonita Springs, FL 34135 | (239) 444-6150 | permitting@cityofbonitaspringscd.org

RE: Neighborhood Meeting Mandatory Requirement for Comprehensive Plan Amendment, Rezoning (conventional or planned development), and Special Exception applications.

On September 5, 2018 the Bonita Springs City Council adopted regulations for Neighborhood Meetings. The purpose of a neighborhood meeting is to educate occupants and owners of nearby lands about the proposed development and application, receive comments, address concerns about the development proposal, and resolve conflicts and outstanding issues, where possible.

Neighborhood meetings are mandatory for applications for a future land use map amendment, rezoning, and special exception. Neighborhood meetings are optional for all other applications. Applicants are required to conduct a neighborhood meeting prior to filing its application with the city and a second neighborhood meeting within 30 days after the city has deemed the application to be sufficient.

Please see City of Bonita Springs LDC Section 4-28 or our website for more information.

For additional questions, contact the Planner on Call at (239)-444-6166.





**PUBLIC HEARING APPLICATION FOR
PLANNED DEVELOPMENT**

Community Development Department | 9220 Bonita Beach Road, Suite 111 | Bonita Springs, FL 34135 | Phone: (239) 444-6150 | Fax: (239) 444-6140

Applicant's Name: Lynx Zuckerman at Bonita Grande, LLC
Project Name: Bonita Grande MPD
STRAP Number(s): See attached
Application Form: X **Computer Generated*** **City Printed**

* By signing this application, the applicant affirms that the form has not been altered.

STAFF USE ONLY

Case Number: PA9-62429-B05 **Date of Application:** 7/26/2019
Fee: See File
Current Zoning: CPD
Land Use Classification(s): Int. Comm/DRGR **Comp. Plan Density:** 10 du/ac ; 1.2 FAR
Date of Zoning Public Hearing: 8/4/2020-CMT **Date of City Council Public Hearing:** CCZ: 8/19 + 9/2
Planner Assigned: J Genson
Staff Recommendation: _____

TYPE OF APPLICATION

_____ DRI _____ PD – Existing Development _____ PD – Amendment
✓ Option 1 _____ Option 2

RECEIVED
CITY OF BONITA SPRINGS
JUN 02 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

**PART I
APPLICANT\PROPERTY OWNERSHIP INFORMATION**

A. Name(s) of applicant(s): Lynx Zuckerman at Bonita Grande, LLC

Mailing Address: Street: 6131 Lyons Road, Suite 200

City: Coconut Creek State: FL Zip: 33073

Phone Number: Area Code: 954 Number: 481-3700 Ext: _____

E-mail: andy@zuckermanhomes.com

B. Relationship of applicant to property:

_____ Owner _____ Trustee _____ Option holder _____ Lessee X Contract Purchaser
_____ Other (indicate): _____

*If applicant is NOT the owner or the person authorized by the Covenant of Unified Control, submit a **Notarized Authorization Form** from the owner or his authorized representative. Label as Exhibit I-B.*

** If the application is City-initiated, enter the date the action was initiated by the Council: _____ Attach a copy of the "green sheet" and a list of all property owners, and their mailing addresses, for all properties within the area described. Names and addresses must be those appearing on the latest tax rolls of Lee County. Label the "green sheet" as "Exhibit I-B-2" and the list as "Exhibit I-B-3". [Sec. 4-193]*

C. Name of owner(s) of property: See attached.

Mailing Address: Street: _____

City: _____ State: _____ Zip: _____

Phone Number: Area Code: _____ Number: _____ Ext: _____

Fax Number: Area Code: _____ Number: _____

D. Date property was acquired by present owner(s): _____

E. Is the property subject to a sales contract or sales option? _____ NO X YES

F. Is owner(s) or contract purchaser(s) required to file a disclosure form? X NO _____ YES. If yes, please complete and submit Exhibit I-F (attached).

G. Are there any existing deed restrictions or other covenants on this property which may affect this request?
X NO _____ YES. If yes, submit a copy of the deed restrictions or other covenants and a statement explaining how the restrictions may affect the requested action. Label as "Exhibit I-G".

H. Authorized Agent(s): List names of authorized agents (submit additional sheets if necessary).

Name: Robert J. Mulhere, FAICP, Vice President/Hole Montes, Inc.

Address: 950 Encore Way, Naples, FL 34110

Contact Person: Robert J. Mulhere

Phone: 239-254-2000 E-mail: bobmulhere@hmeng.com

Richard D. Yovanovich, Esq./Coleman, Yovanovich & Koester, P.A.

4001 Tamiami Trail North, Suite 300, Naples, FL 34103

Telephone: 239-435-3535 Fax: 239-435-1218/ryovanovich@cyklawfirm.com

**PART II
GENERAL INFORMATION**

A. Request:

1. Rezoning from CPD TO:(check all applicable)

<input type="checkbox"/> RPD - Residential	<input checked="" type="checkbox"/> MPD - Mixed Use
<input type="checkbox"/> MHPD - Mobile Home	<input type="checkbox"/> RVPD - Recreational Vehicle
<input type="checkbox"/> CPD - Commercial	<input type="checkbox"/> CFPD - Community Facilities
<input type="checkbox"/> IPD - Industrial	<input type="checkbox"/> AOPD - Airport Operations

2. Option Chosen: Option 1 Option 2

3. Other - Provide specific details. _____

B. Legal Description and Boundary Sketch: Is property within a platted subdivision recorded in the official Plat Books of Lee County?

NO. Attach a legible copy of the legal description (label it Exhibit II-B-1.) and Certified sketch of description as set out in chapter 5J-17.053. (labeled Exhibit II-B-2.). **If the legal description is available on computer disc (Word or Word Perfect) please provide a copy at time of application.**

YES. Property is identified as:

Subdivision Name: _____

Plat Book: _____ Page: _____ Unit: _____ Block: _____ Lot: _____

Section: _____ Township: _____ Range: _____

Attach a copy of the Plat Book page with subject property clearly marked. Label this Exhibit II-B-3.

C. Project Street Address: See attached

D. General Location Of Property (referenced to major streets): _____

NW quadrant of the intersection of Bonita Beach Road and Bonita Grande Drive.

E. City of Bonita Springs Plan Information

1. City of Bonita Springs Land Use Classification: Interchange Commercial, DRGR

2. Are you proposing any City of Bonita Springs amendments which could affect the subject property?
 NO **YES** If yes, submit a copy of the proposed amendment (labeled as "Exhibit II-E-1") along with a statement as to how the proposed amendment will affect your property (labeled as "Exhibit II-E-2").

F. Drainage, Water Control and Other Environmental Issues

1. Is the property within an Area of Special Flood Hazard as indicated in the Flood Insurance Rate Maps (FIRM)s?
 NO **YES.** If yes, specify the minimum elevation required for the first habitable floor).
15 **NGVD (MSL)**

2. Are there any environmentally sensitive lands such as, but not limited to: wetlands, mangrove forests, creek & river shorelines, sand dunes, xeric scrub, mature pine forests, or other unique land forms as defined in the Bonita Plan Goal 15 and its Objectives and Policies, Objective 4.1, Policies 7.1.1 d. 2, 7.2.3, Goal 14 and Policies 14.1.1 through 14.3.5 and applicable sections of the Land Development Code (LDC). Are there any listed species occupied habitat as defined in the Bonita Plan or LDC on the subject property, Bonita Plan Policy 7.1.1 d. 2, 7.4.1 through 7.10.3, Objective 7.12 and Policies 7.12.1 through 7.12.3, and applicable sections of the LDC?

 NO X YES If yes, delineate these areas on a map or aerial photo and label it Exhibit II-F-1. Also, complete Exhibit II-F-2 attached hereto.

G. Present Use of Property: Is the property vacant? NO X YES

If the property is not vacant, the owner or applicant's signature on this application indicates that the Owner agrees to either remove all existing buildings and structures, OR that the proposed use of the building or structure(s) will be in compliance with all applicable requirements of the Land Development Regulations. **[Sec. 4-194(b)(3)]**

Briefly describe current use of the property: _____

H. Property Dimensions

- 1. Width (average if irregular parcel): 1,155 Feet
- 2. Depth (average if irregular parcel): 1,980 Feet
- 3. Frontage on road or street: 2,445 Feet on Bonita Grande Drive
 1,325' on Bonita Beach Rd. (Name of street)
- 4. Total land area: 67.53 Acres ~~or Square Feet~~

I. Land Area Calculations

- 1. Undevelopable Areas:
 - a. Freshwater wetland areas 0.12 Ac.
 - b. Other wetland areas Ø
 - c. Submerged land subject to tidal influence: Ø
 - d. Total (a + b + c): 0.12 Ac.
- 2. Remaining developable land (H.4 less I.1.d): 67.41 Acres

**PART III
PROPOSED DEVELOPMENT**

A. Nature of Request

1. Will the development contain living units? _____ NO YES. If the answer is yes, please indicate the total number of living units proposed, by type:

_____ Single Family _____ Mobile Homes _____ Recreational Vehicles
 _____ Zero-Lot-Line _____ Duplex/Two Family _____ Townhouses
 482 _____ Multiple Family _____ TOTAL ALL TYPES

2. If the development will contain living units, please complete Exhibit III-A-2 (attached) and enter the following information:

a. PERMITTED total units (from Exhibit III-A-2): 482
 b. PROPOSED total units (from A-1. above): 482
 c. PROPOSED density (from Exhibit III-A-2): 10 DU/Acre

3. Will the development contain non-residential areas? _____ NO YES. If the answer is yes, please indicate the size [gross square footage (gsf) unless indicated otherwise] of each general class of uses below:

Retail: 315,000 Total gsf
 and
 Offices: _____ Total gsf
 Medical: _____ gsf Non-medical: _____ gsf
 Hotel/Motel: 165 Total units
 Size of units: _____ 0-425 sq. Ft. _____ 426-725 sq. Ft. _____ 726 or more sq. Ft.
 Industrial: Ø Total gsf
 Under roof: _____ gsf Not under roof: _____ gsf
 Mines, Quarries, or General Excavation: Acres to be excavated: Ø
 Other-specify: Assisted Living Facility, subject to LDC Sec. 4-1283, Density equivalents
 Number of Beds (if applicable): _____ OR: _____ gsf

4. Building Height - residential, hotel/all other

65' Maximum height of buildings (in feet above grade) / 55 '
6 Number of Habitable Floors / 5

5. Aviation Hazard: Do you propose any structures, lighting, or other features that might affect safe flight conditions?

NO _____ YES. If yes, please submit an explanation and label it Exhibit III-A-5.

B. Facilities

1. Fire District: Bonita Fire

2. Water Supply

a. Estimated daily consumption of potable water:

- 1. Residential units: 169,050 gpd
Hotel
- 2. ~~Mobile Home units:~~ 16,500 gpd
- 3. Rec. Vehicle units: _____ gpd
- 4. Commercial: 31,500 gpd
- 5. Industrial: _____ gpd

b. Source of potable water: Bonita Springs Utilities

c. Do you have a written agreement from the utility company to serve your project?
 NO _____ YES. If yes, please submit a copy of the agreement.

d. Source of Non-potable water: Stormwater Lakes

3. Sanitary Sewer Service

a. Estimated daily production of wastewater:

- 1. Residential units: 120,750 gpd
Hotels
- 2. ~~Mobile Home units:~~ 16,500 gpd
- 3. Recreational Vehicles: _____ gpd
- 4. Commercial: 31,500 gpd
- 5. Industrial: _____ gpd

b. Is any special effluent anticipated? NO _____ YES. If yes, please complete Exhibit III-B-3 (attached).

c. Source of sanitary sewer service: Bonita Springs Utilities

d. Do you have a written agreement from the utility company to serve your project?
 NO _____ YES. If yes, please submit a copy of the agreement.

e. Will a private on-site disposal facility be used? NO _____ YES. If yes, please complete Exhibit III-B-3 (attached).

f. Are individual sewage disposal systems proposed? NO _____ YES.

C. Transportation

1. Has this project been exempted from filing a Traffic Impact Statement?

NO _____ YES _____ NOT REQUIRED (Exist. development). If it has been exempted, attach a copy of the exemption and label it Exhibit III-C.

PART IV - SUBMITTAL REQUIREMENTS

COPIES REQUIRED					Exhibit #	Item
SUB	DRI	PD	EXIST	MINOR		
10	15	15	15	15		Completed application [4-193(b)]
1	1	1	1	1		Application Fee [2-571]
N/A	2	2	2	2	I-B-1	Notarized Authorization Form (if applicable) [4-194]
N/A	2	2	2	2	I-B-2	Green Sheet (If applicable)
2	2	2	2	2	I-B-3	List of Property Owners (If applicable) [4-194(a)(5)]
2	2	2	2	2	I-B-4	Notarized Covenant & doc. Of Unified Control [4-194(b)(1)(b)]
1	1	1	1	1	I-B-5	Surrounding Property Owners List [4-194(a)(6)]
2	2	2	2	2	I-B-6	Property Owners Map 4-194(a)(7)]
2	2	2	2	2	I-B-7	Mailing Labels for Surrounding Property Owners
2	2	2	2	2	I-F	Notarized Disclosure Form (if applicable) [4-194(b)(1)]
N/A	2	2	2	2	I-G	Deed Restrictions & Narrative (if applicable) [4-194(b)(2)]
10	15	15	15	15	II-B-1	Legal Description [4-196(1)]
10	15	15	15	15	II-B-2	Certified sketch of description (if applicable) [4-196(1)]
N/A	2	2	2	2	II-B-3	Plat Book Page (if applicable) [4-196(1)]
10	15	15	15	15	II-D	Area Location Map [4-194(a)(4)] See II-F-3
N/A	15	15	15	15	II-E-1	Bonita Springs Plan Amendment (if applicable) [4-295(a)(5) & 4-370]
10	15	15	15	15	II-E-2	Narrative/how prop. complies with Bonita Comp Plan, etc. [4-295(a)(5)]
10	15	15	15	15	II-F-1	Environ. Sensitive Lands map (if app.) [4-325(c)] See II-F-2
4	4	4	4	4	II-F-2	Environmental Assessment [4-1339]
10	15	15	4	4	II-F-3	Exist. zoning & current land use map/photo [4-295(a)(4)a]
10	15	15	4	4	II-F-4	Soils, vegetation and ground cover maps [4-295(a)(4)c.]
10	15	15	4	4	II-F-5	Topography map (if available) [4-295(a)(4)c.]
10	15	15	-	-	III-A-2	Density Calcs (if applicable) [4-295(a)(6)c.]
N/A	15	15	-	-	III-A-5	Aviation Hazard (if applicable) [4-987 et seq.]
N/A	15	15	-	-	III-B-3	Sanitary Sewer Facilities(if applicable) [3-353]
6	6	6	-	6	III-C	Traffic Imp. Statement (if applicable) [4-295 (a)(7)]
N/A	6	6	-	6	III-C	TIS Exemption Form (if applicable) [4-295(a)(7)]
N/A	15	15	6	6	IV-A	Public transit routes map (if applicable) [4-295(a)(4)d.]
N/A	15	15	6	6	IV-C	Existing easements and r-o-w map. [4-295(a)(4)e.]
10	15	15	15	15	IV-D	Description of proposed development. [4-295(a)(6)] See II-E
10	15	15	15	15	IV-E	Master Concept Plan (Option 1) [4-295(a)(6)a]
N/A	15	15	15	15	IV-F	Master Concept Plan (Option 2) [4-295(a)(6)b]
1	1	1	1	1		11 inch by 17 inch copy of the Master Concept Plan
10	15	15	15	15	IV-G	Schedule of Uses [4-295(a)(8)]
10	15	15	15	15	IV-H	Schedule of Dev. & Justification [4-295(a)(9)]
4	4	4	-	-	IV-I	Surface Water Management Plan [4-295(b)(1)]
4	4	4	-	-	IV-J	Protected Species Management Plan [4-295(b)(2)]
N/A	15	15	15	15	IV-K	Program for phased development (if applicable) [4-295(b)(3)]
N/A	15	15	15	15	IV-L	Hazardous Material Emergency Plan (if applicable) [4-194]
N/A	-	-	4	-	IV-M	Mobile Home Park Rezoning Information [4-195(d) et seq.]
3	3	3	3	3	IV-N	Aerial [4-295(a)(4)(b)] See II-F-3
N/A	3	3	3	3	IV-O	Map of Historical & Archaeological Sites [4-295(a)(4)(f)]
N/A	3	3	3	3	IV-P	Possible Impacts on Historical & Archaeological Sites[4-295(a)(4)(f)]
1	1	1	1	1	IV-Q	Application and Exhibits on CD-ROM

***At least one copy must be an original.**

PART V

AFFIDAVIT

I, Michael McCarty certify that I am the owner or authorized representative of the property described herein, and that all answers to the questions in this application and any sketches, data or other supplementary matter attached to and made a part of this application, are honest and true to the best of my knowledge and belief. I also authorize the staff of the City of Bonita Springs Community Development to enter upon the property during normal working hours for the purpose of investigating and evaluating the request made thru this application.

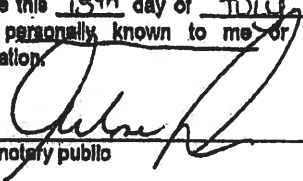

Signature of Owner or Owner-authorized Agent

7/15/19
Date

Lynx Zuckerman at Bonita Grande, LLC
Typed or printed name and title
By: Lynx Zuckerman Holding Company, LLC
By: Michael McCarty, its President

STATE OF ~~FLORIDA~~ NEW JERSEY
COUNTY OF ~~BOCA RATON~~ MORRIS

The foregoing instrument was certified and subscribed before me this 15th day of JULY, 2019, by Michael McCarty, who is personally known to me or who has produced _____ as identification.


Signature of notary public

(SEAL)

Printed name of notary public

ARLENE LIEBERMAN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires 10/15/2019

PART I – GENERAL EXPLANATORY NOTES

THE APPLICANT MUST PAY THE APPROPRIATE APPLICATION FEE AS SET FORTH BY THE CITY.

UPON WRITTEN REQUEST, THE DIRECTOR MAY MODIFY THE SUBMITTAL REQUIREMENTS CONTAINED IN THIS SECTION IF THE APPLICANT CLEARLY DEMONSTRATES THAT THE SUBMISSION WILL HAVE NO BEARING ON THE REVIEW AND PROCESSING OF THE APPLICATION. THE REQUEST AND THE DIRECTOR'S WRITTEN RESPONSE MUST ACCOMPANY THE APPLICATION SUBMITTED AND WILL BECOME A PART OF THE PERMANENT FILE.

PART I – EXPLANATORY NOTES

- A. Applicant's Name: Application may be made by the landowner or the authorized agent. **[Sec. 4-193(a)]** Where there is more than one owner, either legal or equitable, then all such owners must jointly initiate the application. Exceptions to this are:
- 1) It is not required that both husband and wife initiate the application on private real property owned by them.
 - 2) The property is subject to a land trust agreement, the trustee may initiate the application.
 - 3) The fee owner is a corporation, any duly authorized corporate official may initiate the application.
 - 4) The fee owner is a partnership, the general partner may initiate the application.
 - 5) The fee owner is an association, the association may appoint an agent to initiate the application on behalf of the association.
 - 6) The property is a condominium or time-share condominium, refer to Sec. 4-193(a)(1)b. for rules.
 - 7) The property is a subdivision, refer to Sec. 4-193(a)(1)c. for rules.
 - 8) Rezoning initiated by the City Council on property not owned by the City.
- B. Relationship of applicant to owner: If the applicant is not the owner of the property or the person authorized to represent the owner through the Covenant of Unified Control, the applicant must submit proof of authority to represent the owner. This may be accomplished with a **notarized** authorization form from the owner or his authorized representative. Label this submittal as Exhibit I-B-1.
- If the owner does not desire to sign the attached Covenant of Unified Control he may submit an alternate document for consideration by the City Attorney's office prior to submitting the application for rezoning. A copy of the City Attorney's approval of the document must be submitted with the application.
- If the application is City-initiated by the City of Bonita Springs Council, attach a copy of the "green sheet" whereby the action was authorized. Label the copy as Exhibit I-B-2.
- Submit a list of the names of all property owners and their addresses for property included within the requested action. Label as Exhibit I-B-3.
- C. Name of owner (s): see F. below
- D. Date property was acquired by present owner(s). If the City initiated the rezoning and does not own the property or have it under contract for purchase, enter "Not Applicable".
- E. If the request is City-initiated and the City is not purchasing the property, enter "Not Applicable".
- F. Disclosure Form: Except for City-Initiated rezonings, a Disclosure Form (Exhibit I-F, attached) must be submitted for any entity whose interest in the property is other than solely equity interest(s) which are regularly traded on an established commodities market in the United States or another Country.
- G. Existing Deed Restrictions: A copy of the deed restrictions on the subject property, if any, and a statement as to how the deed restrictions may affect the requested action must be submitted.
- H. Authorized Agent(s): If the owner or applicant has authorized agent(s) to act on his/her behalf, list the agent(s) name, mailing address and phone number. If City-initiated, enter "Not Applicable".

PART II – EXPLANATORY NOTES

A. Nature of Request:

1. If for rezoning to a Planned Development district, indicate the zoning classification(s) being requested.
2. If not for rezoning provide specific details of the action requested. (eg. Amendment to PD. Etc),

B. Legal Description: **If rezoning to more than one district, a separate legal description must be provided for each classification requested.**

If the property is not within a platted subdivision recorded in the official plat books of Lee County, a complete legal description must be attached which is sufficiently detailed and legible so as to be able to locate said property on county maps or aerial photographs. The legal description must include the Section, Township, Range, and parcel number(s).

If the application includes multiple contiguous parcels, the legal description may describe the perimeter boundary of the total area, and need not describe each individual parcel, except where different zoning requests are made on individual parcels. Label the legal description as Exhibit II-B-1.

If the request is owner-initiated, a survey or a certified sketch of description as set out in chapter 5J-17.053, Florida Administrative Code must be submitted, unless the subject property consists of one or more undivided platted lots. If the application includes multiple abutting parcels, the legal description must describe the perimeter boundary of the total area, but need not describe each individual parcel. However, the STRAP number for each parcel must be included.

The Director has the right to reject any legal description which is not sufficiently detailed or legible so as to locate said property, and may require a certified survey or boundary-survey prepared by a surveyor meeting the minimum technical standards for land surveying in the state, as set out in chapter 5J-17.053, F.A.C. Boundaries must be clearly marked with a heavy line. The boundary line must include the entire area to be developed. If the request is owner-initiated the Federal Emergency Management Agency flood zone and required finished floor elevation must be shown as well as the location of existing structures on the property.

C. Project Street Address: If the street address is unknown, the address may be obtained from the Lee County E-911 Addressing Division at (239) 338-3200.

D. General Location: The general location should reference known major streets so as to indicate to the general public the location of the property. A property location map must be submitted. Label the map as Exhibit II-D.

E. City of Bonita Springs Plan Information:

1. List the current City of Bonita Springs Land Use Classification of the subject parcel(s).
2. City of Bonita Springs Plan Information. Submit a copy of any amendment being proposed to the City of Bonita Springs Plan by the applicant which may affect the subject property as well as the Planning Division's reference number for the amendment. Label the proposed amendment as Exhibit II-E-1. Attach a statement as to how the amendment will affect your property. Label the statement as Exhibit II-E-2.

F. Drainage, Water Control and Other Environmental Issues

2. If environmentally sensitive areas exist on the site, an environmental assessment must be prepared that examines the existing conditions, addresses the environmental problems, and proposes means and mechanisms to protect, conserve, or preserve the environmental and natural resources.

H. Property Dimensions: If the parcel is irregularly shaped, indicate the average width and depth of the property. Indicate the length of property abutting any existing street rights-of-way or easements. If property abuts more than one street, indicate frontage on each street.

The total area (in square feet or acres) of the property.

I. Land Area Calculations

1. Undevelopable Areas: Insert the area of land identified as undevelopable by the following terms:
 - a. Freshwater wetlands
 - b. Other wetlands
 - c. Submerged land subject to tidal inundation. The area of land which is submerged and is subject to tidal inundation.

PART III – EXPLANATORY NOTES

A. Nature of Request

5. Aviation Hazard: If your project is near any commercial or general aviation facility or within any area delineated on the Lee County Port Authority Airspace Notification Map as a notification area, describe any structures (including proposed communication towers), lighting, or other features which could adversely affect safe flight, and label it Exhibit III.A.5.

B. Facilities

1. Fire District: List the Fire District in which the property is located.
2. Water Supply:
 - a. Estimate the daily consumption of potable water by the proposed project.
For residential projects, use 250 gpd (gallons per day) per unit. If the water treatment facility serves only mobile homes or recreational vehicles, the following figures may be used:
 - Mobile Homes use 187.5 gpd. per unit.
 - Recreational Vehicles use 150 gpd. per unit.For all other types of projects, show calculations and source of consumption rates utilized.
 - b. If the property lies wholly or partly in the certificated franchised service area of an established water utility, name the utility company.
If a private, on-site, potable water system is proposed, please provide a description of the system.
 - d. Source of non-potable water service: If a separate system is proposed for non-potable (irrigation) water uses, please specify the source.
3. Sanitary Sewer Service.
 - a. Estimated daily production of wastewater
For residential projects use 200 gpd (gallons per day) per unit. If the sewage treatment facility serves only mobile homes or recreational vehicles, the following figures may be used:
 - Mobile Homes use 150 gpd per unit.
 - Recreational Vehicles use 120 gpd per unitFor all other types of projects, show calculations and source of consumption rates utilized.
 - b. If any special types of effluent can be anticipated, please submit Exhibit III.B.3. (attached)
 - c. If the property lies wholly or partly in the certificated or franchised service area of an established sanitary sewer district or sewer utility name the utility.
 - e. If a private, on-site, wastewater treatment and disposal facility is proposed, please submit Exhibit III.B.3 (attached).

PART IV - EXPLANATORY NOTES: Exhibits not previously discussed.

Surrounding Property Owners List: A complete list of all property owners, and their mailing addresses, for all property within three hundred seventy-five (375) feet [five hundred (500) feet if for a COP] of the perimeter of the subject property or the portion thereof that is the subject of the request. Names and addresses of property owners shall be deemed to be those appearing on the latest tax rolls of the County. The applicant is responsible for the accuracy of such list. **[Sec 4-194(a)(6)]**

Property Owners Map: A City Zoning map or other similar map displaying all of the parcels of property within three hundred seventy-five feet [five hundred (500) feet if for a COP] of the perimeter of the subject parcel or the portion thereof that is the subject of the request, referenced by number or other symbol to the names on the property owners list. The applicant shall be responsible for the accuracy of the map. **[Sec. 4-194(a)(7)]**

Unified Control Documentation. A notarized document (see Exhibit IV-D) corroborating unified control over the subject parcel. **[Sec. 4-295(a)(3)]**

If the owner does not desire to sign the attached Covenant of Unified Control he may submit an alternate document for consideration by the City Attorney's office prior to submitting the application for rezoning.

Existing Conditions: **[Sec. 4-295(a)(4)]** NOTE: If more than one of the following requirements is shown on the same set of maps or photos, please mark the document with all appropriate exhibition numbers.

Existing zoning and current uses: Show existing zoning and current land uses surrounding the property to a distance of 375 feet.

Soils, vegetation and ground cover: Classified in accordance with USDA/SCS system and the Florida Land Use and Cover Classification System, respectively

Topography: Provide a City of Bonita Springs Topographical map (if available).

Public Transit: Show the property in relation to existing and proposed public transit routes and bus stops, including what facilities exist at the bus stop.

Environmental Assessment: Areas of encroachment by undesirable exotic (floral) species, the line of mean high water, and jurisdictional boundaries of state and federal agencies, and Coastal Construction Setback Lines. If the site contains unique landforms or biological areas such as creek beds, sand dunes, coastal or interior hammocks, or old growth pine flatwoods, additional information may be required including wildlife and plant inventories and hydrologic details, in order to identify the highest quality biological communities and develop suitable conservation measures. Please contact the City of Bonita Springs Community Development at 239-444-6150 with any questions concerning this environmental assessment.

Master Concept Plan: Refer to Sec. 4-295 (a)(6)a.3. or b. 3. AND 4-295(a)(7)a. for information.

Schedule of Uses: **[Sec. 4-295(a)(7)]**

1. A summary of the kinds of uses proposed for the entire site (for projects containing residential uses, this shall include the types of proposed dwelling units);
2. The units (gross square feet for commercial/industrial uses, number of units for residential, motel/ hotel uses, beds for institutional types of uses, etc.) of each kind of use for the entire site;
3. For developments containing uses for which the parking requirements are to be determined by the Director, the number of parking spaces proposed for those uses.

Schedule of deviations: Refer to Sec. 4-295(a)(6)a.9. or b.9. and 4-295(a)(7)d.

Traffic Impact Statement: **[Sec. 4-295(a)(6)a.11 Or b. 10 and 4-295(a)(7)]** Format and degree of detail is set forth in the adopted City of Bonita Springs Code.

Surface Water Management Plan: **[Sec. 4-295 (b)(1)]** Written statements which describe:

1. The runoff characteristics of the property in its existing state;
2. In general terms, the drainage concept proposed, including the outfall to canals or natural water bodies including how drainage flow from adjacent properties will be maintained;
3. The retention features (including existing natural features) that will be incorporated into the drainage system and the legal mechanism which will guarantee their maintenance;
4. How existing natural features will be preserved. Include an estimate of the ranges of existing and post development water table elevations, where appropriate.
5. Describe the requirements for fill materials posed by this development for other than building pads (use, volume, etc.)
6. If the property is subject to seasonal inundation or subject to inundation by a stream swollen by the rains of a 100-year storm event, indicate the measures that will be taken to mitigate the effects of expectable flooding. **[3-324]**

Management Plan for Protected Species: **[Sec. 4-295(b)(2)]** Refer to the Sec. 3-456.

Program for phased development: **[Sec. 4-295(b)(3)]** Description of program for phased development (if applicable). A description of the program of phased construction, if the development is to be so constructed.

GENERAL

- a. The applicant is responsible for the accuracy and completeness of this application. Any time delays or additional expenses necessitated due to the submittal of inaccurate or incomplete information shall be the responsibility of the applicant.
- b. All information submitted with the application or submitted at the public hearing becomes part of the public record and shall be a permanent part of the file.
- c. All applications must be submitted in person. Mailed-in applications will not be processed.
- d. All attachments and exhibits submitted shall be of a size that will fit or conveniently fold to fit into a letter size (8 1/2" x 11") folder.
- e. The Department staff will review this application for compliance with requirements of the City of Bonita Springs Land Development Code. If any deficiencies are noted, the applicant will be notified.
- f. All applicants shall pay an application fee as set forth in the City of Bonita Springs Fees and Charges Manual.

**EXHIBIT I-F
DISCLOSURE OF INTEREST FORM FOR:**

STRAP NO. SEE ATTACHED **CASE NO.** _____

1. If the property is owned in fee simple by an INDIVIDUAL, tenancy by the entirety, tenancy in common, or joint tenancy, list all parties with an ownership interest as well as the percentage of such interest.

Name and Address	Percentage of Ownership
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2. If the property is owned by a CORPORATION, list the officers and stockholders and the percentage of stock owned by each.

Name, Address, and Office	Percentage of Stock
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3. If the property is in the name of a TRUSTEE, list the beneficiaries of the trust with percentage of interest.

Name and Address	Percentage of Interest
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

4. If the property is in the name of a GENERAL PARTNERSHIP OR LIMITED PARTNERSHIP, list the names of the general and limited partners.

Name and Address	Percentage of Ownership
Lynx Asset Services, LLC 2255 Glades Road, Suite 324A, Boca Raton, FL 33431	50%
ZH4, LLC 6131 Lyons Road, Suite 200, Coconut Creek, FL 33073	50%
_____	_____
_____	_____
_____	_____

5. If there is a **CONTRACT FOR PURCHASE**, whether contingent on this application or not, and whether a Corporation, Trustee, or Partnership, list the names of the contract purchasers below, including the officers, stockholders, beneficiaries, or partners.

Name, Address, & Office (if applicable)	Percentage of Stock
LYNX ZUCKERMAN AT BONITA GRANDE, LLC*	
2255 GLADES ROAD, SUITE 324A, BOCA RATON, FL 33431	
*LYNX ZUCKERMAN HOLDING COMPANY, LLC, ITS MGR	

Date of Contract: _____

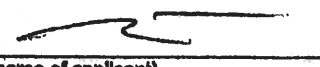
6. If any contingency clause or contract terms involve additional parties, list all individuals or officers, if a corporation, partnership, or trust.

Name and Address

For any changes of ownership or changes in contracts for purchase subsequent to the date of the application, but prior to the date of final public hearing, a supplemental disclosure of interest shall be filed.

The above is a full disclosure of all parties of interest in this application, to the best of my knowledge and belief.

Signature: Lynx Zuckerman at Bonita Grande, LLC
(Applicant)



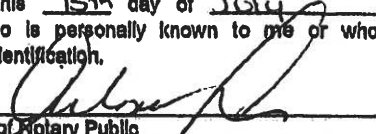
(Printed or typed name of applicant)

STATE OF ~~FLORIDA~~ New Jersey
COUNTY OF ~~DESS~~ McMURTRY

By: Lynx Zuckerman Holding Company, LLC
By: Michael McCarty, its President

The foregoing instrument acknowledged before me this 15th day of July, 2019, by Michael McCarty, who is personally known to me or who has produced as identification.

Signature of Notary Public



ARLENE LIEBERMAN

NOTARY PUBLIC OF NEW JERSEY

Printed Name of Notary Public
My Commission Expires 10/16/2019

(SEAL)

**EXHIBIT II-F-2
ENVIRONMENTAL ISSUES**

A. Topography: Describe the range of surface elevations of the property:

Elevations range mostly from 12' to 14', with lower areas within remnant agricultural ditches (7'±) and within the canal along Bonita Beach Road (2'±).

B. Sensitive Lands: Identify any environmentally sensitive lands, including, but not limited to, wetlands (as defined in the Comprehensive Plan), flow ways, creek beds, sand dunes, other unique land forms [see the Comprehensive Plan for listed species occupied habitat (see Sec. 4-1337 et seq. of the Land Development Code).

A jurisdictional wetland mapped as FLUCFCS Code 6189 E1 Willow/Pop Ash, Disturbed, (0-24% Exotics) occupies approximately 0.12 acres. The wetlands hydrology was irreparably altered over 50 years ago by an encircling deep ditch with direct connection to the Kehl Canal. The sub-canopy is dominated by exotic vegetation, primarily Brazilian pepper (*Schinus terebinthifolius*). Surface water drainage features on the project occupy approximately 6.65 acres and have been mapped as FLUCFCS Code 500 (Canal/Ditch). The Kehl Canal abuts the project's northern boundaries and a portion of the western boundary. Thirteen gopher tortoise (*Gopherus polyphemus*) burrows were located on the east side of project in disturbed upland areas mapped as Palmetto Prairie, Disturbed (FLUCFCS Code 3219 E1); Pine Flatwoods, Disturbed (FLUCFCS Code 4119E1); Hardwood/Conifer Mixed, Disturbed (FLUCFCS Code 4349 E4); and Disturbed Land (FLUCFCS Code 740). Estimated occupancy is four to ten gopher tortoises.

C. Preservation/Conservation of Natural Features: Describe how the lands listed in B. above will be protected by the completed project:

A Preserve Area and Protected Species Management Plan is included as Exhibit IV-J. Approximately 5.7 acres of uplands located near the northeast side of the project are proposed to be enhanced and preserved by conservation easement dedicated to the South Florida Water Management District. The uplands will contain some occupied gopher tortoise habitat. Based on the small population size, poor habitat conditions, and limited habitat availability, it is recommended that the remainder of gopher tortoises be relocated to a suitable off-site conversation area. Suitability for some gopher tortoises to remain following site development will be reviewed with the Florida Fish and Wildlife Conservation Commission.

D. Shoreline Stabilization: If the project is located adjacent to navigable natural waters, describe the method of shoreline stabilization, if any, being proposed:

**EXHIBIT III-A-2
PRELIMINARY DENSITY CALCULATIONS***

A. Gross Residential Acres

1. Total land area:	<u>48.38</u> acres
2. Area to be used for non-residential uses: (Line A.2.a. plus A.2.b.):	_____ acres
a. R-O-W providing access to non-residential uses:	_____ acres
b. Non-residential use areas: Vertical Mixed-use - N/A	_____ acres
3. Gross residential acres (Line A.1 less A.2):	_____ acres
a. Uplands areas	<u>48.26</u> acres
b. Freshwater Wetlands areas	<u>0.12</u> acres
c. Other Wetland areas	_____ acres
	Interchange Commercial

B. Comprehensive Plan Land Use Classification: _____ (If more than one classification, calculations for each classification must be submitted)

Density Standards (from the Comprehensive Plan)

1. Maximum density for Land Use Classification:	<u>10</u> units/gross res. acre
2. Maximum total density for Land Use Classification:	_____ units/gross res. acre

MAXIMUM PERMITTED DWELLING UNITS

C. High Density Residential, High Density Mixed Use/Village, "Old 41" Town Center Mixed Use Redevelopment Overlay Area.

1. Standard density uplands units (A.3.a. times B.1)	_____ units
2. Standard density wetlands units (A.3.b. & A.3.c. times B.1) <i>N/A per Bonita Plan</i>	_____ units
3. Total standard density units (sum of C.1 & C.2)	_____ units
4. Max. Total density units [A.3.a. times ((B.1 plus 1/2 of (B.2 less B.1)))]	_____ units
5. Sub-total permitted std. density units (line C.3 or C.4 - whichever is less):	<u>482</u> Units Sub-total
6. BONUS UNITS (REQUESTED)	
a. Low-moderate housing density:	_____ units
b. TDR units:	_____ units
c. Sub-total (C.6.a plus C.6.b)	<u>Ø</u> units
7. Total Permitted Units (C.5. plus C.6.c):	<u>482</u> Units Total

NOTE: may not exceed (A.3.a. times B.2) plus (A.3.b. and A.3.c. times .05).

* Subject to staff review and correction.

D. Moderate Density Mixed Use/Planned Development, Medium Density Multi-Family Residential, Medium Density Residential, Moderate Density Residential

1. Standard density uplands units (A.3.a. times B.1)	_____ units
2. Standard density freshwater wetlands units (A.3.b. times B.1)	_____ units
3. Total standard density units (sum of D.1 & D.2)	_____ units
4. Maximum upland density (A.3.a. times 8)	_____ units
5. Total permitted units (line D.3 or D.4 - whichever is less):	_____ Units

E. Suburban Density Residential, Low Density Residential, Estate Residential

- | | | |
|---|-------|--------------------|
| 1. Standard density uplands units (A.3.a. times B.1) | _____ | units |
| 2. Standard density freshwater wetlands units (A.3.b times B.1) | _____ | units |
| 3. Total standard density (sum of E.1 & E.2) | _____ | units |
| 4. Maximum upland density (A.3.a. times 4) | _____ | units |
| 5. Total permitted units (line E.3 or E.4 - whichever is less): | _____ | Units Total |

F. Conservation, Resource Protection, DRGR

- | | | |
|-------------------------------------|-------|-------|
| 1. Total acres of "Open Land" | 19.14 | acres |
| 2. Maximum density (F.1 times 0.2*) | 1 | units |
| 3. Total permitted units: | 1 | units |

EXHIBIT III-B-3
SANITARY SEWER FACILITIES
NOT APPLICABLE

A. **Special Effluent:** If special effluent is anticipated, please specify what it is and what strategies will be used to deal with its' special characteristics:

B. **Private On-site Facilities:** If a private on-site wastewater treatment and disposal facility is proposed, please provide a detailed description of the system including:

1. Method and degree of treatment:

2. Quality of the effluent:

3. Expected life of the facility:

4. Who will operate and maintain the internal collection and treatment facilities:

5. Receiving bodies or other means of effluent disposal:

C. **Spray Irrigation:** If spray irrigation will be used, specify:

1. The location and approximate area of the spray fields:

2. Current water table conditions:

3. Proposed rate of application:

4. Back-up system capacity:

**EXHIBIT I-B-4
COVENANT OF UNIFIED CONTROL**

The undersigned do hereby swear or affirm that they are the fee simple title holders and owners of record of property commonly known as See attached (street address) and legally described in exhibit A attached hereto.

The property described herein is the subject of an application for planned development zoning. We hereby designate Robert J. Mulhere & Rich Yovanovitch as the legal representative of the property and as such, this individual is authorized to legally bind all owners of the property in the course of seeking the necessary approvals to develop. This authority includes but is not limited to the hiring and authorization of agents to assist in the preparation of applications, plans, surveys, and studies necessary to obtain zoning and development approval on the site. This representative will remain the only entity to authorize development activity on the property until such time as a new or amended covenant of unified control is delivered to the City of Bonita Springs.

The undersigned recognize the following and will be guided accordingly in the pursuit of development of the project:

1. The property will be developed and used in conformity with the approved master concept plan including all conditions placed on the development and all commitments agreed to by the applicant in connection with the planned development rezoning.
2. The legal representative identified herein is responsible for compliance with all terms, conditions, safeguards, and stipulations made at the time of approval of the master concept plan, even if the property is subsequently sold in whole or in part, unless and until a new or amended covenant of unified control is delivered to and recorded by the City of Bonita Springs.
3. A departure from the provisions of the approved plans or a failure to comply with any requirements, conditions, or safeguards provided for in the planned development process will constitute a violation of the Land Development Code.
4. All terms and conditions of the planned development approval will be incorporated into covenants and restrictions which run with the land so as to provide notice to subsequent owners that all development activity within the planned development must be consistent with those terms and conditions.
5. So long as this covenant is in force, City of Bonita Springs can, upon the discovery of noncompliance with the terms, safeguards, and conditions of the planned development, seek equitable relief as necessary to compel compliance. The City of Bonita Springs will not issue permits, certificates, or licenses to occupy or use any part of the planned development and the City may stop ongoing construction activity until the project is brought into compliance with all terms, conditions and safeguards of the planned development.

Lynx Zuckerman at Bonita Grande, LLC

Owner

Printed Name

By: Lynx Zuckerman Holding Company, LLC

By: Michael McCarty, its President

~~STATE OF FLORIDA~~ NEW JERSEY
~~COUNTY OF BEECH~~ MONMOUTH

Sworn to (or affirmed) and subscribed before me this 10th day of JULY 2019, by MICHAEL MCCARTY, who is personally known to me or who has produced _____ as identification.

Notary Public

ARLENE LIEBERMAN

NOTARY PUBLIC OF NEW JERSEY

(Name typed, printed or stamped) My Commission Expires 10/15/2019
(Serial Number, if any)

RECEIVED
CITY OF BONITA SPRINGS

JUL 26 2019

COMMUNITY DEVELOPMENT
DEPARTMENT


LETTER OF AUTHORIZATION

To Whom It May Concern:

Please be advised that SFI Eagle Land, LLC, fee simple owner of a portion of the subject property, hereby authorizes Andrew Zuckerman, Member, Lynx Zuckerman at Bonita Grande, LLC., to act on its behalf in applying for a City of Bonita Springs Planned Development Zoning. This authority to represent our interest includes any and all documents required as part of the zoning petition and submitted on behalf of the Applicant, Lynx Zuckerman at Bonita Grande, LLC.

STRAP NUMBER(S) or LEGAL DESCRIPTION - See Attached

STRAP#:


Signature of Owner SFI Eagle Land, LLC
NAME, TITLE
Donald Mears, V.P.

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was acknowledged before me this 9th day of July, 2019, by Donald Mears, who is personally known to me, or has produced _____ as identification and who did not take an oath.


NOTARY PUBLIC



Heather Thompson
NOTARY, PRINTED NAME

VARIANCE REPORT

Subject Parcels: 29 Affected Parcels: 137 Buffer Distance: 1000 ft

RECEIVED
CITY OF BOCA RATON
5/30/2019

COMMUNITY DEVELOPMENT
DEPARTMENT



31-47-26-B3-00601.0010 et al.

1,680,260 840 420 0 1,680 Feet

THE INFORMATION CONTAINED IN THIS REPORT IS GOVERNED BY FLORIDA STATUTE 119.071 (GENERAL EXEMPTIONS FROM INSPECTION OR COPYING OF PUBLIC RECORDS).

**EXHIBIT II-E-2
BONITA GRANDE MPD
REQUEST STATEMENT & BONITA PLAN CONSISTENCY**

RECEIVED
CITY OF BONITA SPRINGS
MAR 20 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

Summary of Request

The applicant is requesting a zoning change from CPD (Eagle Trust) to a Mixed Use Planned Development (MPD) to allow for a mixed-use development consisting of up to 483 multi-family dwelling units and/or an equivalent number of assisted or independent living units; 165 hotel rooms; 315,000 square feet of commercial/retail, including office and medical office; along with customary accessory uses.

Development Location

The subject site is located on the northwestern corner of the intersection of Bonita Grande Drive and Bonita Beach Road, approximately half a mile east of Interstate 75, and contains approximately 67.5 acres in total. The site is designated Interchange Commercial (48.4 acres) and DRGR (19.1 acres) on the Future Land Use Map in the Comprehensive Plan of Bonita Springs. A portion of the site is located within the Bonita Beach Road Corridor Overlay, Interstate Zone, and is subject to the Bonita Beach Road design standards of the LDC. The site is currently zoned CPD, allowing a big-box retail/office development.

The property is across Bonita Beach Road from Bernwood Park of Commerce, developed with a shopping center, outparcels (including a gas station, banks, tire store), and across Bonita Grande Drive from a RaceTrac gas station and a Bonita Fire Station. Properties to the west, towards 75, are also designated Interchange Commercial and most have been approved commercial zoning, although they are vacant at this time. The DRGR portion of the site (northern portion) abuts a Lee County Conservation 2020 preserve.

Specifically, the subject site is abutted on the north by the Pine Lake Preserve (Lee County) and the Bonita Nature Place zoned AG-2 Agricultural. On the east, across Bonita Grande Drive, is a vacant parcel zoned CPD Commercial Planned Development (Lee County); a Bonita Springs Fire Department Station zoned CFPD Community Facilities Planned Development; a single family residence zoned AG-2 Agricultural (Lee County); a vacant parcel zoned CC Community Commercial (Lee County), and a gas station zoned CC Community Commercial (Lee County). On the south, across Bonita Beach Road, is the Bernwood Park of Commerce, zoned MPD Mixed Use Planned Development, and developed with a Publix grocery store and several outparcels, including banks and a gas station. To the west, the property abuts a single family residence zoned AG-2 Agricultural, vacant parcels zoned CPD Commercial Planned Development, an office building zoned CPD Commercial Planned Development, and vacant parcels zoned AG-2 Agricultural.

Please see the table on the next page for zoning and existing land uses surrounding the project.

	Zoning	Existing Land Use
North	AG-2	Bonita Nature Place
South	MPD	ROW, Bernwood Park of Commerce
East	CFPD (Bonita), AG-2 & CC (Lee County)	Bonita Springs Fire Department Station 24, single family residence, vacant/undeveloped, gas station
West	AG-2, CPD	Vacant/undeveloped, single family residences, office

Project History

The subject site was rezoned to the Eagle Trust CPD by Bonita Springs Zoning Ordinance ZO-08-09. The CPD allows for a total of 350,000 square feet of commercial floor area, of which 45,000 square feet may be office development. There are two approved Master Concept Plans (MCP) that provide two development scenarios showing a different arrangement of outparcels and height limitations. MCP A shows a primary retail tract and 10 outparcels and allows a maximum building height of 55 feet for the Primary Retail Anchor Tenant Parcel and Outparcels 9 and 10; and a maximum height of 35 feet for all other parcels. MCP B shows a larger primary retail tract and six outparcels, and allows a maximum building height of 55 feet for the Primary Retail Anchor Tenant Parcel and 35 feet for all other parcels.

Design Vision

Bonita Grande is envisioned to be a new model for walkable, mixed-use “village” in Bonita Springs. The plan employs the concept of placemaking to enhance public open space and encourage social interaction. Most significantly, this is accomplished via the north/south palm-lined entry street which transitions to a linear green square that terminates on a lake that is framed by a corner tower element. The network of interconnected streets ensures that as the property is developed with a mixture of uses, the open space network will be maintained (as opposed to the conventional suburban super-block). To create a balanced and sustainable development, the master plan preserves indigenous green space and mitigates flood control with a series of four large lakes.

Design Approach

The site has been designed to accommodate a mixed-use style development in order to support the city’s desire to create a more walkable, bike-friendly environment, placing residents in close proximity to needed services and amenities and making them accessible without the need for a car.

With its high traffic volume, limited crossings, and wide right-of-way, Bonita Beach Road is of a scale that is challenging for pedestrian activity. While pedestrians should be accommodated, bicycles are a more likely alternative transportation mode. Therefore, the master plan proposes a shared 8-foot wide share use path along Bonita Beach Road that is connected to the internal system of bike paths, sidewalks, and shared use paths. This creates a system separated from the traffic along Bonita Beach Road and is also consistent with Sec. 3-304 of the LDC, which places the multimodal path for this section of Bonita Beach Road along the south side of the arterial. Likewise, rather than creating bike/ped facilities along Bonita Grande Drive, a collector that sees traffic from the mine to the north, a 6-foot sidewalk is provided that connects to the internal, separated complete street facilities. Once on the site, pedestrian circulation is given priority. A

network of connected streets feature tree-lined sidewalks and cross-walks to encourage pedestrian activity within the community. Setbacks are proposed to be reduced to allow buildings to interact with the sidewalk and better define the public space of the street.

Because of the well-defined street and open space network, it is not necessary to predetermine uses on a parcel-by-parcel basis. Parcel development may respond to market demand and the needs of the community (including surrounding neighborhoods) as long as it meets the approved development criteria (setbacks, landscaping, etc.) and falls within the range of pre-approved uses. The parcels are platted in smaller increments (smaller than conventional suburban out-parcels), to provide maximum flexibility and encourage smaller uses which are more compatible with the village concept.

Density

Density was calculated at the maximum allowed per the Bonita Plan. A portion of the property is designated Commercial Interchange on the FLUM which allows multi-family dwelling units. The Commercial Interchange designation allows a maximum base density of 10 du/ac, and a maximum total density of 15 du/ac if providing affordable housing. The proposed residential density is a total of 483 multi-family dwelling units; or the equivalent assisted or independent living facility units, subject to LDC Sec. 4-1283, *Density equivalents*. The ratio will be determined at time of development order.

Consistency with the Bonita Plan

The subject property is designated Interchange Commercial and Density Reduction Groundwater Resource (DRGR) on the Future Land Use Map and is consistent with the uses and anticipated development patterns established by these categories.

Specifically, the proposed rezoning is consistent with the following Goals, Objectives, and Policies of the Bonita Plan:

Future Land Use Element

Policy 1.1.15: Interchange Commercial – Intended for uses that serve the traveling public such as automobile service/gas stations, hotel/motel, restaurants and gift shops; and a broad range of tourist-oriented, general commercial, light industrial, commercial office, and multi-family residential up to 10 dwelling units per acre within the approximately 385 acres of gross land area in the land use category.

- a. If affordable housing is provided, residential density may be increase by up to five additional dwelling units per acre.***
- b. Maximum allowable height of structures shall be 75 feet from the base flood elevation to the eaves.***
- c. Nonresidential uses shall be limited to a maximum floor area ratio (FAR) of 1.2.***

The uses proposed are consistent with those permitted by the land use category and density, intensity, and height limitations.

Policy 1.1.21: Density Reduction Groundwater Resource (DRGR) – Intended to recognize geographic areas that provide significant recharge to aquifer systems associated with existing potable water wellfields or future wellfield development. Land uses in these areas must be compatible with maintaining surface and groundwater levels at their historic levels. Allowable land uses are limited to conservation uses; agriculture; residential uses at a maximum density of one dwelling unit per 10 gross acres within the approximately 4,230 acres of gross land area in the land use category (approximate acreage includes annexed Lee County DRGR lands); public uses; non-profit recreational uses and essential services needed for the health safety and general welfare of the community such as lift stations, utility lines, equipment and appurtenances necessary for such systems to furnish adequate levels of service.

In accordance with this policy, the uses proposed for the portion of the site designated DRGR are limited to preservation, open space, stormwater management, and passive recreational uses.

Objective 1.16: Bonita Beach Road Corridor and Bonita Beach Road Corridor Quadrant Map: Establish regulations to implement the Bonita Beach Road Vision Study for the Bonita Beach Road Corridor, which is generally located between the Gulf of Mexico and the City limits to the East. The corridor serves as the main gateway to the City, and is intended for an interconnected mix of uses including commercial, civic, residential, and mixed-use development, with emphasis on compatibility, a human-scale of development, walkability and bike-ability, and a vibrant and aesthetically-pleasing streetscape.

The proposed rezoning and associated conditions will ensure a mixed-use development that is connected to adjacent properties and designed to the human-scale to accommodate and encourage pedestrian and bicycle traffic and contribute to a vibrant and aesthetically pleasing streetscape.

Policy 1.16.1: Implement a cohesive set of provisions in the Land Development Code to provide enhanced standards for new development along the Bonita Beach Road Corridor relating to site design, access, land use, landscaping, parking requirements, interconnectivity, and mobility.

The proposed mixed-use development will provide vehicular interconnectivity to adjacent parcels to remove traffic from adjacent roadways. It will enhance mobility through provision of bicycle and pedestrian facilities. It will be designed to be consistent with place-making principles to enhance public open space and encourage social interaction.

Policy 1.16.4: Promote use of aesthetically pleasing architectural standards, accessory structures, and additional hardscape and landscape features to create a strong sense of place along Bonita Beach Road.

Place-making elements for this project include the north/south palm-lined entry street which transitions to a linear green square, terminating on a lake that is framed by a corner tower element.

Policy 1.16.5: New development and redevelopment projects shall be designed and developed to coordinate land uses, site design, access, and required infrastructure improvements with the mobility network identified in the Bonita Beach Road Vision Study.

The subject site has been designed with the vision for the Bonita Beach Road corridor in mind and complete street principles will be implemented within the site.

Policy 1.16.6: Evaluate new development and redevelopment projects along the Bonita Beach Road Corridor in relationship to the "Bonita Beach Road Corridor Quadrant Map" and "Corridor Network Zones Map" to encourage appropriate land use, site design techniques, interconnectivity, and multi-modal access.

The subject site has been designed with the vision for the Bonita Beach Road corridor in mind and complete street principles will be implemented within the site. Please also see the design discussion included on page 2.

Policy 1.1.4: Allowable Uses - The listing of appropriate land uses in each of the individual land use categories identifies those uses generally expected to be appropriate. However, other uses which are similar in character, intensity and impacts to those listed may also be deemed to be appropriate.

Interchange Commercial allows “multifamily residential.” This term is not specifically defined in the Bonita Plan; however, there is a definition for “Dwelling, Multi-family”: *A residential building containing two or more separate dwelling units, including duplexes, triplexes, and quadraplexes.* The applicant requests that the planned development allow the use of “multiple family building” and “townhouse,” as these terms are defined in the LDC, as uses that are similar in character, intensity, and impacts to multifamily residential. No additional density is requested.

Townhouse means a group of three or more dwelling units attached to each other by a common wall or roof wherein each unit has direct exterior access and no unit is located above another, and each unit is completely separated from any others by a rated firewall or a fire and sound resistant enclosed separation or space, and wherein each dwelling unit is on a separate lot under separate ownership.

Multiple-family building means a group of three or more dwelling units within a single conventional building, attached side by side, or one above another, or both, and wherein each dwelling unit may be individually owned or leased but the land on which the building is located is under common or single ownership. Dwelling units, other than caretaker's quarters, which are included in a building which also contains permitted commercial uses shall also be deemed to be multiple-family dwelling units.

Transportation Element

Objective 1.4: The City shall improve the aesthetic qualities and appearance of roadways, and their adjacent land uses.

The subject property is vacant and undeveloped. The building design and proposed landscaping will improve the aesthetic qualities and appearance of Bonita Beach Road and the adjacent land uses.

Policy 1.4.1: The City shall continue to enforce the provisions of its Land Development Regulations for architectural review and design guidelines for commercial development along its major arterial roadways. Other considerations shall include shared parking; parcel interconnectivity; increased landscaping requirements; participation in the Florida Yards and Neighborhoods Program; requirements for mechanical irrigation systems; and encouragement of, and incentives or requirements to, increase the proportion of parking located on the sides of, or behind, buildings rather than along the roadway frontage in order to protect the aesthetic quality of public viewsheds and vistas.

The development of the site along Bonita Beach Road will be subject to the design requirements of the Overlay, protecting the aesthetics of the corridor. The applicant is also providing an overlay plan which will govern the form of the development (building placement and urban open space features). The MCP provides for future interconnections to the property to the west.

Policy 1.4.4: Initial emphasis shall be given to improving the appearance and aesthetics of Imperial Street, Bonita Beach Road, Old U. S. 41, U. S. 41, Hickory Boulevard and Vanderbilt Drive, each of which are gateways to the City.

The subject property is vacant and undeveloped. The building design and proposed landscaping will improve the aesthetic qualities and appearance of Bonita Beach Road and the adjacent land uses and have been developed to be consistent with the city's vision for the corridor.

Objective 2.1: Provide for bicycle and pedestrian needs in the design of future improvements to Bonita Beach Road.

The project will provide bicycle and pedestrian facilities consistent with the intent of the City's complete street requirements.

Policy 2.1.3: Incorporate pedestrian amenities in the design of sidewalks and pathways to increase walkability and enhance the pedestrian environment, such as benches, canopy trees, and other hardscape and landscape features.

Internal streets will be designed using complete street principles, providing pedestrian and bicycle facilities. The MCP provides for plazas and open space areas to enhance the pedestrian environment and promote engagement in public spaces.

Policy 2.1.4: Where possible, locate planted buffer areas between the travel lanes of Bonita Beach Road and multi-use pathways and sidewalks to create separation between vehicular and non-vehicular traffic and enhance bicycle/pedestrian safety.

There is an existing canal, located within a 65' wide drainage easement, on the south side of the subject property along Bonita Beach Road. Therefore, the applicant proposes an 8-foot shared use path along Bonita Beach Road that connects to the internal bicycle/pedestrian facilities. Once on the site, pedestrian circulation is given priority.

Policy 2.1.7: Require future development to provide accessible bicycle storage racks and similar facilities to promote bicycle usage along Bonita Beach Road.

Bicycle facilities, including storage racks, will be provided in the both the commercial and residential areas within the project.

Conservation/Coastal Management

Policy 7.2.2: The City shall continue to provide regulations and incentives to prevent incompatible development in and around environmentally sensitive lands as defined in the prior "Resource Management Plan" policy, such as open space requirements that:

- a. Large developments must provide 50 percent of their open space percent requirement using existing indigenous native vegetation.***
- b. A scaled open space credit for single preserve areas will be given as an incentive to preserve indigenous native upland plant communities as follows: [Indigenous Vegetation Credit Table]***
- c. An additional maximum ten percent credit will be given if the areas above include and unique uplands or, connection to offsite conservation or preservation areas, or upland buffers to natural water bodies.***

Open space and indigenous vegetation are being provided consistent with this Policy. The applicant has selected for the single largest preserve area with the best chance for long-term sustainability in the disturbed landscape.

Policy 7.2.4: The City shall encourage the protection of viable tracts of sensitive or high-quality natural plant communities within developments.

Approximately 9.4 acres of the site is being set aside as preserve. The preserve area includes high-quality pine flatwoods and palmetto prairie. By selecting for upland pine preservation, the applicant is protecting a high quality natural plant community with the greatest chance of long-term viability. The existing disturbed wetland communities on the project site have already been recognized for impacts by the SFWMD and Corps and mitigated off-site.

Policy 9.3.3: The City shall require as a condition for issuance of development orders an additional fifty (50) percent retention/detention water quality treatment over that required in Section 5.2.1(a) of the Basis of Review for Environmental Resource Permits within the South Florida Water Management District. Dry detention water quality treatment systems shall not be used as the primary detention/retention component of the water management system...

The project will provide an additional 50 percent retention/detention water quality treatment as required by this policy and compliance with this requirement will be demonstrated during the development order review.

Policy 15.1.1: Development in wetlands shall be limited to very low density residential uses and uses of a recreational, open space, or conservation nature that are compatible with wetland functions. The maximum density in wetlands is one unit per 20 acres, except that one single-family residence will be permitted on lots meeting the standards in the administration section of the Future Land Use Element of the City's Comprehensive Plan.

Over-drainage has resulted in loss of wetland hydrology, soil subsidence, loss of hydric soil indicators, and a conversion of obligate wetland plants to more transitional and upland species. The ongoing upland conversion is testament to the non-viability of maintaining a functional wetland ecosystem at this location. The cypress trees, although persistent even in drained conditions, are located in areas that no longer meet wetland criteria. Due to the remaining Willow/Pop Ash wetland's small size, poor ecological value, and isolation, the state will not require design modifications to reduce or eliminate adverse wetland impacts. The pop ash community (0.12 acre) is not a viable preservation wetland community and is a remnant of a much larger wetland system that historically extended off-site. Historic connections have been severed and the remaining wetland area has been ditched and diked around its perimeter, severely affecting the hydrologic regime and allowing hardwoods (laurel oak) to encroach in the canopy of what was once a deep cypress slough. The remnant wetland exists adjacent to roads that have altered historic surface flow connections and larger drainage features that have altered the groundwater table. The natural upland buffer to the remnant wetland has been permanently lost. Wetland functions have already been mitigated in accordance with SFWMD regulations by a credit purchase at Panther Island Wetland Mitigation Bank.

Policy 15.1.5: Development in freshwater wetlands located in residential land use categories shall be limited to very low density residential uses and uses of a recreational, open space, or conservation nature that are compatible with wetland functions. The maximum density in freshwater wetlands, identified on the map of Evaluated Wetlands in the Future Land Use Map Series, shall be one unit per 20 acres ...

No density is being calculated from the wetlands acreage.

Policy 15.1.6: The natural functions of wetlands located in the City, as identified in the wetland inventory and evaluation contained in the Conservation/Coastal Management Element, shall be maintained and not degraded; and, degraded wetlands shall be restored whenever possible.

- a. Before any alteration is allowed, a determination of the existing hydroperiod in each wetland shall be provided by the property owner. The post-development hydroperiod shall approximate pre-development hydroperiod. A wetland hydroperiod maintenance plan shall be submitted for review and approval***
- b. Vegetation shall be protected in areas subject to seasonal water level fluctuations.***

- c. *The natural flow of water within and through contiguous wetlands shall not be impeded.*
- d. *Any alteration in wetlands, which results in loss of habitat, shall be mitigated in accordance with SFWMD regulations and shall ensure that the re-created wetlands provide values and functions equal to "no net loss of wetland functions" or, in case of an impacted or degraded wetland, greater than those of the wetland qualifying for alteration.*
- e. *For any project requiring mitigation, a wetland mitigation, maintenance, and monitoring plan based on best available technology shall be submitted for review and approval.*
- f. *Stormwater runoff from impervious surfaces shall be pretreated prior to its discharge into natural wetlands. Pretreatment may be in the form of underdrains, grassed swales, lake overflow, or other approved methods. Such facilities shall be designed and constructed in accordance with applicable regulations so that the discharge does not violate water quality standards or create an excessive amount of water, such that it could degrade the wetlands. Swales which route stormwater into wetlands shall be stabilized with sod or by other appropriate means.*
- g. *If fill is stockpiled near a wetland, appropriate sediment control measures (e.g., hay bales, silt screens, etc.) shall be employed to prevent sedimentation within the wetland. When building sites adjacent to wetlands are elevated by filling, the same erosion control requirements shall apply and the fill must be stabilized to prevent entry of sediment into the wetland.*
- h. *Buffers of existing upland vegetation, which are sufficient in each case to protect the values and functions of wetlands, shall be required around all or portions of wetlands to protect those systems from adverse impacts of development.*
- i. *To ensure permitted wetlands projects conform to the City's wetland regulations, the City shall meet with the SFWMD enforcement division to discuss what role the City may take in post-permit compliance.*

The pop ash community (0.12 ac) is not a viable preservation wetland community and is a remnant of a much larger wetland system that historically extended off-site. Historic connections have been severed and the remaining wetland area has been ditched and diked around its perimeter, severely affecting the hydrologic regime and allowing hardwoods (laurel oak) to encroach in the canopy of what was once a deep cypress slough. The remnant wetland exists adjacent to roads that have altered historic surface flow connections and larger drainage features that have altered the groundwater table. The natural upland buffer to the remnant wetland has been permanently lost. Wetland functions have already been mitigated in accordance with SFWMD regulations by a credit purchase at Panther Island Wetland Mitigation Bank.

Policy 15.1.10: Wetlands infested with exotics shall, where feasible, be restored to their historical hydrology, functions, and habitat.

Restoration of the cypress and pop ash community to their historic condition is not feasible. The historic hydrology, functions, and habitat have been severely altered by regional drainage projects; disrupted by roads that have severed surface water connection; isolated by destruction of surrounding natural communities; and transformed by invasion of hardwoods and exotic species.

Policy 16.1.3: New development and additions to existing development shall not degrade surface and ground water quality.

Policy 16.1.4: The design, construction, and maintenance of artificial drainage systems shall provide for retention or detention areas and vegetated swale systems that minimize nutrient loading and pollution of freshwater and estuarine systems.

Policy 16.3.1: The City will require new developments to design their surface water management systems to incorporate best management practices including, but not limited to, filtration marshes, grassed swales planted with native vegetation, retention lakes with enlarged littoral zones, preserved or restored wetlands, and meandering flow-ways.

All proposed development will comply with SFWMD design requirements and detention areas will also comply with this policy. Please also see the surface water management plan included with this submittal.

Policy 16.3.3: The City will require substantial preservation of existing flow-ways and encourage the restoration of historic flow-ways.

The water management system is designed to provide sufficient stormwater detention storage and water quality treatment to comply with South Florida Water Management District criteria focused on providing flood protection, adequate drainage, water quality treatment, and flood plain compensation as required to mitigate flood plain impacts and the inclusion of impervious areas within the development area. The system is designed to not degrade or adversely impact surface and ground water quality.

Flood plain compensation lakes outside of the perimeter isolation berm will be available to compensate for encroachment into the federally designated flood plain. These lakes will also provide a significant water quality treatment public benefit not required of the applicant. These lakes will provide water quality treatment facilities for the watershed outside and adjacent to the site isolation berm above and beyond what is required in the Environmental Resource Permit Information Manual. This water quality treatment benefit will depend on the depth of the lakes and will be very beneficial to the City of Bonita Springs' continued attempt to address water quality impairments within the Imperial River Basin. The lakes are positioned adjacent to the flood plain and the Keil Canal and will interact with the canal as the water tables and canal flows in and out of the designated flood plain compensation lakes. The water quality treatment benefit to the public will be significant and can be calculated utilizing the federally and state accepted Harvey Harper methodology for water quality treatment.

Consistency with Land Development Code Criteria

Sec. 4-325 – General Standards

- (a) ***All planned developments shall be consistent with the provisions of the Bonita Plan.***

The application is consistent with the uses, intensities, and densities allowed by the Interchange Commercial and DRGR Future Land Use Designations (please see the Bonita Plan consistency narrative, above).

- (b) ***All planned developments, unless otherwise excepted, shall be designed and constructed in accordance with the provisions of all applicable city development regulations in force at that time.***

The request will meet or exceed all performance and locational standards set forth in the Bonita Plan and LDC. One deviation is requested to allow access points into the site from Bonita Beach Road to match existing access points along the south side of Bonita Beach Road.

- (c) ***The tract or parcel proposed for development under this article must be located so as to minimize the negative effects of the resulting land uses on surrounding properties and the public interest generally, and must be of such size, configuration and dimension as to adequately accommodate the proposed structures, all required open space, including private recreational facilities and parkland, bikeways, pedestrian ways, buffers, parking, access, on-site utilities, including wet or dry runoff retention, and reservations of environmentally sensitive land or water. In large residential or commercial planned developments, the site planner is encouraged to create subunits, neighborhoods or internal communities which promote pedestrian and cyclist activity and community interaction.***

The proposed structures and uses will be compatible with the area. There is commercial development to the west and the south. The Bonita Nature Place is to the north. To the east is a fire station and gas station. The site has been designed in accordance with the city's codes. For additional information regarding the proposed design, please see the discussion of consistency with the Bonita Plan, above.

- (d) ***The tract or parcel shall have access to existing or proposed roads:***
(1) In accordance with chapter 3 and as specified in the Bonita Plan traffic circulation element or the official trafficways map of the county;

The subject property has access to Bonita Grande Drive, a two-lane collector, and Bonita Beach Road, a divided, four-lane major arterial. For further details, please see the Bonita Plan analysis above and the Master Concept Plan.

- (2) That have either sufficient existing capacity or the potential for expanded capacity to accommodate both the traffic generated by the proposed land use and that traffic expected from the background (through traffic plus that generated by surrounding land uses) at a level of service D or better on an annual average basis and level of service E or better during the peak season, except where higher levels of service on specific roads have been established in the Bonita Plan; and**

The project will not unduly burden the transportation network. Adjacent streets have capacity to carry traffic generated by the proposal. Please also see the transportation impact statement.

- (3) That provide ingress and egress without requiring site-related industrial traffic to move through predominantly residential areas.**

Not applicable as this is not an industrial use.

- (e) If within the Lee Tran public transit service area, the development shall be designed to facilitate the use of the transit system.**

The property is located along Bus Route 150 and there is a stop approximately one-tenth of a mile away on Bonita Grande Drive, south of Bonita Beach Road. The applicant has agreed to provide a Lee Tran stop along the Bonita Beach Road frontage.

- (f) Development and subsequent use of the planned development shall not create or increase hazards to persons or property, whether on or off the site, by increasing the probability or degree of flood, erosion or other danger, nor shall it impose a nuisance on surrounding land uses or the public's interest generally through emissions of noise, glare, dust, odor, air or water pollutants.**

The project will not create or increase hazards to persons or property by increasing the probability of flood or impose a nuisance on surrounding land uses through emissions of noise, glare, dust, odor, air or water pollutants. The proposed property development regulations are sufficient to ensure compatibility with surrounding land uses.

- (g) Every effort shall be made in the planning, design and execution of a planned development to protect, preserve or to not unnecessarily destroy or alter natural, historical or archaeological features of the site, particularly mature native trees and other threatened or endangered native vegetation. Alteration of the vegetation or topography that unnecessarily disrupts the surface water or groundwater hydrology, increases erosion of the land, or destroys significant wildlife habitat is prohibited. That habitat is significant that is critical for the survival of rare, threatened or endangered species of flora or fauna.**

A mitigation plan to compensate for the loss of heritage trees was presented to and accepted by the Tree Advisory Board on December 5, 2019. The proposed preserve exceeds the

minimum acreage required by the LDC. The uses proposed for the portion of the site designated DRGR are limited to preservation, open space, stormwater management, and passive recreational uses. Please also see the environmental analysis included with this submittal.

- (h) *A fundamental principle of planned development design is the creative use of the open space requirement to produce an architecturally integrated human environment. This shall be coordinated with the achievement of other goals, e.g., the preservation or conservation of environmentally sensitive land and waters or archaeological sites.***

Open space is being provided as required by the LDC. It is being centrally incorporated into the site via the north/south palm-lined entry street which transitions to a linear green square that terminates on a lake that is framed by a corner tower element. For additional information regarding the proposed design, please see the design discussion on page 2.

- (i) *Site planning and design shall minimize any negative impacts of the planned development on surrounding land and land uses.***

The proposed structures and uses are consistent with those allowed by the Bonita Plan and are compatible with the area. There is commercial development to the east and the south. The Bonita Nature Place is to the north. To the east is a fire station and gas station. The site has been designed in accordance with the city's codes. For additional information regarding the proposed design, please see the discussion of consistency with the Bonita Plan, above.

- (j) *Where a proposed planned development is surrounded by existing development or land use with which it is compatible and of an equivalent intensity of use, the design emphasis shall be on the integration of this development with the existing development, in a manner consistent with current regulation.***

The proposed structures and uses will be compatible with the area. There is commercial development to the east and the south. The Bonita Nature Place is to the north. Most of the property to the east is currently vacant. The site has been designed in accordance with the city's codes. For additional information regarding the proposed design, please see the discussion of consistency with the Bonita Plan, above.

- (k) *Where the proposed planned development is surrounded by existing development or land use with which it is not compatible or which is of a significantly higher or lower intensity of use (plus or minus ten percent of the gross floor area per acre if a commercial or industrial land use, or plus or minus 20 percent of the residential density), or is surrounded by undeveloped land or water, the design emphasis will be to separate and mutually protect the planned development and its environs.***

The site has been designed to provide sufficient separation to the preservation area (Bonita Nature Place) to the north via building setbacks and orientation, lakes, and pedestrian pathways.

- (l) ***In large residential or commercial planned developments, the site planner is encouraged to create subunits, neighborhoods or internal communities which promote pedestrian activity and community interaction.***

The project has been designed to create internal communities with pedestrian facilities and open space to promote community interaction.

- (m) ***In order to enhance the viability and value of the resulting development, the designer shall ensure the internal buffering and separation of potentially conflicting uses within the planned development.***

Property development regulations and robust landscaping provide the separation of potentially conflicting uses within the planned development.

- (n) ***Density or type of use, height and bulk of buildings and other parameters of intensity should vary systematically throughout the planned development. This is intended to permit the location of intense or obnoxious uses away from incompatible land uses at the planned development's perimeter, or, conversely, to permit the concentration of intensity where it is desirable, e.g., on a major road frontage or at an intersection.***

Because of the well-defined street and open space network, it is not necessary to predetermine uses on a parcel-by-parcel basis. Parcel development may respond to market demand and the needs of the community (including surrounding neighborhoods) as long as it meets the approved development criteria (setbacks, landscaping, etc.) and falls within the range of pre-approved uses. The parcels are platted in smaller increments (smaller than conventional suburban out-parcels), to provide maximum flexibility and encourage a diversity of uses which are more compatible with the village concept. The development will also be subject to locational and operational standards for certain uses, such as for warehousing or manufacturing uses, which are prohibited from locating along Bonita Beach Road.

- (o) ***Unless otherwise provided for in this article, minimum parking and loading requirements shall be as set forth in article VI, divisions 25 and 26, of this chapter. Where it can be reasonably anticipated that specified land uses are generators of occasional peak demand for parking space, a portion of the required parking may be pervious or semi-pervious surfaces subject to the condition that it be constructed and maintained so as to prevent erosion of soil. In all cases, however, sufficient parking shall be provided to prevent the spilling over of parking demand onto adjacent properties or rights-of-way at times of peak demand.***

The proposed development will meet the minimum parking and loading requirements set forth in the LDC. Sufficient parking shall be provided to prevent the spilling over of parking demand onto adjacent properties or rights-of-way.

- (p) *Joint use of parking by various land uses within the planned development may be permitted by special condition where it can be demonstrated or required that the demand for parking by the various uses will not conflict. Joint parking agreements between uses within and uses without the planned development shall be governed by agreement per general regulation (see section 4-1730), without exception.*

Acknowledged. Joint parking is not proposed at this time.

- (q) *Internal consistency through sign control, architectural controls, uniform planting schedules and other similar controls is encouraged.*

The site has been designed with uniform architectural and landscaping themes.

Sec. 4-131 (d) (2) – Zoning matters – Considerations

- a. *Whether there exists an error or ambiguity which must be corrected;*

There is no error nor ambiguity which must be corrected.

- b. *Whether public facilities will be available and adequate to serve a proposed land use change when reviewing a proposed change to a future urban area category; and*

The project will have access to adequate public facilities and will not unduly burden the transportation network.

- c. *Whether a proposed change is intended to rectify errors on the official zoning map.*

The proposed change is not intended to rectify errors on the official zoning map.

Sec. 4-131 (d) (3) – Zoning matters – Findings

- a. *The applicant has proved entitlement to the rezoning or special exception by demonstrating compliance with the Bonita Plan, this Land Development Code, and any other applicable code or regulation;*

The request is consistent with the goals, objectives, and policies of the Bonita Plan, the LDC, and other applicable codes or regulations.

- b. *The request will meet or exceed all performance and locational standards set forth for the potential uses allowed by the request;*

The request will meet or exceed all performance and location standards set forth in the Bonita Plan and LDC.

- c. *The request, including the use of TDR or affordable housing bonus density units, is consistent with the densities, intensities and general uses set forth in the Bonita Plan;*

The application is consistent with the uses, density, and intensities allowed by the Commercial Interchange and DRGR Future Land Use Designations.

d. The request is compatible with existing or planned uses in the surrounding area;

The request is compatible with existing and planned uses in the area.

e. Approval of the request will not place an undue burden upon existing transportation or planned infrastructure facilities and will be served by streets with the capacity to carry traffic generated by the development;

The project will have access to adequate transportation facilities and will not unduly burden the transportation network.

f. Where applicable, the request will not adversely affect environmentally critical areas and natural resources;

The request will not adversely affect environmentally critical or sensitive areas and natural resources.

g. In the case of a planned development rezoning, the decision of the zoning board must also be supported by the formal findings required by section 4-299(a)(2) and (4);

Acknowledged. The proposed mix of uses is appropriate at the subject location and the conditions provide sufficient safeguards to the public interest.

h. The zoning board must also find that public facilities are, or will be, available and adequate to serve the proposed land use.

Public facilities are available and adequate to serve the proposed land use.

**BONITA GRANDE
LISTED SPECIES SURVEY AND FLORIDA BONNETED BAT
CAVITY TREE SURVEY AND INSPECTION**

Revised February 2020

RECEIVED
CITY OF BONITA SPRINGS
MAR 20 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

INTRODUCTION

This report documents the listed species survey conducted by Passarella & Associates, Inc. (PAI) on February 24, 2016 and the cavity tree survey and inspection on October 7, 2016 for the 68± acre Bonita Grande parcel (Project), located east of Interstate 75 and northwest of the intersection of Bonita Beach Road and Bonita Grande Drive in Section 31, Township 47 South, Range 26 East, Lee County (Figure 1). The purpose of the listed species survey was to review the Project area for plant and wildlife species listed by the Florida Fish and Wildlife Conservation Commission (FWCC), the Florida Department of Agriculture and Consumer Services, and the U.S. Fish and Wildlife Service (USFWS) as endangered, threatened, species of special concern, or commercially exploited. Bald eagles (*Haliaeetus leucocephalus*) and their nests were also included since they are protected under Florida Administrative Code 68A-16.002 and the Bald and Golden Eagle Protection Act.

On October 7, 2016, trees in the Project area were reviewed and inspected for cavities which may be utilized by the Florida bonneted bat (*Eumops floridanus*) as potential roost sites. The Florida bonneted bat is listed as threatened by the FWCC and endangered by the USFWS.

The Project site is comprised primarily of upland habitat, with some disturbed cypress, pine/cypress, and ditches. A previous listed species survey had been conducted by others in association with environmental resource permitting in 2007. The previous survey had detected the presence of gopher tortoise (*Gopherus polyphemus*).

METHODOLOGY AND DISCUSSION

The listed plant and wildlife species survey included an on-site review conducted on February 26, 2016 and a review of state and federal listed species occurrence records.

The listed species field survey methodology consisted of qualified ecologists walking parallel belt transects across suitable habitat on the property (Figure 2). The transects were generally walked approximately 50 to 100 feet apart depending on habitat type and visibility. Habitat not surveyed consisted of dense Brazilian pepper (*Schinus terebinthifolius*). The weather during the survey was sunny with clear skies, wind from the north-northwest at 5 to 15 mph, and a temperature range of 50 to 70 degrees. The survey began at 9:15 a.m. and ended at approximately 4:30 p.m.

The cavity tree survey was conducted by qualified ecologists walking transects in an east-west direction through the survey area to ensure that sufficient visual coverage of potential cavity trees was obtained. The survey was conducted with the aid of binoculars. Specific habitats on

the Project site inspected for cavity trees included Pine Flatwoods, Disturbed (FLUCFCS Code 4119); Mesic Pine Invaded by Melaleuca (FLUCFCS Code 4159 E4); and Cypress, Disturbed (FLUCFCS Code 6219). The cavities were inspected with a Sandpiper Technologies Inc. TreeTop Peeper 2 elevated inspection system. The weather conditions during the survey were as follows: cloud cover 75 percent, winds northwest at ten miles per hour, and temperatures in the high to mid-80s. The survey was conducted between the hours of 12:30 p.m. and 4:30 p.m.

The review of listed species occurrence records involved an examination of available information on protected species in the Project's geographical region. The literature sources reviewed included the FWCC Florida's Endangered and Threatened Species (2015); Florida Atlas of Breeding Sites for Herons and Their Allies (Runde *et al.* 1991); USFWS Habitat Management Guidelines for the Bald Eagle in the Southeast Region (1987); the Florida Panther Habitat Preservation Plan (Logan *et al.* 1993); the Landscape Conservation Strategy Map (Kautz *et al.* 2006); and the USFWS and/or the FWCC databases for telemetry locations of Florida panther (*Puma concolor coryi*), bald eagle, red-cockaded woodpecker (*Picoides borealis*) (RCW), Florida black bear (*Ursus americanus floridanus*), Florida scrub jay (*Aphelocoma coerulescens*), and wading bird rookeries (such as the wood stork (*Mycteria americana*)) in Lee County. The results of the literature search found no documented occurrences of listed wildlife species on-site (Figure 3).

The wildlife agencies' database information is updated on a periodic basis and is current through different dates, depending on the species. The FWCC information is current through the noted dates for the following four species: Florida panther telemetry – June 2014; bald eagle nest locations – August 2014; black bear telemetry – December 2007; RCW locations – August 2014; and wading bird rookeries – December 1999.

RESULTS

The results of the February 24, 2016 listed species survey identified 13 potentially occupied gopher tortoise burrows and two unidentified squirrel nests. No squirrels were observed; however, the Project does overlap with the range of the Big Cypress fox squirrel (*Sciurus niger avicennia*), a state threatened species.

The literature search found no documented occurrences for listed wildlife species on the property (Figure 3). The Project is located within the 30-kilometer (18.6 miles) Core Foraging Area (CFA) of one wood stork colony (No. 619018) (Figure 4), which is located approximately 8 miles to the northeast. The wood stork is a state and federally listed threatened species. The Project is adjacent to the USFWS primary panther zone (Figure 5) located east of Bonita Grande Drive. There has been no documented Florida panther telemetry on the site.

The closest documented bald eagle nest is LE-050 which is located approximately four miles to the west of the site. The nest distance is beyond the USFWS and FWCC recommended a 660-foot buffer protection zone for active and alternate bald eagle nests. The bald eagle is not a listed species but is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Per the FWCC's database, no RCW colonies or cavity trees have been documented within the Project area (Figure 3). The closest noted RCW colony is located approximately four miles

south of the Project site. The USFWS considers suitable habitat for RCW to include any forested community with pines (*Pinus* sp.) in the canopy that encompasses more than 10.0± acres (i.e., includes both on- and off-site). Although the Project area does have canopy pine trees, no cavities were noted during the survey and no sightings were documented in the area. The RCW is a state and federally listed endangered species.

During the October 7, 2016 cavity tree survey and inspections, a total of seven dead trees with cavities were identified. The cavity trees included six pine (*Pinus elliottii*) and one melaleuca (*Melaleuca quinquenervia*). The approximate locations of the identified cavity trees are depicted on Figure 2. The cavities identified during the survey were inspected during daytime hours with the use of a Tree-Top Peeper Video Inspection System. The cavity inspection field observation form is included as Exhibit A. Photographs of the cavity trees are attached as Exhibit B. No Florida bonneted bats were documented during the cavity inspections.

SUMMARY

The results of the February 26, 2016 listed species survey identified 13 potentially occupied gopher tortoise burrows. The literature search of the wildlife agencies' databases found no documented occurrences for listed species on the Project site. The Project site is located adjacent to the west side of the Primary Zone of the Florida panther. It is also located within the CFA of one wood stork colony. The Project site is not located within the vicinity of an active bald eagle nest.

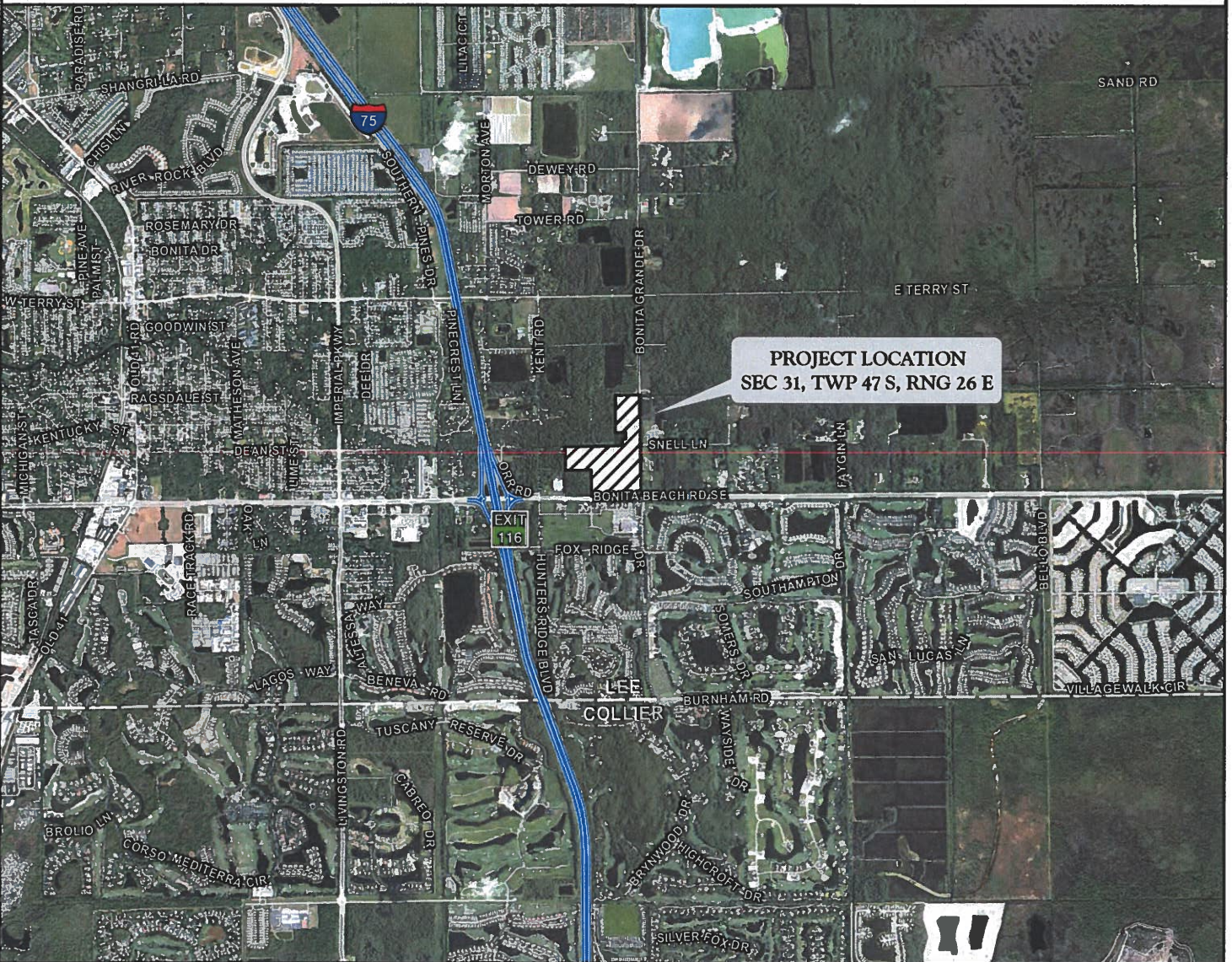
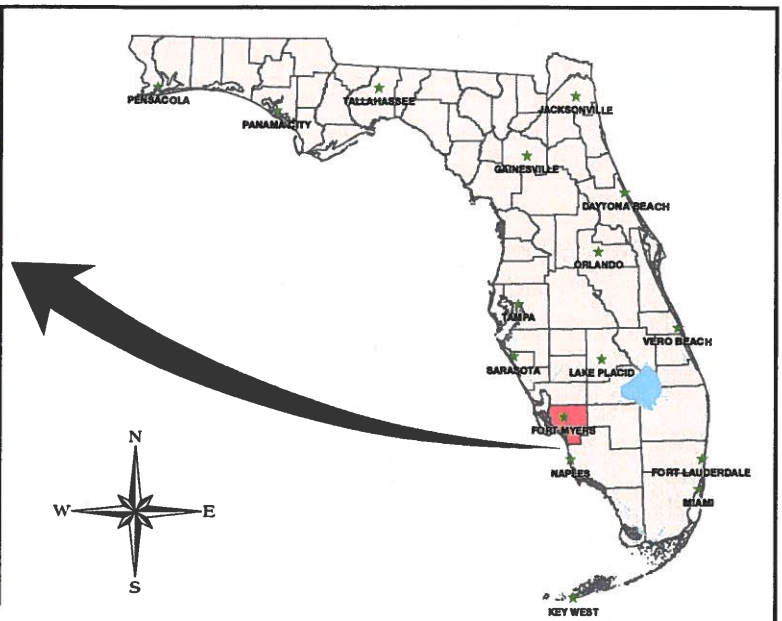
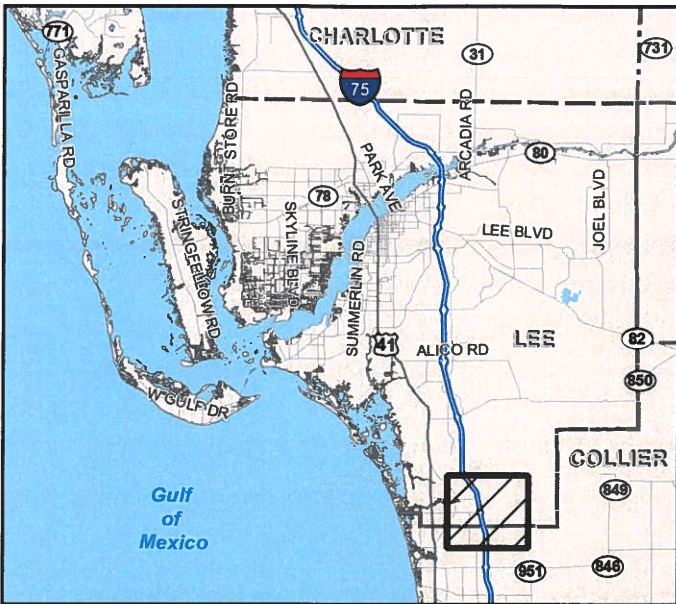
A cavity tree survey was conducted on October 7, 2016 to identify potential cavity trees on the Project site that may be utilized for roosting by the Florida bonneted bat. Cavity locations in seven trees were identified. The cavities were inspected for the presence of roosting Florida bonneted bats with the use of a TreeTop Peeper Video Inspection System. No Florida bonneted bats were documented during the cavity tree survey or the cavity inspections.

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- Florida Fish and Wildlife Conservation Commission. 2015. Florida's Endangered and Threatened Species. Official Lists, Bureau of Non-Game Wildlife, Division of Wildlife. Florida Fish and Wildlife Conservation Commission. Tallahassee, Florida.
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- Logan, Todd, Andrew C. Eller, Jr., Ross Morrell, Donna Ruffner, and Jim Sewell. 1993. Florida Panther Habitat Preservation Plan South Florida Population. U.S. Fish and Wildlife Service; Gainesville, Florida.

Runde, D.E., J.A. Gore, J.A. Hovis, M.S. Robson, and P.D. Southall. 1991. Florida Atlas of Breeding Sites for Herons and Their Allies, Update 1986 - 1989. Nongame Wildlife Program Technical Report No. 10. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

U.S. Fish and Wildlife Service. 1987. Habitat Management Guidelines for the Bald Eagle in the Southeast Region.



**FIGURE 1. PROJECT LOCATION MAP
BONITA GRANDE**






DRAWN BY	DATE
W.C., D.B.	3/11/16
REVIEWED BY	DATE
A.W.	3/11/16
REVISED	DATE



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SCALE: 1" = 200'

- LEGEND:**
-  SFWMD WETLANDS (0.12 Ac.±)
 -  SFWMD "OTHER SURFACE WATERS" (6.65 Ac.±)
 -  GT-1 APPROXIMATE LOCATION OF GOPHER TORTOISE BURROW (TYP.)
 -  CT-1 APPROXIMATE LOCATION OF CAVITY TREE (TYP.)
 -  APPROXIMATE LOCATION OF SURVEY TRANSECTS

FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
*3219 E1	PALMETTO PRAIRIE, DISTURBED (0-24% EXOTICS)	1.22 Ac ±	1.8%
*4119 E1	PINE FLATWOODS, DISTURBED (0-24% EXOTICS)	9.48 Ac ±	14.0%
4159 E4	MESIC PINE INVADDED BY MELALEUCA (78-100% EXOTICS)	3.08 Ac ±	4.6%
422	BRAZILIAN PEPPER	3.58 Ac ±	5.3%
424	MELALEUCA	2.80 Ac ±	4.1%
4289 E4	CABBAGE PALM, DISTURBED (78-100% EXOTICS)	13.28 Ac ±	19.7%
4349 E4	HARDWOOD/CONIFER MIXED, DISTURBED (78-100% EXOTICS)	19.14 Ac ±	28.3%
500	WATER (CANAL/DITCH)	6.65 Ac ±	9.8%
*6189 E1	WILLOW/POP ASH, DISTURBED (0-24% EXOTICS)	0.12 Ac ±	0.2%
*6305 E3	MIXED WETLAND FOREST, DRAINED (50-75% EXOTICS)	1.98 Ac ±	2.9%
740	DISTURBED LAND	4.08 Ac ±	6.0%
814	ROAD	2.14 Ac ±	3.2%
TOTAL		67.53 Ac.±	100.0%

*INDIGENOUS VEGETATION

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - FEBRUARY 2019.

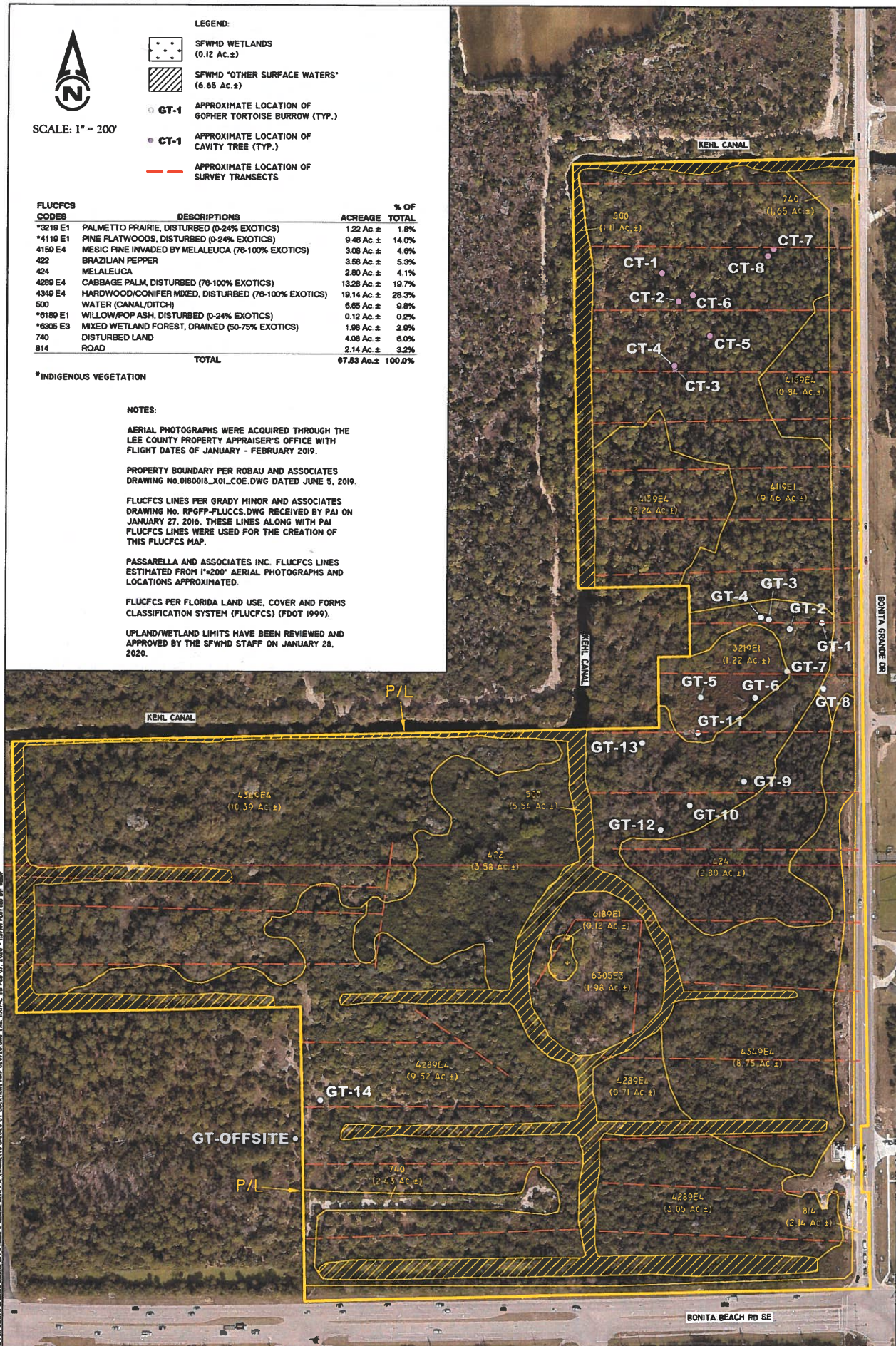
PROPERTY BOUNDARY PER ROBAU AND ASSOCIATES DRAWING No. 0180018_X01_COE.DWG DATED JUNE 5, 2019.

FLUCFCS LINES PER GRADY MINOR AND ASSOCIATES DRAWING No. RFGPF-FLUCFCS.DWG RECEIVED BY PAI ON JANUARY 27, 2016. THESE LINES ALONG WITH PAI FLUCFCS LINES WERE USED FOR THE CREATION OF THIS FLUCFCS MAP.

PASSARELLA AND ASSOCIATES INC. FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS HAVE BEEN REVIEWED AND APPROVED BY THE SFWMD STAFF ON JANUARY 28, 2020.



DRAWN BY	T.S. D.B.	DATE	11/3/16
REVIEWED BY	A.W.	DATE	11/3/16
DATE	D.B.	DATE	02/07/20

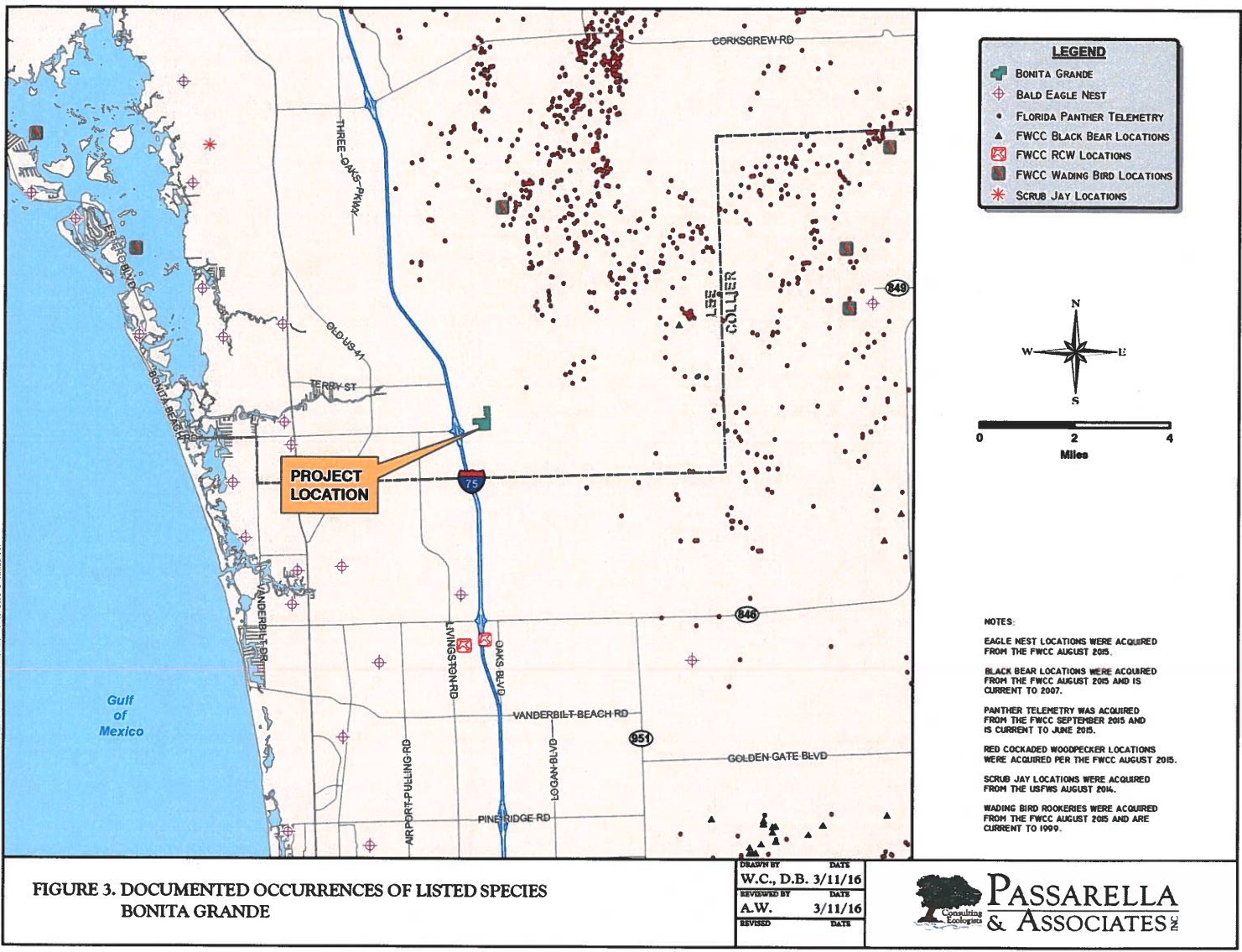
13620 Metropolis Avenue
Suite 200
Ft Myers, FL 33912
Phone (239) 274-0067
Fax (239) 274-0069



BONITA GRANDE
AERIAL WITH FLUCFCS, SURVEY TRANSECTS,
LISTED SPECIES, AND CAVITY TREE LOCATIONS

DRAWING No.	151S12420
FIGURE No.	FIGURE 2

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**FIGURE 3. DOCUMENTED OCCURRENCES OF LISTED SPECIES
BONITA GRANDE**

DRAWN BY	DATE
W.C., D.B.	3/11/16
REVIEWED BY	DATE
A.W.	3/11/16
REVISED	DATE



NOTES:

EAGLE NEST LOCATIONS WERE ACQUIRED FROM THE FWCC AUGUST 2015.

BLACK BEAR LOCATIONS WERE ACQUIRED FROM THE FWCC AUGUST 2015 AND IS CURRENT TO 2007.

PANTHER TELEMETRY WAS ACQUIRED FROM THE FWCC SEPTEMBER 2015 AND IS CURRENT TO JUNE 2015.

RED COCKADED WOODPECKER LOCATIONS WERE ACQUIRED PER THE FWCC AUGUST 2015.

SCRUB JAY LOCATIONS WERE ACQUIRED FROM THE USFWS AUGUST 2014.

WADING BIRD ROOKERIES WERE ACQUIRED FROM THE FWCC AUGUST 2015 AND ARE CURRENT TO 1999.

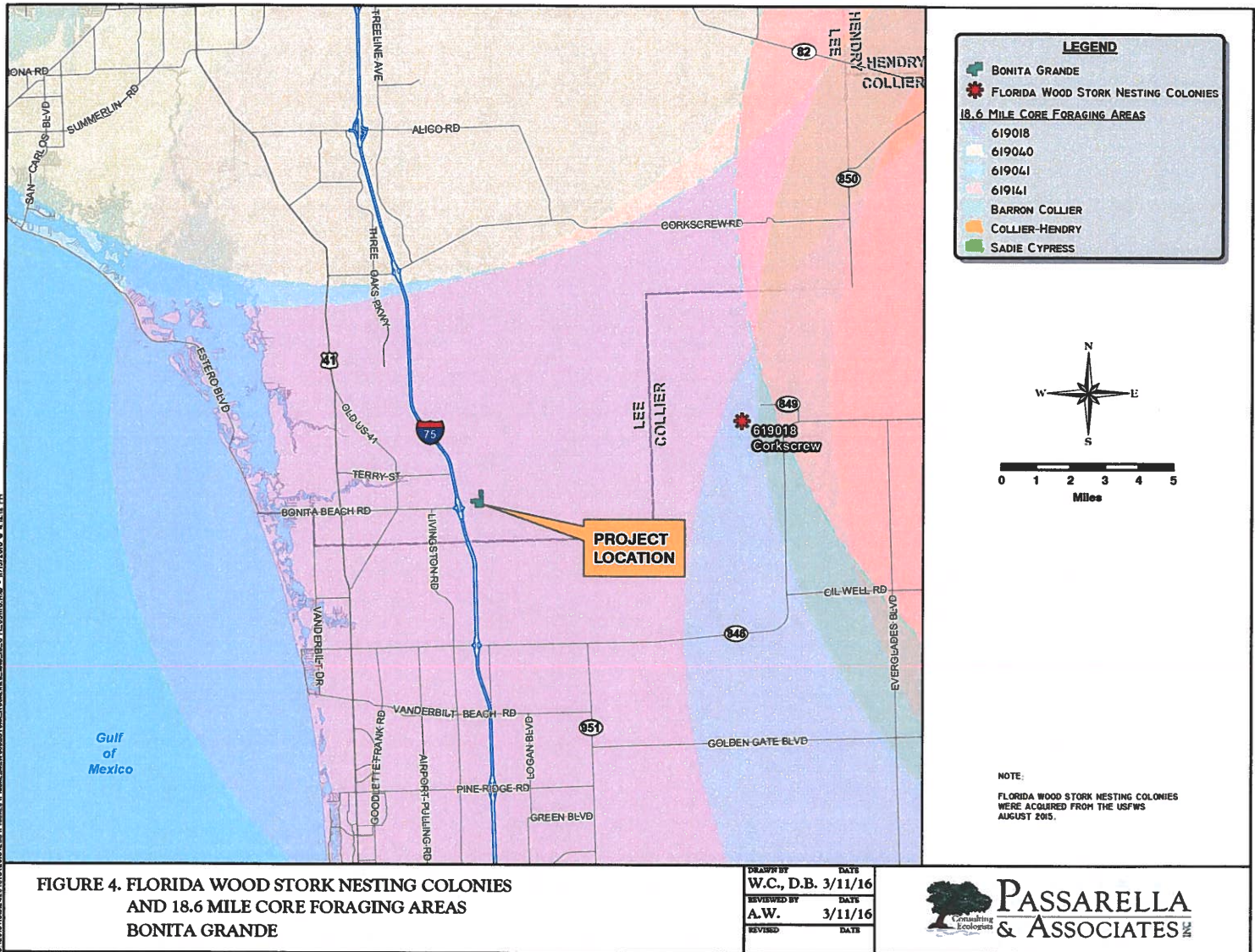
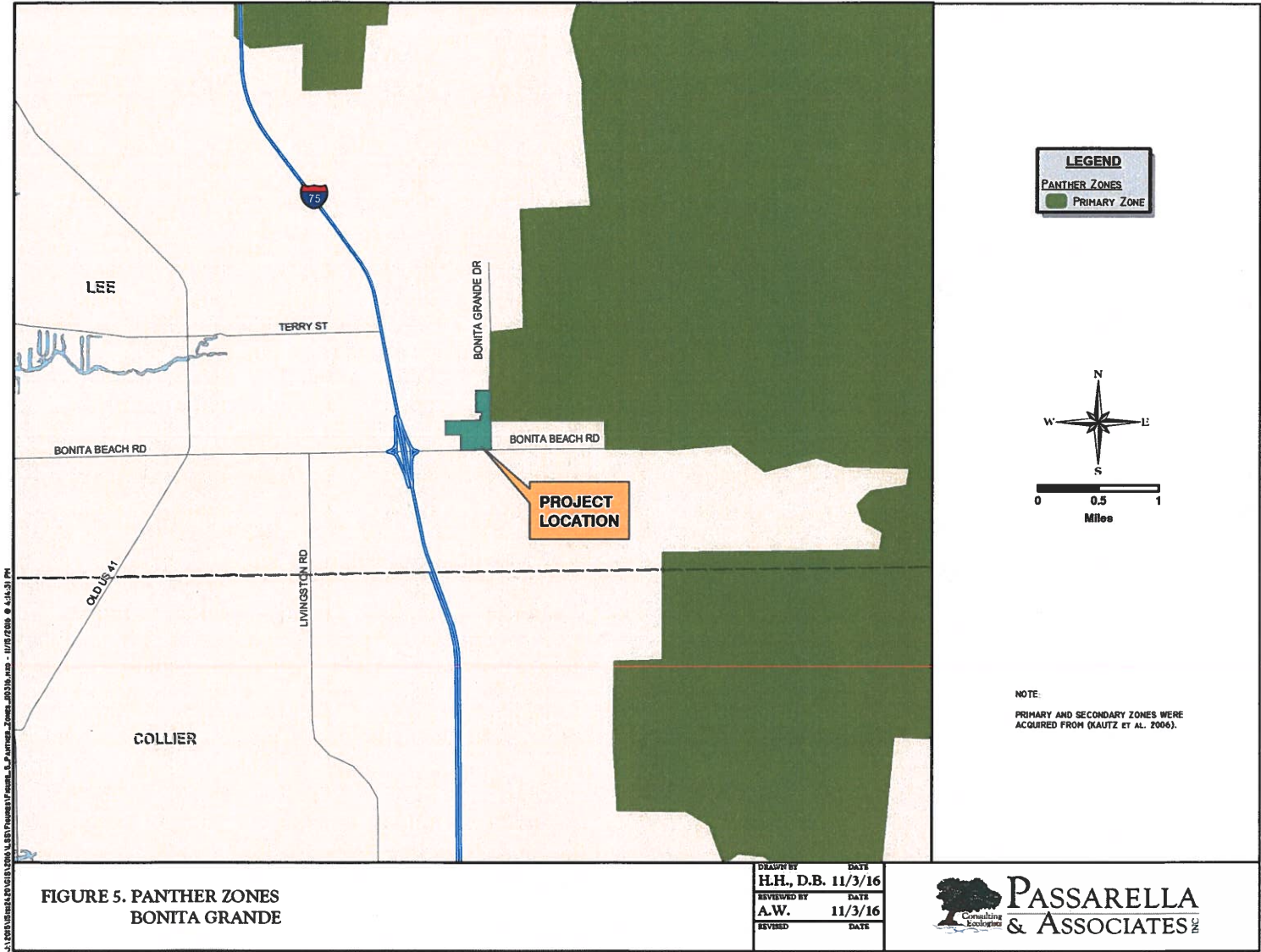
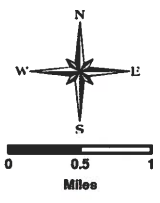


FIGURE 4. FLORIDA WOOD STORK NESTING COLONIES AND 18.6 MILE CORE FORAGING AREAS BONITA GRANDE



LEGEND
PANTHER ZONES
 PRIMARY ZONE



NOTE:
 PRIMARY AND SECONDARY ZONES WERE
 ACQUIRED FROM (KAUTZ ET AL. 2006).

**FIGURE 5. PANTHER ZONES
 BONITA GRANDE**

DRAWN BY	DATE
H.H., D.B.	11/3/16
REVIEWED BY	DATE
A.W.	11/3/16
REVISED	DATE



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APPENDIX A
TREE CAVITY INSPECTION
FIELD OBSERVATION FORM

**BONITA GRANDE
FLORIDA BONNETED BAT
TREE CAVITY INSPECTION FIELD OBSERVATIONS**

Date: October 7, 2016

Start Time of Survey: 1230

Weather Conditions: Cloud cover 75%, wind NW at 10 mph, and temperature in the high 80s

End time of survey: 1615

Weather Conditions: Cloud cover 75%, wind NW at 5-10 mph, and temperature in the mid 80s

Observer(s): Kyle Moore and Chris Griffin

Station	Tree Species	Direction (Degrees)	Height	Notes
CT-1	<i>Pinus elliottii</i>	130	40 feet 6 inches	Empty
CT-2	<i>Pinus elliottii</i>	330	47 feet 11 inches	Empty
CT-3A	<i>Pinus elliottii</i>	170	43 feet 9 inches	Partial cavity
CT-3B	<i>Pinus elliottii</i>	200	46 feet 3 inches	Empty
CT-4	<i>Pinus elliottii</i>	40	44 feet 2 inches	Empty
CT-5A	<i>Pinus elliottii</i>	180	42 feet 8 inches	Empty
CT-5B	<i>Pinus elliottii</i>	175	43 feet 8 inches	Empty
CT-5C	<i>Pinus elliottii</i>	160	46 feet 5 inches	Empty
CT-6	<i>Pinus elliottii</i>	120	49 feet 5 inches	Empty
CT-7A	<i>Melaleuca quinquenervia</i>	300	26 feet 5 inches	Empty
CT-7B	<i>Melaleuca quinquenervia</i>	300	28 feet 5 inches	Empty
CT-7C	<i>Melaleuca quinquenervia</i>	320	29 feet	Partial cavity
CT-8	<i>Pinus elliottii</i>	350	38 feet 7 inches	Partial cavity

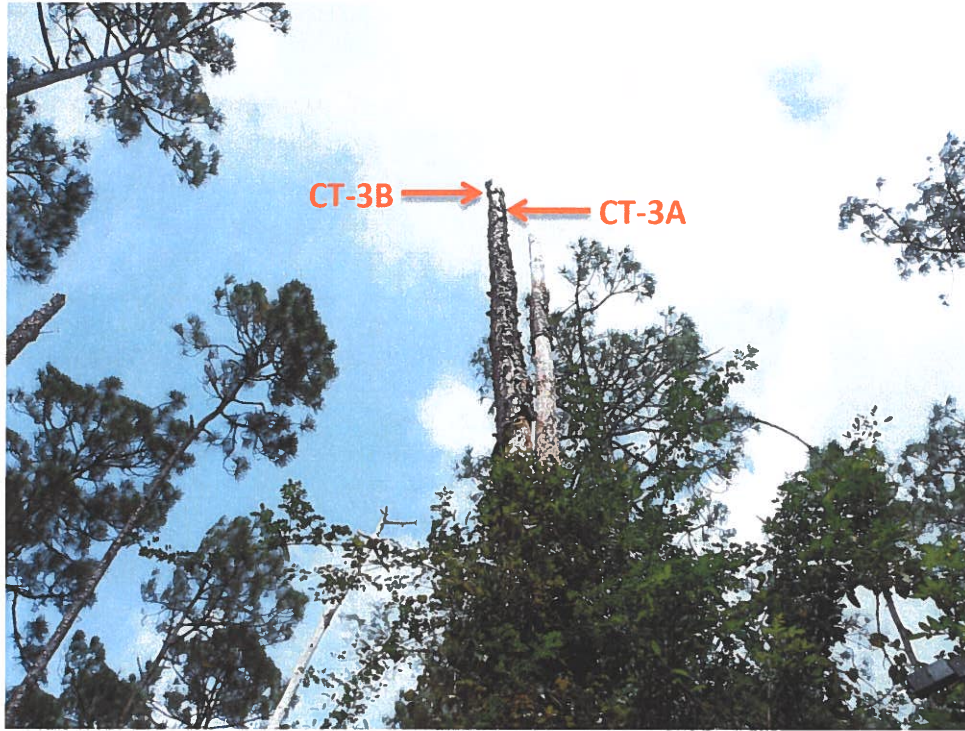
APPENDIX B
CAVITY TREE PHOTOGRAPHS



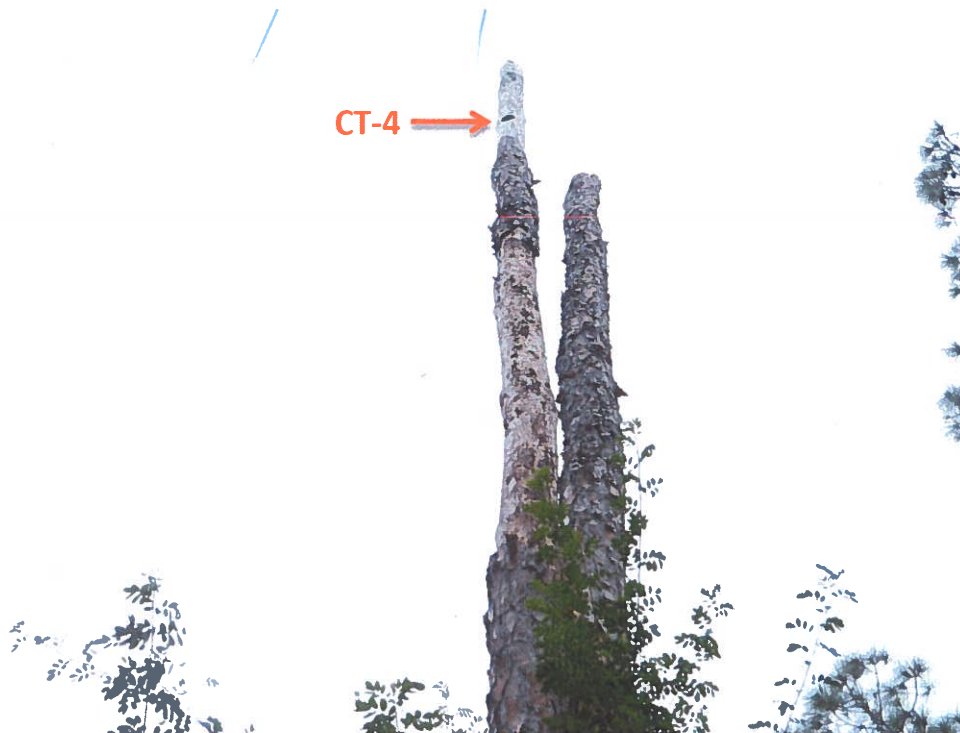
CT-1, October 7, 2016



CT-2, October 7, 2016



CT-3, October 7, 2016



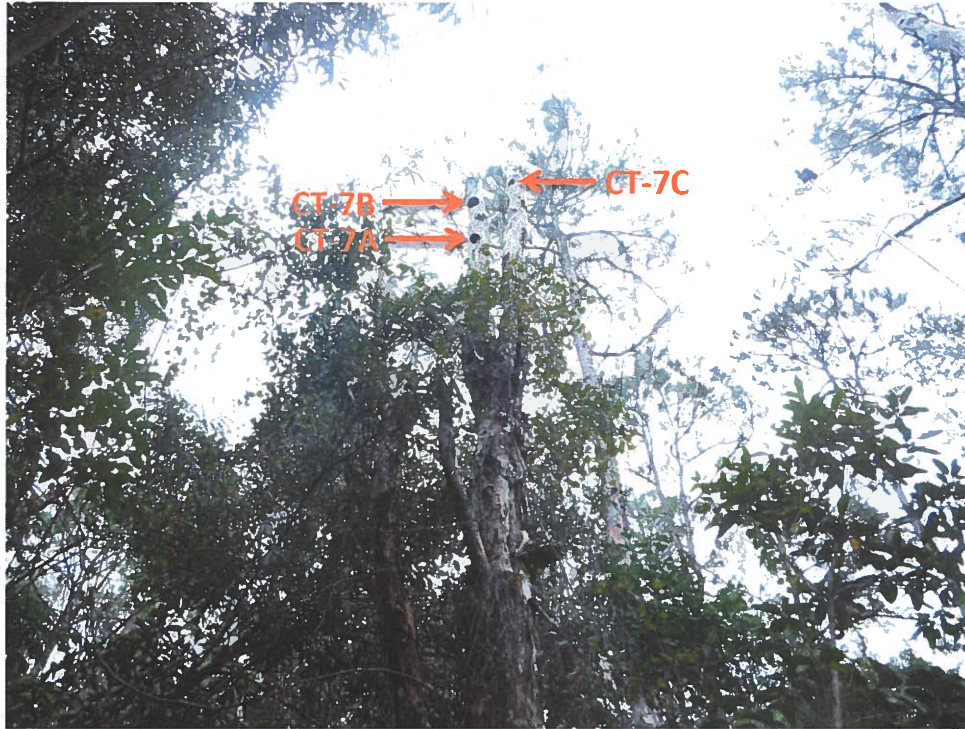
CT-4, October 7, 2016



CT-5, October 7, 2016



CT-6, October 7, 2016



CT-7, October 7, 2016



CT-8, October 7, 2016

**BONITA GRANDE
FLORIDA BONNETED BAT
ACOUSTIC SURVEY REPORT**

RECEIVED
CITY OF BONITA SPRINGS
MAR 20 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

November 2016

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Project No. 15ISI2420

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1.0 INTRODUCTION

This report documents the Florida bonneted bat (*Eumops floridanus*) survey conducted by Passarella & Associates, Inc. for Bonita Grande (Project). The 68± acre Project is located in Section 31, Township 47 South, Range 26 East, Lee County (Exhibit 1). More specifically, the Project is located east of Interstate 75 and northwest of the intersection of Bonita Beach Road and Bonita Grande Drive.

The survey was conducted to determine if Florida bonneted bats are utilizing the Project site. The Florida bonneted bat is listed as Threatened by the Florida Fish and Wildlife Conservation Commission and Endangered by the U.S. Fish and Wildlife Service (USFWS). There are no known records of Florida bonneted bats occurring on-site.

2.0 SITE CONDITIONS

A Florida Land Use, Cover and Forms Classification System (FLUCFCS) and Wetlands Map for the property is provided as Exhibit 2. The Project site is comprised primarily of upland habitat, with some disturbed cypress, pine flatwoods, and ditches. The property is bordered by Bonita Beach Road to the south and Bonita Grande Drive to the west.

3.0 FLORIDA BONNETED BAT BIOLOGY

3.1 Description

With an average wingspan of 490 to 530 millimeters (19.3 to 20.9 inches) and an average length of 130 to 165 millimeters (5.1 to 6.5 inches), the Florida bonneted bat is the largest species of bat found in Florida. They are members of the Molossidae family, commonly referred to as free-tailed bats. As the name suggests, Molossids, including Florida bonneted bats, have tails that extend well beyond their short tail membrane. Also similar to other free-tailed bats, the Florida bonneted bat has small eyes; large upper lips; and long, narrow wings (Marks and Marks 2006). Their fur is short and glossy with sharply bicolored hairs with a white base (Timm and Genoways 2004). Their fur ranges from dark gray to brownish gray or cinnamon brown on its dorsal side, with lighter, grayish fur underneath. The Florida bonneted bat is characterized by its large size and its large, broad ears that slant forward over the eyes and join together along the midline of the head. Their big ears protrude over their head like a bonnet, giving them their name (Marks and Marks 2006).

3.2 Range

The current range of the Florida bonneted bat is known to include both the east and the west coast of Southern Florida (excluding the Keys), and includes Charlotte, Collier, Lee, Miami-Dade, Okeechobee, and Polk Counties. In addition, bonneted bat calls were recorded in two locations in the Kissimmee River area, which may effectively move the

range of this species northward by approximately 50 miles (Marks and Marks 2008a and USFWS 2014). They have historically been found in only a few areas, including the Miami area in 1936; Coral Gables, Coconut Grove, and Miami in the 1950s; Punta Gorda in 1979; Fakahatchee Strand in 2000; and North Fort Myers in 2003 (Marks and Marks 2006). Recent locations where bonneted bats have been recorded include 12 locations documented during acoustic surveys conducted between 2006 and 2008: Coral Gables (Granada Golf Course) and Homestead in Miami-Dade County; North Fort Myers in Lee County; Babcock Ranch in Charlotte and Lee Counties; Babcock/Webb in Charlotte and Lee Counties; Kicco WMA in Polk County; Kissimmee River PUA in Okeechobee County; Naples in Collier County; Everglades City in Collier County; Fakahatchee Preserve in Collier County; Big Cypress National Preserve in Collier County; and Picayune Strand State Forest in Collier County (Marks and Marks 2008b and USFWS 2014). Additional surveys conducted in 2010 through 2012 identified additional bonneted bat locations within the Miami area and areas of Everglades National Park and Big Cypress National Preserve (USFWS 2014).

3.3 Habitat

Habitat for the Florida bonneted bat consists mainly of foraging areas and roosting sites, including some artificial structures in both urban and forested areas (USFWS 2014). They are known to roost in rock crevices, tree cavities, buildings, and bat boxes (Marks and Marks 2008b). South Florida bonneted bats roost primarily in trees and in manmade artificial structures, with roost availability indicated as an important limiting factor (USFWS 2014). Foraging habitat includes areas over open fresh water such as ponds, streams, and wetlands; and they will drink when flying over open water (USFWS 2014). They will also forage over treetops and other open areas such as golf courses (Marks and Marks 2006). During the dry season, the bonneted bat becomes more dependent upon the remaining open water habitats such as ponds, streams, and wetland areas for foraging activities (USFWS 2014).

3.4 Life History and Ecology

Molossids are found primarily in the tropical and subtropical regions of the world, but some species also occur in warmer portions of temperate regions. At one time the Florida bonneted bat was known as Wagner's mastiff bat (*Eumops glaucinus*) and was considered a single species with an extensive range (Marks and Marks 2006). In 1971, the Florida population was recognized as a separate subspecies, *Eumops glaucinus floridanus* (Koopman 1971). Evidence published in 2004 demonstrated that in fact the Florida population is a distinct species and it was subsequently reclassified as *Eumops floridanus* (Timm and Genoways 2004).

Very little information is known about the ecology of the Florida bonneted bat. They are colonial and appear to roost in groups of approximately 8 to 12 individuals. Findings from two colonies suggest that Florida bonneted bats may roost in a harem consisting of one male and a group of females. Females give birth to a single pup, but are believed to have two birthing seasons per year. It has been speculated that one birthing period may

occur in June and July, and a second in late summer. It is unknown whether or not females produce an offspring during both birthing periods. Pregnant females have been found between June and September. Mating behavior, gestation period, and information about weaning of the young is also unknown (Marks and Marks 2006).

All molossids are insectivorous, and the guano from one Florida bonneted bat roost included the remains of insects from several orders including beetles, flies, and true bugs. The Florida bonneted bat emerges from its roost approximately 40 minutes after sunset, which is later in the evening than most other Florida bat species. They are high, fast flyers and have been observed flying at 30 feet or higher, foraging above treetops and over open areas as noted above (Marks and Marks 2006).

The Florida bonneted bat uses echolocation to navigate, as well as to locate and capture prey. Echolocation is used by bats to determine how far away an object is, its size, shape, texture, whether it is approaching or receding, and how fast it is moving. There are five main types of bat calls: commute calls, social calls, search calls, approach calls, and feeding buzzes. Search calls are given when a bat is looking for prey and are the type of call typically used for species identification. The Florida bonneted bat is the only bat in Florida that issues search calls in the 10 to 16 kilohertz (kHz) range (with an occasional extended call range from 16 to 25 kHz), making them easy to distinguish from the other Florida bat species (personal communication with George and Cynthia Marks).

4.0 SURVEY METHODOLOGY

4.1 Survey Stations

Florida bonneted bat roosting habitat includes buildings and other artificial structures, as well as natural tree cavities. Foraging habitat includes water bodies, herbaceous wetlands, streams, tree lines, and wooded fence lines, as well as in forest canopy openings and other open lands. The Project site was inventoried for potential Florida bonneted bat roosting and foraging habitats. Roosting and foraging stations were then selected by qualified ecologists with knowledge of bat ecology. Each survey station was photographed and located using a hand-held Global Positioning System (GPS).

4.2 Survey Equipment

Surveys were conducted using the Song Meter SM4BAT FS recorder by Wildlife Acoustics. The SM4BAT FS is a full-spectrum bioacoustics recorder that detects the echolocation calls of bats with a microphone and records the calls as a full spectrum sonogram. For non-linear projects, the USFWS requires a cumulative total of 16 detector nights per 20 acres of suitable habitat. Surveying with multiple detectors requires a spacing of 100 to 200 meters between recording devices. For surveys, the following weather conditions are required: 1) temperatures at or above 60 degrees Fahrenheit; 2) precipitation, including rain and/or fog, must not exceed 30 minutes or continued

intermittently during the night; and 3) sustained winds no greater than nine miles per hour.

In order to capture high quality call sequences, the following guidelines were used for the placement and orientation of the SM4BAT FS: 1) elevated no less than 5 meters (16.4 feet) above ground level; 2) placed at least 1.5 meters (5 feet) away from any obstruction; 3) placed in areas without or with minimal vegetation within 10 meters (33 feet) in front of the detector microphone; and 4) detector microphone placed at a 45 degree angle from the horizon facing the target area.

4.3 Sonogram Analysis

Sonograms recorded during the surveys were sorted and identified by bat species using the Kaleidoscope 2016 software and reviewed by a qualified ecologist for Florida bonneted bat calls. Florida bonneted bat call frequencies are easily identifiable and well below those of other Florida bat species (Marks and Marks 2006).

5.0 SURVEY RESULTS

5.1 Survey Stations

Ecologists deployed five SM4BAT FS units throughout the Project site near potential foraging and roosting habitat. The units were deployed 100 to 200 meters apart (Exhibit 3). Table 1 provides the GPS coordinates of the survey stations.

Table 1. GPS Coordinates of Florida Bonneted Bat Acoustic Station Locations

Survey Station	Coordinates
AS-1	81°44' 20.2698"W 26°19'55.5996"N
AS-2	81°44'34.047"W 26°20'2.3784"N
AS-3	81°44'20.0724"W 26°20'18.2652"N
AS-4	81°44'22.4946"W 26°20'15.2982"N
AS-5	81°44'20.7456"W 26°20'8.0304"N

The five units were deployed beginning July 8, 2016 for five nights which totaled 25 survey nights. The units were attached to suitable trees that were clear from obstruction and placed at least 5 meters (16.4 feet) off of the ground. Photographs of the acoustic stations are shown in Exhibit 4.

SM4BAT FS units were programmed to begin recording 30 minutes prior to sunset until 30 minutes after sunrise and were left to record on-site. Sunrise and sunset times for the survey period are summarized in Table 2.

Table 2. Sunrise and Sunset Times for Surveys

Date	Sunrise	Sunset
July 8, 2016	6:41 am	8:24 pm
July 9, 2016	6:41 am	8:24 pm
July 10, 2016	6:42 am	8:24 pm
July 11, 2016	6:42 am	8:24 pm
July 12, 2016	6:43 am	8:24 pm

5.2 Weather Conditions

The hourly weather conditions during the survey nights were obtained from the Page Field Airport (KFMY) weather station in Fort Myers which was accessed through Weather Underground (Exhibit 5). On three of the survey nights, rain was recorded. During those nights, rainfall never exceeded 0.83 inch and lasted a maximum of one hour. Wind speeds never exceeded the acceptable speed for Florida bonneted bat surveys of nine miles per hour (mph) during the survey nights.

5.3 Sonogram Analysis

Kaleidoscope 2016 software was used to analyze sonograms collected during the survey nights. Kaleidoscope filters out bat calls and labels them by species depending on the frequency of the call. Florida bonneted bat calls fall in the range of 10 to 17 kHz, which is significantly lower than other native bat calls. The unique frequency of Florida bonneted bat calls aids in call identification. The Kaleidoscope software categorizes sounds other than bat calls as “noise.” If the software was unsure of how to label a bat call, the file was labeled as “No ID.” These “No ID” files were examined by ecologists to ensure these files did not represent Florida bonneted bat calls. Sonograms containing representative calls of bats recorded during the survey periods are included as Exhibit 6.

Over the five survey nights, 5,934 of the recordings gathered included bat calls. Three of those recordings fell near the typical range of the bonneted bat call, but were determined to be made by species other than the bonneted bat. The Brazilian free-tailed bat (*Tadarida brasiliensis*) often uses lower frequency calls as social calls that sometimes fall into the bonneted bat range (personal communication with Cynthia Marks). Typical recordings including the three recordings that overlapped with the lower frequency call range are included in Exhibit 6. A summary of the survey results is provided as Exhibit 7.

6.0 SUMMARY

Field work to establish the Florida bonneted bat survey stations was conducted on July 8, 2016. Five survey stations were selected within the Project site. These stations were established within or adjacent to potential foraging and roosting habitats. Song Meter SM4BAT FS recorders were deployed at the five survey stations. Acoustic recordings were collected over five nights

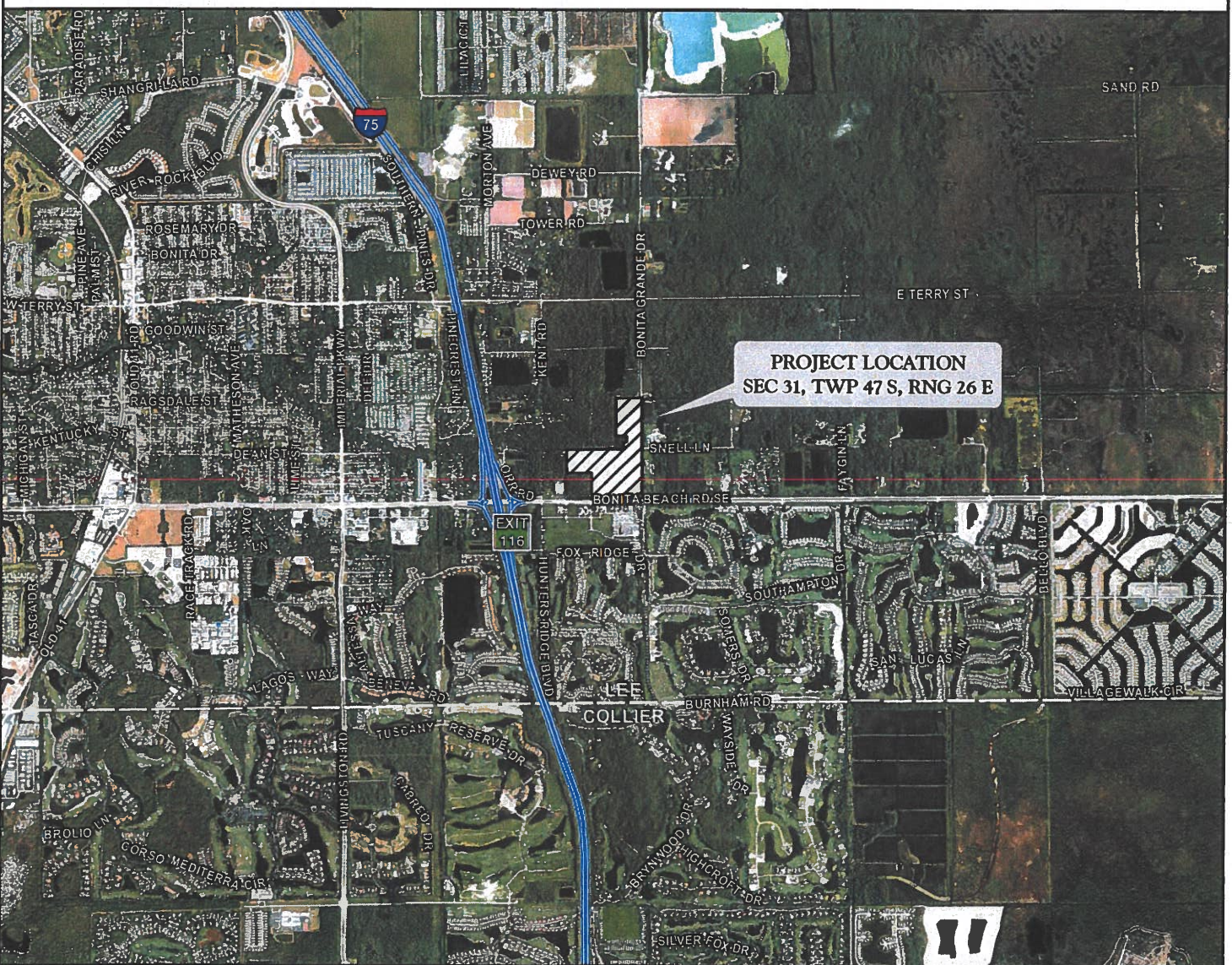
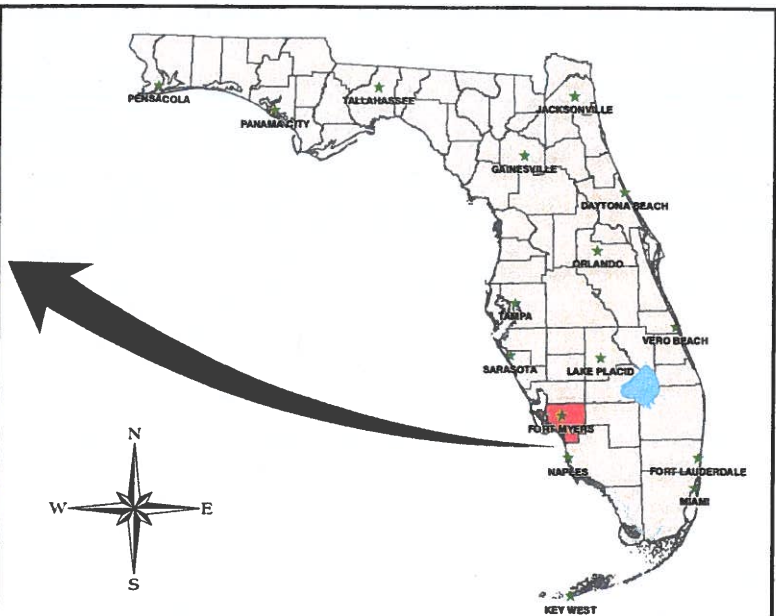
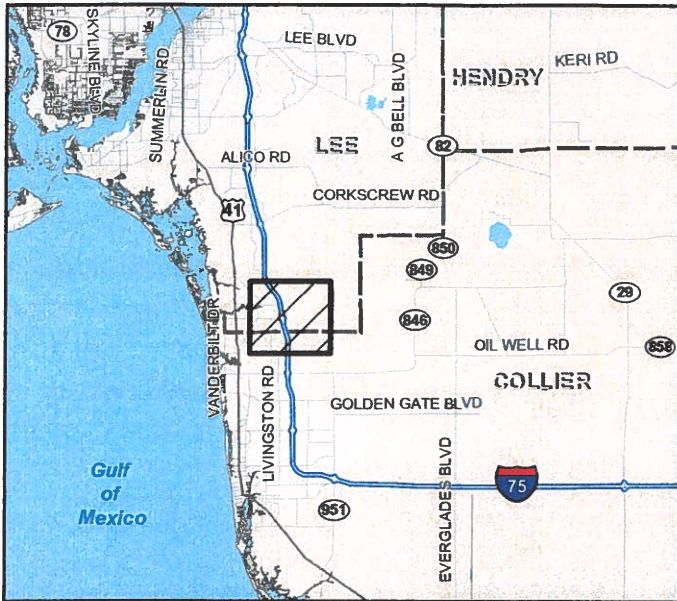
beginning on July 8, 2016. SM4BAT FS units were programmed to record 30 minutes prior to sunset until 30 minutes after sunrise. Kaleidoscope 2016 software was used to analyze the sonograms collected during the survey.

The SM4BAT detectors recorded 5,934 files containing bat calls during the survey. Of those recordings, three included call frequencies that fell near the typical range of the Florida bonneted bat, but were determined to be made by species other than the bonneted bat. The Brazilian free-tailed bat often uses lower frequency calls as social calls that sometimes fall into the bonneted bat range (personal communication with Cynthia Marks). Upon further review by ecologists, it was determined that these calls were not those of the bonneted bat. No Florida bonneted bat calls were found during this survey. In addition, no Florida bonneted bats were heard or observed during the field survey.

7.0 REFERENCES

- Koopman, K.F. 1971. The systematic and historical status of the Florida *Eumops* (Chiroptera: Molossidae). *The American Novitates*. 2478: 1-6.
- Marks, C.S. and G.E. Marks. 2006. *Bats of Florida*. University Press of Florida, Gainesville, Florida.
- Marks, G.E. and C.S. Marks. 2008a. Status of the Florida bonneted bat (*Eumops floridanus*). Supplemental report. Submitted by the Florida Bat Conservancy under grant agreement number 401815G 192. Florida Bat Conservancy. Bay Pines, Florida.
- Marks, G.E. and C.S. Marks. 2008b. Status of the Florida bonneted bat (*Eumops floridanus*). Final report. Submitted by the Florida Bat Conservancy under grant agreement number 401815G 192. Florida Bat Conservancy. Bay Pines, Florida.
- Timm, R.M., and H.H. Genoways. 2004. The Florida bonneted bat, *Eumops floridanus* (Chiroptera: Molossidae): distribution, morphometrics, systematics, and ecology. *Journal of Mammalogy*. 85: 852-865.
- U.S. Fish and Wildlife Service. 2014. Biological Opinion for Golf Club of the Everglades. Service CPA Code 2014-CPA-0037. South Florida Ecological Services Office, Vero Beach, Florida.

EXHIBIT 1
PROJECT LOCATION MAP



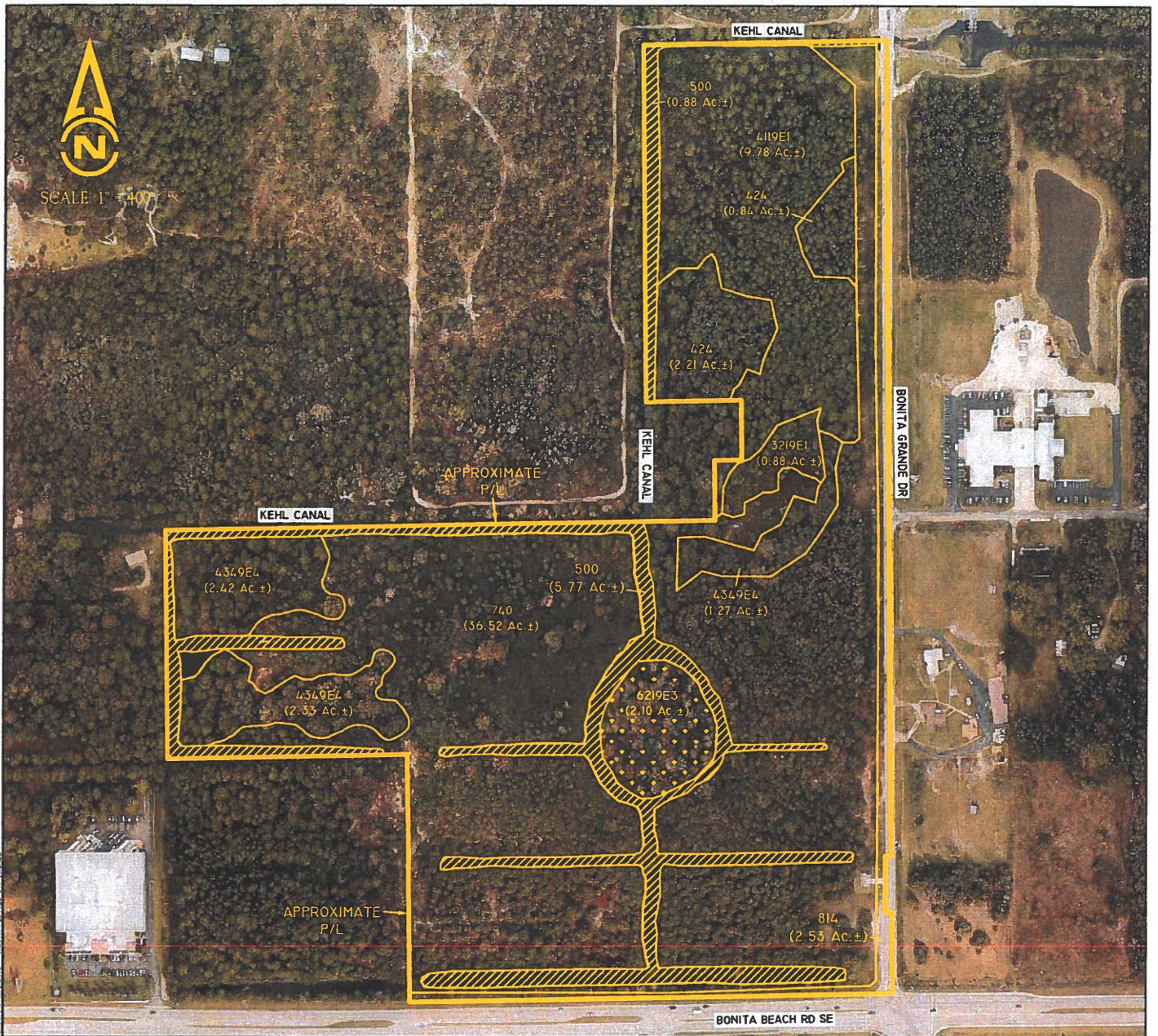
J:\2016\10182420\GIS\2016\FBS_ACCOUNTS\SURVEY\FB\EXHIBIT_1_PROJECT_LOCATION_MAP_08/26/16.MXD - 11/15/2016 4:22:50 PM

**EXHIBIT 1. PROJECT LOCATION MAP
BONITA GRANDE**

DRAWN BY	DATE
T.S.	8/12/16
REVIEWED BY	DATE
A.W.	8/12/16
REVISED	DATE



EXHIBIT 2
AERIAL WITH FLUCFCS AND COE WETLANDS MAP



LEGEND:



COE WETLANDS
(2.10 Ac.±)

COE "WATERS OF THE U.S."
(6.65 Ac.±)

FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
3219 E1	PALMETTO PRAIRIE, DISTURBED (0-24% EXOTICS)	0.88 Ac.±	1.3%
4119 E1	PINE FLATWOODS, DISTURBED (0-24% EXOTICS)	9.78 Ac.±	14.5%
424	MELALEUCA	3.05 Ac.±	4.5%
4349 E4	HARDWOOD/CONIFER MIXED, DISTURBED (76-100% EXOTICS)	6.02 Ac.±	8.9%
500	WATER (CANAL/DITCH)	6.65 Ac.±	9.8%
6219 E3	CYPRESS, DISTURBED (50-75% EXOTICS)	2.10 Ac.±	3.1%
740	DISTURBED LAND	36.52 Ac.±	54.1%
814	ROAD	2.53 Ac.±	3.7%
TOTAL		67.53 Ac.±	100.0%

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH A FLIGHT DATE OF JANUARY 2016.

PROPERTY BOUNDARY PER ROBAU AND ASSOCIATES DRAWING NO. 01500015M01.DWG DATED AUGUST 8, 2016. BOUNDARY RECEIVED WAS NOT IN A COORDINATE SYSTEM; PAI ESTIMATED BOUNDARY LOCATION.

FLUCFCS LINES PER GRADY MINOR AND ASSOCIATES DRAWING NO. RPF6P-FLUCCS.DWG RECEIVED BY PAI ON JANUARY 27, 2016. THESE LINES ALONG WITH PAI FLUCFCS LINES WERE USED FOR THE CREATION OF THIS FLUCFCS MAP.

PASSARELLA AND ASSOCIATES INC. FLUCFCS LINES ESTIMATED FROM 1"-200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS HAVE NOT BEEN REVIEWED BY ANY REGULATORY AGENCY AND ARE SUBJECT TO CHANGE.

**EXHIBIT 2. AERIAL WITH FLUCFCS AND COE WETLANDS MAP
BONITA GRANDE**

DRAWN BY	DATE
T.S., W.C.	8/12/16
REVIEWED BY	DATE
J.L.	8/12/16
REVISED	DATE

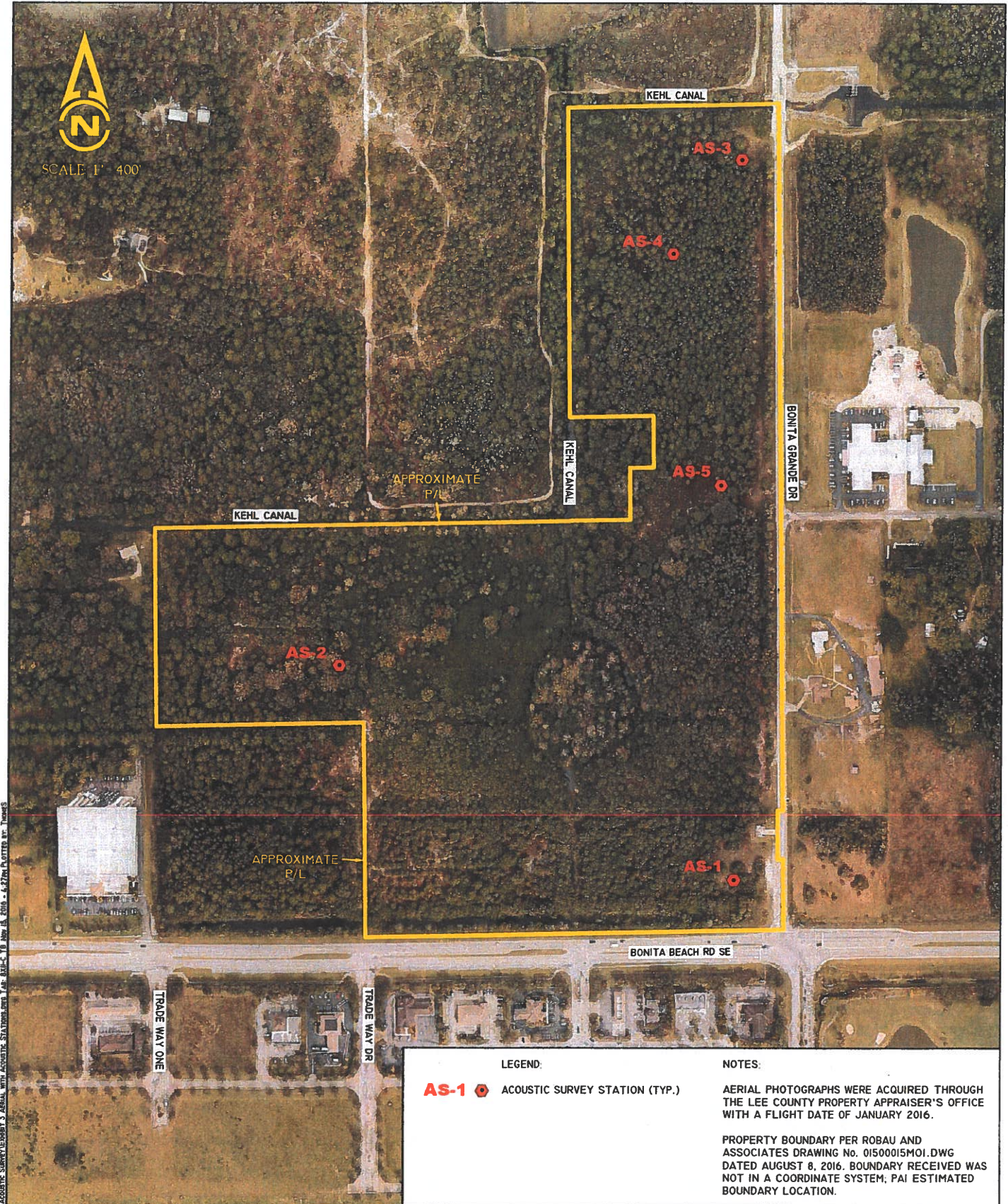


EXHIBIT 3

**AERIAL WITH FLORIDA BONNETED BAT
ACOUSTIC SURVEY STATIONS**



SCALE 1" = 400'



LEGEND:

AS-1 ACOUSTIC SURVEY STATION (TYP.)

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH A FLIGHT DATE OF JANUARY 2016.

PROPERTY BOUNDARY PER ROBAU AND ASSOCIATES DRAWING No. 01500015MOI.DWG DATED AUGUST 8, 2016. BOUNDARY RECEIVED WAS NOT IN A COORDINATE SYSTEM; PAI ESTIMATED BOUNDARY LOCATION.

EXHIBIT 3. AERIAL WITH FLORIDA BONNETED BAT ACOUSTIC SURVEY STATIONS BONITA GRANDE

DRAWN BY	DATE
T.S.	8/12/16
REVIEWED BY	DATE
O.P.	8/12/16
REVISED	DATE



EXHIBIT 4
PHOTOGRAPHS OF ACOUSTIC SURVEY STATIONS



Acoustic Station No. 1



Acoustic Station No. 2



Acoustic Station No. 3



Acoustic Station No. 4



Acoustic Station No. 5

EXHIBIT 5
WEATHER CONDITIONS DURING SURVEY NIGHTS

**BONITA GRANDE
FLORIDA BONNETED BAT ACOUSTIC SURVEY
WEATHER CONDITIONS DURING SURVEY NIGHTS**

Survey Night	Date	Hour	Cloud Cover	Wind	Temperature	Precipitation
1	07/08/16 to 07/09/16	7:53 PM	Mostly Cloudy	Calm	75.9 °F	0.83 inches
		8:53 PM	Clear	5.8 mph	78.1 °F	None
		9:53 PM	Clear	3.5 mph	75.9 °F	None
		10:53 PM	Clear	Calm	79.0 °F	None
		11:53 PM	Clear	3.5 mph	79.0 °F	None
		12:53 AM	Clear	Calm	79.0 °F	None
		1:53 AM	Clear	3.5 mph	78.1 °F	None
		2:53 AM	Clear	Calm	77.0 °F	None
		3:53 AM	Clear	Calm	77.0 °F	None
		4:53 AM	Clear	Calm	78.1 °F	None
		5:53 AM	Clear	Calm	78.1 °F	None
		6:53 AM	Clear	Calm	77.0 °F	None
2	07/09/16 to 07/10/16	7:53 PM	Clear	4.6 mph	84.0 °F	None
		8:53 PM	Clear	5.8 mph	82.9 °F	None
		9:53 PM	Mostly Cloudy	3.5 mph	82.0 °F	None
		10:53 PM	Partly Cloudy	Calm	82.0 °F	None
		11:53 PM	Clear	Calm	82.0 °F	None
		12:53 AM	Partly Cloudy	Calm	82.0 °F	None
		1:53 AM	Mostly Cloudy	Calm	82.0 °F	None
		2:53 AM	Partly Cloudy	3.5 mph	81.0 °F	None
		3:53 AM	Partly Cloudy	4.6 mph	81.0 °F	None
		4:53 AM	Mostly Cloudy	4.6 mph	80.1 °F	None
		5:53 AM	Mostly Cloudy	4.6 mph	81.0 °F	None
3	07/10/16 to 07/11/16	6:53 AM	Clear	Calm	81.0 °F	None
		7:53 PM	Clear	3.5 mph	86.0 °F	None
		8:53 PM	Clear	6.9 mph	84.0 °F	None
		9:53 PM	Clear	3.5 mph	82.9 °F	None
		10:53 PM	Clear	3.5 mph	81.0 °F	None
		11:53 PM	Partly Cloudy	Calm	81.0 °F	None
		12:53 AM	Partly Cloudy	Calm	81.0 °F	None
		1:53 AM	Clear	3.5 mph	79.0 °F	None
2:53 AM	Clear	3.5 mph	79.0 °F	None		

Weather Conditions During Survey Nights (Continued)

Survey Night	Date	Hour	Cloud Cover	Wind	Temperature	Precipitation
3 (Cont.)	07/10/16 to 07/11/16	3:53 AM	Clear	4.6 mph	78.1 °F	None
		4:53 AM	Clear	4.6 mph	78.1 °F	None
		5:53 AM	Clear	4.6 mph	78.1 °F	None
		6:53 AM	Clear	3.5 mph	77.0 °F	None
4	07/11/16 to 07/12/16	7:53 PM	Cloudy	8.1 mph	89.1 °F	None
		8:53 PM	Cloudy	9.2 mph	80.1 °F	0.39 inches
		9:53 PM	Cloudy	5.8 mph	81.0 °F	0.06 inches
		10:53 PM	Cloudy	9.0 mph	80.1 °F	None
		11:53 PM	Cloudy	4.6 mph	79.0 °F	None
		12:53 AM	Clear	4.6 mph	79.0 °F	None
		1:53 AM	Clear	Calm	79.0 °F	None
		2:53 AM	Clear	4.6 mph	79.0 °F	None
		3:53 AM	Clear	4.6 mph	79.0 °F	None
		4:53 AM	Clear	3.5 mph	79.0 °F	None
		5:53 AM	Clear	Calm	79.0 °F	None
		6:53 AM	Clear	3.5 mph	79.0 °F	None
5	07/12/16 to 07/13/16	7:53 PM	Partly Cloudy	5.8 mph	77.0 °F	0.04 inches
		8:53 PM	Partly Cloudy	3.5 mph	77.0 °F	0.01 inches
		9:53 PM	Clear	Calm	77.0 °F	None
		10:53 PM	Clear	5.8 mph	77.0 °F	None
		11:53 PM	Clear	9.0 mph	77.0 °F	None
		12:53 AM	Clear	4.6 mph	75.9 °F	None
		1:53 AM	Clear	3.5 mph	75.9 °F	None
		2:53 AM	Clear	Calm	75.9 °F	None
		3:53 AM	Clear	Calm	75.9 °F	None
		4:53 AM	Clear	3.5 mph	75.9 °F	None
		5:53 AM	Clear	Calm	75.9 °F	None
		6:53 AM	Clear	Calm	75.9 °F	None

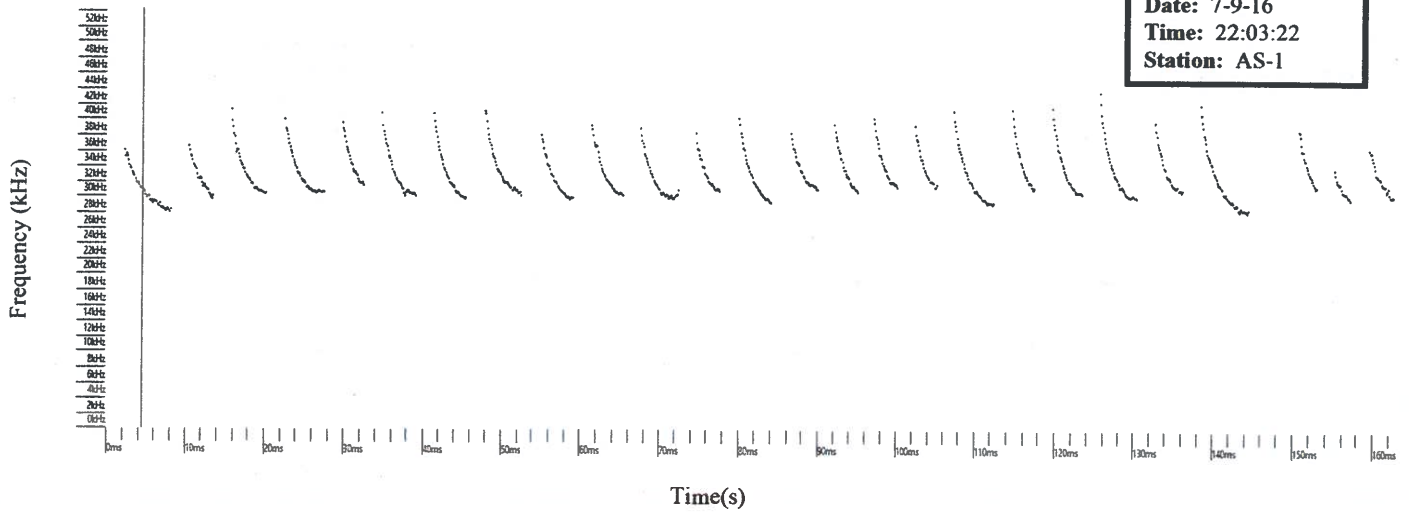
EXHIBIT 6

**SONOGRAMS OF REPRESENTATIVE CALLS OBTAINED
DURING THE FLORIDA BONNETED BAT SURVEY**

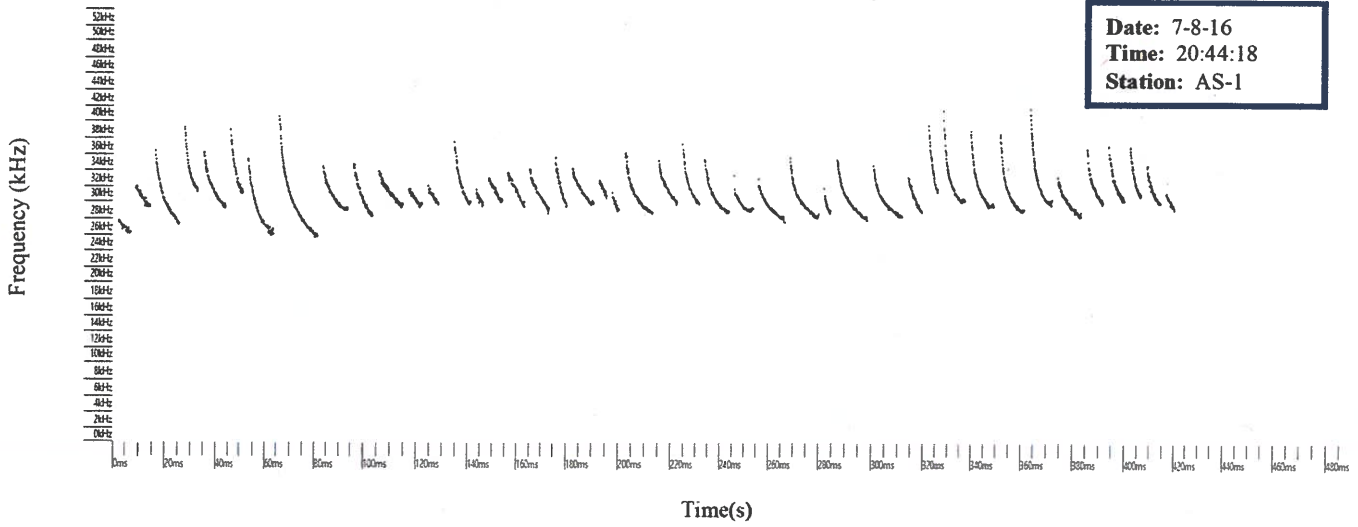
**BONITA GRANDE
SONOGRAMS OF REPRESENTATIVE BAT CALLS**

July 2016

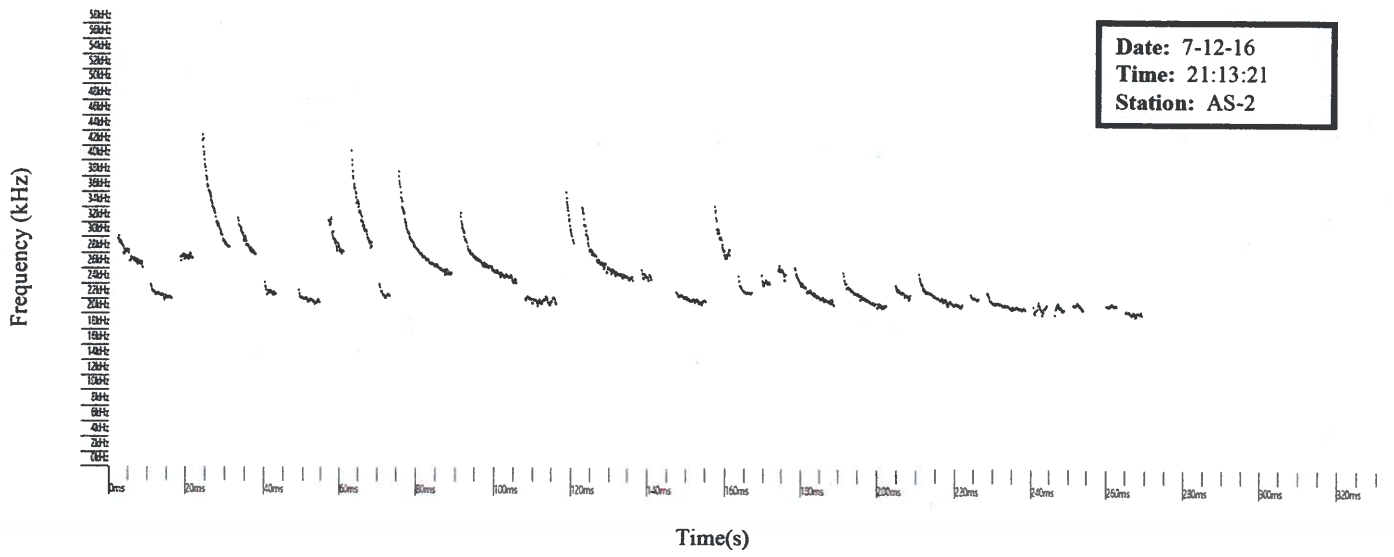
**Date: 7-9-16
Time: 22:03:22
Station: AS-1**



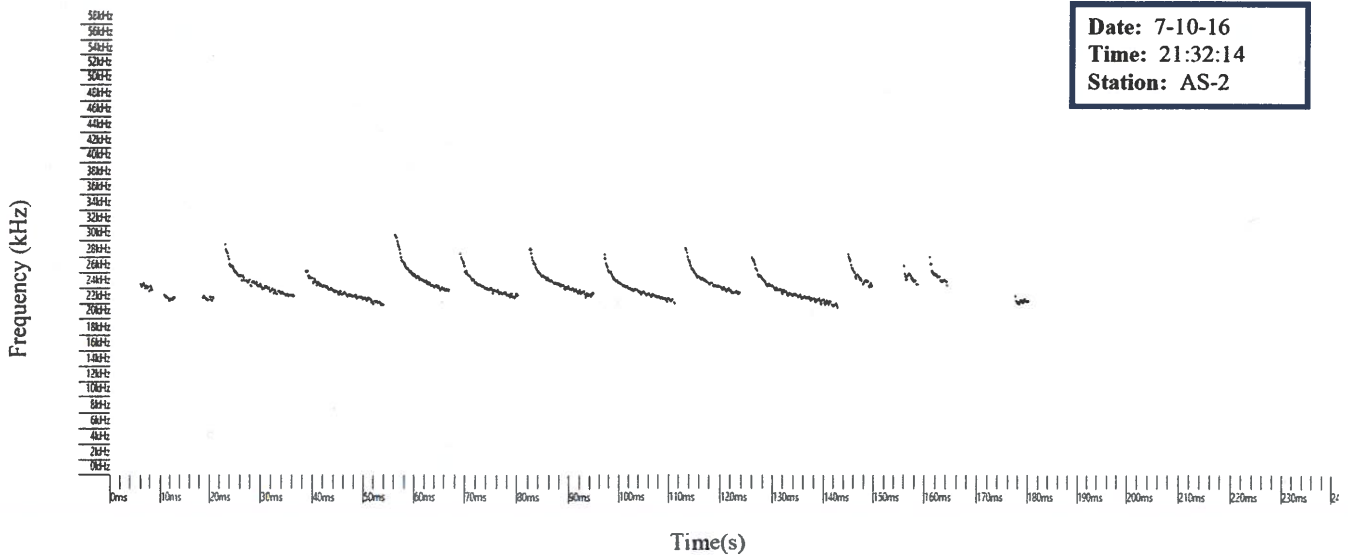
E6-1



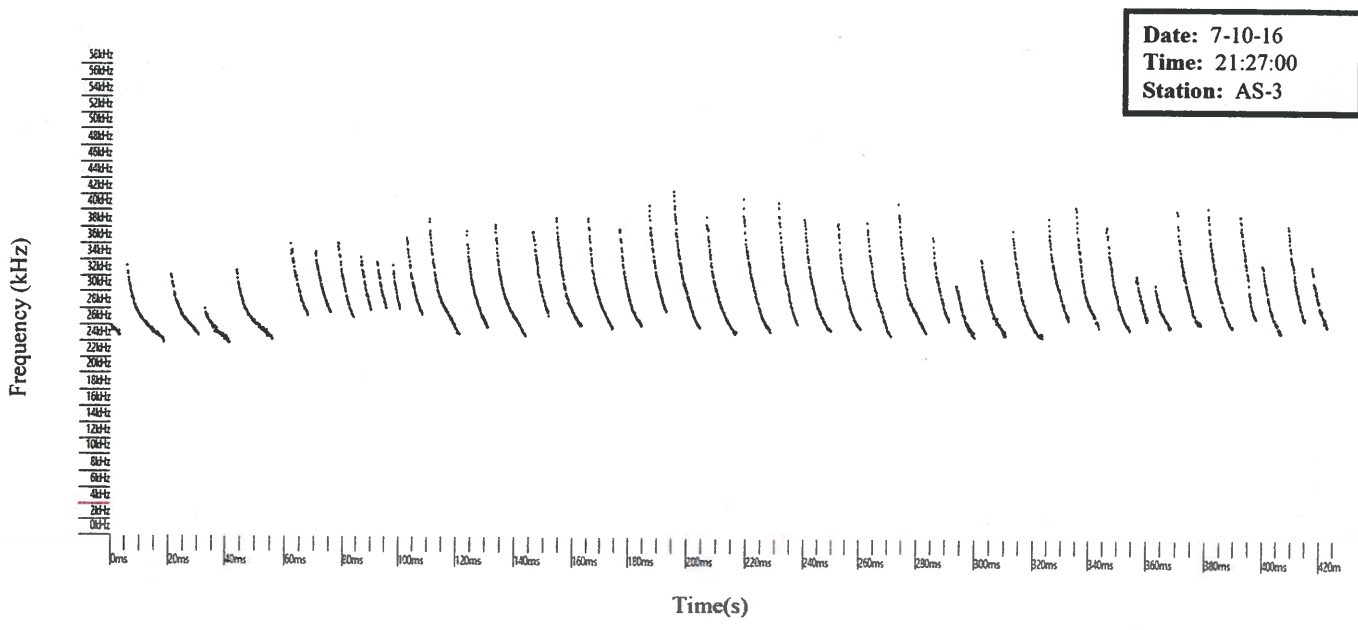
E6-2



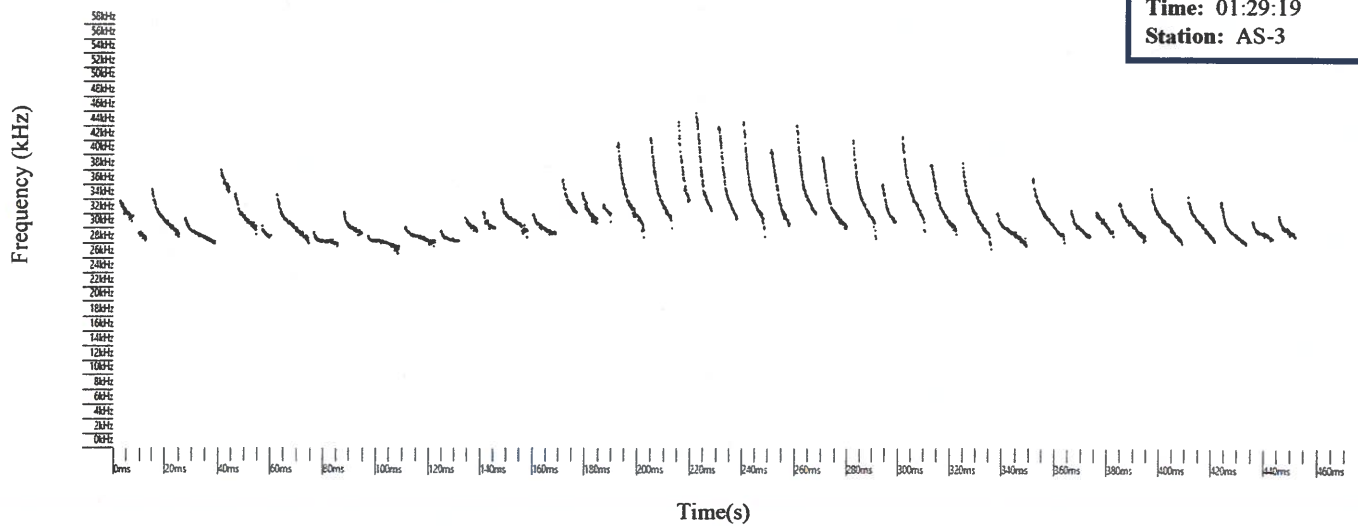
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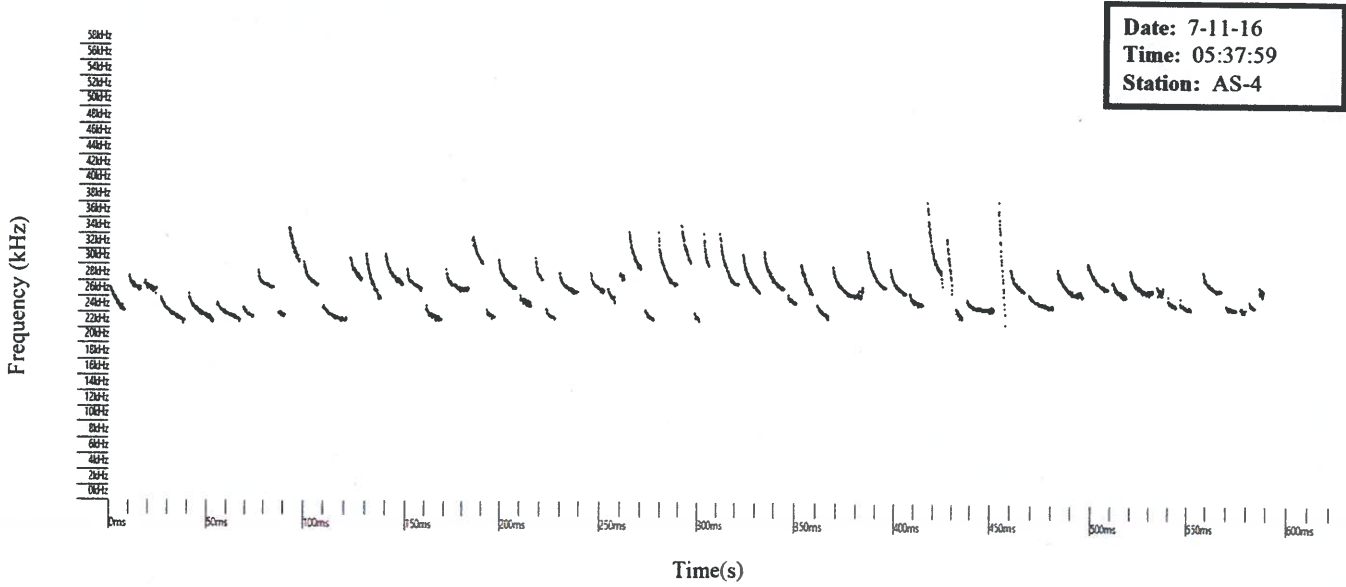
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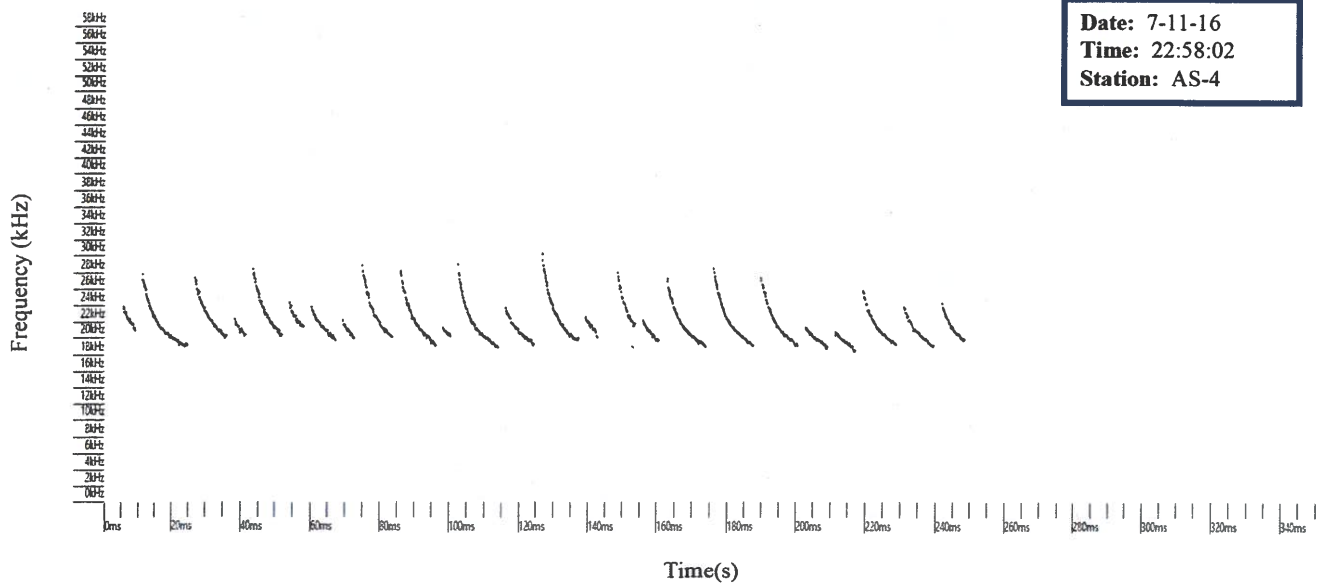
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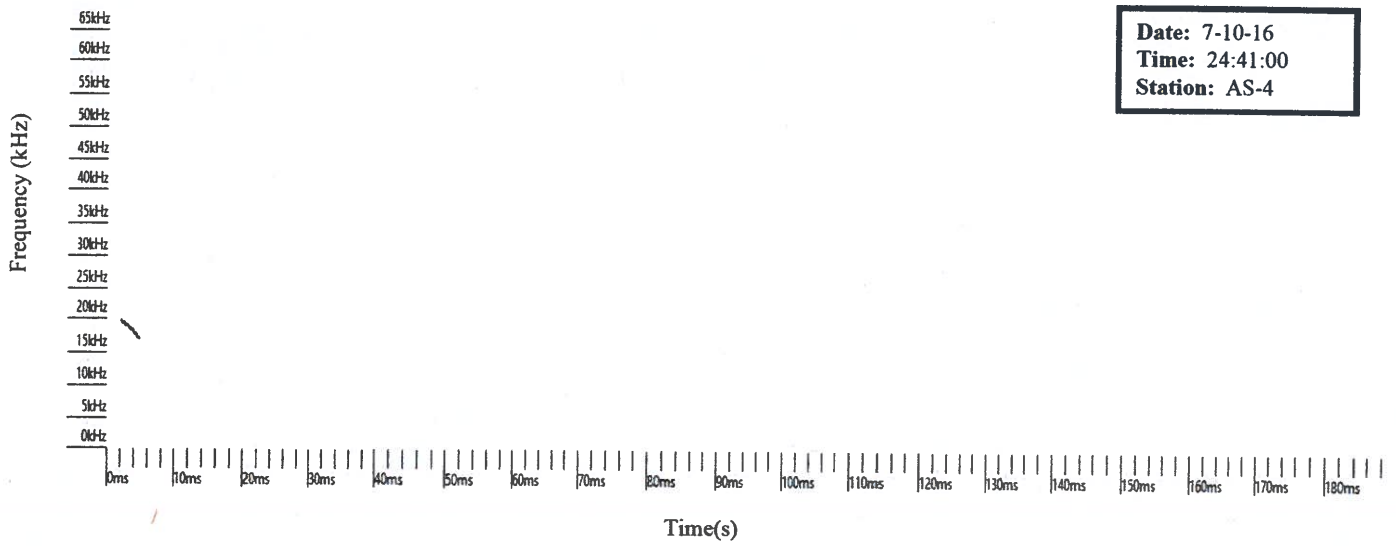
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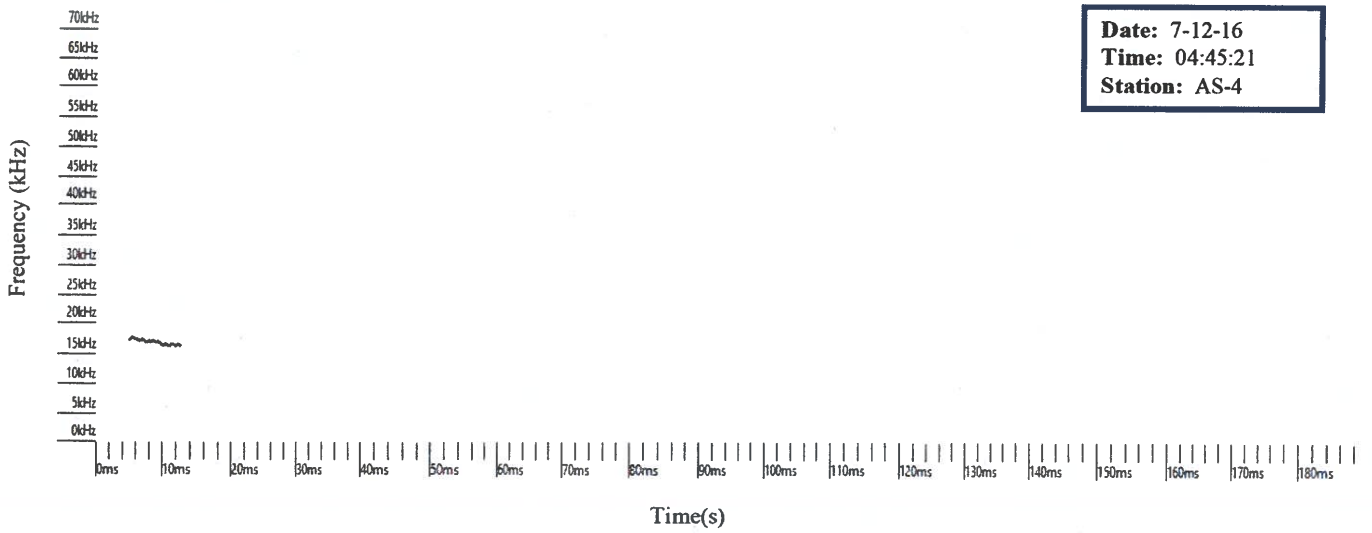
E6-7



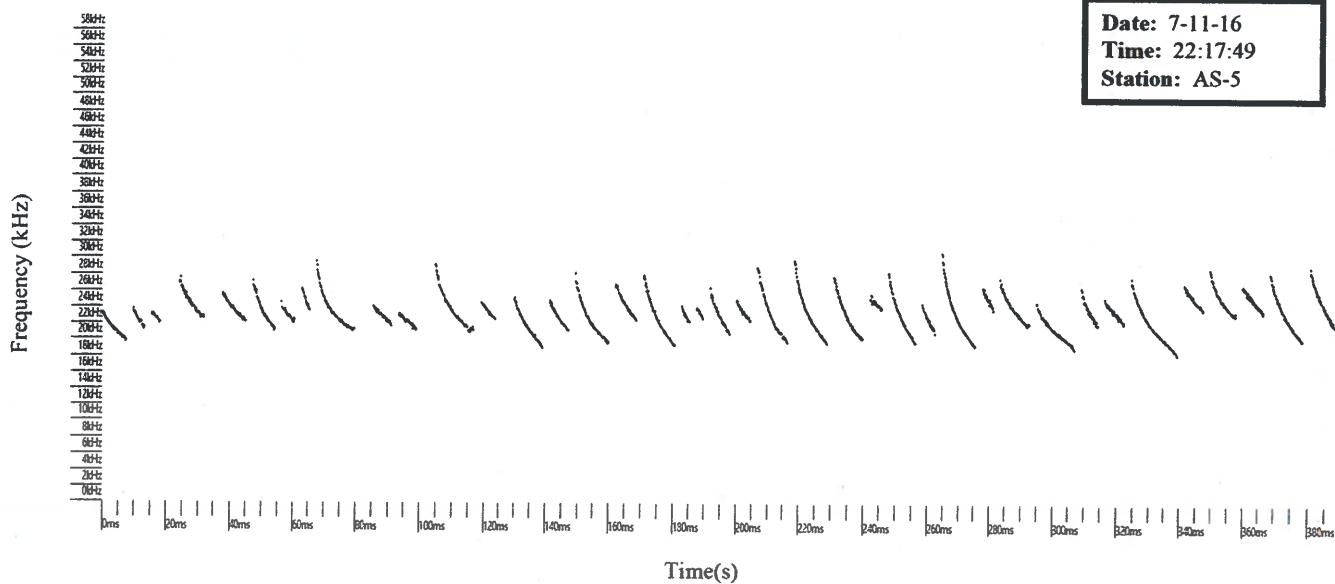
E6-8



E6-9

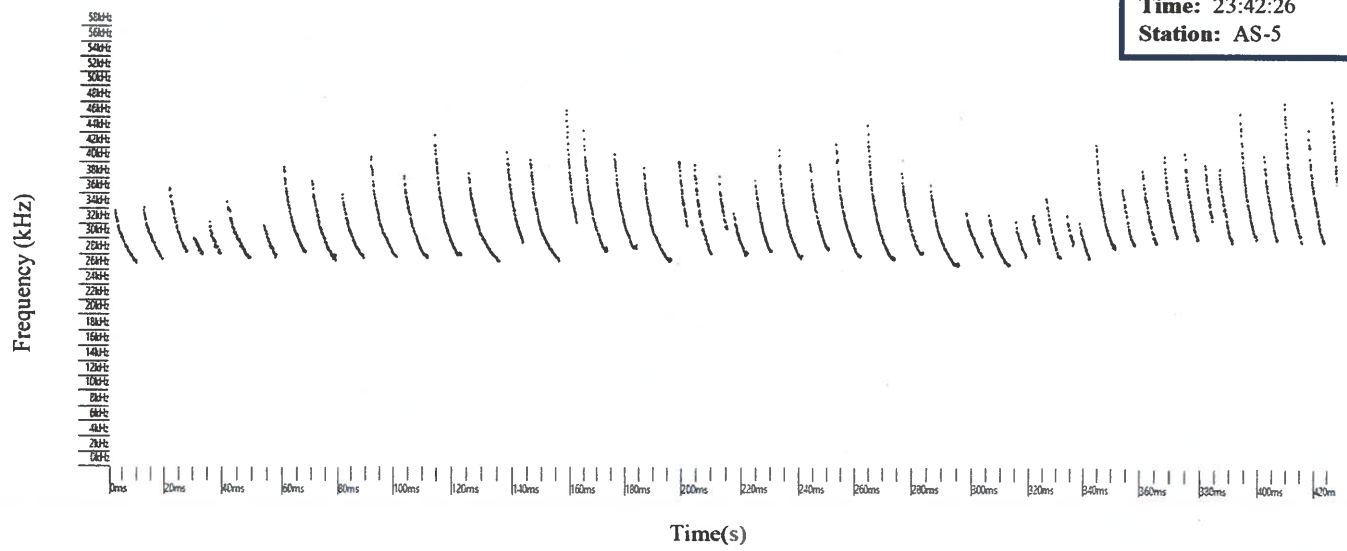


E6-10



E6-11

Date: 7-12-16
Time: 23:42:26
Station: AS-5



E6-12

EXHIBIT 7
SUMMARY OF ACOUSTIC SURVEY RESULTS

**BONITA GRANDE
FLORIDA BONNETED BAT
SUMMARY OF ACOUSTIC SURVEY RESULTS**

Survey Station ID	Survey Date	Number of Bat Recordings
AS-1	July 8, 2016	114
	July 9, 2016	225
	July 10, 2016	312
	July 11, 2016	247
	July 12, 2016	223
	July 13, 2016	147
AS-2	July 8, 2016	61
	July 9, 2016	70
	July 10, 2016	167
	July 11, 2016	150
	July 12, 2016	121
	July 13, 2016	36
AS-3	July 8, 2016	67
	July 9, 2016	325
	July 10, 2016	272
	July 11, 2016	415
	July 12, 2016	368
	July 13, 2016	168
AS-4	July 8, 2016	15
	July 9, 2016	98
	July 10, 2016	143
	July 11, 2016	175
	July 12, 2016	156
	July 13, 2016	114
AS-5	July 8, 2016	186
	July 9, 2016	336
	July 10, 2016	378
	July 11, 2016	319
	July 12, 2016	313
	July 13, 2016	209
Total		5,930
Average		197.67



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

May 6, 2019

Shawn Zinszer
U.S. Army Corps of Engineers
1520 Royal Palm Square Boulevard, Suite 310
Fort Myers, Florida 33919

RECEIVED
CITY OF BONITA SPRINGS
MAR 20 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

Service Consultation Code: 04EF2000-2017-F-0083
Corps Application Number: SAJ-2005-07179 (SP-RWR)
Date Received: July 12, 2018
Project: Bonita Grande
Applicant: iStar Financial, Inc.
County: Lee

Dear Mr. Zinszer:

The U.S. Fish and Wildlife Service (Service) received the U.S. Army Corps of Engineers' (Corps) request for consultation dated July 12, 2018, for the construction of a commercial development and associated infrastructure on a 67.53-acre (ac) parcel (Project) by iStar Financial, Inc. (Applicant). The Corps determined the proposed Project may affect, but is not likely to adversely affect the federally endangered Florida bonneted bat (*Eumops floridanus*; FBB) and Florida panther (*Puma concolor coryi*; panther). This letter is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*)

PROJECT DESCRIPTION

The Applicant proposes to develop their Project on an approximately 67.53-ac parcel. The current land cover is composed of approximately 36.52 ac of exotic vegetation, 16.68 ac of uplands, and 14.33 ac of disturbed lands. The Project site is bordered by commercial development to the south, sparse development and I-75 to the west, conservation lands to the north, and Bonita Grande Drive to the east.

The proposed Project would develop 61.83 ac into a commercial development, with associated infrastructure and stormwater features. 5.7 ac of uplands will be preserved. The development would convert 8.75 ac of waters of the United States to non-jurisdictional features.

The proposed Project site is located along Bonita Beach Road east of Interstate 75 (I-75), in Section 31, Township 47 south, Range 26 east, Fort Myers, Lee County, Florida (26.334975, -81.741516).

THREATENED AND ENDANGERED SPECIES

Florida bonneted bat

The Project site is located within the Service's Florida bonneted bat (FBB) consultation area (Service 2013). The Corps determined the proposed Project may affect, but is not likely to adversely affect the FBB. Information gathered during numerous site assessments and a formal roost and acoustic survey by the Applicant's consultant, Passarella and Associates, indicate that FBB do not roost on the property. However, the Project will result in the conversion of approximately 61.83 ac of lower quality FBB foraging habitat (consisting of exotics dominated wetlands and uplands) into a commercial development. Limited information on FBB foraging behavior is currently available. In one study using GPS-satellite tags at Babcock-Webb WMA, researchers found that most FBB activity occurs within one mile (mi) of the roost (point of capture) (Ober 2015). However, FBBs also tended to take one longer foray, up to 7 mi, shortly after sunset each night (Ober 2015, Ober 2016). Assuming a foraging area centered on a roost with a 1-mi radius, FBBs could forage from 2,010 ac to 98,470 ac, within a 7-mi radius of the roost, on any given night. It is unknown how foraging behavior and needs differ among individuals (*e.g.*, ages, sexes), seasonally and in different habitat types. The quality of habitat and the prey availability and other factors likely greatly influences the relative importance of any particular area. FBB foraging areas are expected to be larger in areas with lower quality foraging habitat in order to meet their biological needs; which at some point would be expected to lead to a loss in fitness.

The FBB is known to occur in highly urbanized landscapes, showing these areas provide some level of foraging opportunities. Therefore, feeding opportunities would be expected to persist at some level above the Project following development. Consequently, based on the lack of impact to FBB roosting habitat and the expected negligible effect from the loss of low-quality foraging habitat from the proposed development, the Service concurs with the Corps' determination that the Project may affect, but is not likely to adversely affect the FBB.

Florida panther

The Project site is within the Other Zone of the Service's Designated Panther Focus Area (Focus Area). According to Florida Fish and Wildlife Commission (FWC), the Project site has been identified as being near the western edge of the designated home range of male panther FP237 (FWC 2018). Telemetry data indicates that FP237 had been detected within 1 mi of the site in 2015, but was discovered deceased due to intraspecific aggression later the same year.

The Service assesses the potential risk for panther deaths related to the Project by reviewing traffic volume and mortality data for area roads during the past 5 years and estimating the increased risk associated with anticipated Project-generated traffic. According to available data, there have been two panthers killed by motor vehicle collisions within 5 mi of the Project, both on I-75. The most recent occurred in April of 2016 approximately 0.75 mi southwest of the

Project site. As the Project involves commercial development, traffic generation is not expected to occur and any changes to traffic patterns would be insignificant.

Project activities will result in the direct loss of 60.88 ac of habitat types that could provide habitat for the panther and panther prey. According to the most current home range estimates of the panther (Lotz et al. 2005), this loss represents 0.2 percent of a female panther's average home range (29,059 ac) and 0.09 percent of a male panther's average home range (62,542 ac). Moreover, this loss represents 0.005 percent of the 1,202,699 ac of available non-urban private lands available to the panther in the Focus Area south of the Caloosahatchee River. Additionally, the site is located adjacent to I-75 and in proximity to multiple large residential developments, contributing to heavy traffic and constant human presence, making the Project site less favorable for use by the panther.

Therefore, based on the above discussions of location and size of the Project area, and analysis of traffic impacts, the Service does not believe the Project will pose an adverse risk to the panther. Therefore, we concur with your finding that the Project "may affect, but is not likely to adversely affect" the panther.

This letter fulfills the requirements of section 7 of the Act and further action is not required. If modifications are made to the Project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

Thank you for your cooperation in the effort to protect fish and wildlife resources. If you have any questions regarding this project, please contact Adam Knutson at 772-469-4252.

Sincerely yours,



Roxanna Hinzman
Field Supervisor
South Florida Ecological Services Office

cc: electronic only
Corps, Tampa, Florida (Caitlin Hoch-Nussbaum)
FWC, Tallahassee, Florida (FWC-CPS)
Passarella and Associates, Inc., Fort Myers, Florida (Andy Woodruff)

LITERATURE CITED

- Florida Fish and Wildlife Conservation Commission (FWC). 2018. Florida Panther Telemetry, Florida panther (*Puma concolor coryi*) radio-telemetry dataset. Available at <http://geodata.myfwc.com/datasets/florida-panther-telemetry?page=11037> (Date Accessed: August 26, 2018).
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- Ober, H. 2016. Annual report to USFWS for calendar year 2016. Permit Number TE23583B-1. University of Florida, Department of Wildlife Ecology and Conservation, North Florida Research and Education Center. Quincy, Florida.
- U.S. Fish and Wildlife Service (Service). 2013. Florida bonneted bat consultation and focal areas. Fish and Wildlife Service, South Florida Ecological Services Office: Vero Beach Florida.

Exhibit II-F-2b

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**BONITA GRANDE
FLUCFCS DESCRIPTIONS AND SUMMARY TABLE**

Revised February 2020

The Florida Land Use, Cover and Forms Classification System (FLUCFCS) codes identified within Bonita Grande are listed below (Table 1). Groundtruthing to update the vegetative communities was conducted in July 2016 and January 2020. The dominant plant species found in each of these codes are listed in the FLUCFCS descriptions that follow.

Table 1. FLUCFCS Summary

FLUCFCS Code	Description	Acreage	Percent of Total
3219 E1	Palmetto Prairie, Disturbed (0-24% Exotics)	1.22	1.6
4119 E1	Pine Flatwoods, Disturbed (0-24% Exotics)	9.46	14.0
4159 E4	Mesic Pine invaded by Melaleuca (76-100% Exotics)	3.08	4.6
422	Brazilian Pepper	3.58	5.3
424	Melaleuca	2.80	4.1
4289 E4	Cabbage Palm, Disturbed (76-100% Exotics)	13.28	19.7
4349 E4	Hardwood/Conifer Mixed, Disturbed (76-100% Exotics)	19.14	28.3
500	Water (Canal/Ditch)	6.65	9.8
6189 E1	Willow/Pop Ash, Disturbed (0-24% Exotics)	0.12	0.2
6305 E3	Mixed Wetland Forest, Drained (50-75% Exotics)	1.98	2.9
740	Disturbed Land	4.08	6.0
814	Road	2.14	3.2
Total		67.53	100.0

Palmetto Prairie, Disturbed (0-24% Exotics) (FLUCFCS Code 3219 E1)

The canopy of this habitat type contains cabbage palm (*Sabal palmetto*), slash pine (*Pinus elliotii*), and laurel oak (*Quercus laurifolia*). The sub-canopy is dominated by cabbage palm and slash pine as well.

Pine Flatwoods, Disturbed (0-24% Exotics) (FLUCFCS Code 4119 E1)

The canopy of this habitat type includes slash pine, melaleuca (*Melaleuca quinquenervia*), and earleaf acacia (*Acacia auriculiformis*). The sub-canopy contains cabbage palm, cocoplum (*Chrysobalanus icaco*), Brazilian pepper (*Schinus terebinthifolius*), and melaleuca. The ground cover includes muscadine grapevine (*Vitis rotundifolia*), St. Augustine grass (*Stenotaphrum secundatum*), cabbage palm, caesarweed (*Urena lobata*), poison ivy (*Toxicodendron radicans*), and spermacoce (*Spermacoce verticillata*).

Mesic Pine invaded by Melaleuca (76-100% Exotics) (FLUCFCS Code 4159 E4)

The canopy and sub-canopy of this habitat type is dominated by melaleuca with scattered slash pine, Brazilian pepper, and live oak (*Quercus virginiana*). The ground cover contains swamp fern (*Telmatoblechnum serrulatum*), and muscadine grapevine.

Brazilian Pepper (FLUCFCS Code 422)

The canopy of this land use type includes scattered cabbage palm and laurel oak. The sub-canopy is dominated by Brazilian pepper. The ground cover is sparse, but includes Brazilian pepper, cabbage palm, American beautyberry (*Callicarpa americana*), poison ivy, and greenbrier (*Smilax* sp.).

Melaleuca (FLUCFCS Code 424)

The canopy of this habitat type is dominated by melaleuca with scattered slash pine and live oak (*Quercus virginiana*). The sub-canopy includes melaleuca, cabbage palm, and Brazilian pepper. The ground cover contains cocoplum, caesarweed, poison ivy, muscadine grapevine, and greenbrier.

Cabbage Palm, Disturbed (76-100% Exotics) (FLUCFCS Code 4289 E4)

The canopy of this habitat type is dominated by cabbage palm with scattered melaleuca, live oak, and laurel oak. The sub-canopy contains Brazilian pepper, cabbage palm, and slash pine. The ground cover includes muscadine grapevine, caesarweed, poison ivy, and greenbrier.

Hardwood/Conifer Mixed, Disturbed (76-100% Exotics) (FLUCFCS Code 4349 E4)

The canopy of this habitat type includes slash pine, laurel oak, live oak, cabbage palm, Brazilian pepper, and melaleuca. The sub-canopy contains cabbage palm, slash pine, and scattered Brazilian pepper. The ground cover includes muscadine grapevine, slash pine, laurel oak, and Brazilian pepper.

Water (Canal/Ditch) (FLUCFCS Code 500)

The canopy and sub-canopy of this land use type are open. The ground cover is primarily open water that leads to the Kehl Canal and on to the headwaters of the Imperial River.

Willow/Pop Ash, Disturbed (0-24% Exotics) (FLUCFCS Code 6189 E3)

The canopy of this land use type is dominated by pop ash (*Fraxinus caroliniana*) and willow (*Salix caroliniana*).

Mixed Wetland Forest, Drained (50-75% Exotics) (FLUCFCS Code 6305 E3)

The canopy of this drained wetland habitat contains pop ash, laurel oak, and bald cypress (*Taxodium distichum*). The sub-canopy consists of pop ash, willow, and Brazilian pepper. The ground cover is sparse but contains false fennel (*Eupatorium leptophyllum*), cabbage, American beautyberry, ceasarweed, and swamp fern.

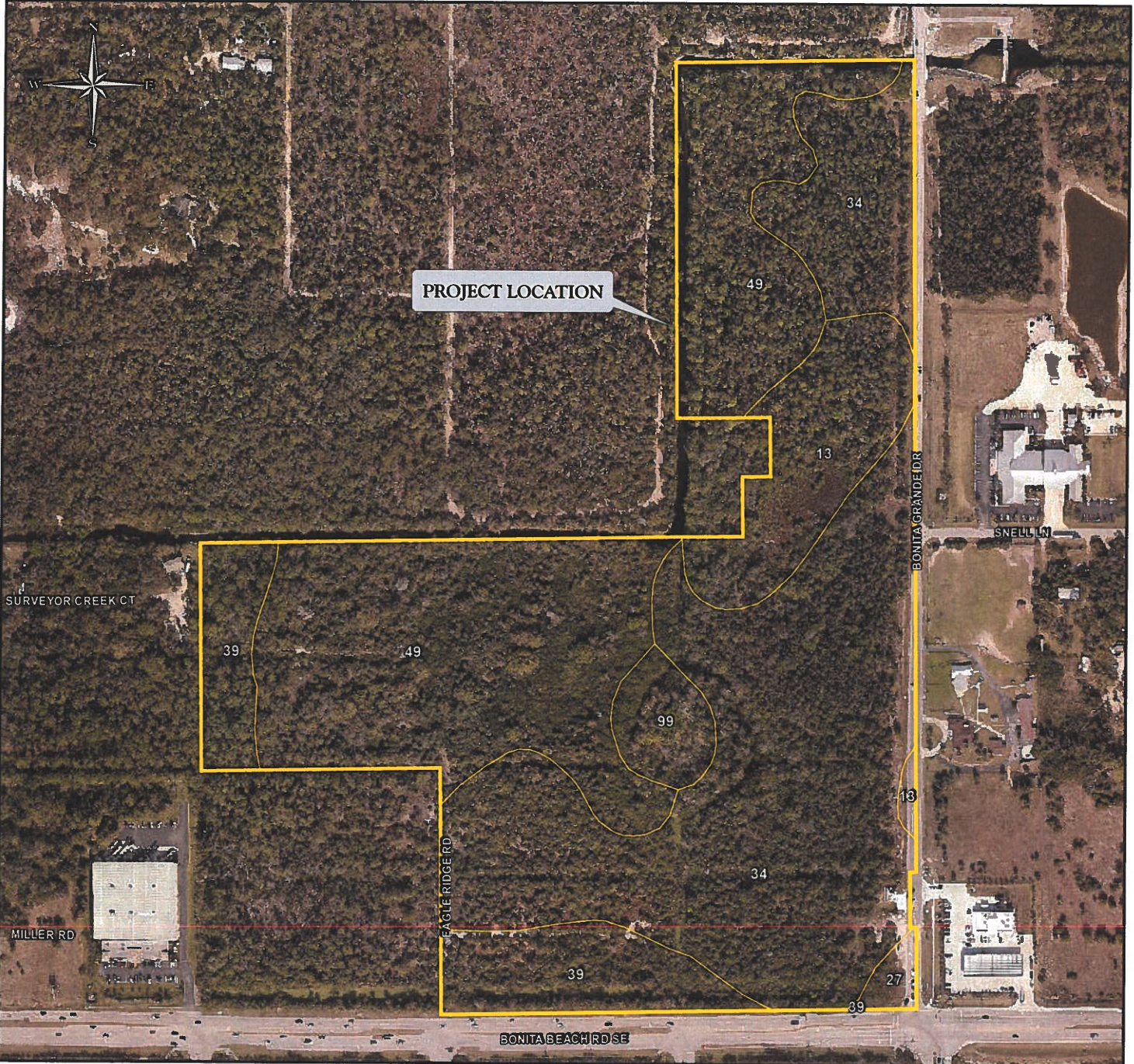
Disturbed Land (FLUCFCS Code 740)

The canopy and sub-canopy are mostly open but contain scattered cabbage palm, Brazilian pepper, laurel oak, and melaleuca. The ground cover includes cabbage palm, cogon grass (*Imperata cylindrica*), ceasarweed, spermacoce, poison ivy, greenbrier, and muscadine grape.

Road (FLUCFCS Code 814)

The canopy, sub-canopy, and ground cover are all open for this land use type. This land use includes actively maintained Bonita Beach Road and Bonita Grande Drive.

Exhibit II-F-4a



J:\2019\15182420\GIS\2019\SS_FOR_BONITA_SPRINGS_ZONE\APR\BONITA_SOLID_SOILS_MAP_HTD - 7/25/2019 @ 2:24:54 PM

LEGEND

 BONITA GRANDE



Soil Unit	Description
13	BOCA FINE SAND
27	POMPANO FINE SAND, DEPRESSIONAL
34	MALABAR FINE SAND
39	ISLES FINE SAND, DEPRESSIONAL
49	FELDA FINE SAND, DEPRESSIONAL
99	WATER

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - FEBRUARY 2019.

PROPERTY BOUNDARY PER ROBAU AND ASSOCIATES DRAWING No.0180018_X01_COE.DWG DATED JUNE 5, 2019.

ROADWAY NETWORKS WERE ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

SOILS MAPPING WAS ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE OCTOBER 2007 AND CREATED BY THE NATURAL RESOURCES CONSERVATION SERVICE 1990.

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**SOILS MAP
BONITA GRANDE**

DRAWN BY	DATE
T.F.	7/11/19
REVIEWED BY	DATE
A.W.	7/11/19
REVISED	DATE



**PASSARELLA
& ASSOCIATES**

Exhibit II-F-4b



SCALE: 1" = 200'

LEGEND:

- SFWMD WETLANDS
(0.12 Ac.±)
- SFWMD "OTHER SURFACE WATERS"
(6.65 Ac.±)

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FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
*3219 E1	PALMETTO PRAIRIE, DISTURBED (0-24% EXOTICS)	1.82 Ac.±	1.8%
*4119 E1	PINE FLATWOODS, DISTURBED (0-24% EXOTICS)	9.48 Ac.±	14.0%
4159 E4	MESIC PINE INVADED BY MELALEUCA (76-100% EXOTICS)	3.08 Ac.±	4.6%
422	BRAZILIAN PEPPER	3.58 Ac.±	5.3%
424	MELALEUCA	2.80 Ac.±	4.1%
4289 E4	CABBAGE PALM, DISTURBED (76-100% EXOTICS)	13.28 Ac.±	19.7%
4349 E4	HARDWOOD/CONIFER MIXED, DISTURBED (76-100% EXOTICS)	19.14 Ac.±	28.3%
500	WATER (CANAL/DITCH)	6.65 Ac.±	9.8%
*6189 E1	WILLOW/POP ASH, DISTURBED (0-24% EXOTICS)	0.12 Ac.±	0.2%
*6305 E3	MIXED WETLAND FOREST, DRAINED (50-75% EXOTICS)	1.98 Ac.±	2.9%
740	DISTURBED LAND	4.08 Ac.±	6.0%
814	ROAD	2.14 Ac.±	3.2%
TOTAL		67.53 Ac.±	100.0%

*INDIGENOUS VEGETATION

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - FEBRUARY 2019.

PROPERTY BOUNDARY PER ROBAU AND ASSOCIATES DRAWING No.0180018_X01.COE.DWG DATED JUNE 5, 2019.

FLUCFCS LINES PER GRADY MINOR AND ASSOCIATES DRAWING No. RPGFP-FLUCCS.DWG RECEIVED BY PAI ON JANUARY 27, 2016. THESE LINES ALONG WITH PAI FLUCFCS LINES WERE USED FOR THE CREATION OF THIS FLUCFCS MAP.

PASSARELLA AND ASSOCIATES INC. FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS HAVE BEEN REVIEWED AND APPROVED BY THE SFWMD STAFF ON JANUARY 28, 2020.



DRAWN BY	DATE
R.F.	1/31/20
REVIEWED BY	DATE
A.W.	1/31/20
REVISED	DATE

13620 Metropolis Avenue
Suite 200
Ft. Myers, FL 33912
Phone (239) 274-0067
Fax (239) 274-0069



BONITA GRANDE
AERIAL WITH FLUCFCS AND WETLANDS MAP

DRAWING No.	151S12420
SHEET No.	

J:\2019\151S12420\151S12420\AERIAL WITH FLUCFCS AND WETLAND MAP 013020.dwg Tab: IIIT-C.TB Feb 07, 2020 - 12:04 PM PLOTTED BY: RBDF

Exhibit II-F-2c



SCALE: 1" = 200'

LEGEND:

INDIGENOUS UPLAND PRESERVATION AND ENHANCEMENT (9.40 Ac.±)

UPLAND FLUCFCS CODE	UPLAND PRESERVE & ENHANCEMENT
3219 E1	0.16 Ac.±
4119 E1	5.21 Ac.±
4159 E4	2.89 Ac.±
4349 E4	0.64 Ac.±
740	0.50 Ac.±
TOTAL	9.40 Ac.±

NOTES:

PROPERTY BOUNDARY PER ROBAU DESIGNS DRAWING No. 0180018_X01_COE.DWG DATED JUNE 5, 2019.

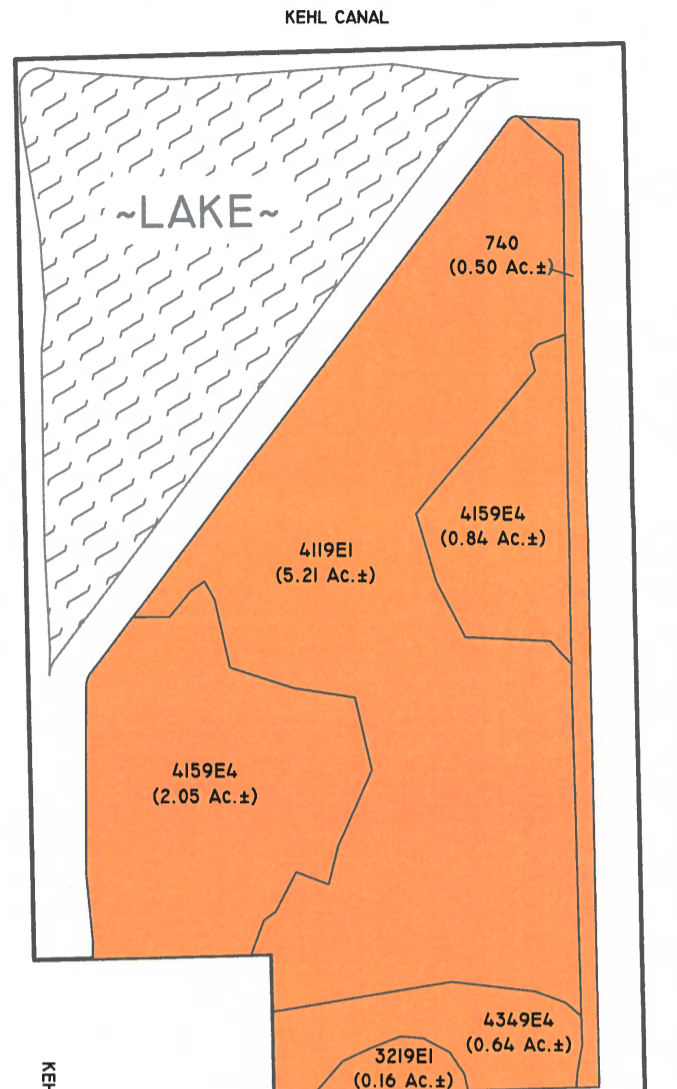
SITE PLAN PER PER ROBAU DESIGNS DRAWING No. 001800018MOI_CONCEP_SP-OPTION A.DWG DATED NOVEMBER 4, 2019.

FLUCFCS LINE PER GRADY MINOR AND ASSOCIATES DRAWING No. RPGFP-FLUCCS.DWG RECEIVED BY PAI ON JANUARY 27, 2016. THESE LINES ALONG WITH PAI FLUCFCS LINES WERE USED FOR THE CREATION OF THIS FLUCFCS MAP.

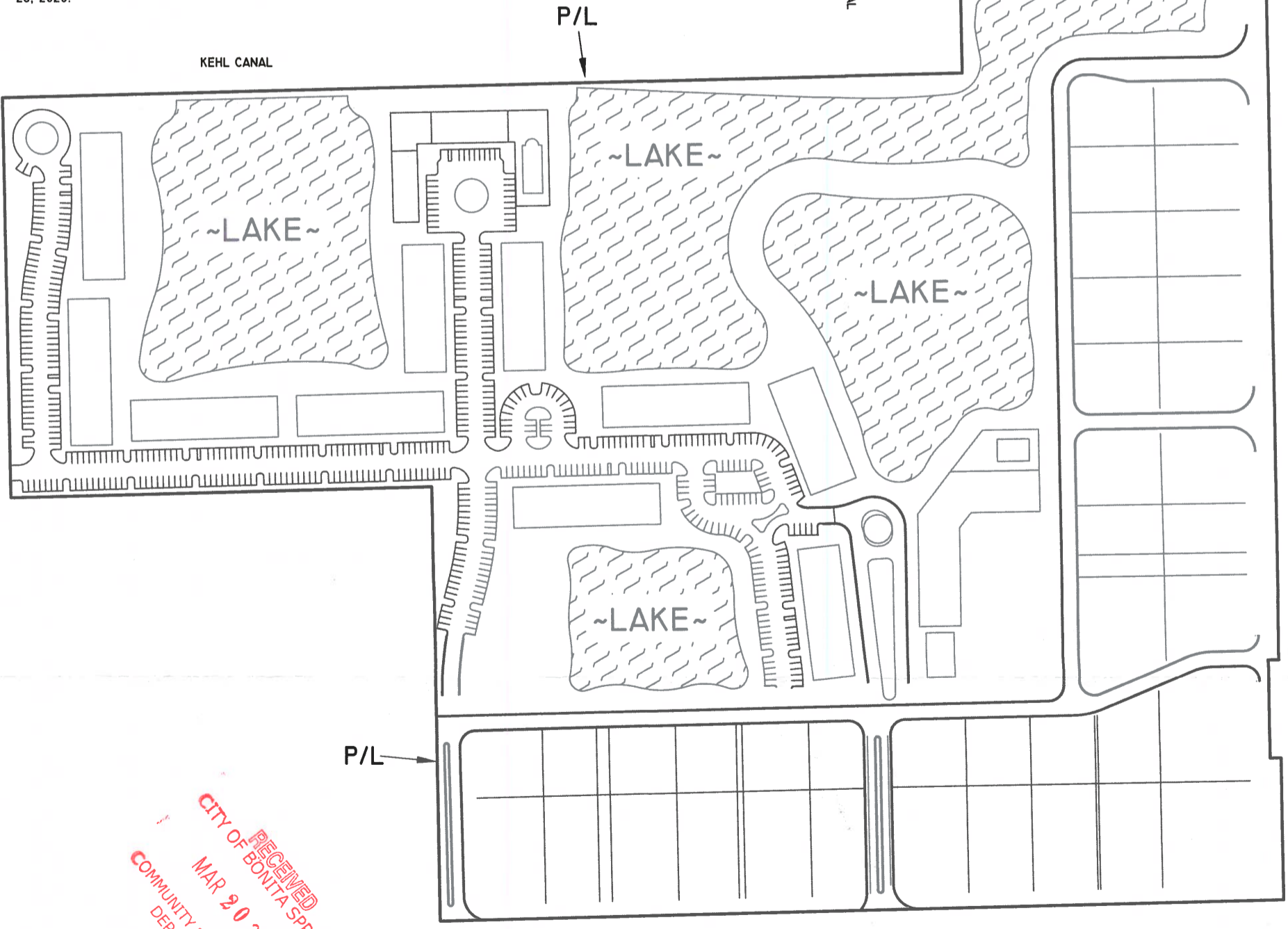
PASSARELLA AND ASSOCIATES INC. FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS HAVE BEEN REVIEWED AND APPROVED BY THE SFWMD STAFF ON JANUARY 28, 2020.



BONITA GRANDE DR



BONITA BEACH RD SE

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D.B.	11/2/16
REVIEWED BY	DATE
A.W.	11/2/16
REVISED	DATE
R.F.	02/07/20

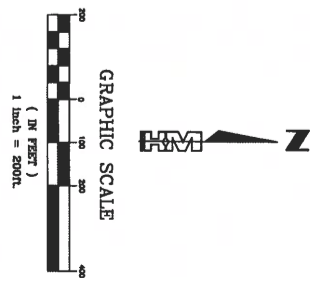
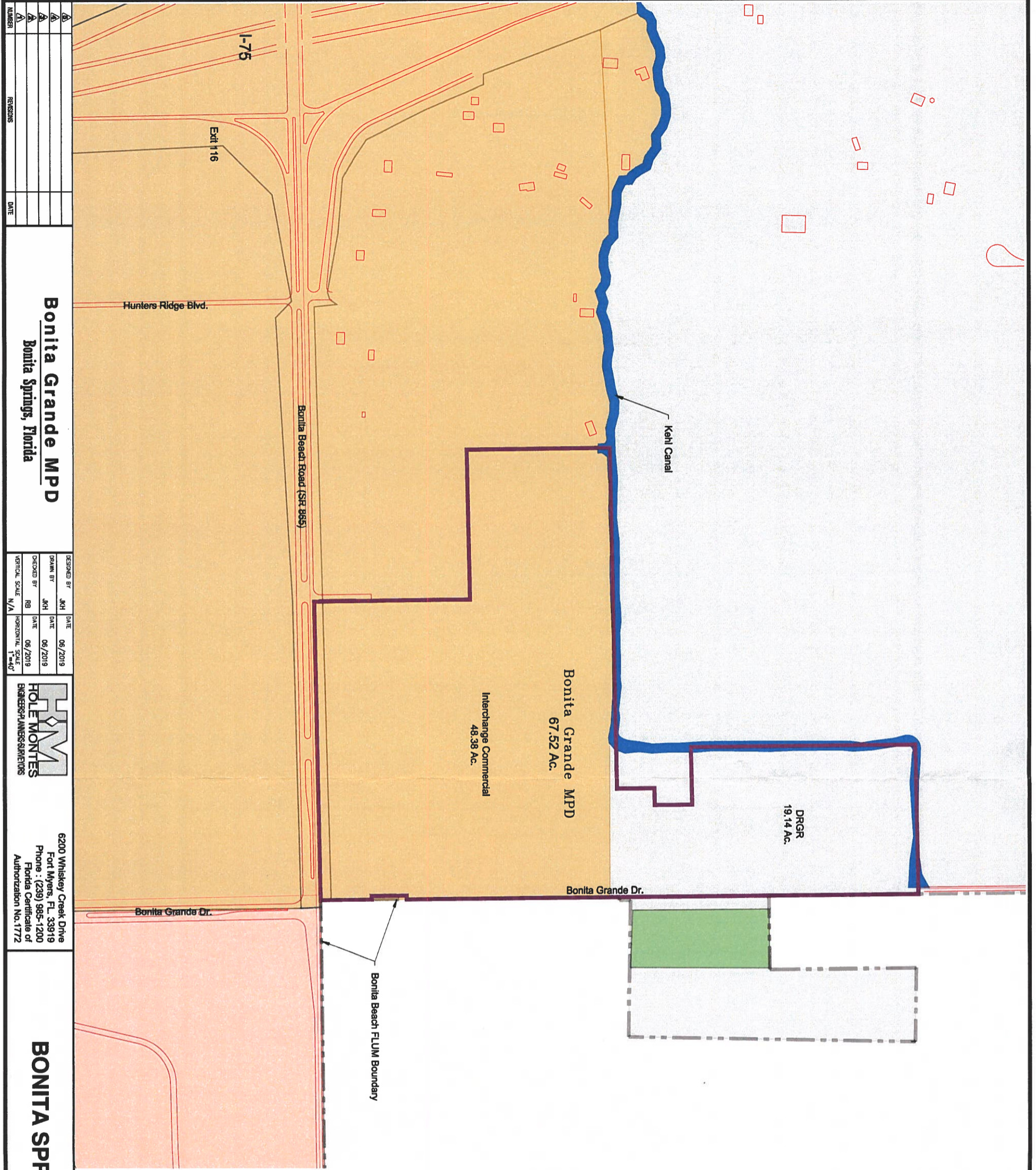
13620 Metropolis Avenue
 Suite 200
 Ft. Myers, FL 33912
 Phone (239) 274-0067
 Fax (239) 274-0069










BONITA GRANDE
 SITE PLAN WITH UPLAND PRESERVE
 ENHANCEMENT AREAS

DRAWING No.	151S12420
SHEET No.	

J:\2015\15s12420\2015\SS FOR BONITA SPRINGS ZONING APP\SITE PLAN WITH UPLAND PRESERVE ENHANCEMENT AREAS 02/07/20.DWG, TAB: I\X17-HI FEB 07, 2020 - 3:29PM, PLOTTED BY: REUF



LEGEND

-  Project Boundary
-  Bonita Springs FLUM Boundary Line
-  DRGR
-  Interchange Commercial
-  Kehl Canal
-  Resource Protection
-  Mod. Density MU / PD

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REVISIONS	DATE	NUMBER

Bonita Grande MPPD
Bonita Springs, Florida

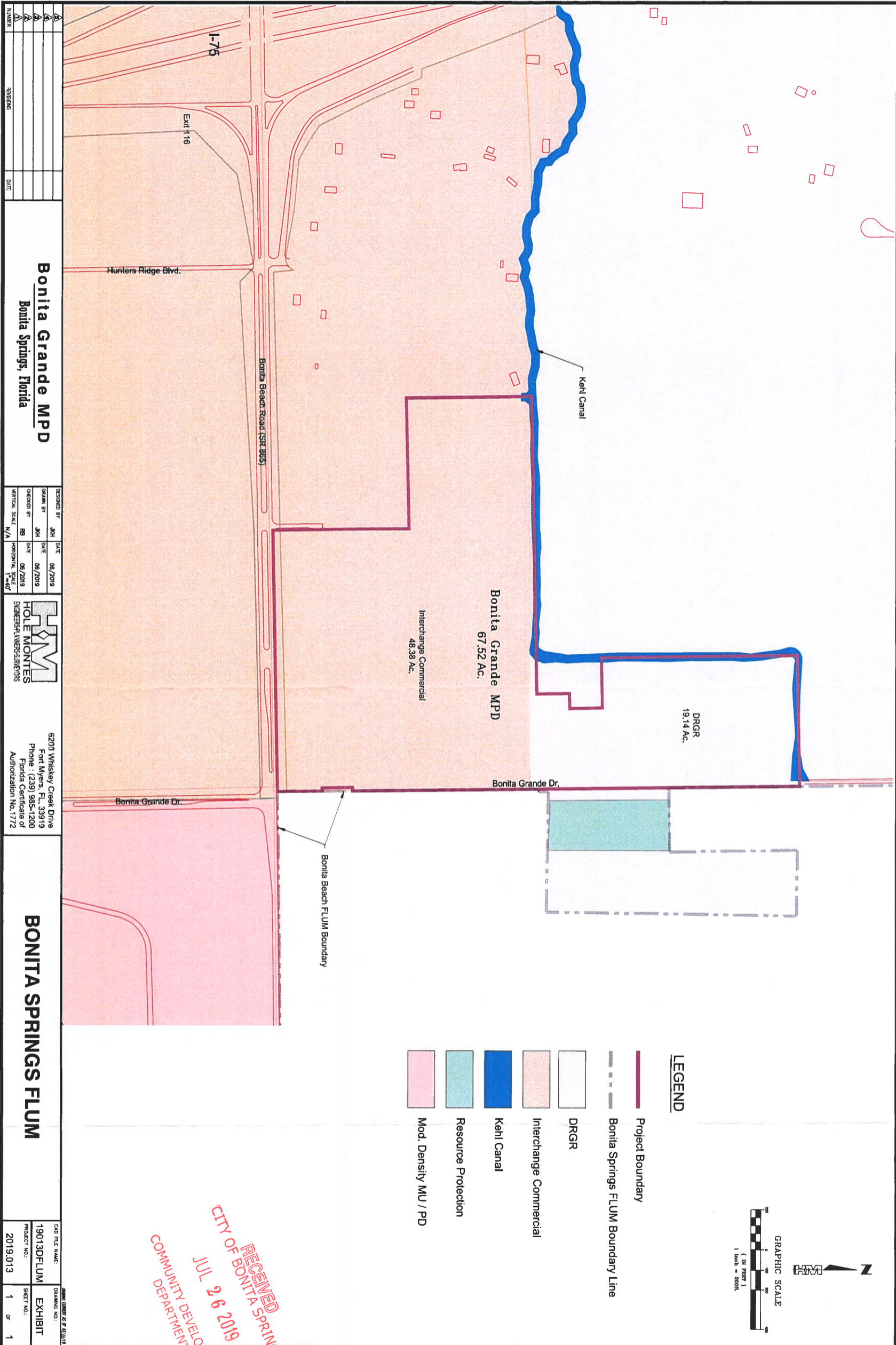
DESIGNED BY	DATE
JMH	06/20/19
CHECKED BY	DATE
RB	06/20/19
VERTICAL SCALE	HORIZONTAL SCALE
N/A	1"=40'



6200 Whiskey Creek Drive
Fort Myers, FL 33919
Phone : (239) 985-1200
Florida Certificate of
Authorization No. 1772

BONITA SPRINGS FLUM

CAD FILE NAME:	DRAWING NO.:
19013DFLUM	EXHIBIT
PROJECT NO.:	SHEET NO.:
2019.013	1 OF 1



NUMBER	REVISIONS	DATE
1/A		
2/A		
3/A		
4/A		

Bonita Grande MPP
 Bonita Springs, Florida

DESIGNED BY	DATE	06/2019
JKH		
CHECKED BY	DATE	06/2019
RB		
VERTICAL SCALE	HORIZONTAL SCALE	1"=40'
N/A		

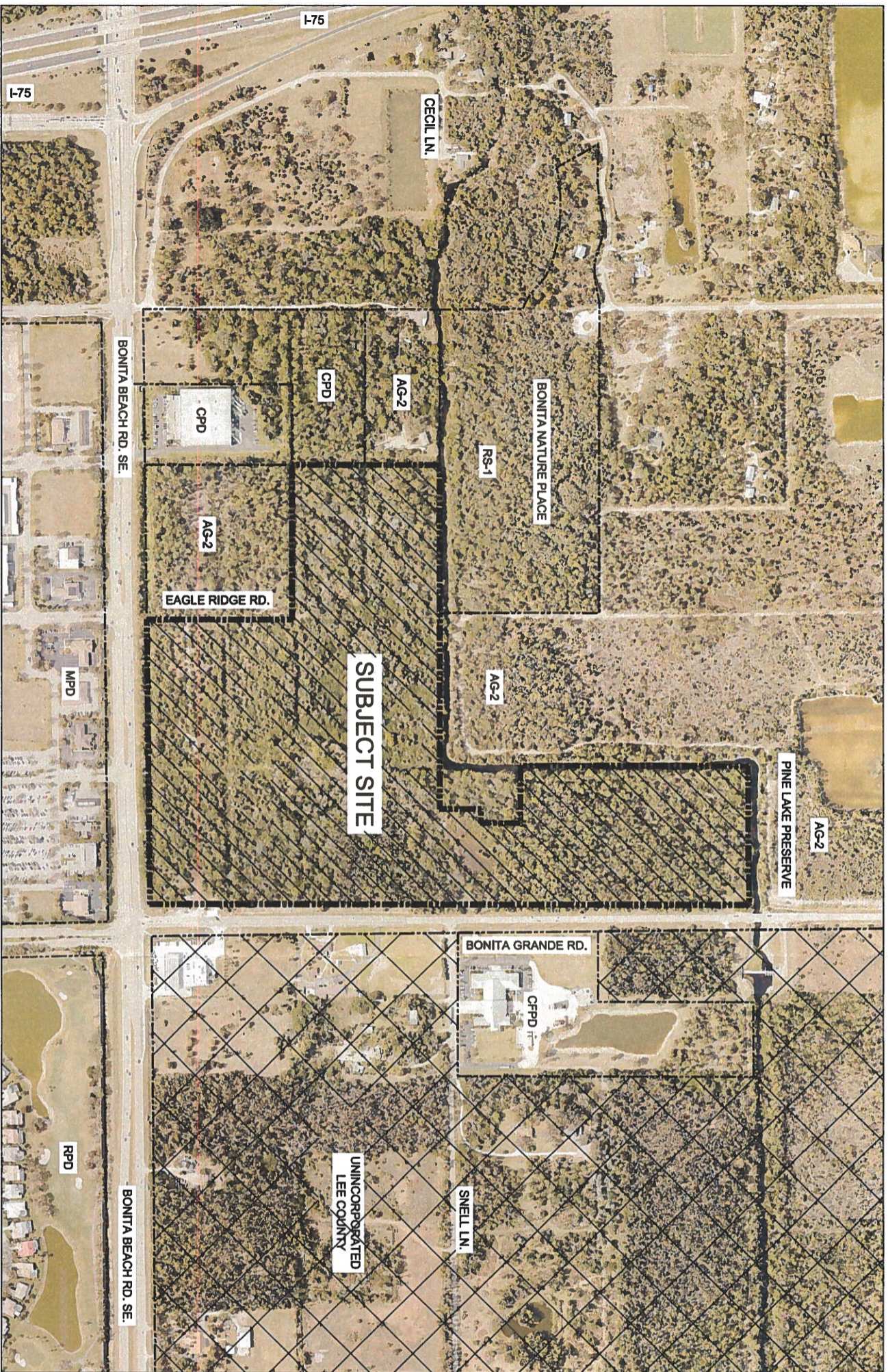


5201 Whiskey Creek Drive
 Fort Myers, FL 33919
 Phone : (239) 985-1200
 Florida Certificate of
 Authorization No. 1772

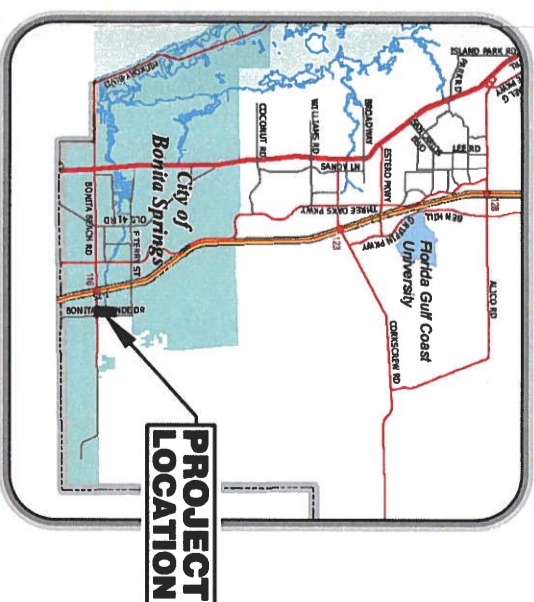
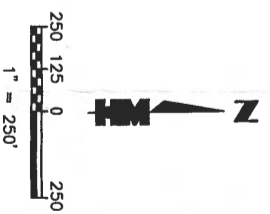
BONITA SPRINGS FLUM

CAD FILE NAME	DRAWING NO.
19013DFLUM	EXHIBIT
PROJECT NO.	SHEET NO.
2019.013	1 of 1

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LOCATION MAP
SECTION 31 TOWNSHIP 47 SOUTH, RANGE 26 EAST

ADJACENT PROPERTY LAND USE/ ZONING	
ZONING	LAND USE
NORTH	AG-2, RS-1 BONITA NATURE PLACE, PINE LAKE PRESERVE
SOUTH	MPD BONITA BEACH RD., BERNWOOD PARK OF COMMERCE (COMMERCIAL)
EAST	CPD BONITA GRANDE DR., RACE TRAC, AGRICULTURAL, BONITA SPRINGS FIRE DEPT. STATION 24
WEST	AG-2, CPD CITY MATRESS, SINGLE FAMILY RESIDENTIAL, PINE LAKE PRESERVE

BONITA GRANDE MPD	DESIGNED BY: KLP DATE: 06/21/2019	H.M.	DRAWING NO. 19013
	CHECKED BY: KLP DATE: 06/21/2019	HOLE MONTES	PROJECT NO. 2019013
	VERTICAL SCALE: 1" = 250'	HOLE MONTES, INC. 6200 WHISKEY CREEK DRIVE FORT MYERS, FL. 33919 CERTIFICATE OF AUTHORIZATION NO. 1772	DRAWING NO. -
			SHEET NO. 1

Exhibit IV-J

**BONITA GRANDE
CITY OF BONITA SPRINGS
PRESERVE AREA AND PROTECTED SPECIES
MANAGEMENT PLAN**

Revised November 2019

Prepared For:

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(954) 481-3700***

Prepared By:

***Passarella & Associates, Inc.
13620 Metropolis Avenue, Suite 200
Fort Myers, Florida 33912
(239) 274-0067***

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Project No. 15ISI2420

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1.0 INTRODUCTION

The following outlines the City of Bonita Springs Preserve Area and Protected Species Management Plan for Bonita Grande (Project) in Section 31, Township 47 South, Range 26 East, Lee County (Appendix A). The Project includes 9.4± acres of preserve area. The preserves include a mixture of upland vegetation types with varying degrees of exotic vegetation coverage. The location of the preserve area, including the Florida Land Use, Cover and Forms Classification System (FLUCFCS) types within the preserve, is depicted on Appendix B. The preserve area will be enhanced by the hand treatment of exotic and nuisance vegetation.

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2.0 METHOD AND FREQUENCY OF PRUNING AND TRIMMING

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The preserve area shall remain in a natural state in perpetuity and not be disturbed by dredging, filling, land clearing, or construction related activities. The preserve area will be monitored for excessive ground cover and sub-canopy growth. Following completion of initial exotic treatment, semi-annual inspections of the preserves will occur for the first two years. During these inspections, the Project area will be traversed by a qualified ecologist. Locations of nuisance and/or exotic species will be identified for immediate treatment with an appropriate herbicide. Any additional growth problems will also be noted, and corrective actions taken. Once exotic/nuisance species levels have been reduced to acceptable limits (i.e., less than five percent cover), inspections of the Project area will be conducted annually.

If prescribed burning is not feasible to control excessive growth, maintenance of native upland vegetation maybe conducted by use of mechanical mowing or disking equipment. Mowing or bush-hogging may be conducted in palmetto and pine flatwood habitats every three to seven years. Heavy equipment should be used during dry periods to reduce disturbance to the soil. Heavy equipment should stay clear of the drip line of preserved pine trees and remain outside of three-quarters of the drip line of all other preserved canopy trees. Alternatively, selective hand removal of ground cover and sub-canopy growth may be conducted as needed to enhance maximum wildlife use and reduce risk of wildfire. Where listed species may be affected by vegetation clearing practices, surveys for listed species must be conducted no more than six months prior to clearing.

Dead or dying trees that pose a hazard to areas outside of the preserve may be cut or trimmed after inspection for nesting or roosting by listed species and coordination with City of Bonita Springs staff.

3.0 METHODS TO REMOVE AND CONTROL EXOTIC AND NUISANCE PLANTS

Initial treatment of exotic vegetation will be coordinated with South Florida Water Management District (SFWMD) compliance staff and City of Bonita Springs staff in accordance with the monitoring program outlined in the SFWMD Environmental Resource Permit (ERP).

Exotic and nuisance vegetation within the preserve area will be treated by hand methods. Exotics to be treated include all Category I exotics as defined by the current Florida Exotic Pest Plant Council list, including but not limited to those outlined in Table 1. The preserves will be maintained free of exotics in perpetuity. Access to the preserves will be through the development areas.

Table 1. Prohibited Invasive Exotics

Common Name	Scientific Name
Air potato	<i>Dioscorea bulbifera</i>
Australian pines	All <i>Casuarina</i> species
Benjamin fig	<i>Ficus benjamina</i>
Bishopwood	<i>Bischofia javanic</i>
Brazilian pepper	<i>Schinus terebinthifolius</i>
Carrotwood	<i>Cupaniopsis anacardioides</i>
Caesarweed	<i>Urena lobata</i>
Chinese tallow	<i>Sapium sebiferum</i>
Cork tree	<i>Thespesia populnea</i>
Cuban laurel fig	<i>Ficus retusa</i>
Downy rose-myrtle	<i>Rhodomyrtus tomentosa</i>
Earleaf acacia	<i>Acacia auriculiformis</i>
Guinea grass	<i>Panicum maximum</i>
Japanese climbing fern	<i>Lygodium japonicum</i>
Java plum	<i>Syzygium cumini</i>
Lantana	<i>Lantana camara</i>
Lead tree	<i>Leucaena leucocephala</i>
Melaleuca	<i>Melaleuca quinquenervia</i>
Murray red gum	<i>Eucalyptus camaldulensis</i>
Norfolk Island pine	<i>Araucaria heterophylla</i>
Old World climbing fern	<i>Lygodium microrphyllum</i>
Rosary pea	<i>Abrus precatorius</i>
Rose apple	<i>Syzygium jambos</i>
Rosewood	<i>Dalbergia sissoo</i>
Scaevola Beach naupaka	<i>Scaevola taccada</i>
Seaside mahoe	<i>Hibiscus tiliaceus</i>
Tropical soda apple	<i>Solanum viarum</i>
Wedelia	<i>Wedelia trilobata</i>
Weeping fig	<i>Ficus benjamina</i>
Winged yam	<i>Dioscorea alata</i>
Woman's tongue	<i>Albizia lebeck</i>

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Hand treatment will either be by felling of exotic trees, hand removal and herbicide treatment of the stumps, or hand pulling. The hand treatment of exotic and nuisance vegetation will include one or more of the following methods: (1) cut exotics within 12 inches of ground elevation, hand remove cut vegetation, and treat remaining stump with approved herbicide; (2) girdle standing Brazilian pepper (*Schinus terebinthifolius*), melaleuca (*Melaleuca quinquenervia*), and Australian pine (*Casuarina equisetifolia*) with diameter at breast height greater than 4 inches and apply approved herbicide to cambium; (3) foliar application of approved herbicide to Brazilian pepper, melaleuca saplings, Australian pine, and downy rose-myrtle (*Rhodomyrtus tomentosa*); (4) foliar application of approved herbicide or hand pulling of exotic seedlings; and (5) foliar application of approved herbicide to nuisance grasses.

In areas where the density of exotic vegetation exceeds 50 percent, cuttings will either be removed from the site or stacked in piles at approximately 100-foot intervals. If left on the site, smaller cuttings will be stacked butt end to the ground into a nearly vertical position (i.e., teepee method). Larger cuttings will be cut and stacked side by side into an area approximately 6 feet on a side. Cuttings will be stacked perpendicular to the previous layer up to a height of approximately 4 feet (i.e., log cabin method).

4.0 DEBRIS REMOVAL

If exotic vegetation is removed from the preserve areas, it will be removed by hand and disposed of within the development area. The removal of the exotic vegetation debris will be coordinated with the general site contractor.

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5.0 PRESERVE MAINTENANCE SCHEDULE

Activities associated with the implementation of the preserve maintenance program shall be in accordance with the five-year SFWMD ERP Work Schedule.

6.0 PROTECTED SPECIES MANAGEMENT PLANS

The following listed species management plans for American alligator (*Alligator mississippiensis*), gopher tortoise (*Gopherus polyphemus*), and Florida panther (*Puma concolor coryi*) are provided per Section 3-456 of the City of Bonita Springs Land Development Code (LDC).

6.1 American Alligator Management Plan

No American alligators were observed during the protected species survey conducted by Passarella & Associates, Inc. (PAI) on February 26, 2016; however, sign of American alligator (i.e., scat) was observed on the property. The following plan outlines the protection guidelines that will be implemented for the American alligator. The plan identifies the procedures taken, such as the use of signage to avoid the feeding or harassing of American alligators located on the property. The American alligator is listed by the Florida Fish and

Wildlife Conservation Commission (FWCC) as a federally threatened species due to similarity of appearance to the American crocodile (*Crocodylus acutus*).

6.1.1 Biology

The American alligator is a reptile with an elongated, armored, lizard-like body with a muscular, flat tail. Adult alligators are dark with a pale underside while juveniles have bright yellow stripes and blotches. The average size for adults is 8.2 feet for females and 11.2 feet for males. The body weight can reach up to one-half ton.

American alligators inhabit all counties in the State of Florida and are most common in the major river drainage basins and large lakes in the central and southern portions of the state. They can also be found in marshes, swamps, ponds, drainage canals, phosphate-mine settling ponds, and ditches. Alligators are tolerant of poor water quality and occasionally inhabit brackish marshes along the coast. A few even venture into saltwater. Individuals are wide ranging and some males may utilize an area of two square miles or more. Individuals of both sexes are most likely to become more active and extend their ranges during the April to May courtship and breeding season. Prey may include frogs, snakes, birds, and small mammals, although alligators are opportunistic feeders and may prey on whatever is readily available. Larger individuals often prefer carrion to fresh meat.

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6.1.2 Management Plan

Alligators commonly move from water body to water body in response to factors such as season, disturbances, food supply, etc. Only representatives of the FWCC are authorized to handle nuisance alligators. If an alligator is present within the limits of construction at the time of clearing, work within the immediate vicinity of the alligator will be halted and the animal will be allowed to move out and into safer territory. Once the alligator has moved, work can be restarted. If an active alligator nest is found, it will be temporarily protected with an adequate buffer zone until the hatchlings leave the nest.

COMMUNITY DEVELOPMENT
DEPARTMENT

6.1.3 Educational Materials

The FWCC's educational brochure entitled "A Guide to Living with Alligators" (Appendix C) will be provided to homeowners via the Homeowner's Association (HOA) Documents and to maintenance staff. The brochure can be found at http://myfwc.com/media/152524/Alligator_Brochure.pdf. Construction personnel and homeowners will be instructed that in the event there is a problem with a persistent nuisance alligator, they should contact the FWCC's Nuisance Alligator Hotline at 866-FWC-GATOR (866-392-4286). The FWCC is the only agency empowered to handle nuisance alligators.

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6.2 Gopher Tortoise Management Plan

The preservation area may provide suitable gopher tortoise habitat. Gopher tortoises located in habitats proposed for development may be relocated to the on-site preservation area in accordance with Florida Fish and Wildlife Conservation Commission (FWCC) permit. If gopher tortoises are relocated on-site, the preserve will remain fenced to prevent the relocated gopher tortoises from entering the construction area and to protect vegetation during the clearing and construction period. Areas used for gopher tortoise preserve will be managed in accordance with FWCC permit conditions.

6.2.1 Gopher Tortoise Relocation and Management

Prior to the relocation of any gopher tortoises, an updated gopher tortoise survey will be conducted within the limits of construction no more than 90 days prior to excavating the gopher tortoise burrows. Within the limits of construction, all potentially occupied gopher tortoise burrows will be excavated. Removal of the vegetation and heavier overburden material will occur by backhoe. The finer digging around the burrow will be done by hand. Excavation activities will be supervised by a qualified biologist. Any gopher tortoises and their commensals found will be relocated to the on-site preserve area. The number of burrows excavated, and the number of tortoises relocated to each on-site preserve will be documented annually in accordance with FWCC permit conditions.

To reduce the threat of wildfires and maintain quality gopher tortoise habitat within the preserve area, prescribed burns may be utilized to remove excess vegetative growth and nuisance vegetation, such as vines. Burning in the preserves may occur on a one to three-year rotation or as conditions permit. Any controlled burning shall be conducted by a state certified burn manager and will be at the discretion of the developer or homeowner's association. Roller-chopping and hand clearing are alternative methods for removing excess vegetation growth and nuisance vegetation. Where habitat management needs to occur for listed species it will be implemented by the preserve manager with the evaluations and recommendations of the preserve manager documented in the annual report.

6.2.2 Eastern Indigo Snake

During clearing operations for the Project, informational posters will be placed in conspicuous locations at the construction office and construction entrances to the Project. The posters will provide background information on identification, habits, and protection of the Eastern indigo snake (*Drymarchon corais couperi*). The posters will state actions to take if an Eastern indigo snake is sighted and the names and telephone numbers of contact persons.

U.S. Fish and Wildlife informational pamphlets (Appendix D) will be made available to individuals in charge of the clearing operation for distribution to all construction crew. The pamphlet provides background information on identification, habits, and protection of the Eastern indigo snake. The pamphlet states actions to take if an

Eastern indigo snake is sighted, and the names and telephone numbers of contact persons.

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6.3 Florida Panther Management Plan

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The following habitat management plan has been prepared for the purpose of addressing the Florida panther. The Florida panther is listed as endangered by the FWCC and the U.S. Fish and Wildlife Service (USFWS).

6.3.1 Biology

The Florida panther is a large, long-tailed cat with a great deal of color variation: pale brown or rusty upper parts; dull white or buff-colored under parts; and dark brown or blackish tail tip, back of ears, and sides of nose. Mature males have an average weight range between 100 to 150 pounds and measure nearly seven feet from nose to tip of tail. Females are considerably smaller with a weight range of 50 to 100 pounds and measuring about six feet (USFWS 1987). Panthers subsist on a variety of mammalian prey dominated by white-tailed deer, feral hog, and in some areas raccoon (Maehr 1988a). Existing data on Florida panther reproduction indicates that breeding occurs throughout the year with a peak in the winter/spring period, a gestation period of around 90 to 95 days, litter sizes of one to four kittens, and a breeding cycle of two years for females successfully raising young to dispersal (which occurs around 18 to 24 months) (Belden 1988, Maehr 1988b).

In terms of population size and occupied range, the Florida panther population is at least stable and at best expanding as evidenced by natality rates exceeding mortality rates and by recent dispersals north of the Caloosahatchee River (Land *et al.* 2000). According to Maehr *et al.* (1991), home ranges average 200 square miles for resident adult males, 75 square miles for adult females, 241 square miles for transient males, and 69 square miles for sub-adult females. Florida panthers inhabit large remote tracts of land with adequate prey and cover and occupy a variety of habitat types including hardwood hammocks, pine flatwoods, mixed hardwood swamps, and cypress swamps. Appropriate cover is an important component of habitats used, especially during hunting, denning, and day-bedding. Recent information based on global positioning system (GPS) telemetry data collected during nocturnal and diurnal periods indicate that forests are the habitats selected by panthers (Land *et al.* 2008).

6.3.2 Educational Material

Residents will be educated about the presence of Florida panthers in their community. The educational brochure entitled "A Guide to Living with Florida Panthers" (Appendix E), prepared by the FWCC and the USFWS, will be provided to homeowners via the HOA Documents and maintenance staff. This brochure provides safety tips and instructions for panther encounters. The brochure can be found on the FWCC website located at:

<http://myfwc.com/conservation/you- conserve/wildlife/panthers/>.

7.0 METHOD OF EXOTIC ANIMAL MANAGEMENT

Information will be provided to the homeowners via the HOA Documents notifying them that pets will not be allowed to roam free and unattended, and that a leash is required for pets at all times. If exotic animals (i.e., pythons (*Python* sp.), iguanas (*Iguana* sp.), etc.) are observed within the preserve area, FWCC will be notified accordingly.

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8.0 PRESERVE SIGNAGE

Signage shall be placed around preserve areas to identify and protect the preserve during construction. The signs shall be no closer than ten feet from residential property lines, be limited to a maximum height of four feet and a maximum size of two square feet, and otherwise comply with the City of Bonita Springs LDC. Signs identifying the preserve as a “nature preserve area” will be installed along the boundary of the preserve. The signage should include language stating, “No dumping allowed.” The approximate locations of the preserve signs and the typical sign detail are depicted on Appendix B.

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9.0 MONITORING REPORTS

Annual reports will be provided to SFWMD and City of Bonita Springs Environmental Sciences staff through the fifth annual monitoring reports. The annual reports will include a brief description of mitigation and maintenance work performed. Reports will also include a brief description of anticipated mitigation and maintenance work to be conducted over the next year. The results of quantitative vegetation monitoring conducted in the preserve areas, as well as a list of observed wildlife species, will also be included.

10.0 WILDLAND FIRE HAZARD MITIGATION

Preserves may be managed through prescribed fire or activities which mimic the natural effects of fire. Fire management may include prescribed burns by a Certified Burn Manager. The removal of dead vegetation or the periodic thinning of living vegetation may also be conducted to improve forest health, as appropriate for the habitat type and surrounding land uses.

11.0 ALLOWABLE USES

The following activities are allowed within the preserve area: restoration, enhancement, maintenance and monitoring activities, and surface water management improvements. Activities not identified above, including the construction of boardwalks and recreational pathways, are prohibited within the preserve.

12.0 PRESERVE MANAGER AND DEVELOPER INFORMATION

The contact information for the preserve manager and the developer are as follows:

Preserve Manager

Andy Woodruff
Passarella & Associates, Inc.
13620 Metropolis Avenue, Suite 200
Fort Myers, Florida 33912
(239) 274-0067
andyw@passarella.net

Developer

The Zuckerman Group, Inc.
6131 Lyons Road, Suite 200
Coconut Creek, Florida 33073
(954) 481-3700

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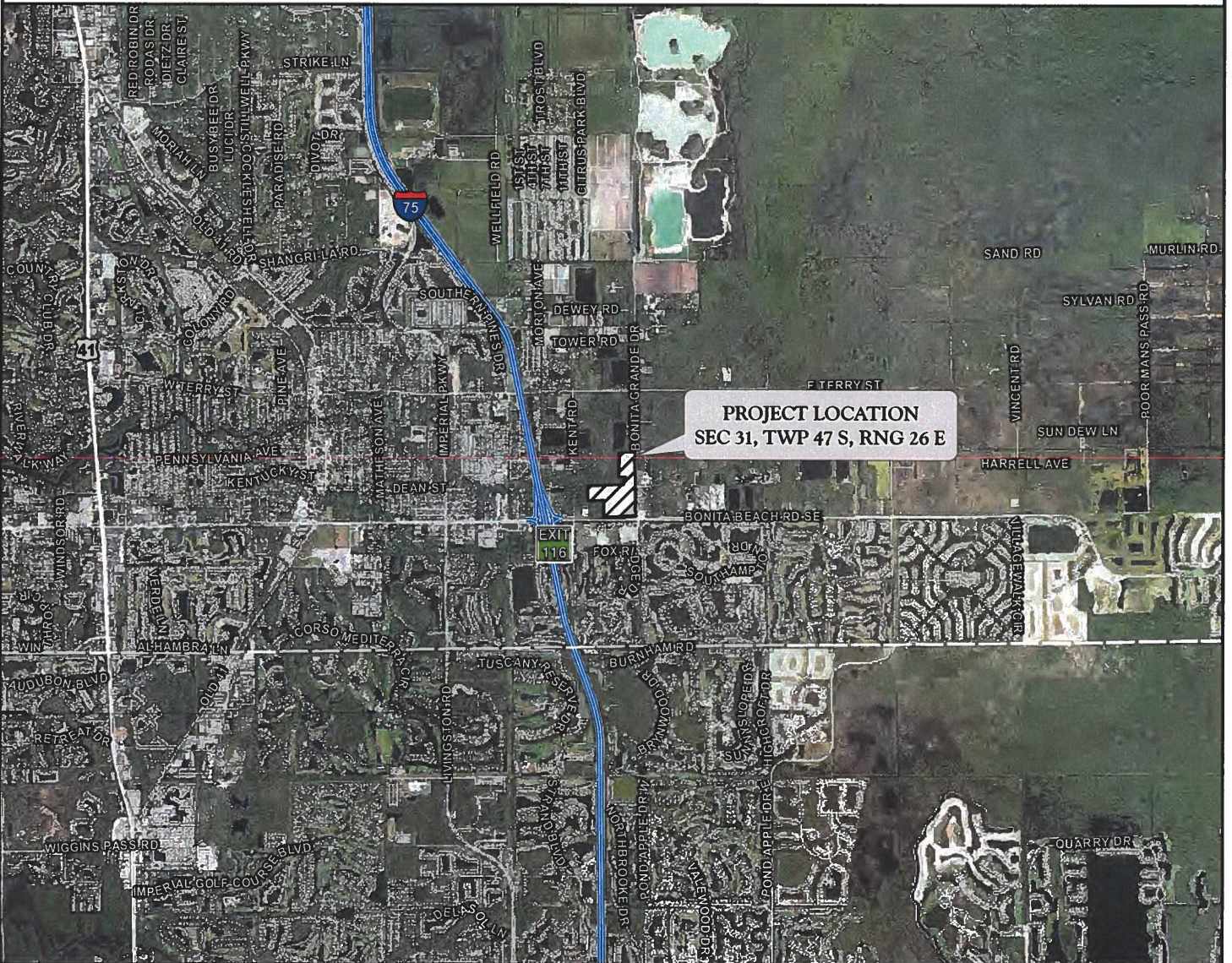
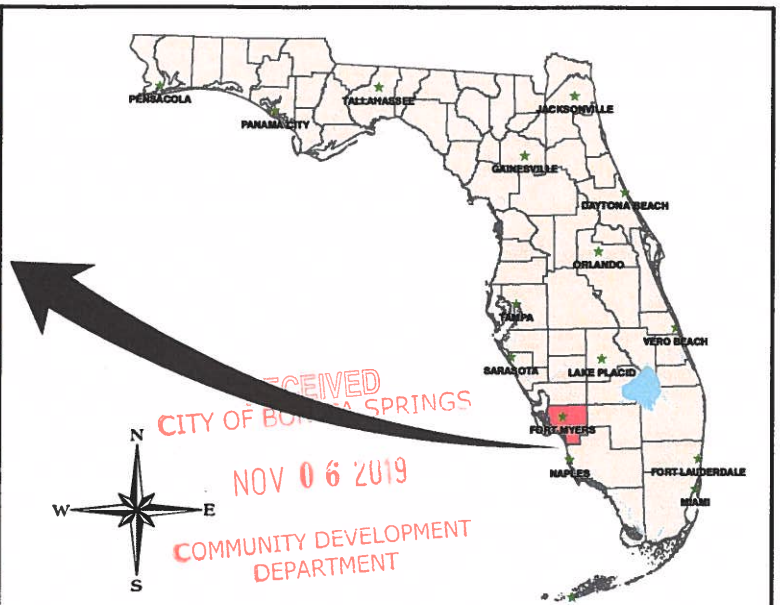
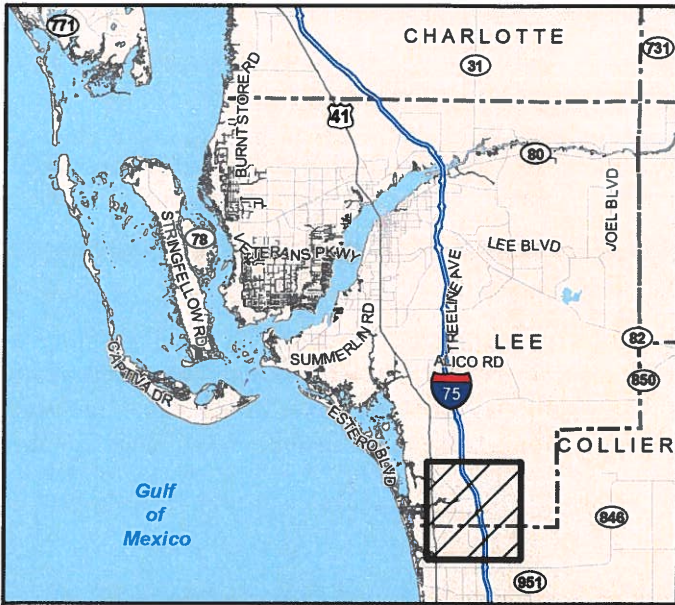
The preserve manager is responsible for overseeing the implementation of the preserve management plan until the HOA takes over from the developer.

13.0 REFERENCES

- Belden, R.C. 1988. The Florida Panther. Pages 514-532 *in* W.J. Chandler (ed) Audubon Wildlife Report. 1988/1989. The National Audubon Society, New York. 817 pages.
- Land, E.D., M. Lotz, D. Shindle, and S.K. Taylor. 2000. Florida panther genetic restoration and management. Annual report, Study Number 7508. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida.
- Land, E.D., D. Shindle, R. Kawula, J. Benson, M. Lotz, and D. Onorato. 2008. Florida Panther Habitat Selection Analysis of Concurrent GPS and VHF Telemetry Data. *Journal of Wildlife Management*. 72(3):633-639.
- Maehr, D.S. 1988a. Florida Panther Movements, Social Organization and Habitat Utilization. Annual Performance Report, 7/1/87-6/30/88, Study No. E-1-12 II-E-2 7502, Florida Game and Fresh Water Fish Commission. 19 pages.
- Maehr, D.S. 1988b. Florida Panther Food Habits and Energetics. Annual Performance Report, 7/1/87-6/30/88, Study No. E-1-12 II-E-3 7503, Florida Game and Fresh Water Fish Commission. 4 pages.
- Maehr, D.S., E.D. Land, and J.C. Roof. 1991. Social Ecology of Florida Panthers. *National Geographic Research & Exploration*, 7(4): 414-431.

APPENDIX A
PROJECT LOCATION MAP

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**APPENDIX A. PROJECT LOCATION MAP
BONITA GRANDE**

DRAWN BY	DATE
T.F.	7/11/19
REVIEWED BY	DATE
A.W.	7/11/19
REVISED	DATE





APPENDIX B
AERIAL WITH PRESERVE AREA MAP

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SCALE: 1" = 200'

LEGEND:

-  INDIGENOUS UPLAND PRESERVATION AND ENHANCEMENT (9.40 AC. ±)
-  APPROXIMATE LOCATION OF PRESERVE SIGNAGE

FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
3219 E1	PALMETTO PRAIRIE, DISTURBED (0-24% EXOTICS)	1.36 AC. ±	3.8%
4119 E1	PINE FLATWOODS, DISTURBED (0-24% EXOTICS)	5.54 AC. ±	56.8%
4159 E4	MESIC PINE INVADIED BY MELALEUCA (76-100% EXOTICS)	2.89 AC. ±	30.7%
422	BRAZILIAN PEPPER	0.54 AC. ±	5.7%
4349 E4	HARDWOOD/CONIFER MIXED, DISTURBED (76-100% EXOTICS)	0.07 AC. ±	0.7%
TOTAL		9.40 AC. ±	100.0%

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY & FEBRUARY 2019.

PROPERTY BOUNDARY PER ROBAU DESIGNS DRAWING No. 0180018_X01_COE.DWG DATED JUNE 5, 2019.

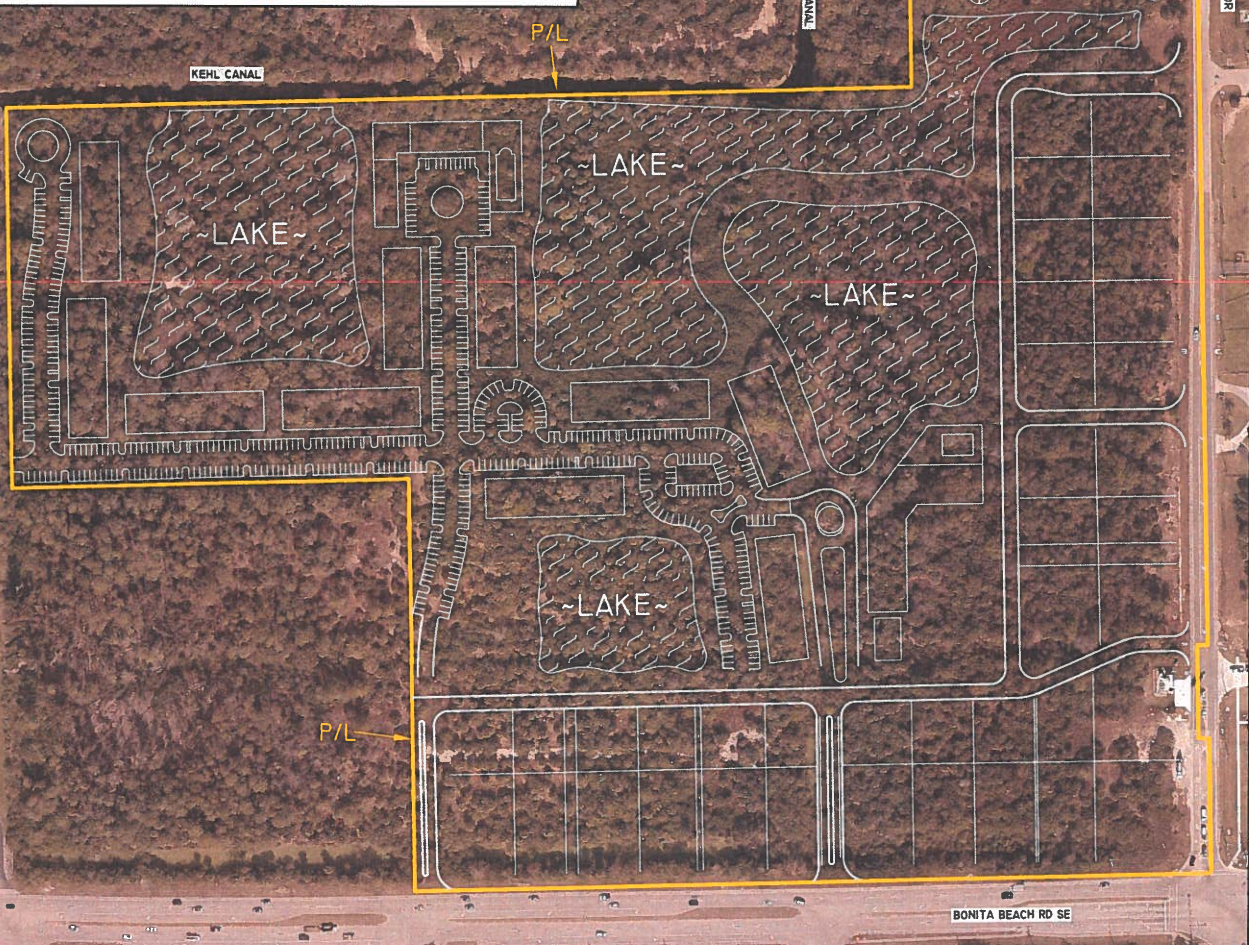
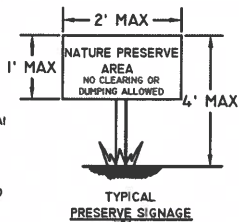
SITE PLAN PER ROBAU DESIGNS DRAWING No. 00180018M01_CONCEP_SP-OPTION A.DWG DATED NOVEMBER 4, 2019.

FLUCFCS LINE PER GRADY MINOR AND ASSOCIATES DRAWING No. RFGFP-FLUCCS.DWG RECEIVED BY PAI ON JANUARY 27, 2016. THESE LINES ALONG WITH PAI FLUCFCS LINES WERE USED FOR THE CREATION OF THIS FLUCFCS MAP.

PASSARELLA AND ASSOCIATES INC. FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS HAVE NOT BEEN REVIEWED BY ANY REGULATORY AGENCY AND ARE SUBJECT TO CHANGE.



DRAWN BY	DATE
D.B.	11/2/16
REVIEWED BY	DATE
A.W.	11/2/16
APPROVED	DATE
D.B.	11/4/19

13620 Metropolis Avenue
Suite 200
Ft. Myers, FL 33912
Phone (239) 274-0067
Fax (239) 274-0069



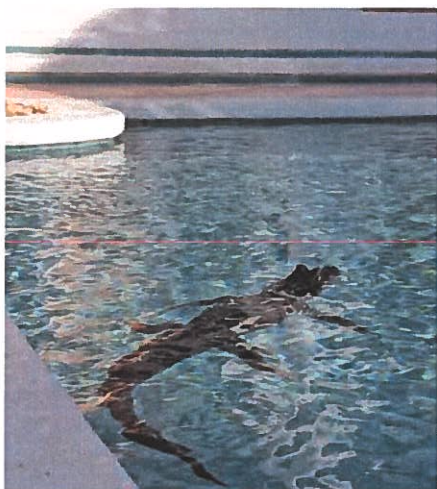
BONITA GRANDE
AERIAL WITH SITE PLAN AND PRESERVE
AREA MAP

DRAWING No.	151S12420
SHEET No.	APPENDIX B

APPENDIX C
AMERICAN ALLIGATOR INFORMATIONAL PAMPHLET

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- Never feed alligators – it's dangerous and illegal. When fed, alligators can overcome their natural wariness and learn to associate people with food. When this happens, some of these alligators have to be removed and killed.
- Dispose of fish scraps in garbage cans at boat ramps and fish camps. Do not throw them into the water. Although you are not intentionally feeding alligators when you do this, the result can be the same.
- Seek immediate medical attention if you are bitten by an alligator. Alligator bites can result in serious infections.
- Observe and photograph alligators only from a distance. Remember, they're an important part of Florida's natural history as well as an integral component of aquatic ecosystems.



Tim Dornan

Call 866-FWC-GATOR (392-4286) to report nuisance alligators.



Janice Plain

Call 866-FWC-GATOR (392-4286) to report nuisance alligators.

Regional offices
Northwest Region, Panama City
850-265-3676

North Central Region, Lake City
386-758-0525

Northeast Region, Ocala
352-732-1225

Southwest Region, Lakeland
863-648-3200

South Region, West Palm Beach
561-625-5122

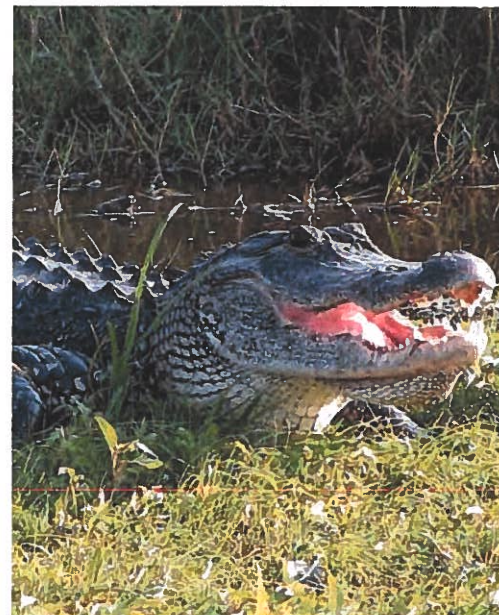


The FWC prohibits discrimination by race, color, nationality, age, sex or handicap. If you believe you have been discriminated against in any program, activity or facility of this agency, write to: Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600; or to: Office of Human Relations, USFWS, Department of Interior, Washington, D.C. 20240.

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A guide to living with Alligators



Jamie Feddersen



Florida Fish and Wildlife Conservation Commission

MyFWC.com

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Do not swim outside of posted swimming areas or in waters that may be inhabited by alligators.

Lizabeth West

Living with alligators

In Florida, the growing number of people living and recreating near water has led to a steady rise in the number of alligator-related complaints. The majority of these complaints relate to alligators being where they simply aren't wanted. Because of these complaints, the Florida Fish and Wildlife Conservation Commission's Statewide Nuisance Alligator Program permits the killing of approximately 7,000 nuisance alligators each year. Using this approach, and through increased public awareness, the rate of alligator bites on people has remained constant despite the increased potential for alligator-human interactions as Florida's human population has grown.

Alligators are an important part of Florida's landscape and play a valuable role in the ecology of our state's wetlands. Alligators are predators and help keep other aquatic animal populations in balance. A better understanding of the facts and information presented in this brochure will help ensure that people and alligators can continue to coexist.

Visit MyFWC.com/Gators for more information about alligators and the latest nuisance alligator program statistics.

Alligators and people

Alligators are a fundamental part of Florida's marshes, swamps, rivers and lakes, and they are found in all 67 counties. Florida continues to experience human population growth. Many new residents seek waterfront homes, resulting in increased interactions between people and alligators.

Although many Floridians accept living with alligators nearby, the potential for conflict exists. Because of their predatory nature, alligators may target pets and livestock as prey. Unfortunately, people also are occasionally bitten. Since 1948, Florida has averaged about five unprovoked bites per year. During that period, a little more than 300 unprovoked bites to people have been documented in Florida, with 22 resulting in deaths.

In the past 10 years, the Florida Fish and Wildlife Conservation Commission has received an average of nearly 16,000 alligator-related complaints per year. Most of these complaints deal with alligators occurring in places such as backyard ponds, canals, ditches and streams, but other conflicts occur when alligators wander into garages, swimming pools and golf course ponds. Sometimes, alligators come out of the water to bask in the sun or move between wetlands. In many cases, if left alone, these alligators will eventually move on to areas away from people.

Safety tips

- Generally, alligators less than four feet in length are not large enough to be dangerous unless handled. However, if you encounter any alligator that you believe poses a threat to people, pets or property, call the Nuisance Alligator Hotline at 866-FWC-GATOR (392-4286). Please be aware, nuisance alligators are harvested, not relocated.



A young alligator wanders onto a porch in a residential neighborhood.

Tim Donovan

- Be aware of the possibility of alligators when you are in or near fresh or brackish water. Bites may occur when people do not pay close enough attention to their surroundings when working or recreating near water.
- Do not swim outside of posted swimming areas or in waters that might be inhabited by large alligators.
- Alligators are most active between dusk and dawn. Therefore, avoid swimming at night.
- Dogs and cats are similar in size to the natural prey of alligators. Don't allow pets to swim, exercise or drink in or near waters that may contain alligators. Dogs often attract an alligator's interest, so do not swim with your dog.
- Leave alligators alone. State law prohibits killing, harassing or possessing alligators. Handling even small alligators can result in injury.

(continued)

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APPENDIX D
EASTERN INDIGO SNAKE INFORMATIONAL PAMPHLET

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IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site without interference.
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, and the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, and the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

**North Florida ES Office – (904) 731-3336
Panama City ES Office – (850) 769-0552
South Florida ES Office – (772) 562-3909**

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

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Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

LEGAL STATUS: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.



August 12, 2013

ATTENTION:
THREATENED EASTERN INDIGO
SNAKES MAY BE PRESENT ON
THIS SITE!!!



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.

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APPENDIX E
FLORIDA PANTHER INFORMATIONAL PAMPHLET

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You live in Florida panther country

Florida panthers are reclusive and rarely seen by people. They normally live in remote, undeveloped areas. However, as the number of people in southern Florida grows, there is an increased chance of an encounter with a Florida panther.

This brochure contains some guidelines to help you live safely in Florida panther country.



Keep children within sight and close to you, especially outdoors between dusk and dawn.

If you feel threatened by a panther, or have lost pets or livestock to a panther, please call the Florida Fish and Wildlife Conservation Commission's Wildlife Alert Hotline at 1-888-404-FWCC (3922).

If you see a Florida panther

The Florida panther moves primarily at night. The chances of seeing a panther are slim. But if you live in Florida panther country, you need to know what to do if you see one.

- Keep children within sight and close to you.** Pick up any small children so they don't panic and run. Try to do this without bending over or turning away from the Florida panther.
- Give them space.** Florida panthers typically will avoid a confrontation. Give them a way to escape.
- Do not run.** Running may stimulate a panther's instinct to chase. Stand and face the animal. Make eye contact to let the panther know you are aware of its presence.
- Avoid crouching or bending over.** Squatting or bending makes you look smaller, resembling a prey-sized animal.
- Appear larger.** Make gestures that indicate you are not prey and that you may be a danger to the panther. Raise your arms. Open your jacket. Throw stones, branches or whatever you can reach without crouching or turning your back. Wave your arms slowly and speak firmly in a loud voice.
- Fight back if attacked.** There has never been a reported panther attack in Florida. In western states, where attacks by cougars have occurred very rarely, potential victims have fought back successfully with rocks, sticks, caps, jackets, garden tools and their bare hands. Since large cats usually try to bite the head or neck, try to remain standing and face the animal.

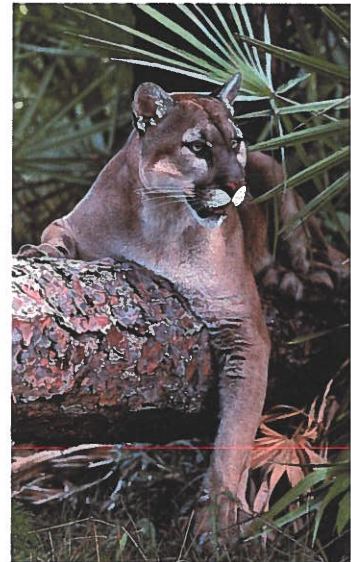


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Florida Fish and Wildlife Conservation Commission
630 S. Meridian Street
Tallahassee, FL 32399-6800
MyFWC.com/Panther

A guide to living with **Florida Panthers**



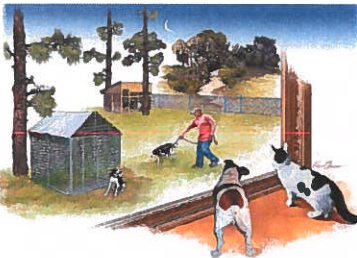
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MyFWC.com/Panther

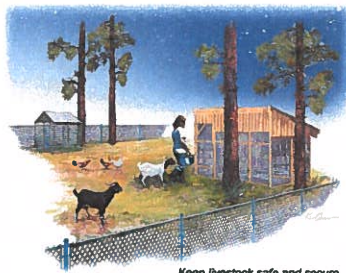
7 ways to live safely in Florida panther country

While these guidelines are meant to help you live safely in Florida panther habitat, they also apply to living with more commonly encountered wildlife, including raccoons, snakes, bears and alligators.

- 1. Be alert from dusk 'til dawn (and whenever deer are active)**
Florida panthers primarily are active at night. Exercise more caution at dawn, dusk or dark.
- 2. Keep panther prey away**
Deer, raccoons, rabbits, armadillos and wild hogs are prey for the Florida panther. By feeding deer or other wildlife, people inadvertently may attract panthers. Do not leave potential wildlife food outside, such as unsecured garbage or pet food. Consider fencing vegetable gardens.
- 3. Keep pets secure**
Free-roaming pets, or pets that are tethered and unfenced, are easy prey for predators, including panthers. Bring pets inside or keep them in a secure and covered kennel at night. Feeding pets outside also may attract raccoons and other panther prey; do not leave uneaten pet food available to wildlife.



Keep your pets safe and secure. Bring pets inside or keep them in a secure and covered kennel at night.



Keep livestock safe and secure.

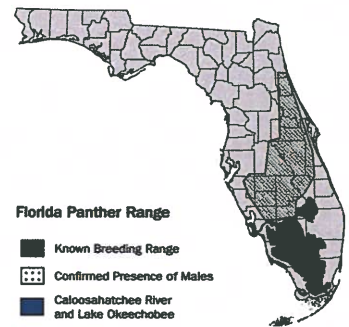
- 4. Keep domestic livestock secure**
Where practical, place chickens, goats, hogs or other livestock in enclosed structures at night. Electric fencing can be an effective predator deterrent.
- 5. Landscape for safety**
Remove dense or low-lying vegetation that would provide hiding places for panthers and other predatory animals near your house.
 - Remove plants that deer like to eat.
 - Choose plants that do not attract deer or other panther prey species. For information on plants that deer do not like to eat, visit edis.ifas.ufl.edu/UW137.
 - Appropriate fencing will make your yard or play area uninviting to prey animals such as deer.
- 6. Consider other deterrents**
Outdoor lighting, motion sensors and electric fencing also may deter prey animals and panthers from entering your yard. Outdoor lighting also will make approaching prey and panthers more visible to you.
- 7. Hike or bike with a friend**
When recreating outdoors, it's a good practice to let friends or family know your whereabouts and when you expect to return. Better yet, take a friend with you!

Florida panther facts

- 🐾 The Florida panther is a subspecies of puma, also known as a mountain lion or cougar. It is the last subspecies still surviving in the eastern United States.
- 🐾 Biologists estimate roughly 100-160 adult and subadult Florida panthers remain in the wild. Most panthers live in southwest Florida, south of the Caloosahatchee River, although some panthers have been documented traveling as far north as central Georgia.
- 🐾 The Florida panther's decline occurred prior to 1950, when it still was legal to hunt panthers. It was listed as endangered in 1967 and is protected under federal and state laws.
- 🐾 Florida panther numbers declined to roughly 30 cats by the early 1980s. Severe inbreeding resulted in many health and physical problems. A genetic restoration project in 1995 was successful in improving the genetic health and vigor of the panther population.
- 🐾 Florida panthers are found primarily in the Big Cypress/Everglades ecosystem in Collier, Lee, Hendry, Monroe and Miami-Dade counties.
- 🐾 Florida panthers' home range sizes vary by sex and by individual. Female home ranges are typically 60-75 square miles whereas males' are typically 160-200 square miles.



- 🐾 There is no record of a Florida panther attacking a person. Florida panthers are rarely seen.
- 🐾 The biggest threat to the future of the Florida panther is habitat loss. A number of panthers also die each year due to vehicle strikes on roadways.
- 🐾 The Florida panther was chosen as the State Animal of Florida in 1982 by a vote of elementary school students throughout the state.



This brochure was produced through a partnership of the Audubon Society of Florida, Conservancy of Southwest Florida, Defenders of Wildlife, Florida Fish and Wildlife Conservation Commission, Florida Wildlife Federation, Friends of the Florida Panther Refuge, Mountain Lion Foundation, National Park Service, National Wildlife Federation, Seminole Tribe of Florida, University of Florida and the U.S. Fish and Wildlife Service.
Funding provided by the Florida Fish and Wildlife Conservation Commission, Friends of the Florida Panther Refuge and the National Fish and Wildlife Foundation.

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**BONITA GRANDE
UMAM SUMMARY**

November 2016

Table 1. Wetland Impacts (2.10± acres)

Wetland Polygon No.	Pre-Development FLUCFCS Code	Without Location	Without Water Environment	Without Community Structure	Score/ Delta	Impact Acreage	Functional Units Lost
1-1	6219 E3	3.00	3.00	3.00	0.30	2.10	0.63
Wetland Impacts Total						2.10	0.63

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**PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)**

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Site/Project Name Bonita Grande		Application Number 191008-2006	Assessment Area Name or Number 1-1	
FLUCCs code 6219 E3	Further classification (optional) Cypress, Disturbed (50-75% exotics)		Impact or Mitigation Site? Impact	Assessment Area Size 2.10 acres
Basin/Watershed Name/Number Estero Bay Frontal (HUC 0309020401)	Affected Waterbody (Class) Kehl Canal to Imperial River	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) NA		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The assessment area is a degraded wetland that is surrounded in the landscape by canals, ditches, disturbed land, and roads. The wetland is primarily surrounded by a drainage ditch and berm. Drainage ditches are connected to the Kehl Canal.				
The canopy of this assessment area consists of pop ash, laural oak, cabbage palm, and bald cypress. The sub-canopy is dominated by pop ash and Brazilian pepper. The ground cover includes Sesbania, false fennel, and toothed mid-sorus fern.				
Significant nearby features Bonita Grande Drive is located to the east, Bonita Beach Road is located to the south, the Kehl Canal is located to the north, and a commercial development is located to the west. A series of excavated canals and ditches are located on all sides of the assessment area.		Uniqueness (considering the relative rarity in relation to the regional landscape.) This wetland does not display any unique characteristics.		
Functions Wetland may include minimal functions including substrate, breeding, and water storage.		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Birds, small mammals, reptiles, and amphibians.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential use by listed wading birds for foraging. Hydrologic degradation and infestation by exotic species severely limit use.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): No listed wildlife species have been observed within the assessment area.				
Additional relevant factors:				
Assessment conducted by: SR/AW		Assessment date(s): 9/15/2016		

PART II – Quantification of Assessment Area (Impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name Bonita Grande	Application Number 191008-2006	Assessment Area Name or Number 1-1
Impact or Mitigation Impact	Assessment conducted by: SR/AW	Assessment date: 9/15/2016

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>3 0</p>	<p>The land surrounding the assessment area is dominated by disturbed land, but does contain some land covers that provide limited habitat. The vegetative community in the assessment area is infested with exotic invasives (50 to 75 percent). Furthermore, the wetland is surrounded by a berm and a drainage ditch, limiting wildlife access to and from habitats outside the assessment area. These structures also reduce the hydrological benefits the wetland could be providing downstream.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <p>3 0</p>	<p>An excavated drainage ditch encompasses this assessment area. During the assessment area evaluation, no surface water was present, and neither a water table nor saturation were observed within 19 inches of the surface. A low water table and lack of saturation during the wetter months of the year could be an indicator that the surrounding drainage ditch is diminishing the hydrology of the wetland. However, soil and hydrology indicators still suggest that periodic ponding is possible.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>3 0</p>	<p>The sub-canopy of the assessment area is dominated, in part, by the exotic invasive Brazilian pepper. Approximately 50 to 75 percent of the area is covered by exotic vegetation. The addition of a ditch and berm surrounding the assessment area has resulted in the alteration of natural structures.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.3 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.3 x 2.10 = 0.63

Delta = [with-current]
0.3

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =



PASSARELLA & ASSOCIATES INC.

TO: Paula McMichael
FROM: Brett Bartek *BB*
DATE: November 5, 2019
RE: Bonita Grande Heritage Tree Survey
Project No. 15ISI2420

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On November 1, 2019, ecologists from Passarella & Associates, Inc. (PAI) conducted a survey for heritage trees within the Project boundary at Bonita Grande (Project). Under the City of Bonita Springs Land Development Code, heritage trees are defined as any long leaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*), or live oak (*Quercus virginiana*) with a minimum 20-inch caliper diameter at breast height (DBH). If a heritage tree must be removed from the Project site, then a replacement tree with a minimum 20-foot height must be planted within an appropriate open space.

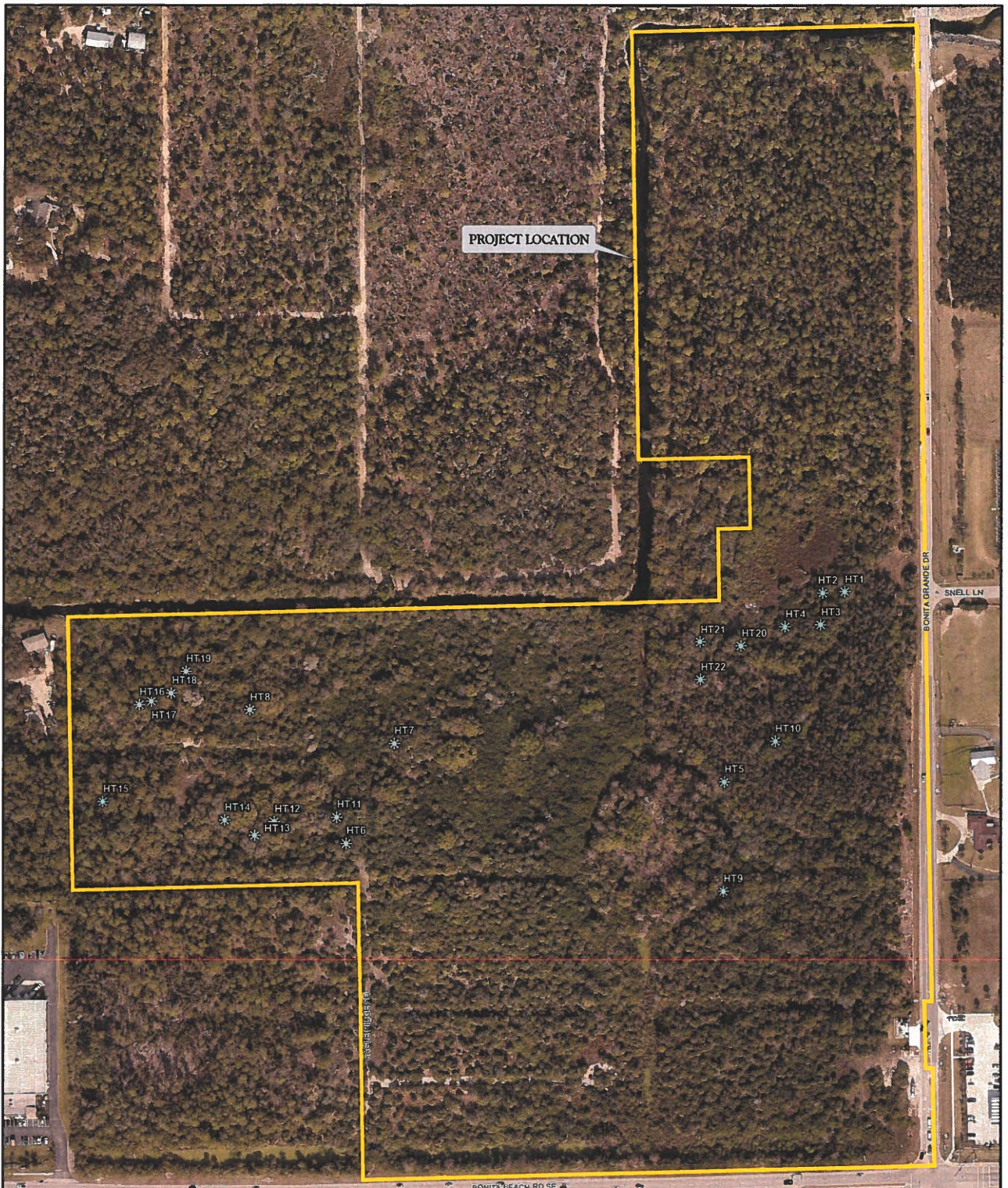
A total of 22 heritage trees were identified on the Project site during the November 1, 2019 survey, including 5 slash pines and 17 live oaks. Each tree was GPS located (Figure 1) and marked with orange ribbon.

BB/pz

Enclosure

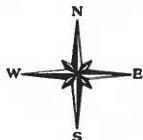
Offices in Florida and South Carolina

13620 Metropolis Avenue • Suite 200 • Fort Myers, Florida 33912 • Phone: (239) 274-0067 • Fax: (239) 274-0069 • www.passarella.net



PROJECT LOCATION

LEGEND
 BONITA GRANDE
 HERITAGE TREE



Tree No.	Tree Species	DBH (inches)	Latitude	Longitude
HT-1	Live oak	50.0	26.33530	-81.73915
HT-2	Slash pine	21.5	26.33530	-81.73930
HT-3	Live oak	21.5	26.33510	-81.73932
HT-4	Live oak	25.0	26.33508	-81.73956
HT-5	Live oak	21.5	26.33410	-81.73999
HT-6	Live oak	26.0	26.33372	-81.74265
HT-7	Live oak	28.0	26.33435	-81.74231
HT-8	Live oak	33.0	26.33456	-81.74333
HT-9	Live oak	30.0	26.33341	-81.73999
HT-10	Live oak	20.5	26.33436	-81.73963
HT-11	Live oak	27.5	26.33388	-81.74272
HT-12	Live oak	26.5	26.33385	-81.74316
HT-13	Live oak	30.8	26.33377	-81.74329
HT-14	Live oak	28.6	26.33386	-81.74350
HT-15	Slash pine	20.5	26.33398	-81.74437
HT-16	Slash pine	21.0	26.33460	-81.74411
HT-17	Live oak	30.5	26.33462	-81.74403
HT-18	Slash pine	21.0	26.33467	-81.74389
HT-19	Live oak	24.0	26.33481	-81.74378
HT-20	Live oak	25.5	26.33496	-81.73987
HT-21	Live oak	26.5	26.33499	-81.74016
HT-22	Live oak	23.5	26.33475	-81.74016

NOTES:

AERIAL PHOTOGRAPHS PROVIDED BY THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - FEBRUARY 2019.

COUNTY INFORMATION AND ROADWAY NETWORKS WERE ACQUIRED FROM THE FLORIDA GEOGRAPHIC DATA LIBRARY WEBSITE.

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DRAWN BY	DATE
D.B.	11/4/19
REVIEWED BY	DATE
A.W.	11/4/19
REVISED	DATE

13620 Metropolis Avenue
 Suite 200
 Fort Myers, Florida 33912
 Phone (239) 274-0067
 Fax (239) 274-0069



BONITA GRANDE
 AERIAL WITH HERITAGE TREE LOCATIONS

DRAWING No.	151512420
DIST. No.	FIGURE 1

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BONITA GRANDE MPD Heritage Tree Impacts – Justification & Mitigation Plan

The subject property is located in the northwest quadrant of the intersection of Bonita Beach Rd. and Bonita Grande Dr. and is zoned Eagle Trust CPD. The northern property line is coterminous with the Kehl Canal. The site contains approx. 67.5 acres. The Future Land Use Map designates the property as Interchange Commercial and DRGR. The applicant proposes a mixed-use development consisting of a maximum of 482 dwelling units, 315,000 square feet of commercial/office, and 165 hotel rooms.

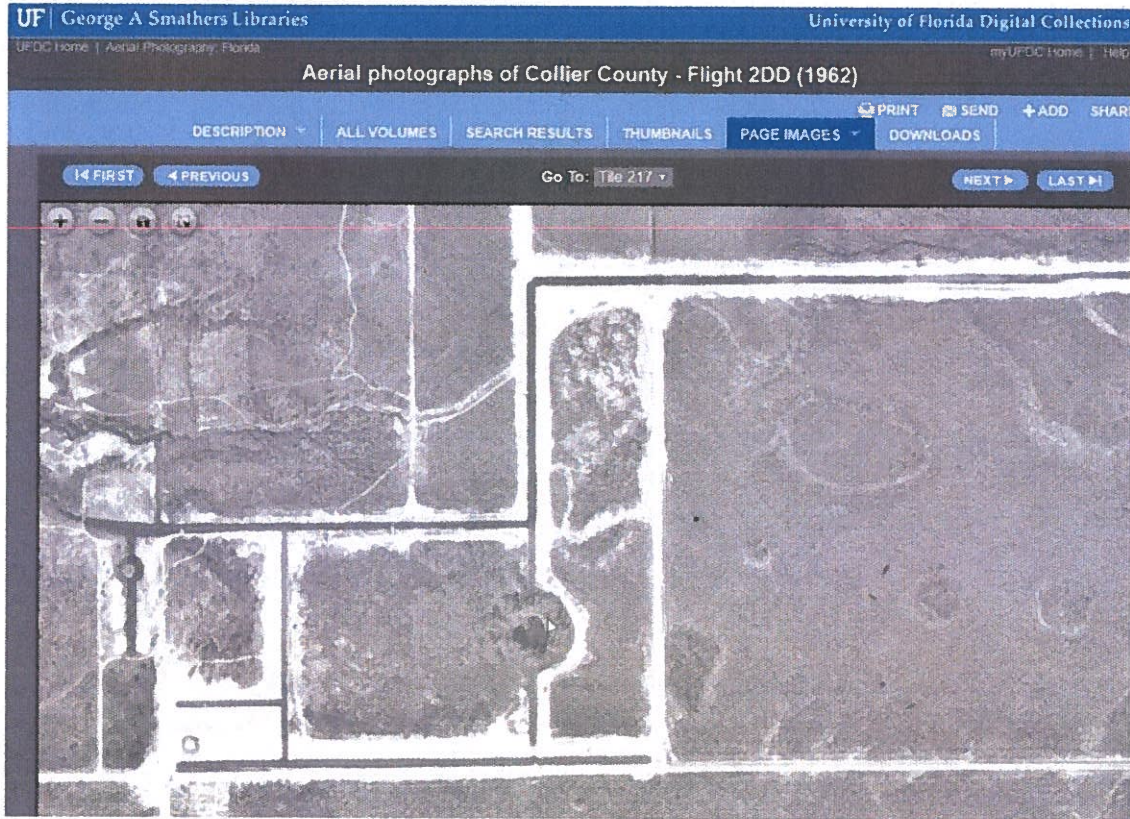
JUSTIFICATION

The applicant has identified 22 heritage trees on-site – 3 slash pines and 19 live oaks. The trees cannot be saved due to extensive water management improvements required for the site. Please see below for additional information.

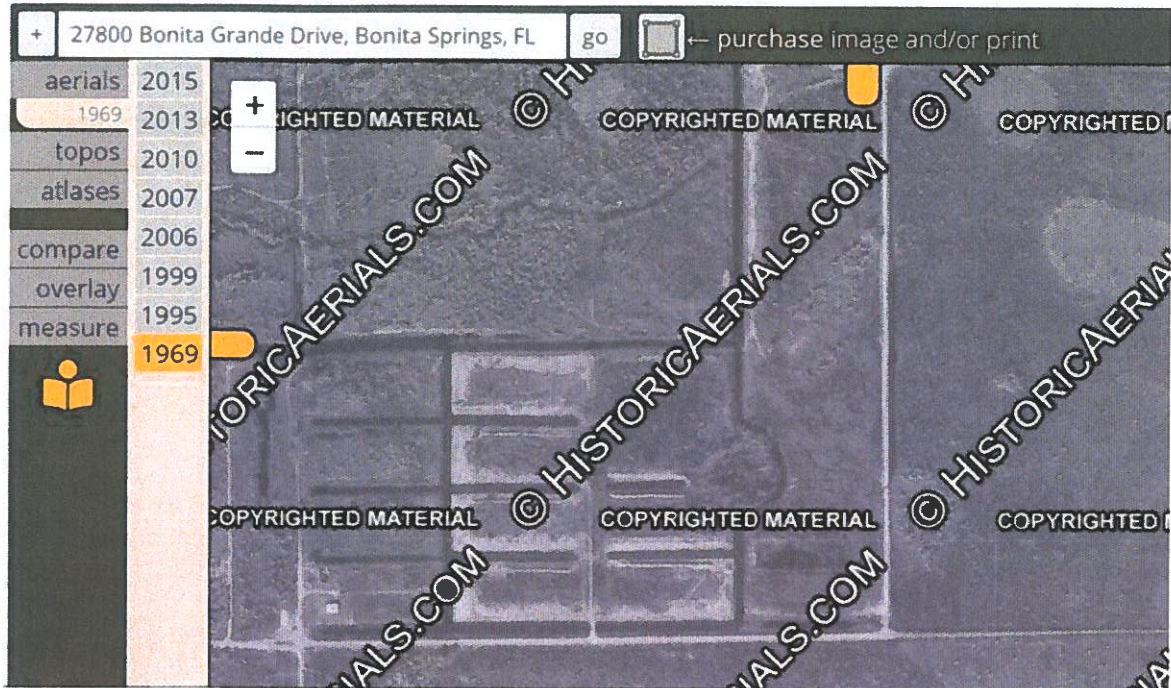
1. *The site has been extensively altered with ditches and berms.*

The Kehl Canal was dug somewhere around 1962, impacting the headwaters of the Imperial River, and the site was extensively ditched in support of agricultural operations starting in the late 60s and continuing into the early 70s. Throughout the 90s, the southern portion of the site was maintained as cleared pasture. Elevations on the site range from 12'-14' for "upland" portions and 1.5'-2.5' within ditched areas, based on topo provided in the Environmental Resource Permit. Please see the aerials, below, illustrating the extent of ditching.

1962



1969



1998 (Lee County Property Appraiser)



2. *Outside of the internal water management system, there are two primary components of water management design: floodplain compensation lakes and accommodation of offsite flows.*

The water management system for the site has been designed to both provide compensation for floodplain storage for encroachments into the 100-year floodplain and to continue to accept conveyance of offsite flows from the existing drainage ditch along Bonita Beach Road to the Kehl Canal. Floodplain compensation lakes will be located outside of the perimeter isolation berm and will provide a significant water quality treatment benefit, not otherwise required of the applicant, to the City's efforts to address water quality impairments within the Imperial River Basin. The floodplain lakes must be located adjacent to the Kehl Canal and the size must be adequate to store the needed volume. Over 25 percent of the site is being allocated to provide floodplain storage, acceptance of off-site flows, or water management needed for the proposed development.

3. *Fill needed for the developed portions of the site will negatively affect existing trees.*

More than a quarter of the site will be excavated for stormwater management, and the remainder will need to be filled to remove ditching. Site work will be extensive, including an average of approx. four feet of fill over the developed portions of the property. Given that both the soil and hydrology will be changing extensively, the likelihood that any of the existing trees will survive is poor. Site alteration will bury the roots under fill, eventually killing the trees.

4. *Access points into the site are determined by Lee County, as adjacent roadways are county-maintained, and must align with adjacent driveways or access points.*

Both Bonita Grande Drive and Bonita Beach Road are county-maintained roadways. Lee County regulates access points and driveways from private property to the road and has required that access points into the subject property align with existing driveways or roads. Therefore, the access points we have depicted on the Master Concept Plan are located as required by the reviewing jurisdiction.

PROPOSED MITIGATION

The applicant is proposing the following mitigation to compensate for the loss of heritage trees:

For each heritage tree removed from the site the applicant will provide one replacement tree with a minimum 20-foot height to be planted within an appropriate open space area. The replacement trees may be considered for credit towards code required tree landscaping where ground spacing constraints exist. The replacement trees will include slash pine, live oak, and at least 50 percent replacement with other appropriate native tree species, including but not limited to the other species listed in Table 1, Heritage Tree Replacement Planting List. The final selection will be made at time of landscaping plan approval and be otherwise appropriate for the planting area.

Table 1. Heritage Tree Replacement Planting List

Common Name	Scientific Name
Slash Pine	<i>Pinus elliottii</i>
Live Oak	<i>Quercus virginiana</i>
Bald Cypress	<i>Taxodium distichum</i>
Seagrape	<i>Coccoloba uvifera</i>
Southern Mahogany	<i>Swietenia mahogoni</i>
Southern Red Cedar	<i>Juniperus silicicola</i>
Gumbo Limbo	<i>Burseria simaruba</i>
Southern Magnolia	<i>Magnolia grandiflora</i>
Royal Palm	<i>Roystonea regia</i>
Everglades Palm	<i>Acoelorrhaphe wrightii</i>
Pigeon Plum	<i>Coccoloba diversifolia</i>
Red Maple	<i>Acer rubrum</i>
Satin Leaf	<i>Chrysophyllum oliviforme</i>
Buttonwood	<i>Conocarpus erectus</i>
Jamaican Dogwood	<i>Piscidia piscipula</i>
Pond Cypress	<i>Taxodium ascendens</i>

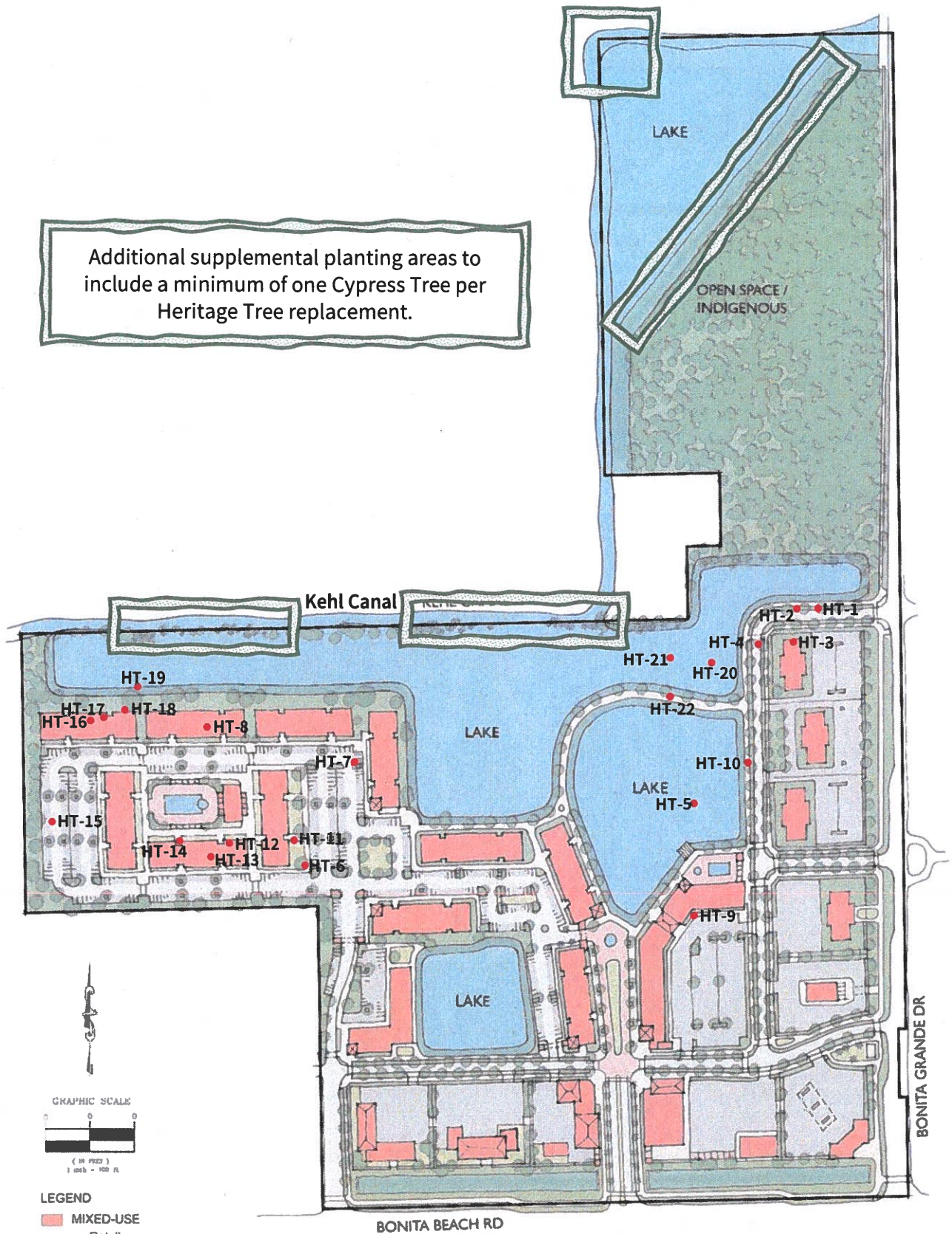
In addition, the applicant will prepare a supplemental native planting plan using all three strata (groundcover, shrubs, and trees) for wetland areas that interface along the Kehl Canal. Please see the Illustrative Master Plan with Heritage Trees for the general location of these planting areas. Tree and shrub plantings will include a minimum of two species listed in Table 2, and ground cover plantings will include a minimum of three species listed in Table 2. Plantings must be appropriate to the conditions as agreed to by SFWMD staff and do not need to be limited by the species listed in Table 2. Supplemental tree plantings will include a minimum of one cypress tree (*Taxodium* spp.) for each heritage tree replacement (min. 22 cypress trees). The supplemental planting work will be done concurrently with the construction of the surface water management system.

Table 2. Supplemental Wetland Planting List

Common Name	Scientific Name	Minimum Height	Minimum Container Size	Planting Instruction (On Center)
Freshwater Wetland Plantings				
Trees				
Pond Cypress	<i>Taxodium ascendens</i>	6 ft.	3 gal.	15 ft.
Bald Cypress	<i>Taxodium distichum</i>	6 ft.	3 gal.	15 ft.
Dahoon holly	<i>Ilex cassine</i>	6 ft.	3 gal.	15 ft.
Pop ash	<i>Fraxinus caroliniana</i>	6 ft.	3 gal.	15 ft.
Red maple	<i>Acer rubrum</i>	6 ft.	3 gal.	15 ft.
Slash pine	<i>Pinus elliottii</i>	6 ft.	3 gal.	15 ft.
Pond apple	<i>Annona glabra</i>	6 ft.	3 gal.	15 ft.
Shrubs				
Wax myrtle	<i>Myrica cerifera</i>	3 ft.	1 gal.	8 ft.
Gallberry	<i>Ilex glabra</i>	3 ft.	1 gal.	8 ft.

Common Name	Scientific Name	Minimum Height	Minimum Container Size	Planting Instruction (On Center)
Buttonbush	<i>Cephalanthus occidentalis</i>	3 ft.	1 gal.	8 ft.
Ground Cover				
Cordgrass	<i>Spartina bakeri</i>	12 in.	4 in.	3 ft.
Wiregrass	<i>Aristida stricta</i>	12 in.	4 in.	3 ft.
Gulfdune paspalum	<i>Paspalum monostachyum</i>	12 in.	4 in.	3 ft.
Sawgrass	<i>Cladium jamaicense</i>	12 in.	4 in.	3 ft.
Maidencane	<i>Panicum hemitomon</i>	12 in.	4 in.	3 ft.
Pickernelweed	<i>Pontederia cordata</i>	12 in.	4 in.	3 ft.
Duck potato	<i>Sagittaria lancifolia</i>	12 in.	4 in.	3 ft.
Soft-stem bulrush	<i>Scirpus validus</i>	12 in.	4 in.	3 ft.
Spikerush	<i>Eleocharis interstincta</i>	12 in.	4 in.	3 ft.
Bacopa	<i>Bacopa caroliniana</i>	--	Liner	--

Additional supplemental planting areas to include a minimum of one Cypress Tree per Heritage Tree replacement.



- LEGEND**
- MIXED-USE
 - Retail
 - Restaurant
 - Commercial
 - Office
 - Hotel
 - Multi-family
 - ALF
 - Townhomes

MIDTOWN AT BONITA MIXED-USE COMMUNITY

PRELIMINARY ILLUSTRATIVE MASTER PLAN WITH HERITAGE TREES



SCALE: 1" = 200'

LEGEND:



PRESERVE
(9.40 Ac.±)

HT-12 • HERITAGE TREE NUMBER AND APPROXIMATE LOCATION

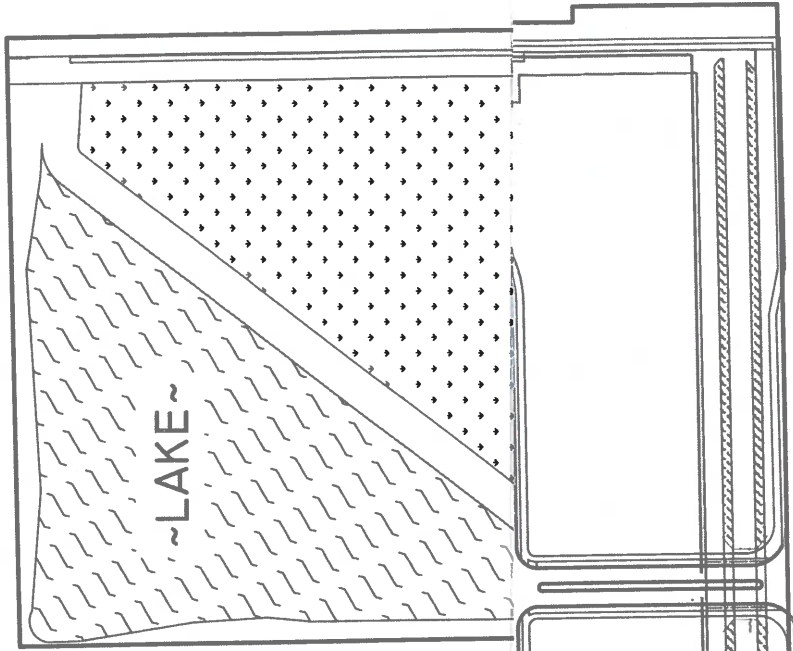
NOTES:

PROPERTY BOUNDARY PER ROBAU AND ASSOCIATES DRAWING No.01800018_X01_COE.DWG DATED JUNE 5, 2019.

SITE PLAN PER ROBAU AND ASSOCIATES DRAWING No. 01800018M01_CONCEPT_SP_OPTION A.DWG DATED NOVEMBER 5, 2019.

Tree No.	Tree Species	DBH (Inches)	Latitude	Longitude

KEHL CANAL



BONITA BEACH RD SE

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A.W.	11/5/19
REVISED	DATE

13620 Metropolis Avenue
Suite 200
Ft. Myers, FL 33912
Phone (239) 274-0067
Fax (239) 274-0069



BONITA GRANDE
SITE PLAN WITH HERITAGE TREE LOCATIONS

DRAWING No.
151S12420

SHEET No.
2

**CULTURAL RESOURCE ASSESSMENT SURVEY
OF THE BONITA GRANDE COMMERCE PROPERTY
LEE COUNTY, FLORIDA**

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Performed for:

The Roberts Group
3180 Mathieson Drive, N.E. Unit 902
Atlanta, Georgia 30305

Performed by:

Archaeological Consultants, Inc.
8110 Blaikie Ct., Suite A
Sarasota, Florida 34240

Marion Almy – Project Manager
Lee Hutchinson - Project Archaeologists
Richard Mattern and Katherine Baar - Archaeologists

March 2006

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EXECUTIVE SUMMARY

A cultural resource assessment survey of the ±67.53-acre Bonita Grande Commerce property in Lee County, Florida was performed to locate and identify any cultural resources within the project area and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). The survey complies with Chapters 267 and 373 of the *Florida Statutes* for possible adverse impacts to historic properties listed or eligible for listing in the NRHP. The survey and report also comply with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992; 36 C.F.R. Part 800, as well as the *Lee County Land Development Code*. The cultural resource assessment survey was conducted in March 2006.

Findings

Archaeological: Background research and a review of the Florida Site File (FMSF) indicated that no archaeological sites have been recorded within or adjacent to the project area. A review of relevant site location information for environmentally similar areas within Lee County and the surrounding region indicated a low to moderate probability for the occurrence of prehistoric sites within the property. The background research also indicated that sites, if present, would most likely be small artifact scatters located on slightly elevated terrain relative to the surrounding topography and proximate to naturally occurring wetlands. As a result of field survey, no archaeological sites were discovered.

Historical: Historical background research, including a review of the FMSF and the NRHP, indicated that no historic properties (50 years of age or older) have been previously recorded within the project area. As a result of field survey, no historic resources were discovered.

Based on these results, it is the opinion of ACI, that project development will have no impact on any significant cultural resources, including those properties listed, determined eligible, or considered potentially eligible for listing in the NRHP. No further research is recommended.

APPROVED
CITY OF BONITA SPRING
NOV 14 2006
COMMUNITY DEVELOPMENT

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DEPARTMENT OF PLANNING
SERVICES UNIT

TABLE OF FIGURES, TABLES, AND PHOTOS

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1.0 INTRODUCTION

1.1 Project Description

This project involved an archaeological and historical survey of the ±67.53-acre Bonita Grande Commerce property in Lee County, Florida (Figure 1.1). The survey complies with Section 10-110 of the Lee County Land Development Code, Ordinance Number 03-16, Chapters 267 and 373 *Florida Statutes*, Florida's Coastal Management Program, and implementing State regulation regarding possible impact to historical properties. In addition, the survey complies with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992; 36 C.F.R. Part 800. The project was conducted in conformity with the standards contained in *Cultural Resource Management Standards and Operational Manual* (FDHR 2002). The resulting report meets specifications set forth in Chapter 1A-46, Florida Administrative Code (revised August 21, 2002).

1.2 Purpose

The purpose of the cultural resource assessment survey was to locate and identify any prehistoric and historic period archaeological sites located within the project area, and to assess their significance in terms of eligibility for listing in the NRHP. The archaeological survey was conducted in March 2006. Field survey was preceded by background research. Such work served to provide an informed set of expectations concerning the kinds of cultural resources that might be anticipated to occur within the project area, as well as a basis for evaluating any newly discovered sites.

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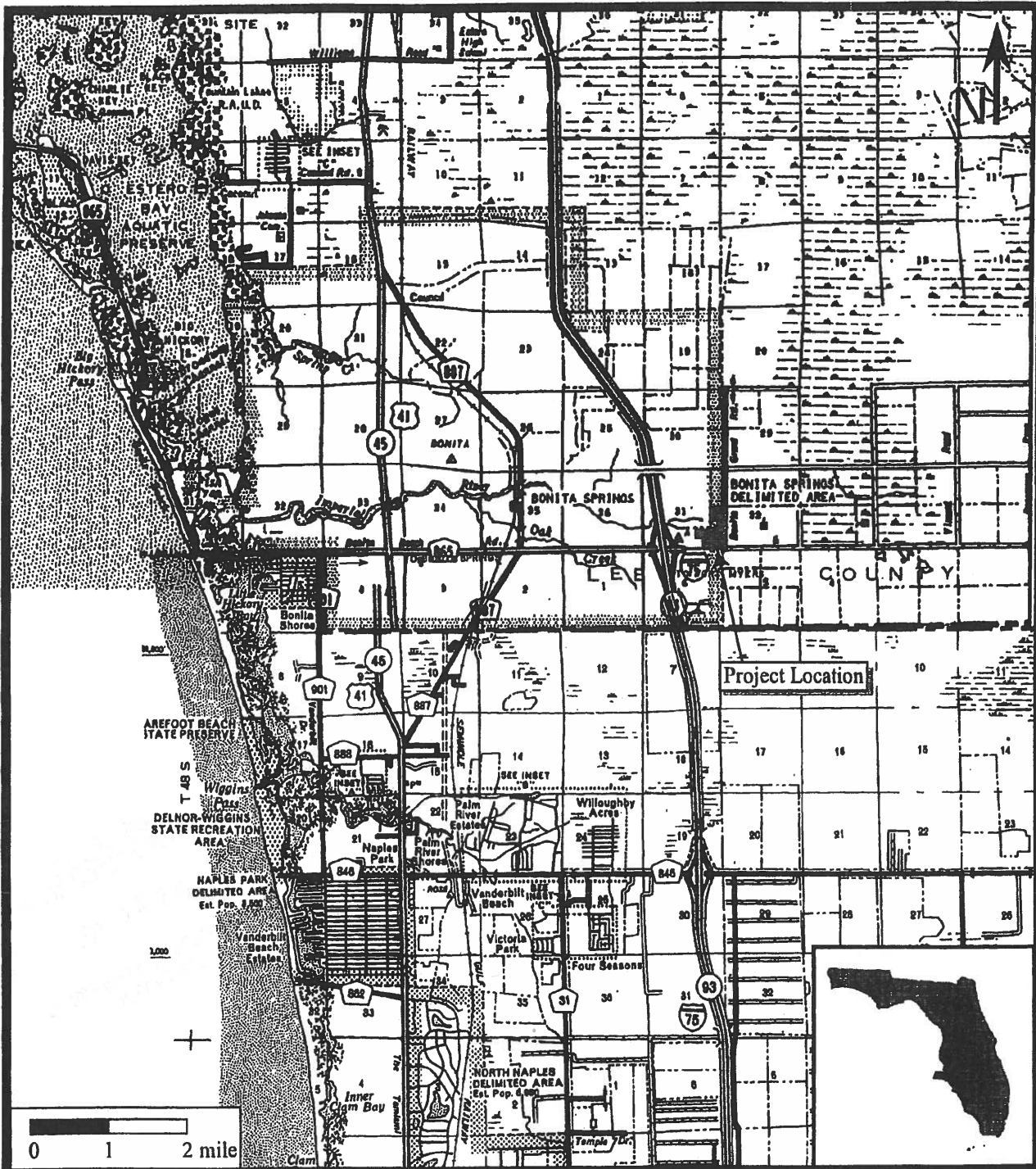


Figure 1.1 Bonita Grande Commerce Project Location. Lee County, Township 47 South, Range 26 East, Section 31 (State Topographic Office 1978 and 1989).



2.0 ENVIRONMENTAL SETTING

The ±67.53-acre property is located in Section 31 of Township 47 South, Range 26 East in southeastern Lee County, Florida (USGS Corkscrew SW, Fla. 1958, PR 1987) (Figure 2.1). The project area is bordered on the east by Bonita Grande Drive and on the south by Bonita Beach Road. The Kehl Canal forms the property's northern boundaries, and a portion of the western boundaries. The Bonita Grande Commerce project area is situated just over one-quarter of a mile east of Interstate 75, and approximately one-half of a mile south of East Terry Street. The topography is generally flat, with elevations between 10 and 15 feet (ft) above mean sea level (AMSL).

Geology: Geologically, the project area is located within the Gulf Coastal Lowlands (White 1970). The Lowlands, for the most part, consist of level to nearly level plains where little stream dissection has taken place (USDA 1984). The project lies within the Southwestern Slope, which is characterized by a relatively thin veneer of sand underlain by clayey, shelly, or limestone units (Lane 1980; White 1970). The prominent topographic features of the Gulf Coastal Lowland are scarps and terraces that formed during the Pleistocene sea level stands and are nearly level plains less than 100 feet AMSL (USDA 1984:3). The Bonita Grande Commerce property is situated on the Pamlico Terrace, which has an elevation of 8 to 25 ft AMSL (Healy 1975). The general area is underlain by the Plio-Pleistocene fossiliferous sediments (Scott 2001; Scott et al. 2001). The surficial lithology consists primarily of shelly sand and clay (Lane 1980).

General Environment: The project area is underlain by soils of the Hallandale-Boca and Isles-Boca-Pompano soil associations, both of which include nearly level, poorly drained soils (USDA 1984). Soils of the Hallandale-Boca association are characteristic of flatwoods, whereas those of the Isles-Boca-Pompano association are found in sloughs and depressions. The specific soil types recorded within the project area and their environmental settings are presented in Table 2.1. Native vegetation supported by the flatwoods and slough soils includes sawpalmetto, pineland threeawn, South Florida slash pine, and waxmyrtle, maidencane and panicums. The depressional soils support cabbage palm, cypress, fern, water oak, popash, waxmyrtle, and water-tolerant grasses and weeds.

Table 2.1. Soil types, relief, drainage, and environmental setting (USDA 1984).

Soil Type	Slope and Drainage	Environmental Setting
Boca fine sand	nearly level, poorly drained	flatwoods
Malabar fine sand	nearly level, poorly drained	sloughs
Isles fine sand, depressional	nearly level, very poorly drained	depressions
Felda fine sand, depressional	nearly level, poorly drained	depressions

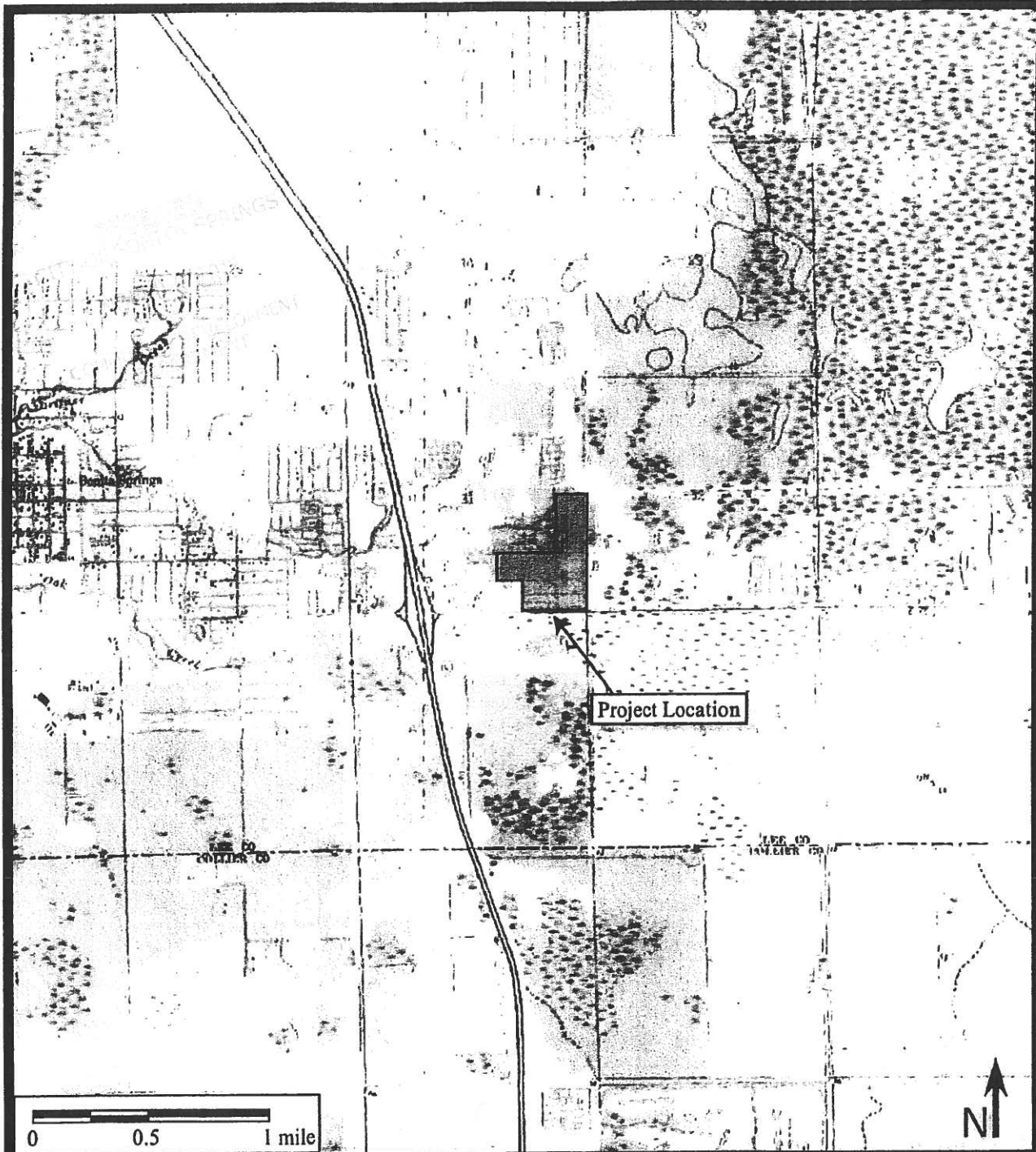


Figure 2.1 Location and Environmental Setting of the Bonita Grande Commerce Project Area. Lee County, Township 47 South, Range 26 East, Section 31 (USGS Bonita Springs, Fla. 1973, PR 1987 and Corkscrew SW, Fla. 1958, PR 1987).



Today, the natural drainage of the project area has been modified by dredging and the creation of a series of canals within and adjacent to the project boundaries (Photo 2.1). Furthermore, portions of the project area have been invaded by the exotic *Melaleuca* sp. and Brazilian pepper. There are some areas of the property that support natural vegetation, such as pine, oak, and cabbage palm (Photo 2.2).



Photo 2.1. Looking north at a canal within the central portion of the project area.



Photo 2.2. Looking south at native pine, oak, and palm vegetation with some invasive Brazilian pepper.

The faunal resources that would have been available for exploitation by aboriginal inhabitants are dependent on the botanical resources. Openland habitat such as meadows, would have supported bobwhite quail, meadowlarks, doves, field sparrows, cottontail rabbit, and sandhill cranes. The woodland habitats with deciduous and/or coniferous plants associated with legumes, grasses and herbaceous plants, would have supported turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bobcat. Wetland habitats of open, marshy, or swampy shallow water areas would have hosted ducks, egrets, herons, shorebirds, otters, mink, and ibis. In addition, standing water locales would have provided drinking water for animal and human populations.

Historic and Prehistoric Environment: The current environment is not the same as that inhabited by the aboriginal and early historic populations of this region. Drainage of the area has been extensive, beginning in the late 1800s and early 1900s. Ten to twelve thousand years ago, sea levels were much lower, the climate was drier, and potable water was scarce. Dunbar (1981:95) notes that due to the arid conditions during the period 14,500 to 10,500 B.C., "the perched water aquifer and potable water supplies were absent." Pollen analyses from lake sediment cores performed by Watts (1969, 1971, 1975, 1980) suggest that a mosaic landscape of herb prairie and oak savanna covered central Florida prior to the arrival of the first human groups. Rosemary (*Ceratiola ericoides*), ragweed (*Ambrosia* sp.), grass species, and other composites covered the dune ridges. Scattered stands of sclerophyllous oak scrub grew in the lower, riparian areas. Pine species were rare in Florida 35,000 years ago (Watts 1975:345) but increased in abundance toward the end of the Pleistocene (Watts 1980:400). Drier conditions are suggested by hiatuses in lake sediment cores obtained from Mud Lake in north-central Florida, Lake Louise in southern Georgia, Scott Lake in west-central Florida, and Sheelar Lake in north-central Florida (Watts 1969, 1971; Watts and Stuiver 1980). The rise of sea levels severely reduced xeric habitats over the next several millennia.

Bloom (1983) developed an approach for viewing factors involved in sea level change by emphasizing the change from water weight being tied up within the glaciers to the weight once the glaciers melted and the water returned to the ocean. Analysis of five eastern United States coastal sites support the hypothesis that post-glacial sea level rise has been sufficient to isostatically deform coastal areas.

This approach prompted research in the sea level records of oceanic islands as a means for testing theories of isostasy and research into the models of the Earth's reaction to mass shifts and the subsequent effects this shifting had on sea levels (Cronin 1987). Through coastal archaeological site interpretation, Colquhoun et al. (1981) present data for a gradual sea level increase by fluctuation. During the middle and late Holocene in the southeastern United States, sea level generally rose in the manner of the Shepard Curve, but through a series of fluctuations similar to the Fairbridge Curve (Colquhoun et al. 1981:147). Most researchers agree that, with minor temporal differences, the oscillation frequency is approximately 400 to 500 years (Cronin 1987; Tanner 1992) and they are attributed to glacio-eustatic processes (Cronin 1987). Tanner (1992:302) states that within the last 3000 years, sea level has experienced four rises and three drops in the range of 1-3 m.

Tanner's (1992:302-303) work on St. Vincent Island, Florida has shown that sea level was rising about 1000 years ago and by A.D. 1200 it began to fall. It reached its low level by A.D. 1400. That level represents the Little Ice Age (Lamb 1981). The sea level began to rise about A.D. 1750 and it continued to rise until at least A.D. 1900. Although sea level has not yet reached as high as it did on at least two previous occasions in the last 8000 years, it nevertheless now stands well above its average position for late Holocene time. Richards (1971) concluded that since the last interglacial, Florida has tectonically been stable. Studies in the Charlotte Harbor area agree in general within these conclusions (Stapor et al. 1987, 1991): from roughly A.D. 1 to 500 sea levels were roughly 1.2 m above today's level and there was another "high" stand (ca. 0.3 m above present levels) from roughly A.D. 1000 to 1500.

According to studies by Watts (1980), inundation of lowland lake basins in central Florida occurred about 6500 B.C. Dunbar and Waller (1983) have noted that many Paleo-Indian sites are located near or adjacent to open karst areas (e.g. Little Salt and Warm Mineral Springs). This supports the theory that surface water was quite rare during the early human occupation of Florida (Dunbar 1981, 1991).

By 5000 years ago, the mid-Holocene hypsithermal, a climatic event marking a brief return to Pleistocene climatic conditions, induced a change toward more open vegetation. Southern pine forests replaced the oak savannahs. Extensive marshes and swamps developed along the coasts and subtropical hardwood forests became established along the southern tip of Florida (Delcourt and Delcourt 1981). At Lake Annie, in south-central Florida, pollen cores were dominated by wax myrtle and pine. The assemblage suggests that by this time, a forest dominated by longleaf pine, along with cypress swamps and bayheads, existed in the area (Watts 1971, 1975). By about 3500 B.C., surface water was plentiful in karst terrains and the level of the Floridan aquifer rose to 1.5 m above present levels. After this time, modern floral, climatic, and environmental conditions began to be established. However, it should be noted that sea levels and climatic conditions have not remained constant (cf., Bryson et al. 1970; Stapor et al. 1991; Walker 1995).

Faunal changes are more difficult to document due to the mixing of the species record and the lack of accessibility of sites containing faunal remains. Webb (1981, 1990) has compiled a lists extinct mammal species that occupied the southeastern continent some 14,000 years ago. These include giant land tortoise, giant ground sloth, mastodon, mammoth, camel, bison, giant beaver, wolf, jaguar, and horse. The predominant species were large grazers, some of which were herd ungulates (Carbone 1983:10). Within Florida, the presence of the long nosed peccary, spectacled bear, southern llama, and giant armadillo indicate that this region possessed a rich and diverse environment. Many of these animals migrated north from South America during the Great American Interchange some two million years ago (MacFadden 1997).

3.0 PREHISTORIC OVERVIEW

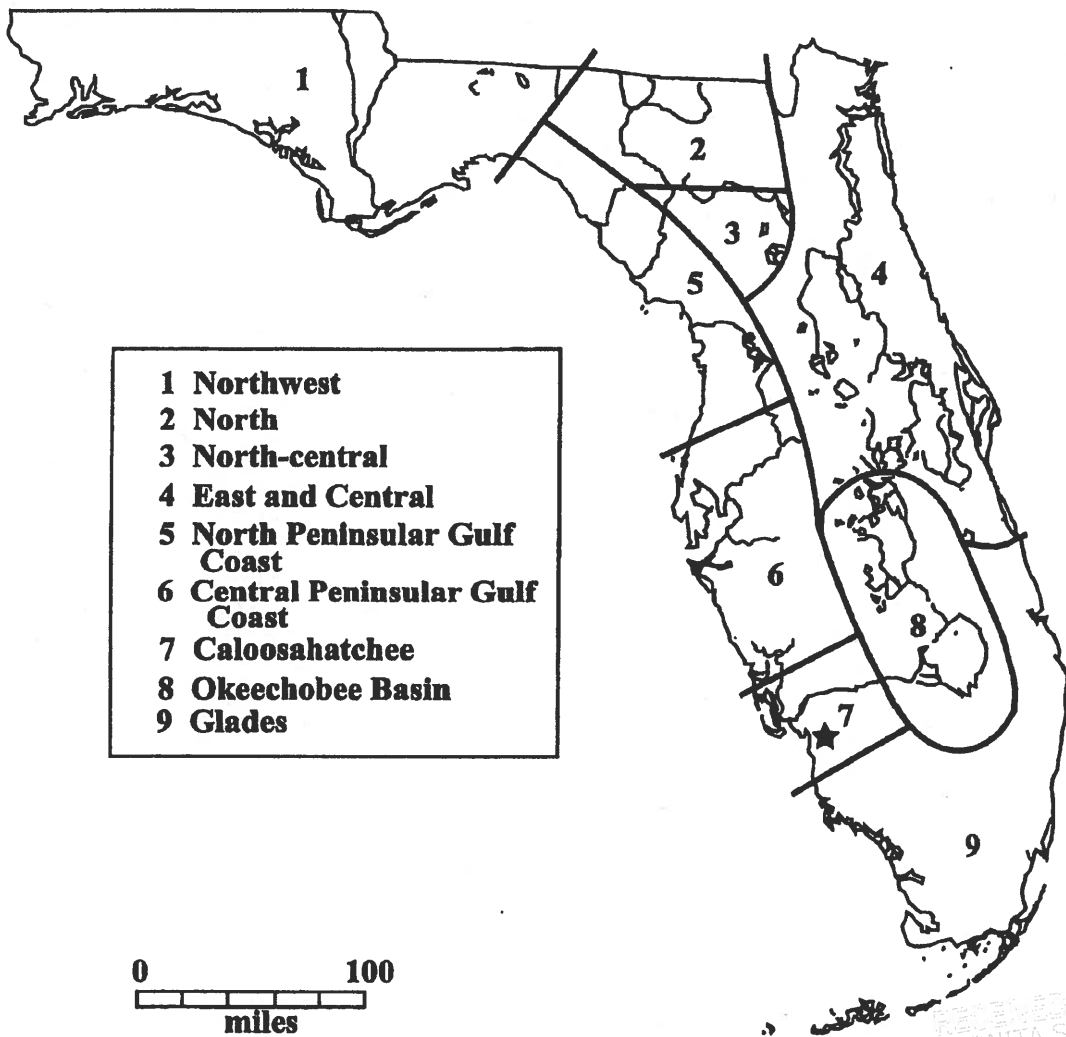
A discussion of the cultural chronology of a specific region provides a framework within which the local archaeological record can be examined. Archaeological sites are not individual entities, but are the remains of once dynamic cultural systems. As a result, they cannot be adequately examined or interpreted without reference to other sites and resources in the general area. Aboriginal populations have inhabited Florida for at least 14,000 years. The earliest cultural stages are similar throughout the Southeast and cultural regionalism began to develop some 4000 years ago with the advent of fired clay pottery.

In general, archaeologists summarize the prehistory of a given area (i.e., an archaeological region) by outlining the sequence of archaeological cultures through time. These cultures are defined largely in geographical terms but also reflect shared environmental and cultural factors. Lee County is part of the Caloosahatchee archaeological area of the South Florida Region (Griffin 1988; Milanich 1994:xix). Geographically, the Caloosahatchee area extends from Charlotte Harbor on the north, to the northern border of the Ten Thousand Islands on the south (Figure 3.1), and eastward from the islands about 86 km (54 mi) inland.

The sequence of cultural development for the South Florida Region is pan-regional during the earliest periods of human occupation: the Paleo-Indian and the Archaic. By approximately 500 B.C., distinctive regional cultures had developed as evidenced by differences in ceramic sequences. By this time, the prehistoric populations residing in the Caloosahatchee area developed a cultural assemblage distinct from those people inhabiting the Belle Glade (Okeechobee) and Everglades areas, the latter of which includes the Ten Thousand Islands District (Griffin 1988:120-121). The following summary follows closely the outlines presented by Griffin (1988), Marquardt (1992b, 1999a), and Widmer (1988).

3.1 Paleo-Indian (11,500.- 7500 B.C.)

Current archaeological evidence indicates that the earliest human occupation of the Florida peninsula occurred approximately 13,500 years ago or ca. 11,500 B.C. (Widmer 1988). The earliest occupation is referred to as the Paleo-Indian period. It lasted until approximately 7000 B.C. During the Paleo-Indian period, the climate of South Florida was much drier than today. Sea level was 130-165 feet lower than present and the coast extended approximately 100 miles seaward on the gulf coast. With lower sea levels, today's well-watered inland environments were arid uplands (Milanich 1994). Lake Okeechobee, the Caloosahatchee, Myakka, and Peace Rivers, as well as the Everglades, were probably dry. Because of drier global conditions and little or no surface water available for evaporation, Florida's rainfall was much lower than at present (Milanich and Fairbanks 1980:38-40). Potable water was obtainable at sinkholes where the lower



Post- 500 B.C. regions of precolumbian Florida

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Figure 3.1 Florida Archaeological Regions (Milanich 1994:xix). The project area is located in Lee County (★) in the Caloosahatchee Region.



water table could be reached. Plant and animal life were also more diverse around these oases, which were frequented by both people and game animals (Widmer 1988; Milanich 1994:40).

Thus, the prevailing environmental conditions were largely uninviting to human habitation during the Paleo-Indian period (Griffin 1988:191). Given the inhospitable climate, it is not surprising that the population was sparse and Paleo-Indian sites are uncommon in south Florida. Just to the north of Charlotte Harbor, however, evidence of Florida's earliest inhabitants has been uncovered. Underwater excavations at both Little Salt Spring (Clausen et al. 1979) and Warm Mineral Springs (Clausen et al. 1975; Cockrell and Murphy 1978) in Sarasota County have provided abundant data concerning this period. Work at the Cutler Fossil Site in Dade County, southeast of the Caloosahatchee region, has yielded two projectile points associated with a hearth area that has been radiocarbon dated to ca. 7760 B.C. (Carr 1986). In Lee County, a Santa Fe point, dating from the Late Paleo-Indian period (ca. 8000 B.C.), was recovered from Useppa Island and an earlier Suwannee point was reported to have come from Sanibel Island (Marquardt 1999b).

In general, the Paleo-Indian period is characterized by small nomadic groups with a hunting and gathering mode of subsistence. Permanent sources of water, scarce during this time, were very important in settlement selection (Daniel and Wisenbaker 1987). This settlement model, often referred to as the Oasis Hypothesis (Milanich 1994:41), has a high correlation with geologic features in southern Florida such as deep sinkholes like those noted in Sarasota and Dade Counties. Sites of this period are most readily identified on the basis of distinctive lanceolate-shaped stone projectile points including those of the Simpson and Suwannee types (Bullen 1975). The tool assemblage also included items manufactured of bone and wood, and very likely leather, as well as plant fibers (Clausen et al. 1979)

3.2 Archaic (7500-1000 B.C.)

The succeeding Archaic Tradition is divided into three temporal periods: the Early Archaic (ca. 7000 to 5000 B.C.), Middle Archaic (ca. 5000 to 2000 B.C.), and the Late Archaic (ca. 2000 to 500 B.C.). Sites from the Early Archaic are rare in southwestern Florida. Currently, the West Coral Creek Site and Wrecked Site Shell Midden (8CH75) in Charlotte County are the only known Early Archaic sites in the Caloosahatchee region (Ballo and Estabrook 1988; Hazeltine 1983). At the West Coral site, numerous chert and silicified coral tools and debitage were recovered from dredge spoil from the excavation of canals near a large slough. This may indicate that the site clustered around a once dependable water source.

Roughly 6500 years ago, marked environmental changes occurred. These had a profound influence upon human settlement and subsistence practices. Among the landscape alterations was a rise in sea and water table levels resulting in the creation of more available surface water. It was during this period that Lake Okeechobee, the

Everglades, and the Caloosahatchee and Peace Rivers developed. In addition to changed hydrological conditions, this period is characterized by the spread of mesic forests and the beginnings of modern vegetation communities including pine forests and cypress swamps (Widmer 1988; Griffin 1988).

The archaeological record for the Middle Archaic is better understood than the Early Archaic. Among the material culture inventory are several varieties of stemmed, broad blade projectile points including the Newnan, Levy, Marion, Putnam, and Alachua types (Bullen 1975). At sites where preservation is good, such as sinkholes and ponds, an elaborate bone tool assemblage is recognized along with shell tools and complicated weaving (e.g., Beriault et al. 1981; Wheeler 1994). In addition, artifacts have been found in the surrounding upland areas, as exhibited in the projectile points found in the upland palmetto and pine flatwoods surrounding the Bay West Site (Beriault et al. 1981). Along the coast, excavations on both Horr's Island in Collier County, and Useppa Island in Lee County have uncovered pre-ceramic shell middens which date to the Middle Archaic period (Milanich et al. 1984; Russo 1991; Russo et al. 1991). Other sites dating to the Archaic period in Lee County are 8LL27, 8LL714, 8LL716, 8LL717, 8LL1843, 8LL1773, 8LL1792, 8LL1850, 8LL1982, 8LL1983, 8LL2007, and 8LL2020 (ACI 2000; Austin 1992; Beriault and Carr 2001a, 2001b; Carr and Davis 1993; Davis and Steele 1994; Dickel 1992; Janus Research 1994; Schober and Torrence 2002).

Mortuary sites, characterized by interments in shallow ponds and sloughs as discovered at the Little Salt Springs and Nona Sites in Sarasota County (Clausen et al. 1979; Luer 2002b), Republic Groves in Hardee County (Wharton et al. 1981), and the Bay West Site in Collier County (Beriault et al. 1981), are also distinctive of the Middle Archaic. At the latter site, the remains of 35 to 40 individuals were found, some of which had been placed on leafy biers, perhaps branches, laid down in graves dug into the peat deposits. Artifacts recovered included small wooden sticks possibly used as bow drills for starting fires, antler tools with wooden hafts that appear to be sections of throwing sticks, two throwing stick triggers, and bone points or pins (Milanich 1994:81). Evidence for this burial technique has not been discovered in the Caloosahatchee area. However, burials within midden deposits have been documented on Useppa Island (Torrence 1999).

Pre-ceramic cultural horizons beneath tree island sites have been reported in the eastern Everglades (Carr and Beriault 1984; Mowers and Williams 1972). Population growth, as evidenced by the increased number of Middle Archaic sites and accompanied by increased socio-cultural complexity, is also assumed for this time (Milanich and Fairbanks 1980; Widmer 1988). Marquardt, on the other hand, suggests that there was not so much of an increase in population, but a clustering of the population around wetland resources because of the drier climatic conditions (Marquardt 1999c:77).

The beginning of the Late (or Ceramic) Archaic Period is similar in many respects to the Middle Archaic but includes the addition of ceramics. The earliest pottery in the South Florida region is fiber-tempered, as represented at several sites on Key Marco and Useppa (Cockrell 1970; Widmer 1974). This pottery, referred to as the Orange series, was often decorated with incised lines. Orange Plain pottery is coeval with plain chalky

and limestone tempered wares with the use of incising occurring as early as 1500 B.C. (Widmer 1988:69-72). In addition to fiber, sand and sponge spicules were often common components of the paste (Cordell 2004; Russo and Heide 2004; Sassaman 2004; Saunders 2004). Projectile points of the Late Archaic are primarily stemmed and corner-notched, and include the Culbreath, Clay, and Lafayette types (Bullen 1975). Other lithic tools include hafted scrapers and ovate and trianguloid knives (Milanich and Fairbanks 1980). Archaeological evidence indicates that South Florida was sparsely settled during this time with only a few sites recorded. Some of these sites include 8LL44 (Howard Mound), 8LL45 (Calusa Island), 8LL67 (Cayo Tuna), 8LL717 (Boones Farm A), 8LL718 (Spring Creek), and 8LL1843 (Little Boar) (Dickel 1992; FMSF; Schober and Torrence 2002; Walker et al. 1996).

The termination of the Late or Ceramic Archaic corresponds to a time of environmental change. The maturing of productive estuarine systems was accompanied by cultural changes leading to the establishment of what John Goggin originally defined as the "Glades Tradition" (Griffin 1988:133). Dominated by the presence of sand-tempered ceramics in the archaeological record, the Glades Tradition was also characterized by "the exploitation of the food resources of the tropical coastal waters, with secondary dependence on game and some use of wild plant foods. Agriculture was apparently never practiced, but pottery was extensively used" (Goggin 1949:28). The Heineken Hammock (8CR231), Howard Mound (8LL44), Calusa Island (8LL45), Edge of the Woods (8LL2049), and Useppa Island (8LL51) (Beriault 2003b; Edic 1992; Lee et al. 1998; Torrence 1999) are reported to have components dating from this period.

3.3 Glades (1000 B.C.-A.D.1700)

The Glades Tradition was initially defined by Goggin on the basis of work he conducted in South Florida in the 1930s and 1940s (Goggin 1947). Goggin noticed that the archaeological assemblage, beginning around 500 B.C., began to take on a distinct appearance. This reflected the adaptation to the tropical coastal environment of South Florida. By this time the estuarine systems, along with their high biological productivity and diversity, were well established. The archaeological record reveals a widespread population increase and an apparent florescence in the tool assemblages related to the exploitation of the marine environment. Unlike much of the rest of peninsular Florida, South Florida does not contain deposits of chert, and as such, stone artifacts are rare. Instead of stone, shell and bone were used as raw materials for tools (Milanich 1994:302). It was not until the 1970s that sufficient data had been gathered in South Florida to begin delimiting smaller cultural regions. At that time, Griffin divided South Florida into three smaller regions: Okeechobee (the Okeechobee Basin and adjacent areas to the east and west), Calusa (southwest coast), and Tekesta (remainder of South Florida, including the Keys) (Griffin 1974; Milanich 1994:277). More recent work has divided South Florida into four or five regions: Caloosahatchee, Okeechobee, East Okeechobee, Glades, and Ten Thousand Islands (cf., Carr and Beriault 1984; Griffin 1988; Milanich 1994; Wheeler et al. 2002; Widmer 1988).

Most information concerning the post-500 B.C. aboriginal populations is derived from coastal sites where the subsistence patterns are typified by the extensive exploitation of fish and shellfish, wild plants, and inland game, like deer. Inland sites, such as those in the Big Cypress Swamp, show a greater, if not exclusive, reliance on interior wetland resources. Known inland sites often consist of sand burial mounds and shell and dirt middens along major water courses (Lee and Beriault 1993) and small dirt middens containing animal bone and ceramic sherds in oak/palm hammocks or palm tree islands associated with freshwater marshes (Griffin 1988). These islands of dry ground provided space for settlements (Milanich 1994:298). The coastal area at this time was one of the most productive marine regions in the state (Milanich 1994:311), and as such, the intensive utilization of the bays and estuaries is evidenced by the extensive midden deposits along the shorelines and on the barrier islands.

The division of the Glades tradition into periods is based on changes in the ceramic assemblages as well as variations in subsistence patterns resulting from the changes in sea-level stands (cf., Cordell 1992; Marquardt 1992a, 1999c; Walker 1992; Widmer 1988). In this part of the state, the cultural chronology is referred to as Caloosahatchee. The settlement pattern at this time consisted of large villages (10 hectares [ha] in size with about 400 people), small villages (3-4 ha/50 people), and fishing hamlets and/or collection stations (< 1 ha, temporary, task specific site) (Widmer 1988). The larger sites are located in the coastal areas, whereas most of the interior sites are seen as short-term hunting stations occupied by special task groups from the permanent coastal villages (Widmer 1988: 226).

Caloosahatchee I (500 B.C. to A.D. 650) is characterized by thick, sand-tempered plain sherds with rounded lips, some St. Johns Plain ceramics, the appearance of Pineland Plain ceramics (tempered with sponge spicules and medium to fine quartz sand) and the absence of Belle Glade ceramics (Marquardt 1999c:85). Based on the faunal analysis from Useppa Island, fish was the primary meat source with whelks and conchs being the primary shellfish. Botanical materials utilized include chenopod, panic grass, talinum, mallow, red mangrove, wax myrtle, pine, mangrove, buttonwood, and seagrape (Marquardt 1999c:857). Data on burial customs for this time have not been obtained. The Wightman (Fradkin 1976; Wilson 1982), Solana (Widmer 1986), Useppa Island (Marquardt 1999c; Milanich et al. 1984), Josslyn Island (Marquardt 1992c), Bird Rookery (Patton 2000), Circle Pond Campsite (Dickel 1992), Little Boar, and Eagle Pond (Schober and Torrence 2002), and Cash Mound (Anon. 1987) sites have been dated to this period.

From A.D. 650 to 1200, the Caloosahatchee II period is marked by a dramatic increase of Belle Glade ceramics in the area (Widmer 1986:84). This ceramic ware is tempered with sand and the surface has been smoothed or tooled by scraping the almost dry clay with a wooden tool, leaving characteristic drag marks caused by the grains of sand being pulled across the surface. The lips of the bowls were often flatted with the same techniques (Milanich 1994:293). Austin (1996:75) modifies the type description somewhat in that the paste must also contain sponge spicules, although the sherd does not have to have a chalky feel. The shell tool assemblage became more diversified with

hafted whelk and conch hammers and cutting-edged tools being common (Marquardt 1992a:429). Cordell (1992) has divided the Caloosahatchee II period into IIA and IIB with the appearance of Belle Glade Red ceramics (ca. A.D. 800) marking the beginning of IIB. The changes in ceramics may also correspond to the initial use of ceremonial mounds that characterize this period. Burials occurred in sand mounds and in natural sand ridges with both primary flexed and secondary bundle burials. At this time, the number of shell middens or village sites increased (Milanich 1994:319). In addition, the first evidence of ranked societies in southwest Florida begins at this time (Widmer 1988:93). The Wightman Site has three non-mortuary ceremonial mounds connected by shell causeways (Fradkin 1976). In addition, the large Pineland Canal appears to have been constructed at this time (Luer 1989a). It is possible that the large Pineland complex served as the center of Calusa society (cf. Milanich 1995: 44). Archaeologists have postulated that sea levels were higher than during the Caloosahatchee I period, or that the coastal area was under greater influence from nearby ocean inlets. This is based on the higher diversity of faunal remains and the increased number of higher salinity-based food stuffs found at coastal sites (Marquardt 1999c:91). The John Quiet Site, on the Cape Haze Peninsula (Bullen and Bullen 1956), and the earliest occupation of the Buck Key Midden (Anon. 1987) date to this period. Other Caloosahatchee II period sites include Useppa Island, Buck Key, Pineland, Galt Island, Josslyn Island, Big Mound Key, Hooker Key, Mason Island, Bird Rookery and the Bonita Bay Sand Mound (Dickel 1992; Marquardt 1992b, 1999c; Patton 2000).

The Caloosahatchee III period, from A.D. 1200 to 1400, is identified in the archaeological record by the appearance of St. Johns Check-Stamped and Englewood ceramics (Cordell 1992:168; Widmer 1988:85). Belle Glade Plain ceramics continue to be the dominant type, but Sand-tempered Plain and Pineland Plain wares are also present. According to Marquardt (1992a:430) the climate was cooler and not as stormy as the Caloosahatchee IIB period. No changes in the subsistence economy or settlement patterns have been identified. Sand burial mounds continued to be used with Englewood and Safety Harbor ceramics occasionally associated with the burials. A number of mounds dating to this period evidence radially placed, extended burials within the mounds (Luer and Almy 1987). Josslyn Island, Buck Key, Mound Key, Aqui Esta Mound, Cayo Pelau, Pineland, Galt, Arcadia, Keen Mound, Mound Key, Hooker Key, Mason Island, East Terry Street Extension, and Broken Pot, among other sites, have Caloosahatchee III period materials (ACI 1990; Dickel 1992; Luer 2002a; Marquardt 1992a; Mitchem 1989; Patton 2000; Willey 1949a; Willis and Johnson 1980).

From A.D. 1400 to 1513, the Caloosahatchee IV period is characterized by the appearance of numerous trade wares from all adjoining regions of Florida (Widmer 1988:86) and a decline in the popularity of Belle Glade Plain pottery (Milanich 1994:321). Sand-tempered Plain pottery, with square and flattened lips, is the most common (Cordell 1992:168). There is also an increase in Pineland Plain ceramics. Around A.D. 1400, the use of incising on ceramics in the Glades and Caloosahatchee regions ceased and the ceramic assemblages of the two areas were very homogeneous (Marquardt 1992a:431). Some archaeologists have suggested that this represents an expansion of the Calusa within this area (Griffin 1988; McGregor 1974). Certainly, there

were close ties between the Caloosahatchee and Belle Glade populations (Milanich 1995). The trade wares include Glades Tooled and pottery of the Safety Harbor series, including Pinellas Plain. Buck Key and Josslyn Island, as well as Pineland, contain shell middens which date to this period (Marquardt 1992b:13). Other sites include Mound Key, Punta Rassa, Indian Field, Captiva Mound, Mason Island, Galt Burial Mound, Dr. Wilson's Sanctuary 3, and Boone's Farm Archaic Shell Enclosure (Dickel 1992; FMSF; Futch et al. 1980; Patton 2000; Wheeler 2001).

The Caloosahatchee V period (A.D. 1513 to 1750) is coterminous with the period of European contact. Sites of this time are marked by the appearance of European artifacts such as metal, beads, and olive jar sherds, found in association with aboriginal artifacts. There is a decline in the use of Belle Glade Plain pottery. Cultural materials from the Leon-Jefferson Mission period of north Florida have also been recovered (Bullen and Bullen 1956; Widmer 1988:86). European artifacts have been recovered from the Galt and Pineland burial mounds, the Keen Mound, the Cape Haze Peninsula, and on Cape Coral (Bullen and Bullen 1956; Marquardt 1992a; Sears 1967; Willis and Johnson 1980). Metal pendants also were being manufactured by aboriginal metal smiths at this time (Allerton et al. 1984).

In historic times, the Caloosahatchee area was the home territory of the Calusa, a sedentary, non-agricultural, highly stratified, and politically complex chiefdom. Calusa villages along the coast are marked by extensive shellworks and earthworks. In addition, numerous sites have been recorded inland along the Caloosahatchee River. The great Pine Island Canal, which runs across Pine Island in coastal Lee County, may have been dug after A.D. 1000 to bring trade goods and tribute to the Calusa from the interior (Luer 1989a). Based on the account of d'Escalante Fontaneda, who was shipwrecked in 1545, the extent of the Calusa influence extended throughout the Okeechobee Basin and had alliances with tribes along the Atlantic coast as well (Milanich 1995). In 1567, a Spanish garrison (San Antonio) and a Jesuit mission were established in Calos, the capital town of the Calusa. This was believed to be on Mound Key in Estero Bay. By 1572, however, the Jesuits withdrew from Florida due to a lack of converts and difficulties with the native inhabitants. In 1697, five Franciscan friars from Cuba attempted to establish a mission among the Calusa (Hann 1991). This was a short-lived endeavor, as by 1698 the mission was abandoned. The Calusa perceived that the acceptance of baptism would not bring gifts from the Spanish Crown, and with the realization that the friars were attempting to abolish their traditional forms of worship, hostility arose (Hann 1991:161). The friars were stripped of their possessions and deported to the Keys, from whence they returned to Cuba. By the mid-1700s, the once dominant Calusa had all but disappeared, the victims of European diseases, slavery, and warfare.

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4.0 HISTORICAL OVERVIEW

When the Spanish arrived on the west coast of Florida they encountered a powerful, highly organized and socio-politically complex society referred to as the Calusa. On Friday, June 4, 1513, Ponce de Leon sailed into what is believed to be the area of Charlotte Harbor and was attacked by a group of hostile Indians. The Spanish held off the attack, but the next day the Indians returned with 80 canoes and attacked the Spanish again. This action demonstrates the sophistication and political complexity of a non-agricultural, Chiefdom level society (Widmer 1988).

During the Spanish years in South Florida, there were many attempts to establish missions, but none was successful. Trade relations existed between the Spanish and the Calusa until their populations were almost totally decimated by disease and their remaining population brought to Cuba in the mid-1700s (Milanich and Fairbanks 1980). Spanish fishing communities, or ranchos, were established around Gasparilla, Shell Island, Cayo Costa, Fisherman's Key, Punta Rassa, and Estero Island, but gradually fell into demise shortly after Spain lost Florida (Grismer 1949). At Pineland, the abundant large shell mounds were important because they provided high dry ground and had rich soil for gardening, as well as ample space for drying fish (Luer 1991). Several reported Cuban ranchos were on the island as well as a small colony of runaway slaves that made a living cutting timber and fishing (Covington 1959:121; Luer 1991).

The area which now constitutes the State of Florida was ceded to England in 1763 after two centuries of Spanish possession. England governed Florida until 1783 when the Treaty of Paris returned Florida to Spain; however, Spanish influence was nominal during this second period of ownership. Prior to the American colonial settlement of Florida, portions of the Creek nation and remnants of other Indian groups from Alabama, Georgia, and South Carolina moved into Florida and repopulated the vacuum created by the decimation of the aboriginal inhabitants. The Seminoles, as these migrating groups of Indians became known, formed, at various times, loose confederacies for mutual protection against the new American Nation to the north (Tebeau 1971:72).

The bloody conflict between the Americans and the Seminoles over Florida first came to a head in 1818, and was subsequently known as the First Seminole War. The battles between Seminoles and settlers could erupt any time, and settlement was almost impossible except at locations where protection was a factor. Evidence of Seminoles in the region has been recovered at Useppa (Marquardt 1999a) and a burial was uncovered at Indian Field (Luer 1989b).

As a result of the war and the Adams-Onis Treaty of 1819, Florida became a United States territory in 1821, but settlement was slow and scattered during the early years. Andrew Jackson, who served as the first Governor of the Territory of Florida, created St. Johns and Escambia Counties as the first two political subdivisions in the newly formed territory. St. Johns County initially encompassed all of Florida lying east of the Suwannee River, including the project area, and Escambia encompassed the land

lying to the west of the Suwannee. The earliest attempts for Americans to settle what is now Lee County did not occur until 1833. In this year, William Hackley of Tampa and a group of New York investors tried unsuccessfully to establish the town of Sanibel on Sanibel Island.

Although the First Seminole War was fought in north Florida, the Treaty of Moultrie Creek in 1823, at the end of the war, was to affect the settlement of all of south Florida. The Seminoles relinquished their claim to the whole peninsula in return for occupancy of approximately four million acres of reservation south of Ocala and north of Charlotte Harbor (Mahon 1967:50). In 1824, Mosquito County was created from St. Johns County. The boundaries of the new county stretched from near present-day St. Augustine to Key West along the east coast, and west to Alachua County.

The Treaty of Moultrie Creek never satisfied the Indians or settlers. The inadequacy of the reservation and desperate situation of the Seminoles living there, plus the mounting demand of the whites for their removal, spawned the Indian Removal Act of 1830, and soon produced another conflict. By 1835, the Second Seminole War was underway.

During the Second Seminole War (1835-1842), a strong force of American soldiers, commanded by Col. Persifer F. Smith, left Fort Basinger in January 1838, and entered Indian territory south of the Caloosahatchee River, traveling to Punta Rassa. Three supply depots were established along the way, two at the place Col. Smith crossed the river and a third at Punta Rassa (Grismer 1949). During the 1837-38 campaign, Smith was to take his troops up the Caloosahatchee and, in theory, meet up with three other columns to push the Seminoles into the Everglades where it was hoped that they would either surrender or die (Knetsch 2003:100). The few settlers in the area probably lived near these depots, which provided some protection. If not close to a depot, settlers homesteaded near coastal waterways or inland rivers, which provided food, a livelihood, fresh water, and a way into the interior. The swampy inland was a refuge for the Seminoles who refused removal from Florida (Tebeau 1980).

Fort Dulany, at Punta Rassa, was used as the principal base and was expanded to include large barracks, warehouses, and a hospital. It continued to serve this function until it was destroyed by a hurricane on October 19, 1841 during which all the buildings were demolished and the area was covered by several feet of water. After the destruction of Fort Dulany, Capt. H. McKavit was sent to establish a location for a new fort to be built in an area less prone to flooding. He traveled up the Caloosahatchee River and came upon a hammock densely covered with towering palms, pines, and moss-draped oaks. The land was elevated and dry, with few mosquitoes. It was at that location that he built Fort Harvie, the present location of Fort Myers. This fort was abandoned in 1842 at the close of the Second Seminole War (Mahon 1967). Col. Smith established Fort Keis at the northern edge of the Big Cypress and Fort Center on the south bank of Fisheating Creek in 1838. These forts were established in an attempt to control any Seminole movement into the Big Cypress and northwest of Lake Okeechobee (Knetsch 2003:108).

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Throughout the years that followed, increased hostilities between Indians and settlers intensified a campaign to remove all Seminoles from Florida, which had become a state in 1845 (Tebeau 1980). In December of 1855, the Third Seminole War or the Billy Bowlegs War (1855-1858) began as a result of pressure placed on Native Americans remaining in Florida to emigrate to the west. The war began in what is now Collier County when Seminole Chief Holatter-Micco, Billy Bowlegs, and 30 warriors attacked an army camp killing four soldiers and wounding four others. The attack was in retaliation for damage done by several artillerymen to some property belonging to Billy Bowlegs. This hostile action renewed state and federal interest in the final elimination of the Seminoles from Florida (Covington 1982).

Military action was not decisive during the war. Therefore, in 1858 the U.S. government resorted to monetary persuasion to induce the remaining Seminoles to migrate west. Chief Billy Bowlegs, who had surrendered to federal forces at Fort Myers, accepted \$5,000 for himself and \$2,500 for his lost cattle; each warrior received \$500, and \$100 was given to each woman and child. On May 4, 1858 the ship *Grey Cloud* set sail from Fort Myers with 38 Seminole warriors and 85 Seminole women and children. Stopping at Egmont Key, 41 captives and a Seminole woman guide was added to the group. This made a total of 165 Seminoles migrating west. On May 8, 1858, the Third Seminole War was declared officially over (Covington 1982:78-80). By 1860, an estimated 300 Indians were allowed to remain in the Everglades.

Cattle ranching served as one of the earliest important economic activities reported in the region. Mavericks left by early Spanish explorers such as DeSoto and Narvaéz provided the stock for the herds raised by the mid-eighteenth century "cowkeeper" Seminoles. As the Seminoles were pushed further south during the Seminole Wars and their cattle were either sold or left to roam, settlers captured or bought the cattle. By the late 1850s, the cattle industry of southwestern Florida was developing on a significant scale. By 1860, cattlemen from all over Florida drove their herds to Fort Brooke (Tampa) and Punta Rassa for shipment to Cuba, at a considerable profit. During this period, Jacob Summerlin became the first cattle baron of southwestern Florida. Known as the "King of the Crackers," Summerlin herds ranged from Ft. Meade to Ft. Myers (Covington 1957).

In 1861, Florida followed South Carolina's lead and seceded from the Union as a prelude to the American Civil War. Florida had much at stake in this war as evidenced in a report released from Tallahassee in June of 1861. It listed the value of land in Florida's 35 counties as \$35,127,721 and the value of the slaves in the state at \$29,024,513 (Dunn 1989:59). Although the Union blockaded the coast of Florida during the war, the interior of the state saw very little military action. Florida became one of the major contributors of beef to the Confederate government (Shofner 1995:72). One of the most successful blockade runners, James McKay, formed a partnership with Jacob Summerlin in 1860 (Baker 1993:37). Summerlin, a cattleman from around Fort Meade, originally had a contract with the Confederate government to market thousands of head a year at \$8 to \$10 a head (Akerman 1976:85). By driving his cattle to Punta Rassa and shipping them to Cuba, he received \$25 a head. In one year in the 1870s, a Captain Hendry shipped 12,896

head of cattle from Punta Rassa to Key West at \$15 a piece for approximately \$200,000. There is no doubt that Fort Myers got its start as a cattle town. McKay's side-wheel steamer, *Scottish Chief*, made six runs to Cuba in 1862-63. At first, he shipped cattle, but when the cattle were needed for the Confederate troops, he switched to cotton (Buker 1993). In October 1863, the *Scottish Chief* was destroyed in Tampa Bay by Union forces as it was preparing to take another load of cotton to Cuba (Buker 1993:65).

In an attempt to limit the supply of beef transported to the Confederate government, Union troops stationed at Ft. Myers conducted several raids into the Peace River Valley to seize cattle and destroy ranches. In response, Confederate supporters formed the Cattle Guard Battalion, consisting of nine companies under the command of Colonel Charles J. Mannerlyn (Akerman 1976:91-93). The cattlemen and the farmers in the state lived simply. The typical home was a log cabin without windows or chinking and settlers' diets consisted largely of fried pork, corn bread, sweet potatoes, and hominy. The lack of railway transport to other states, the federal embargo, and the enclaves of Union supporters and Union troops holding key areas such as Jacksonville and Ft. Myers prevented an influx of finished materials. As a result, settlement remained limited until after the Civil War.

Immediately following the war, the South underwent a period of "Reconstruction" to prepare the Confederate States for readmission to the Union. The program was administered by the U.S. Congress, and on July 25, 1868, Florida officially returned to the Union (Tebeau 1980). During this time, the U.S. Government began surveying land in southwest Florida, including the present Lee County. Records indicate that federal surveys began before the Civil War, but were generally discontinued for ten years. Nutting (1986) writes, "During the conflicts with the Seminoles, the United States Army engineers had done some surveying of the region south of the Caloosahatchee and had mapped out the areas surveyed. One of these maps shows the stream, now known as the Imperial River, with the name "Corkscrew Creek", given to it by the engineers. Since the engineers camped along its banks it soon was referred to as Surveyors Creek, a name it bore until the boom days of the 1910 decade when it was christened Imperial River, a name more in keeping with the grandiose ideas of that era." The town that evolved around Surveyors Creek was aptly named Survey and was later renamed Bonita Springs. The exterior boundaries of Township 47 South, Range 26 East were surveyed in 1872 by W. L. Apthorp who noted pine and cypress swamp along the southern boundary of Section 31 (State of Florida 1872: 50). The interior section lines were surveyed in 1874 by T.S. Stearns, who noted "3rd rate-timber pine and cypress" with an "undergrowth of saw[palmetto] and myrtle" (State of Florida 1873: 687). The resulting plat depicts no historic features proximate to the project area (State of Florida 1874). A large portion located in the southeast corner of the township and range was left un-surveyed, and was merely labeled "cypress swamp" (State of Florida 1874).

The Bonita Grande Commerce project area was, at that time, part of the vast central Florida acreage, which remained unclaimed when Florida reached statehood. The Seminole Indian Wars, disease, and, the swamps discouraged many potential settlers. Surveyed almost thirty years after statehood, lands in the protected area were not sold

until the 1880's when the state of Florida began a serious effort to get its commonwealth settled.

Prompting these surveys and land sales in the 1880s was the mounting pressure over the issue of public land ownership. On the eve of the Civil War, land had been pledged by the Internal Improvement Fund to underwrite railroad bonds. When the railroad failed after the war, the land reverted to the State. Almost one million dollars was needed to pay off the principal and accumulated interest on the state's debt in order to receive clear title. Hamilton Disston, son of a wealthy Philadelphia industrialist, saw this as an opportunity to expand his influence in Florida.

Disston and the State of Florida agreed to two large land deals - the Disston Drainage Contract and the Disston Land Purchase. The Drainage Contract allowed Disston and his associates to drain and reclaim overflow lands in exchange for one-half the acreage that could be reclaimed and made fit for cultivation. A contract was signed on March 10th, 1881 (Davis 1939). After 200,000 acres had been drained, Disston was to receive the alternate sections of the reclaimed land. As the work progressed, deeds were to be issued. Disston and his associates received 1,652,711 acres of land under the Drainage Contract, although they probably never permanently drained more than 50,000 acres (Tebeau 1980:280). The crux of the Disston land transactions was the distribution of large subsidies of reclaimed land by the state to railroad companies, inducing them to begin extensive construction programs for new lines throughout the state. A portion of land within Section 31, Township 47 South, Range 26 East, including land within the project area, was deeded to the Pensacola Atlantic Railroad Company on December 31, 1888 (State of Florida n.d.: 91). On May 14, 1889, Perry Simms was also deeded land within the section, including the remainder of the current project area (State of Florida n.d.: 91).

By 1885, there were approximately 50 families living within the town limits of Fort Myers. "The need for public improvements and better law enforcement led the residents to incorporate the settlement as a town" on August 12, 1885, and a mayor and councilmen were elected (Grismer 1949:255). These first permanent pioneers were farmers; the hunters and fishermen who had preceded them established only temporary camps. As the land was largely impassable, their market was Key West, a growing city which produced almost none of its own food (Tebeau 1966:233-234). Dissatisfaction in northern Monroe County concerning the distance to the county seat of Key West led to the establishment of Lee County in 1887. Named for General Robert E. Lee, Lee County, at the time, was one of the largest counties in the state consisting of most of southwest Florida. The population for the entire county was recorded as 1,414 inhabitants in 1890.

By 1893, Dr. Cyrus Teed, founder of the Koreshan Unity Settlement (northwest of the project area adjacent to US 41), decided to establish a branch colony in Florida. Within a few months, on a return trip to Florida, he purchased 300 acres of land on the Estero River, several miles west of I-75. Shortly thereafter, a nucleus of colonists arrived to construct a community. The settlement was called "New Jerusalem," and Teed was known to his followers as "Koresh," the Hebrew translation of his given name Cyrus,

which means "Shepard" in Hebrew. The Koreshan settlement was an experiment in utopian communal living that emphasized usefulness and service to God and neighbor, and the denial of personal gain (Rea 1994:1).

With Teed's death in 1908, the Koreshan movement declined. The church leaders' celibate lifestyle required new members to be recruited from outside the community. Although New Jerusalem continued without Teed's charismatic leadership, attracting new members proved more and more difficult (Rea 1994:58-59). By the late 1940s, dissolution of the community appeared eminent (Hedwig 1961). As a result of its unique purpose, the Koreshan Unity Settlement is now a state park and the settlement area within the park is listed on the NRHP (Florida Preservation Services 1986:53).

While the Koreshan Unity Settlement at Estero enjoyed its greatest prosperity and a population of over 200 people between 1900-1905, other settlements of present-day Lee County were slow to develop. Typically, they were delayed until the Florida land boom of the 1920s that coincided with road development. The Tamiami Trail (today's US 41) is a north/south connector from Tampa to Miami, which was expected to open up Lee County. Preliminary survey of the roadway through the Everglades was conducted in 1915, but it wasn't until 1923 Barron G. Collier agreed to finish that section of road between Lee and Dade Counties, provided his lands in Lee County were established as a separate county (Scupholm 1997). Construction progressed slowly though, largely due to a lack of funding, and the Tamiami Trail was not officially opened until 1928, thirteen years after its inception (Anon. 1972). Built on fill material obtained from a continuous pit next to the road, construction resulted in a residue of ditches that were turned into canals (Duever 1986:246).

As US 41 was completed, it went right through the middle of Bonita Springs at the southern end of Lee County. First established as the community of "Survey", the name of the town was changed to Bonita Springs in 1912 to reflect the hotel (Bonita Villa) that was the centerpiece of the town, and the mineral springs that provided the town with a reputation as a health spa. While it no longer serves as a health resort, Bonita Springs continues to thrive on tourism due to its proximity to the Gulf beaches, the larger city of Naples to the south, and the vast, nearby Everglades.

Modest signs of growth in the area were halted by the "bust" of Florida real estate in 1926-27 and the Great Depression that followed soon after. Massive freight car congestion from hundreds of loaded cars sitting in railroad yards caused the Florida East Coast Railway to embargo all but perishable goods in August of 1925 (Curl 1986:84-84). The embargo spread to other railroads throughout the state and, as a result, most construction halted. The 1926 real estate economy in Florida was based upon such wild land speculations that banks could not keep track of loans or property values (Eriksen 1994:172). By October, rumors were rampant in northern newspapers concerning fraudulent practices in the real estate market in south Florida. To counteract the reports, T. Coleman du Pont, chairman of the Mizner Development Corporation of Palm Beach County, held an open meeting to try to convince the public that the increase in property values represented real worth. However, the next week du Pont and several other board

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members resigned. After that, confidence in the Florida real estate market quickly diminished, investors could not sell lots, and the Great Depression struck Florida developers earlier than the rest of the nation (Curl 1986:84-84).

To make the situation worse, Lee County suffered agricultural and structural damage from two hurricanes that hit south Florida in 1926 and 1928. Preceded by the collapse of the Florida Land Boom, and followed by the October 1929 stock market crash, the hurricanes were part of a chain of events that left Lee County in a state of stagnation. As a participant in the federal government's programs designed to lift the country out of economic depression in the 1930s, Lee County found employment in government-planned construction projects that helped revive the economy of the state (Grismer 1949:257). These projects helped to employ several of the 14,990 inhabitants of Lee County. Some of these programs were instrumental in the construction of parks, bridges, and public buildings. Programs such as the Works Progress Administration completed projects in Fort Myers such as the Edison Bridge, the Fort Myers Yacht Basin, and the Lee Memorial Hospital (Board and Bartlett 1985:28).

The 1940 population of Lee County totaled 17,488--10,604 of them living in Fort Myers (Grismer 1949:257). Because of the undeveloped nature of inland areas of Lee County, two sites were selected during World War II for the construction of air bases in the Fort Myers area, Buckingham and Page Fields. At its peak, Buckingham Field had 16,000 service personnel stationed there. Many of the troops stationed in the area returned with their families to make Fort Myers their home after the war, even though the bases were closed (Board and Bartlett 1985:28). This contributed to the continued, steady growth of Fort Myers. As veterans returned, the trend in new housing focused on the development of small tract homes in new subdivisions.

In many ways, the post-World War II development of Lee County is similar to that of the rest of America: increasing numbers of automobiles and asphalt, an interstate highway system, suburban sprawl, and strip development along major state highways. Florida's population increased from 1,897,414 to 2,771,305 between 1940 and 1950 (Tebeau 1980:431). After the war, car ownership increased and the American public became more mobile, many taking driving vacations to Florida and the Fort Myers area.

The construction of suburbs and malls, such as the Edison Mall in Fort Myers in 1965, changed the character of Florida cities by creating a string of development along coastal areas (Board and Bartlett 1985:28). Development and settlement patterns over the latter half of the twentieth century pushed outward along coastal areas and through the center of the state along the I-4 corridor. Construction, some of which was necessary because of the result of devastating Hurricane Donna, boomed in Lee County. Afterwards, millions of insurance dollars and an abundance of work revitalized a sluggish economy (Dean 1991:93). The completion of I-75 in the 1980s generated a spurt of activity that has continued into the 1990s (Board and Colcord 1992:12; Purdum 1994).

Private and commercial traffic into Lee County was enhanced with the construction of the Southwest Florida International Airport in the 1980s. Serving Fort Myers, the airport was built in an area that was primarily agricultural. With the exception of Fort Myers and a few small towns, the remainder of Lee County is devoted to citrus groves, vegetable farms, and cattle ranches. Today, Lee County, like other counties in Florida, is undergoing rapid development. Agricultural acreage is being developed as planned residential communities.

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5.0 RESEARCH CONSIDERATIONS AND METHODOLOGIES

5.1 Background Research and Literature Review

A comprehensive review of archaeological and historical literature, records and other documents and data pertaining to the project area was conducted. The focus of this research was to ascertain the types of cultural resources known in the project area and vicinity, their temporal/cultural affiliations, site location information, and other relevant data. This included a review of sites listed in the NRHP, the FMSF, cultural resource survey reports, published books and articles, unpublished manuscripts, maps, and information from the files of Archaeological Consultants, Inc. No informant interviews were conducted for this project.

It should be noted that digital FMSF data used in this report were obtained in March 2006 from the FMSF. However, input may be up to a month behind receipt of reports and site files. Thus, the findings of the background research phase of investigation may not be current with actual work performed in the general project area.

5.1.1 Archaeological Considerations

For archaeological survey projects of this kind, specific research designs are formulated prior to initiating fieldwork in order to delineate project goals and strategies. Of primary importance is an attempt to understand, based on prior investigations, the spatial distribution of known resources. Such knowledge serves not only to generate an informed set of expectations concerning the kinds of sites which might be anticipated to occur within the project area, but also provides a valuable regional perspective and, thus, a basis for evaluating any new sites discovered. In addition, in keeping with standard archaeological conventions, metric measurements are used in this and the following section.

Background research indicated that no sites were currently recorded within the project area; however, four sites are located within two miles (3.2 km) of the property (Figure 5.1). Three of these sites (8LL707, -1447, and -1904) include prehistoric campsites (artifact scatters) situated between one to two miles (1.6 and 3.2 km) west of the project area adjacent drainages feeding the Imperial River. The Oak Creek Seasonal Campground (8LL707) dates to the Transitional period. The site was not evaluated for listing in the NRHP. The East Terry Street Extension Site (8LL1447) is a Glades III Period site discovered during a survey of the East Terry Street Extension (ACI 1990). The site is considered ineligible for listing in the NRHP. The Relic Levee Site (8LL1904), another Glades III artifact scatter/campsite, was recorded during the survey of a ten-acre parcel on Imperial Street (ACI 1996). There is currently insufficient information to determine the site's eligibility for listing into the NRHP (ACI 1996). Finally, a Glades III period mound, the Sumac Mound (8CR808), was recorded about 1.5 miles (2.4 km) to the southwest of

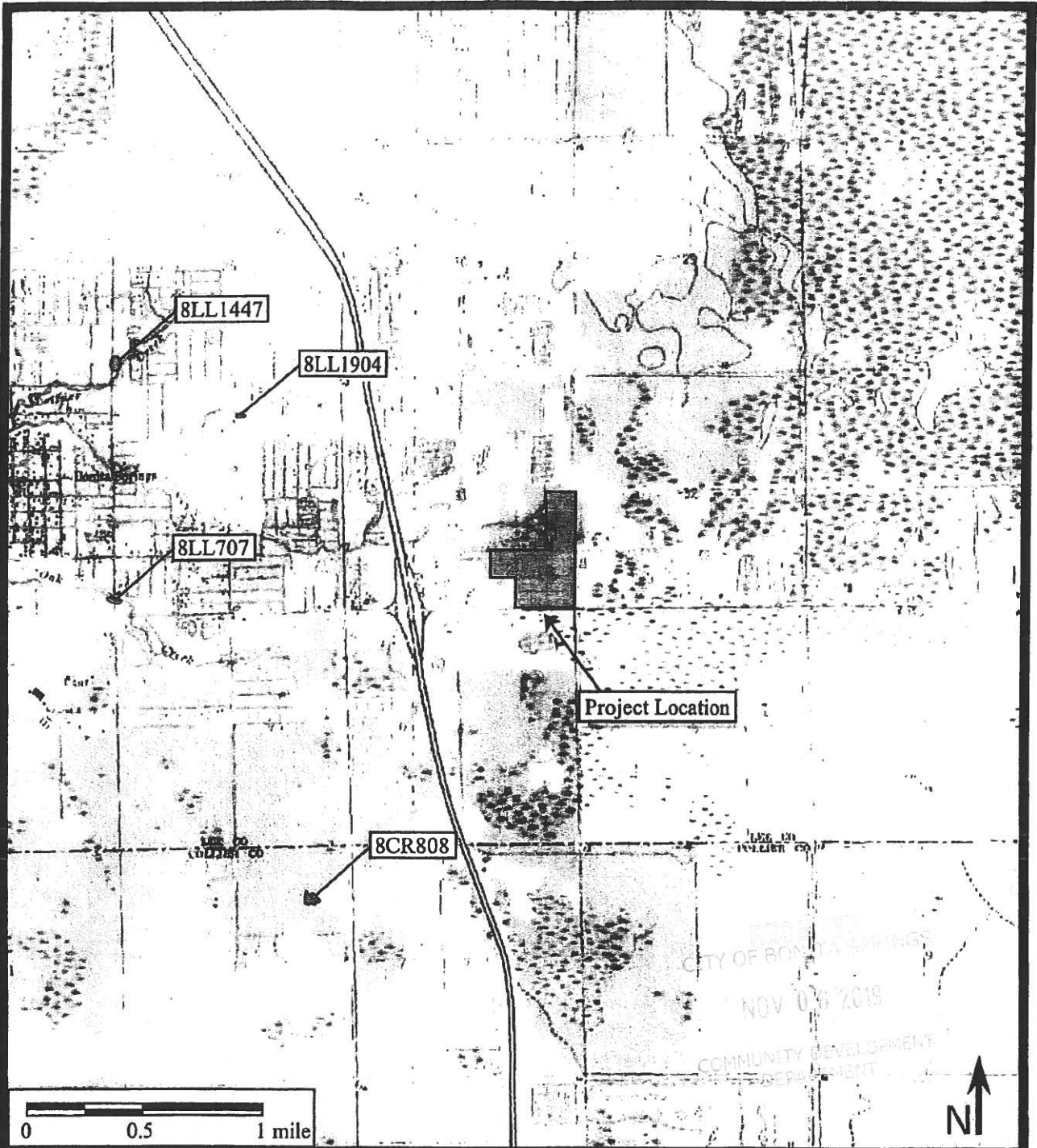


Figure 5.1 Previously Recorded Archaeological Sites Within Two Miles of the Bonita Grande Commerce Project Area. Lee County, Township 47 South, Range 26 East, Section 31 (USGS Bonita Springs, Fla. 1973, PR 1987 and Corkscrew SW, Fla. 1958, PR 1987).



the project area during a survey of the Mediterra Parcel (Beriault and Carr 2000). There is insufficient information to determine the site's eligibility for listing in the NRHP.

Other cultural resource assessment surveys have been conducted in the general project area, most of which produced negative results. Just east and southeast of the project area are surveys of I-75 from south of Bonita Beach Road to South of Corkscrew Road (HDR 2004, 2005). Additional surveys in the area include two more along I-75 (ACI 2001, 2002a), Quail West Phase II (ACI 1991a), Irish Pines (ACI 1991b), Proposed Livingston Road Alignments (Estabrook and Fuhrmeister 1992), an Annual Progress Report of the Cooperative Agreement for the Archaeological Salvage Program (Jones 1975), Three Oaks Parkway Extension (ACI 2002b), and the Bonita RPD/CPD (ACI 2000). One site, a prehistoric campsite, was recorded during the Proposed Livingston Road Alignments survey, although it is more than two miles (3.2 km) from the project area.

As archaeologists have long realized, aboriginal populations did not select their habitation sites and special activity areas in a random fashion. Rather, many environmental factors had a direct influence upon site location selection. Variables such as soil drainage, distance to freshwater, relative topography, and proximity to food and other resources, including stone and clay, have proven to be good site indicators. In general, it has been repeatedly demonstrated that archaeological sites are most often located in proximity to a permanent or semi-permanent water source, and these sites are found, more often than not, on better drained soils, or at the better drained upland margins of marsh ponds, cypress sloughs, and seasonal wetlands. However, sites are also found in areas of high elevation regardless of soil drainage characteristics in what is referred to as a marginal environment typical of interior lowlands (Austin 1987:41). Sites expected to occur in a marginal environment are small, limited activity campsites such as lithic, artifact, or shell scatter type sites associated with the prehistoric exploitation of locally available resources; large, coastal villages are typically found directly on bays and creeks. Areas of low elevation relative to the surrounding terrain are considered less likely to contain evidence of prehistoric occupation, as these poorly drained areas are considered generally unsuitable for either habitation or special use campsites (Austin 1987; Bellomo and Fuhrmeister 1991).

It should be noted, however, that these settlement patterns cannot be applied to sites of the Paleo-Indian and Early Archaic periods which precede the onset of modern environmental conditions. During the Paleo-Indian and Early Archaic periods, archaeologists believe, settlement was restricted to areas near karst sinkholes or spring caverns (Milanich and Fairbanks 1980). None of those types of features appear to be present within the project area.

Thus, it was anticipated that the project area had a low to moderate potential for the occurrence of prehistoric archaeological sites (Figure 5.1). Small prehistoric artifact scatter type sites were anticipated on slightly elevated terrain proximate to naturally occurring wetlands. Given the results of the historic research, no 19th century

homesteads, forts, military trails, or Indian encampments were expected within the project area.

5.1.2 Historical/Architectural Considerations

Examination of the FMSF and other historical data indicated that no historic structures (50 years of age or older) have been recorded within or proximate to the project area, nor were any properties listed in the NRHP. Preliminary reconnaissance of the general project vicinity indicated the absence of historic resources.

5.2 Methodology

Archaeological field methodology consisted of an initial reconnaissance whereby the project area was checked for discrete locales where archaeological testing would be possible. Following ground surface inspection, subsurface shovel testing was carried out in order to locate sites not exposed on the ground, as well as to test for the presence of buried cultural deposits in areas yielding surface artifacts. Subsurface testing was carried out systematically at 50 m (164 ft) and 100 m (328 ft) intervals, as well as judgmentally.

Shovel test pits were circular and measured approximately 0.5 m (20 in) in diameter by at least 1 m (3.3 ft) in depth unless impeded by limestone, fill, clay, or water intrusion. All soil removed from the test pits was screened through 6.4 mm (0.25 in) mesh hardware cloth to maximize the recovery of artifacts. The locations of all shovel tests were plotted on the aerial maps and, following the recording of relevant data such as stratigraphic profile and artifact finds all test pits were backfilled.

Historic structures field methodology consisted of a reconnaissance survey of the project area. This was done in order to determine the location of any historic sites, including structures and cemeteries, believed to be 50 years of age or older, and to ascertain if these resources could be eligible or potentially eligible for listing in the NRHP. If structures were found, they were to be photographed and information needed for the completion of FMSF forms was to be gathered, including interviews with persons knowledgeable about the project area and subject properties. In addition to physical descriptions and historical associations, each historic resource was to be reviewed to assess historic context, condition, and potential NRHP eligibility.

5.3 Laboratory Methods/Curation

In the event any cultural materials were recovered, laboratory methods would include an initial cleaning and sorting by artifact class. Lithics would be divided into tools and debitage based on gross morphology. If found, tools would be measured, and the edges examined with a 10x hand lens for traces of edge damage. Lithic debitage would then be subjected to a limited technological analysis that focused on ascertaining the stages of stone tool production. When present, flakes and non-flake production debris (i.e. cores, blanks, preforms) would be measured, and examined for raw materials types and absence or presence of thermal alteration. Flakes would be classified into four types

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(primary decortication, secondary decortication, non-decortication, and shatter) based on the amount of cortex on the dorsal surface and the shape (White 1963). Aboriginal ceramics, if discovered, would be classified into commonly recognized types based on observable characteristics such as aplastic inclusions and surface treatment (cf., Cordell 1992; Griffin 1988; Willey 1949a, 1949b). Historic artifacts, if discovered, would be subjected to a functional and typological analysis after cleaning.

Curation of project related information (field notes, aerials, etc.) will be at Archaeological Consultants, Inc. (ACI) in Sarasota.

5.4 Unexpected Discoveries

If human burial sites such as Indian mounds, lost historic and prehistoric cemeteries, or other unmarked burials or associated artifacts were found, then the provisions and guidelines set forth in Chapter 872.05, F.S. (Florida's Unmarked Burial Law) would be followed. Although burial mounds have been found several miles from the project area, none was expected in the project area.

6.0 SURVEY RESULTS AND RECOMMENDATIONS

6.1 Archaeological Results

Archaeological field survey included both ground surface reconnaissance and the excavation of 60 shovel tests within the Bonita Grande Commerce project area. These shovel tests were excavated at 50 m (164 ft) (N=21), as well as judgmentally (N=39), as shown in Figure 6.1. The general soil stratigraphy across the project area consisted of an upper 30 cm of light gray sand, followed by 60 cm of light tan sand, underlain by mottled clay.

As a result of this testing, no prehistoric or historic period archaeological sites were discovered within the project area. These results were in keeping with the expectations derived from the background research and the results are similar to those of other surveys detailed in the Research Considerations Section of this report.

6.2 Historical Results

The historic structures survey of the property revealed an absence of historic structures (50 years of age or older). Thus, no structures listed or considered eligible for listing in the NRHP are located within the project area. These results are in keeping with the expectations derived from the Research Considerations Section of this report.

6.3 Recommendations

Based on the results of the background research, visual reconnaissance, field survey and analysis, development of the Bonita Grande Commerce project area will not impact any significant cultural resources. No further archaeological or historical work is recommended.

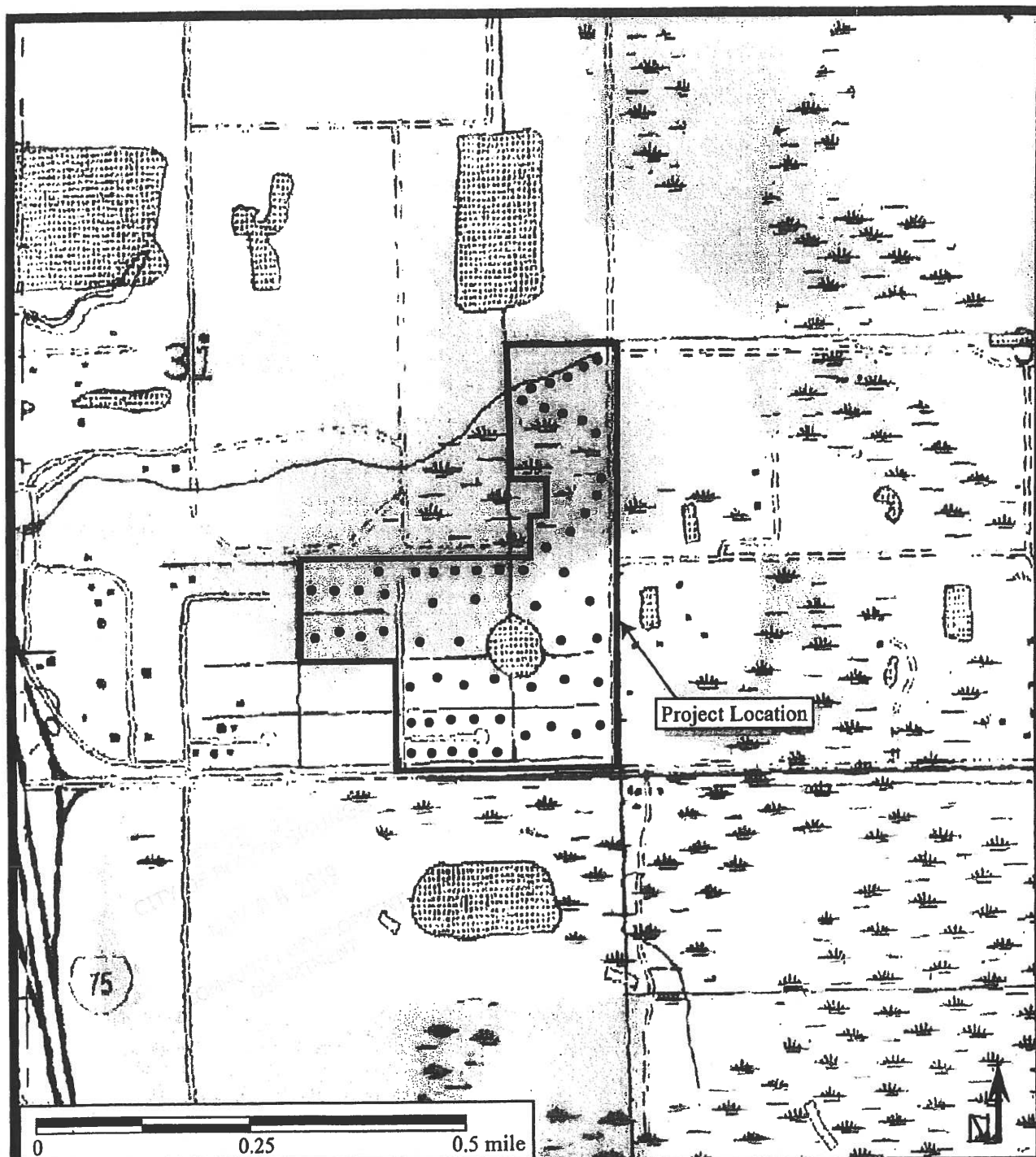


Figure 6.1 Approximate Location of Shovel Tests within the Bonita Grande Commerce Project Area. Lee County, Township 47 South, Range 26 East, Section 31 (USGS Bonita Springs, Fla. 1973, PR 1987 and Corkscrew SW, Fla. 1958, PR 1987). Shovel tests are not to scale.



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Form Date 3/22/06

Survey Log Sheet

Florida Master Site File
Version 2.0 9/97

FMSF USE ONLY
FMSF Survey # _____

Consult *Guide to the Survey Log Sheet* for detailed instructions.

Recorder of Log Sheet Katherine Baar

Identification and Bibliographic Information

Survey Project (Name and project phase) CRAS Bonita Grande Commerce Property, Lee County, Florida

Is this a continuation of a previous project? No Yes Previous survey#(s) _____

Report Title (exactly as on title page) Cultural Resource Assessment Survey of the Bonita Grande Commerce Property, Lee County, Florida

Report Author(s) (as on title page-Individual or corporate) ACI Archaeological Consultants, Inc.

Publication Date (month/year) 3/06 Total Number of Pages in Report (Count text, figures, tables, not site forms) 46

Publication Information (If relevant, series and no. in series, publisher, and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*. See *Guide to the Survey Log Sheet*.) Archaeological Consultants, Inc. 8110 Blaikie Ct., Suite A., Sarasota, FL 34240

Supervisor(s) of Fieldwork (whether or not the same as author(s)) Lee Hutchinson

Affiliation of Fieldworkers (organization, city) Archaeological Consultants, Inc.

Key Words/Phrases (Don't use the county, or common words like *archaeology, structure, survey, architecture*. Put the most important first. Limit each word or phrase to 25 characters.) _____

Bonita Springs, Bonita Grande, CR 865

Survey Sponsors (corporation, government unit, or person who is directly paying for fieldwork)

Name The Roberts Group

Address/Phone 3180 Mathieson Drive, NE Unit 902, Atlanta, Georgia 30305

Mapping

Counties (List each one in which field survey was done-do not abbreviate) Lee

USGS 1:24,000 Map(s): Names/Dates: Corkscrew SW, Fla. 1958, PR 1987

Remarks (Use supplementary sheet(s) if needed) no sites, no structures

Description of Survey Area

Dates for Fieldwork: Start 3/13/05 End 3/15/05 Total Area Surveyed (fill in one) _____ hectares 67.53 acres

Number of District Tracts or Areas Surveyed 1

If Corridor (fill in one for each) Width _____ meters _____ feet Length _____ kilometers _____ miles

Types of Survey (check all that apply) archaeological architectural historical/archival underwater other: _____

HR6E06610-97 Florida Master Site File, Division of Historical Resources, Gray Building, 500 South Bronough St., Tallahassee, FL 32399-0250
Phone 850-487-2299, Suncom 277-2299, Fax 850-921-0372, Email fmsfile@mail.dos.state.fl.us, Web http://www.dos.state.fl.us/dhr/msf

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FLORIDA
CITY OF BONITA SPRINGS
NOV 10 2006
COMMUNITY DEVELOPMENT
DEPARTMENT

Survey Log Sheet of the Florida Master Site File

Research and Field Methods

Preliminary Methods (Check as many as apply to the project as a whole. If needed write others at bottom).

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> Florida Archives (Gray Building) | <input type="checkbox"/> library research - (local public) | <input type="checkbox"/> local property or tax records | <input checked="" type="checkbox"/> windfield survey |
| <input type="checkbox"/> Florida Photo Archives (Gray Building) | <input type="checkbox"/> library-special collection- (non local) | <input type="checkbox"/> newspaper files | <input checked="" type="checkbox"/> aerial photography |
| <input checked="" type="checkbox"/> FMSF site property search | <input checked="" type="checkbox"/> Public Lands Survey (maps at DEP) | <input checked="" type="checkbox"/> literature search | |
| <input checked="" type="checkbox"/> FMSF survey search | <input type="checkbox"/> local informant(s) | <input type="checkbox"/> Sanborn insurance maps | |
| <input type="checkbox"/> other (describe) _____ | | | |

Archaeological Methods (Describe the proportion of properties at which method was used by writing in the corresponding letter. Blanks are interpreted as "None.")

F(-ew: 0-20%, S(-ome: 20-50%); M(-ost: 50-90%); or A(-ll, Nearly all: 90-100%). If needed write others at bottom.

Check here if NO archaeological methods were used.

- | | | |
|---|---|--|
| <input type="checkbox"/> surface collection, controlled | <input type="checkbox"/> other screen shovel test (size: _____) | <input type="checkbox"/> block excavation (at least 2x2 m) |
| <input type="checkbox"/> surface collection, uncontrolled | <input type="checkbox"/> water screen (finest size: _____) | <input type="checkbox"/> soil reactivity |
| <input checked="" type="checkbox"/> shovel test-1/4" screen | <input type="checkbox"/> posthole tests | <input type="checkbox"/> magnetometer |
| <input type="checkbox"/> shovel test-1/8" screen | <input type="checkbox"/> auger (size: _____) | <input type="checkbox"/> side scan sonar |
| <input type="checkbox"/> shovel test-1/16" screen | <input type="checkbox"/> coring | <input type="checkbox"/> unknown |
| <input type="checkbox"/> shovel test-unscreened | <input type="checkbox"/> test excavation (at least 1x2 m) | |
| <input type="checkbox"/> other (describe): _____ | | |

Historical/Architectural Methods (Describe the proportion of properties at which method was used by writing in the corresponding letter.

Blanks are interpreted as "None.")

F(-ew: 0-20%, S(-ome: 20-50%); M(-ost: 50-90%); or A(-ll, Nearly all: 90-100%). If needed write others at bottom.

Check here if NO historical/architectural methods were used.

- | | | | |
|--|--|---|---|
| <input type="checkbox"/> building permits | <input type="checkbox"/> demolition permits | <input type="checkbox"/> neighbor interview | <input type="checkbox"/> subdivision maps |
| <input type="checkbox"/> commercial permits | <input checked="" type="checkbox"/> exposed ground inspected | <input type="checkbox"/> occupant interview | <input type="checkbox"/> tax records |
| <input type="checkbox"/> interior documentation | <input type="checkbox"/> local property records | <input type="checkbox"/> occupation permits | <input type="checkbox"/> unknown |
| <input type="checkbox"/> other (describe): _____ | | | |

Scope/Intensity/Procedures background research; 60 shovel tests; systematic subsurface testing 60 m intervals and judgmentally, 1 m deep, 60 cm diameter, 1/4" screen; photographs taken; report prepared

Survey Results (cultural resources recorded)

Site Significance Evaluated? Yes No If Yes, circle NR-eligible/significant site numbers below.

Site Counts: Previously Recorded Sites 0 Newly Recorded Sites 0

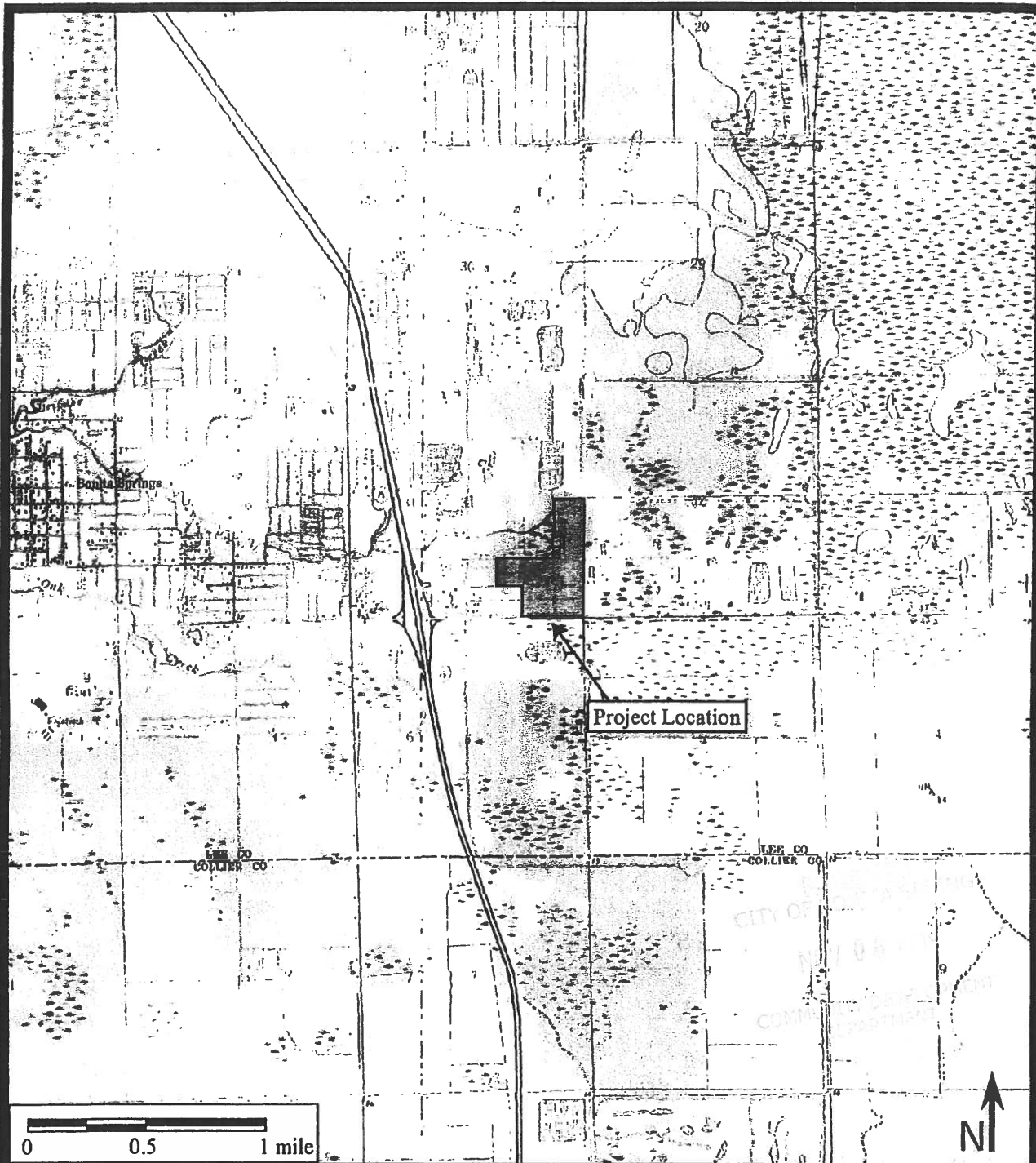
Previously Recorded Site #'s (List site #'s without "8." Attach supplementary pages if necessary) na

Newly Recorded Site #'s (Are you sure all are originals and not updates? Identify methods used to check for updates, ie, researched the FMSF records). List site #'s without "8." Attach supplementary pages if necessary. na

Site Form Used: SmartForm FMSF Paper Form Approved Custom Form: Attach copies of written approval from FMSF Supervisor and Supervisor-signed form.

DO NOT USE *****SITE FILE USE ONLY *****DO NOT USE	
BAR Related <input type="checkbox"/> 872 <input type="checkbox"/> 1A32 <input type="checkbox"/> CARL <input type="checkbox"/> UW	BHP Related <input type="checkbox"/> State Historic Preservation Grant <input type="checkbox"/> Compliance Review CRAT # _____

ATTACH PLOT OF SURVEY AREA ON PHOTOCOPIES OF USGS 1:24,000 MAP(S)



Bonita Grande Commerce Project Area. Lee County, Township 47 South, Range 26 East, Section 31 (USGS Bonita Springs, Fla. 1973, PR 1987 and Corkscrew SW, Fla. 1958, PR 1987).



CITY OF BONITA SPRINGS
ZONING ORDINANCE NO. 08-09

RECEIVED
CITY OF BONITA SPRINGS
NOV 06 2019
COMMUNITY DEVELOPMENT
DEPARTMENT

A ZONING ORDINANCE OF THE CITY OF BONITA SPRINGS, FLORIDA; APPROVING A REQUEST BY GREG W. EAGLE, TRUSTEE F/K/A THE ROBERTS GROUP, INC. IN REFERENCE TO EAGLE TRUST CPD F/K/A ROBERTS GROUP CPD TO REZONE FROM AG-2 AND RS-1 TO COMMERCIAL PLANNED DEVELOPMENT; ON LAND LOCATED AT 27800, 27910, 27940, 27960 BONITA GRANDE DRIVE AND 27800, 27897, 27901, 27931, AND 27937 EAGLE RIDGE ROAD, BONITA SPRINGS, FLORIDA, (STRAP NOS. 31-47-26-B3-00601.0010; .0070; .0080; .0160; 31-47-26-B3-00602.0040; .0070; .0090; .0100; .0110; .0130; .0140; .0160; 31-47-26-B3-00603.0010; .0040; .0090; .0110; .0140; .0150; .0160; 31-47-26-B3-00604.0010; .0030; .0050; .0060; .0090; .0110; .0120; 31-47-26-B3-00706.0010), ON 68 +/- ACRES; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Robert's Group, Inc. in reference to Roberts Group CPD has filed an application for a rezoning from AG-2 and RS-1 to CPD; and

WHEREAS, City Council held a public hearing on December 18, 2007, continued it to January 28, 2008 and again continued the public hearing to February 6, 2008, denying the zoning application; and

WHEREAS, the Robert's Group is no longer the contract purchaser, and the legal owner, Greg W. Eagle, Trustee, is proceeding forward with the zoning request as the Eagle Trust CPD so as to resolve the petition filed under the Florida Land Use and Environmental Dispute Resolution Act; and

WHEREAS, the subject property is located at 27800, 27910, 27940, 27960 Bonita Grande Drive and 27800, 27897, 27901, 27931, and 27937 Eagle Ridge Road, Bonita Springs, Florida, and is described more particularly as:

"See Exhibit A"

WHEREAS, a Public Hearing was advertised and heard on September 28, 2007 by the City of Bonita Springs Board for Land Use Hearings and Adjustments and Zoning Board of Appeals ("Zoning Board") on Case DCI 2005-00023 who gave full consideration to the evidence available and recommended denial (6-1, Norris to approve); and gave full and complete consideration of the record, consisting of the Staff Recommendation, the Zoning Board, the documents on file with the City and the testimony of all interested parties. The September 11, 2007 Staff Report prepared by Lee County Development Services Division and evidence submitted at the Zoning Board hearing is on file with the City Clerk.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Bonita Springs, Lee County, Florida:

SECTION ONE: APPROVAL OF REQUEST

City Council of Bonita Springs hereby approves the rezoning to Commercial Planned Development (CPD), with the following conditions:

Conditions

1. The development of this project must be consistent with the attached Master Concept Plan and related drawings, except as modified by the conditions below and with the attached. This development must comply with all requirements of the Bonita Springs LDC at time of local Development Order Approval, except as may be granted by deviation as part of this planned development. If changes to the Master Concept Plan are subsequently pursued, appropriate approvals will be necessary.

Development is limited to a maximum of 350,000 square feet of commercial floor area with the development PM peak hour trip count limitation of 1260 (ITE 8th. Edition Average Trip Generation Report or a later edition if available at the time of development order), of which 45,000 square feet may be office development. Of this 45,000 square feet of office floor area, up to 22,500 square feet of floor area can be medical office.

The developer must provide a cumulative land development summary table as part any local development order applications.

2. The following limits apply to the project and uses:

- a. Schedule of Uses

Primary Retail Anchor Tenant Area and Outparcels 1, and 8 through 10:

* Accessory uses and structures
Administrative offices
Animals: Clinic
Auto parts store (no installation services)
Auto repair and service, Group I (limited to oil change battery and tire repair) **See Condition 2b**
Bait and tackle shop
Banks and Financial Establishments, Groups I and II
Bar or Cocktail Lounge (limited solely as an ancillary use to a Restaurant, Group III only)

Business services: Groups I and II
Car wash (limited to one within the planned development
see Condition 2b)
Clothing stores, general
Consumption on premises (limited to Restaurant Group III
only)
Contractors and Buildings, Group I
Convenience food and beverage store (limited to one within
the planned development) - limited to a maximum of 16
pumps. **See Condition 2b and 31**
Cultural facilities
Department store
Drive-through facility for any permitted use **See Cond. 2b**
Drugstore
Essential services
Essential service facilities: Group I
Excavation: Water retention
Food stores: Group I
Hardware store
Hobby, toy and game shops
Household and office furnishings, all groups (Group III
limited to hot tubs and spas only)
Insurance companies
Laundry or dry cleaning: Group I, drop off only **See**
Condition 2b
Lawn and garden supply stores **See Condition 2b**
Medical office
Nonstore retailers, Groups I and III
Package store
Parks: Group I
Parking lot: Accessory
Personal services: All Groups
Post office
Recreation facilities: Commercial: Group IV
Rental or leasing establishment: Group II and III (passenger
cars only (not exceeding the storage of 12 vehicles)
Repair shops: Groups I and II
Restaurants: Groups I, II, and III
Schools: Commercial
Signs in accordance with chapter 30
Specialty retail shops: All Groups
Temporary uses - limited to contractor's office and
equipment storage shed, Christmas tree sales, and ancillary
temporary uses in parking lots (excluding car and boat sales)
subject to Condition 3.
Used Merchandise Store, Groups I and II

Warehouse: Mini-warehouse

Outparcels 2 through 6-7:

* Accessory uses and structures

Administrative offices

Auto parts store (no installation)

Auto repair and service, Group I - limited to oil change
battery and tire repair-**See Condition 2b and 31**

Banks and Financial Establishments, Groups I and II

Bar or Cocktail Lounge (limited solely as an ancillary use to
a Restaurant, Group III only)

Boats: Boat parts store (no installation)

Business services: Groups I and II

Car wash (limited to one within the planned development
See Condition 2b)

Clothing stores, general

Consumption on premises (limited to Restaurant Group III
only)

Drive-through facility for any permitted use **See Cond. 2b**

Drugstore

Essential services

Essential service facilities: Group I

Excavation: Water retention

Food stores: Group I

Hardware store

Hobby, toy and game shops

Household and office furnishings, all groups (Group III
limited to hot tubs and spas only)

Insurance companies

Laundry or dry cleaning: Group I **See Condition 2b**

Lawn and garden supply stores **See Condition 2b**

Medical office

Package store

Parks: Group I

Parking lot: Accessory

Personal services: All Groups

Recreation facilities: Commercial: Group IV

Rental or leasing establishment: Group II and III (passenger
cars only, not exceeding the storage of 12 vehicles)

Restaurants: Groups I, II, and III

Signs in accordance with chapter 30

Specialty retail shops: Groups I, II, III, IV

- All accessory uses must be located on the same tract, parcel, outparcel, or lot where a principal use is located. Accessory uses must be

incidental and subordinate to the principal use of the tract, parcel, outparcel, or lot.

- 2.b. The following uses are prohibited within Retail Building B, and are permitted as an accessory use in Primary Retail Tenant Areas in MCP Option B or in Primary Retail Tenant Areas and Outparcels 9 and 10 in MCP Option A.: auto repair and service, drive through facility, laundry and dry cleaning, car wash, and convenience food stores. The uses are permitted uses on the project outparcels consistent with the schedule of uses identified in Condition 2.b. The primary use and anchor tenant(s) of Retail Building B, located closest to Kehl Canal, shall be used as a restaurant. For purposes of this Zoning Ordinance, primary use will require a minimum of 4,000+ square feet, with other uses as permitted in this condition and the use schedule above.

Site Development Regulations

Development of the CPD must comply with the following Property Development Regulations:

Minimum Lot Area and Dimensions:

Area: 32,500 square feet
Width: 100 feet
Depth: 100 feet

Minimum Setbacks:

Street: variable according to the functional classification of the street or road (LDC Section 34-2191 et seq.)
Internal Accessways: 15 feet
Side: 15 feet
Rear: 15 feet
Water Body: 25 feet

Accessory Use and Structure setbacks must comply with LDC Sections 34-1171 et seq. and 34-2194.

Maximum Lot Coverage: 40%

Maximum Building Height:

MCP A: 55 Feet for the Primary Retail Anchor Tenant Parcel and Outparcels 9 and 10. 35 Feet for all other parcels.
MCP B: 55 Feet for the Primary Retail Anchor Tenant Parcel. 35 Feet for all other parcels.

3. The local development order plans must identify the location where any Temporary Uses will be located. Temporary Uses may not be located in

any area used to comply with the off-street parking requirements for all permitted uses within the approved planned development.

4. Along Bonita Beach Road, all parking lot and drives (with the sole exception being access points directly connecting with this road) must maintain a 50 foot setback from the road right-of-way for each road.
5. Prior to local development order approval, development order plans must depict a meandering pedestrian trail of crushed shell surface, maximum 8 feet in width, at existing grade in the approximate location as shown on the approved master concept plan. The pedestrian trail is to be constructed by the developer prior to the issuance of the first building certificate of occupancy.

Prior to construction of the pedestrian trail, the location must be staked by the developer and field verified by City of Bonita Springs staff to insure the preservation of existing mature native trees to the greatest extent possible.

6. Applicant will comply with the Carts, Cases, Baskets and Containers Act, Florida Statutes §§506.501 – 506.519, and will enforce prosecution of any removal of carts by posting signs to discourage removal of shopping carts from the premises or parking area (to keep the carts within the planned development perimeter boundary).
7. The applicant shall provide a cross access easement in favor of the property owners to the west of the subject property, and east of the interstate that need access to Trade Way. The applicant shall contact the owners to the west to determine which landowners are willing to provide a cross access easement and participate in maintenance of the property subject to the cross easement. The property that will be subject to a cross access easement from the applicant is identified as the area proposed by Developer in Exhibit C. The property to be subject to a cross access easement by the property owners to the west is identified as the Future by Others area on the attached Exhibit C.

The cross access easement(s) shall be held in escrow by the City of Bonita Springs until such time as the cross access easements from the property owners to the west and the applicant have been provided. The documents must be recorded at the same time, a copy of the recorded documents should be provided to the applicant by the City. The City of Bonita Springs shall ensure, prior to recording the applicant's cross access easement, that all property owners to the west of the applicant's property who will be using the intersection will be paying their proportionate share of the signal improvements. The city shall require the parties to enter into an agreement for maintenance ensuring that all

parties utilizing the cross access easement area pay their proportionate share of the maintenance costs.

8. The developer is responsible for its proportionate share (based on the percentage of left turns attributable to the project) of the cost of signalized improvements at the intersection of Bonita Beach Road and Trade Way Drive. The Developer shall construct the intersection improvements in accordance with the attached Exhibit D. The developers to the west shall be responsible for the intersection modifications identified as Future by Others in Exhibit C. Should the property owners to the west proceed with development prior to the applicant, then the property owners to the west shall be responsible for making all of the needed improvements at the intersection of Bonita Beach Road and Trade Way Drive, in accordance with Exhibit C. The applicant will provide its proportionate share of the costs by providing the lanes as marked in light cross-hatching as "proposed (by developer)" as required in Exhibit C.
9. The developer is responsible for its proportionate share (based on the percentage of intersection traffic attributable to the project) of the cost of intersection improvements to the intersection of Bonita Grande Drive and Bonita Beach Road as a site-related improvement. If at the time of final development order approval the City of Bonita Springs or Lee County have not acquired the right of way from the parcel(s) located on the east side of Bonita Grande sufficient for a realignment, the developer shall construct intersection improvements in accordance with Exhibit E.

If the City of Bonita Springs or Lee County have acquired sufficient right of way for the realignment of Bonita Grande Drive at the time the Developer obtains a final development order approval from the City of Bonita Springs, the Developer shall construct the intersection improvements in accordance with Exhibit E, with the expanded right-of-way as determined necessary by City or County's design engineer.

10. Reserved.

11. Lee County Department of Transportation Conditions:

1. As part of the Development Order submittal for any improvements in the Bonita Beach Road right-of-way, the Eagle Trust shall provide SYNCHRO 6.0 or 7.0 analyses unless otherwise approved by LCDOT, as well as safety and operational analyses of Bonita Beach Road from Bonita Grande Drive to Oakland Drive. The time periods will include the on-street peak hour/peak season and the generator's peak hour at on-street peak conditions unless otherwise directed by Lee County DOT. The SYNCHRO analyses are to include, as a minimum:

- ☆ Utilizing existing traffic volumes, conditions and signal timings calibrate SYNCHRO to closely replicate existing traffic flows and deficiencies so as to establish baseline peak period models.;
 - ☆ Add traffic generation for all approved development orders, plus a level of background growth based on a ten year average, up to the build-out year, to the models. Include in the analyses, funded projects scheduled to be completed by build-out year;
 - ☆ Add Eagle Trust total projected traffic (build-out year) plus proposed site specific improvements and any road intersection projects to be advanced by impact fee payments and/or credits by the build-out year; and
 - ☆ As a separate independent signed and sealed analysis, run SYNCHRO both with a directional left-in opening and without the eastern most Bonita Beach Road median opening for the Bernwood Park of Commerce (BPOC). Coordinate with BPOC's representative and their engineer to present alternatives to Lee County, including the safety and operational benefits of full closure of the median opening, to establish whether further widening is feasible and to analyze (1.) widening Bonita Beach Road to provide a directional left, (2.) to analyze widening Bonita Beach Road to provide a dual left eastbound at Bonita Grande Drive while maintaining a directional left at BPOC, and (3.) to analyze the timing of the need for change in the median opening and whether reconstruction can be delayed until near full build-out or at full build-out.
2. The Owner, Developer or successor shall enter into a development agreement with the City of Bonita Springs as a condition for issuance of the project's paving, drainage, water and sanitary sewer Development Order to fund the access modifications and improvements on Bonita Beach Road required as a result of the Eagle Trust project, as required by Conditions 8 and 9. The required modifications and improvements shall include median modifications, minor access modifications, widening of intersections and a fair-share of designing and constructing traffic signalization at Bonita Beach Road and the Eagle Trust CPD Main Entrance which is caused to be warranted by the impacts of Eagle Trust traffic. To the extent that Bernwood Park of Commerce (BPOC), traffic may cause the Eagle Trust main access point to meet traffic signal warrants, BPOC will be requested to provide a fair share

contribution for the design, signal construction and inspections. The City of Bonita Springs and Lee County shall receive from the Owner, Developer or successor a fair share analysis and Lee County will determine and approve any fair share percentages in consideration of submittals, either separately or jointly, from the Owner, Developer or successor and BPOC.

3. Improvements on Bonita Beach Road and on Bonita Grande Drive shall be designed and constructed in accordance with specific requirements to be stipulated by Lee County DOT. An application must be filed for a separate Development Order (DO) for improvements in County R/W. The Contractor or the Developer shall submit to Lee County Development Services an application for a Development Order (DO). The applicant will need to state that this is for "Improvements in County R/W related to a development project in an Incorporated Area (i.e., City of Bonita Springs)."
12. The internal access to the outparcels shall be as identified on Exhibit F, to ensure adequate driveway length.
13. The final development design will incorporate the ability to travel from the Trade Way Drive intersection through the site to Bonita Grande, in a manner substantially similar to the accessway depicted on Exhibit G. Minor changes to the design may be addressed administratively by the City Manager or designee, as long as there are no adverse external impacts caused by the re-design.
14. Prior to local development order approval, the development order plans must depict a minimum 35 foot vegetated buffer between Building B and the Kehl Canal top of bank (TOB) and a minimum 100 foot vegetated buffer between Major Anchor Building and associated parking lot and the Kehl Canal TOB consistent with MCP A and B. The vegetated buffer must consist of retained and installed native vegetation of all three strata planted to mimic natural systems and provide a visual screening of commercial use. A detailed planting plan for the vegetated buffer area must be included in the indigenous management plan for review and approval by City of Bonita Springs staff, Lee County Natural Resources Management, South Florida Water Management District (SFWMD), and Lee County Parks and Recreation in their need to enforce the Pine Lake Preserve Agreement. The planting plan must include species, location, heights and densities at installation and maintenance.
15. The developer must comply with all provisions of the Bonita Springs Flood Ordinance including, but not limited to, Section Six, B (5) relating to Floodways and the Conditional Letter of Map Revision (CLOMR) issued by the Division of Homeland Security/FEMA.

16. In the event that the City Council approves this planned development, the following conditions apply:

- a. The Developer has shown compliance with traffic generation with development as indicated on the Master Concept Plan based on a total square footage of 350,000 square feet of commercial floor area, of which 45,000 square feet may be office development (LUC 710) and 305,000 sq ft shopping center (LUC 820), with 1,260 PM peak hour trips generated from the site. Up to 22,500 of the office development may be medical office (LUC 720). Should the developer seek to convert any of the uses to any other allowable land use by amendment to the planned development, the conversion factor would be commensurate with the trip generation rates for commercial land use types per the 8th Edition of ITE Trip Generation report.
 - b. As a condition for the project's paving, drainage, water and sanitary sewer development order, the Developer, or successor in interests or assigns, is to financially participate in City of Bonita Springs studies to be performed by URS or Tindale Oliver, for Bonita Beach Road from Old 41 East to the eastern terminus of the County maintained portion of Bonita Beach Road. The purpose of the study is to: (i) establish the appropriate level of background traffic for the next ten years, (ii) conduct a corridor wide traffic impact study; (iii) identify needed improvements and a procedure to assess costs to properties; and (iv) identify funding sources, proportionate fair share payments and adjustments for payments made.
 - c. The Developer will ensure that sufficient funds are made available through a Developer's Agreement for the realignment of the Bonita Grande/Bonita Beach Road (BBR) intersection prior to the approval of the first Development Order.
17. Prior to local development order approval, the landscape plans must include an open space table and an open space exhibit detailing how the 13 acres of open space is being provided within the overall planned development. A minimum of 10% open space must be provided within each lot, tract, or outparcel.
18. Prior to local development order approval, an updated protected species survey must be submitted that specifically focuses on locating gopher tortoise burrows, Big Cypress fox squirrel nests, wading bird nests, and alligator nests. If any of these are located, then management plans for each listed species located must be submitted for review and approval by the Division of Environmental Sciences staff.

19. Prior to local development order approval, a gopher tortoise management plan meeting the Florida Fish and Wildlife Conservation Commission and Lee County requirements must be submitted for review and approval by the Division of Environmental Sciences.
20. Approval of this zoning request does not address mitigation of the project's vehicular or pedestrian traffic impacts. Additional conditions consistent with the Bonita Springs Land Development Code may be required to obtain a local development order unless otherwise determined in the statutory development agreement.
21. Prior to issuance of the first Development Order (or any early work, clearing, filing permits) that is adjacent to or affects the canal maintenance, the developer must dedicate a twenty foot wide maintenance easement adjacent to the canal, including access, ingress and egress to the City of Bonita Springs, the Lee County Natural Resources Division, Lee County Parks and Recreation and South Florida Water Management District for the purpose of maintenance. These entities will have the right to maintain Kehl Canal at this location, but not the obligation to do so, which remains with the developer and his assigns. The 20 foot maintenance easement may overlap with the 8' wide pedestrian trail provided in condition #14.
 - a. The cost of maintenance of the Developer's portion of the canal shall remain the responsibility of the developer, or a successor in interest. In the event that the developer grants a conservation easement to the South Florida Water Management District, or other government agency, over any portion of the canal, or the 20 foot maintenance easement, that conveyance shall not prevent Lee County from exercising its maintenance rights.
 - b. The Developer shall convey a non-exclusive easement in and over the Developer's portion of the realigned Kehl Canal to Lee County to permit off-site drainage to legally flow over and through the Kehl Canal.
 - c. Prior to issuance of the first Certificate of Compliance for the first Development Order, the developer must provide certified "as-built" plans of the proposed realigned Kehl Canal and littoral zones within Tract C-1, D-1 and C-2 as shown on the Master Concept Plan, to the Lee County Natural Resources Division for review and approval.
 - d. The access easement in Kehl Canal to Lee County must be identified on the local development order plans and on any plat to the property. The plat dedication language must reflect the county's easement. The dedication language will be reviewed by the County at the time of local development order review.

- e. The ERP plans; if necessary, shall be amended to reflect the easement in the canal and the 20 foot maintenance easement.
22. The 20 foot wide maintenance easement as required in Condition 21 may overlap with the vegetated buffer and indigenous preservation and the easement acreage may be included in the indigenous preservation acreage requirement subject to the following:
- a. Within the 20 foot wide maintenance easement, the property owner must keep the area clear of exotic and downed vegetative debris in order to provide satisfactory vehicle access; and
 - b. Removal of native vegetative within 20 foot maintenance easement must be minimized and limited to when necessary for vehicle access for waterway maintenance purposed only; and
 - c. Existing native vegetation must remain in the 20 foot maintenance easement but no additional vegetation planted to meet the vegetated buffer or indigenous preservation requirement may be installed within 20 foot wide maintenance easement area; and
 - d. The maintenance easement must be recorded prior to local development order approval.
 - e. No vegetative plantings, other than planting required by this resolution and the Pine Lakes Preserve Agreement, are allowed within the 20 foot maintenance easement area.
 - f. The Developer must provide a maintenance schedule at the time of local development order review for the removal of exotics and downed vegetation as required in sub-paragraph (a.) above. The schedule shall be reviewed and approved by Lee County in accordance with County regulations and administrative code provisions regarding maintenance.
 - g. The 20 foot maintenance easement must be identified on the local development order plans and any plat for the property. The plat dedication language must reflect the county's easement. The dedication language will be reviewed by the County at the time of local development order review.
23. Fertilizers or hazardous chemicals must be stored within a garden center or retail portion of a building. Fertilizers or hazardous chemicals may not be stored within parking areas.
24. Prior to issuance of a development order, the applicant will provide an indigenous preserve management plan. This plan will provide details of the management and enhancement activities that will be performed in the indigenous preserve areas.
25. Long leaf pine, slash pine or other suitable pine trees will be incorporated into the restoration planting plans for the indigenous preserve area. The

specifics of the planting plan will be reviewed and approved during the development order permitting process.

26. If any archaeological/historical sites are uncovered during development activities, all work in the immediate vicinity of such sites will cease. The Developer will immediately contact the Florida Department of State, Division of Historical Resources, Lee County and the City of Bonita Springs and advise them of the discovery. The Developer will have a State-certified archaeologist determine the significance of the findings and recommend appropriate mitigation actions if necessary.
27. The development must comply with the commercial lighting standards found in Land Development Code, Chapter 3. Street, parking lot and building lighting must be shielded so that light is directed downward to reduce light spillage to off-site parcels.
28. The Developer shall grant the City of Bonita Springs an easement to construct a canoe/kayak launch and attendant parking for the launch facility within the Eagle Trust CPD, as identified in the MCP. The easement will be no less than $.25 + (1/4)$ acres. This easement and the City's use shall not be counted against the development's intensity. The canoe/kayak launch shall be located in the area identified on the master concept plan. The City shall be responsible for agency permitting for the facility, and any reduction in required open space for the Eagle Trust CPD shall be mitigated by the City. The Developer will provide consent for any required agency permitting related to the canoe/kayak launch. The Developer shall not be responsible for construction or maintenance of the facility. Subject to the limitations as set forth in Florida Statutes §768.28, as it may be revised or amended from time to time, the City agrees to indemnify and hold harmless the Developer for money damages in tort for any injuries to or losses of property, personal injury, or death arising out of negligent or wrongful acts or omissions of any official or employee of the City while acting within the scope of the official's or employee's office or employment for the canoe/kayak launch and attendant parking for the launch facility.
29. Prior to local development order approval, the applicant will meet with the Bonita Springs Tree Advisory Board to discuss the potential preservation of heritage trees within the parking and open space areas. Staff may give administrative deviations to parking requirements for tree preservation with adequate space for root structure (drip line). Prior to local development order approval, the landscape plans must feature a dual sided 20-ft. wide pedestrian promenade system for the right-in / right-out local street and the internal east/west frontage street consistent with as depicted on the Promenade Exhibit. Streetscape tree planting will be based on five trees per 100 linear feet. In addition, in coordination with the City of Bonita Springs, the applicant will take actions necessary to

amend its SFWMD Environmental Resource Permit (ERP) regarding the cypress head, in a manner that provides compensatory mitigation within the City of Bonita Springs and subject watershed. As an additional incentive, the applicant will meet with the Bonita Springs Tree Advisory Board to discuss the potential preservation of any specimen trees located within the parking lot and open space areas. Staff may give administrative deviations to parking requirements for tree preservation with adequate space for root structure (drip line).

30. Any gas station located within this development shall be required to install double wall tanks with vapor and liquid sensors between the walls to detect leakage from the inner tank. The tanks shall also be constructed with a liquid proof underlayment that traps all leaks from around the pumps and tank fill areas. Any spills that occur will be contained and designed so it can be removed. This condition shall not be interpreted to permit a less restrictive requirement than those imposed by other regulations, either now or in the future.
31. The Developer will use best efforts to incorporate principles for its buildings through the Florida Green Building Coalition program, in site design and construction, by emphasizing use of high energy efficiency designs and use of high efficiency fixtures and appliances where possible. Dominant landscaping shall be plant species native to Florida. Building materials, both internal and external, will be comprised of durable and recycled materials where possible.
32. All development shall be designed in a unified architectural style, which shall be stylistic of Old Florida, Key West, or Bermuda architecture.
33. The Developer agrees to construct, operate and maintain for the public benefit and enjoyment a kayak launch with parking made available to the public on the eastern portion of its parking lot. Developer may place signs to advise the public that the use of the facility is at their sole risk and that use of the kayak launch is only from dawn to dusk. Developer also has the right to eject from their premises any person or entity operating a commercial use of the kayak launch or parking area without the express consent of the Developer, but may not prohibit individual kayakers or groups under six persons from using the facility.
34. The Developer agrees to work with the transit authority (Lee Tran or any other public transportation entity) to develop a bus stop, with a shelter located on site, to be paid for and constructed by the developer.
35. Hours of operation – Hours of operation are limited to 6:00 a.m. to midnight, with outdoor lighting to be substantially reduced during non-operational hours so as to discourage light pollution or night glow.

B. Deviations

Deviation 1, 2 and 3 have been **WITHDRAWN**.

Deviation 4 is approved, granting relief from LDC Section 30-155 regarding building signage; to allow a two primary ownership parcels to be treated as a multiple occupancy complex in order to establish directory and building signage, subject to the following conditions:

- a. Limited to the two primary ownership parcels as shown on Exhibit H, Signs to be treated as a multiple occupancy parcel for purposes of establishing directory and building signage for the project.
- b. The signage must be designed in a uniform architectural style and color palate which must be consistent with the colors utilized for the primary project tenant.
- c. A signage plan must be submitted prior to development order approval, which identifies signage style and color to be utilized within the project.

Deviation 4a is approved, granting relief from Section 30-155 for building signage to permit a maximum of 200 square feet for a ground mounted sign on Bonita Beach Road instead of the required signage of 1 square foot for each 2 linear feet of frontage for each parcel, as limited so as to permit the directory sign for the project to be located on Bonita Beach Road and as conditioned in Deviation 4 above.

Deviation 4b is approved, granting relief from Section 30-155 to permit a maximum of 2 ground mounted signs for a single lot (Deviation 4), subject the following:

- a. A minimum separation on the lot of 100 linear feet between signs.
- b. One of the two allowed signs may include a ground mounted directory sign not exceeding 200 square feet and a ground mounted monument sign for the out lot tenant not exceeding 64 square feet.
- c. As conditioned in Deviation 4 above.

Deviation 5 has been **WITHDRAWN**.

Deviation 6 is approved, granting relief from LDC Section 3-285 which requires a 660 foot connection separation along arterial roads; to allow a connection along Bonita Beach Road 605 feet west of the intersection of Bonita Beach Road and Bonita Grande Drive.

Deviation 7 is approved, granting relief from LDC Section 3-416 which addresses buffers where one use abuts another use to allow a buffer along the project's western property line in substantial compliance with Exhibit I subject to the following provisions:

- A. A minimum 5 foot wide buffer area near the top of the bank of the water management lake which shall consist of a native double staggered hedge installed and maintained at a height of 48 inches, and native tree canopy trees, including bald cypress (*Taxodium distichum*), a minimum of 12 feet in height at time of planting planted at an average of 4 trees per 100 linear feet.
- B. A secondary 15 foot wide vegetative buffer shall be installed east of the water management lake which shall consist of native plant materials including hedge, canopy and mid-story planting substantially as depicted in Exhibit I.
- C. No buffer shall be required along the western boundary property where future shared access and turn lanes are proposed.

Deviation 8 approved, granting relief from LDC Section 3-415.B.b which requires that 50% of the project's open space consist of indigenous vegetation or approximately 6.5 acres for this planned development, provided that prior to local development order approval, the development order plans must include details of the preservation, restoration and creation areas substantially consistent with the document entitled "Eagle Trust CPD, Planting/Restoration Plan, Boylan Environmental Consultants, August 31, 2005" stamped received September 2, 2005 (attached) for the 7.81 acre created flow-way and floodplain storage, and the 6.0 acre indigenous and re-created preserve labeled on the Master Concept Plan. A minimum of 3.38 acres of existing upland indigenous areas qualifying for 150% upland preservation credit equating to 5.07 acres of preservation, and a minimum of 1.43 acres of restored upland must be provided within the 6.0 acre indigenous and re-created preserve delineated on the Master Concept Plan. The created flowway and flood plain storage area must include wetland creation that is designed to provide wading bird forage areas, with a particular emphasis on wood stork foraging.

Findings and Conclusions:

Based upon an analysis of the application and the standards for approval of planned development rezonings, Bonita Springs City Council offers the following findings and conclusions:

1. The applicant has proven entitlement to the rezoning to Commercial Planned Development by demonstrating compliance with the Bonita

Springs Comprehensive Plan, the Land Development Code, and other applicable codes and regulations.

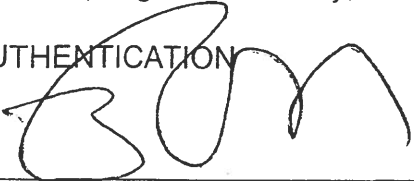
2. The requested zoning, as conditioned:
 - a) meets or exceeds all performance and locational standards set forth for the potential uses allowed by the request;
 - b) is consistent with the densities, intensities and general uses set forth in the Bonita Springs Comprehensive Plan;
 - c) is compatible with existing or planned uses in the surrounding area; and
 - d) will not adversely affect environmentally critical areas or natural resources.
3. Approval of the request, as conditioned, is not expected to place an undue burden upon existing transportation or planned infrastructure facilities within the City and the site will be served by streets with the capacity to carry traffic generated by the development.
4. Urban services (road infrastructure), as defined in the Bonita Springs Comprehensive Plan, are or will be available and adequate to serve the proposed land use.
5. The proposed mix of uses, as conditioned, is appropriate at the subject location due to the project's expected transportation impacts.
6. Adequate conditions to the concept plan and other applicable regulations will provide sufficient safeguards to the public interest.
7. Conditions reasonably related to the impacts on the public's interest created by or expected from the proposed development address the impacts.
8. The deviations recommended for approval:
 - a) enhance the objectives of the planned development; and
 - b) preserve and promote the general intent of the LDC to protect the public health, safety and welfare.

SECTION TWO: EFFECTIVE DATE

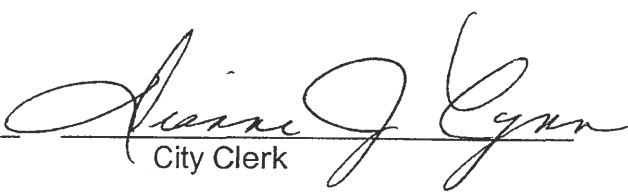
This ordinance shall take effect thirty (30) days from the date of adoption.

DULY PASSED AND ENACTED by the Council of the City of Bonita Springs, Lee County, Florida, this 18th day of June, 2008.

AUTHENTICATION

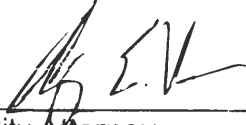


Mayor



City Clerk

APPROVED AS TO FORM:



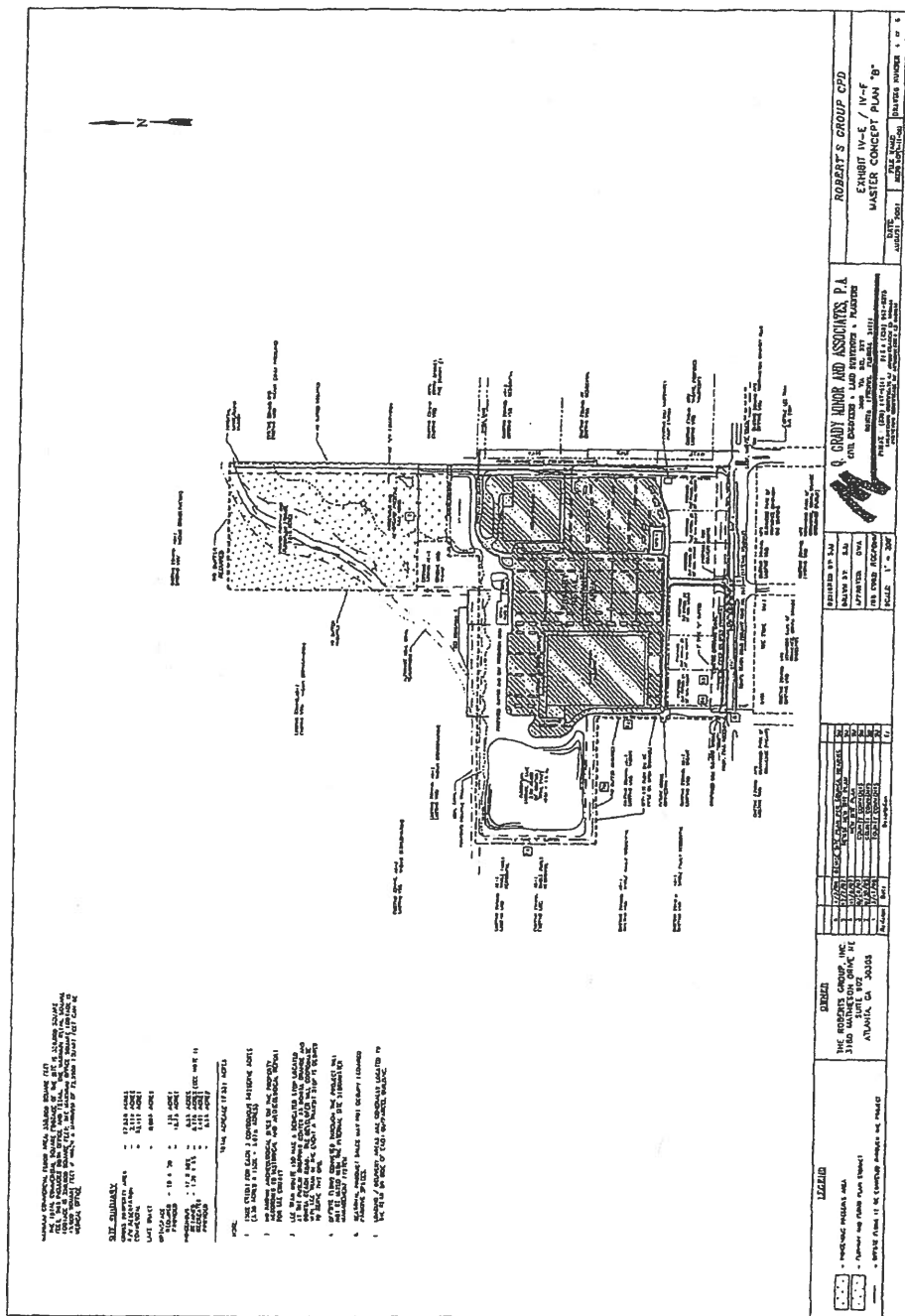
City Attorney

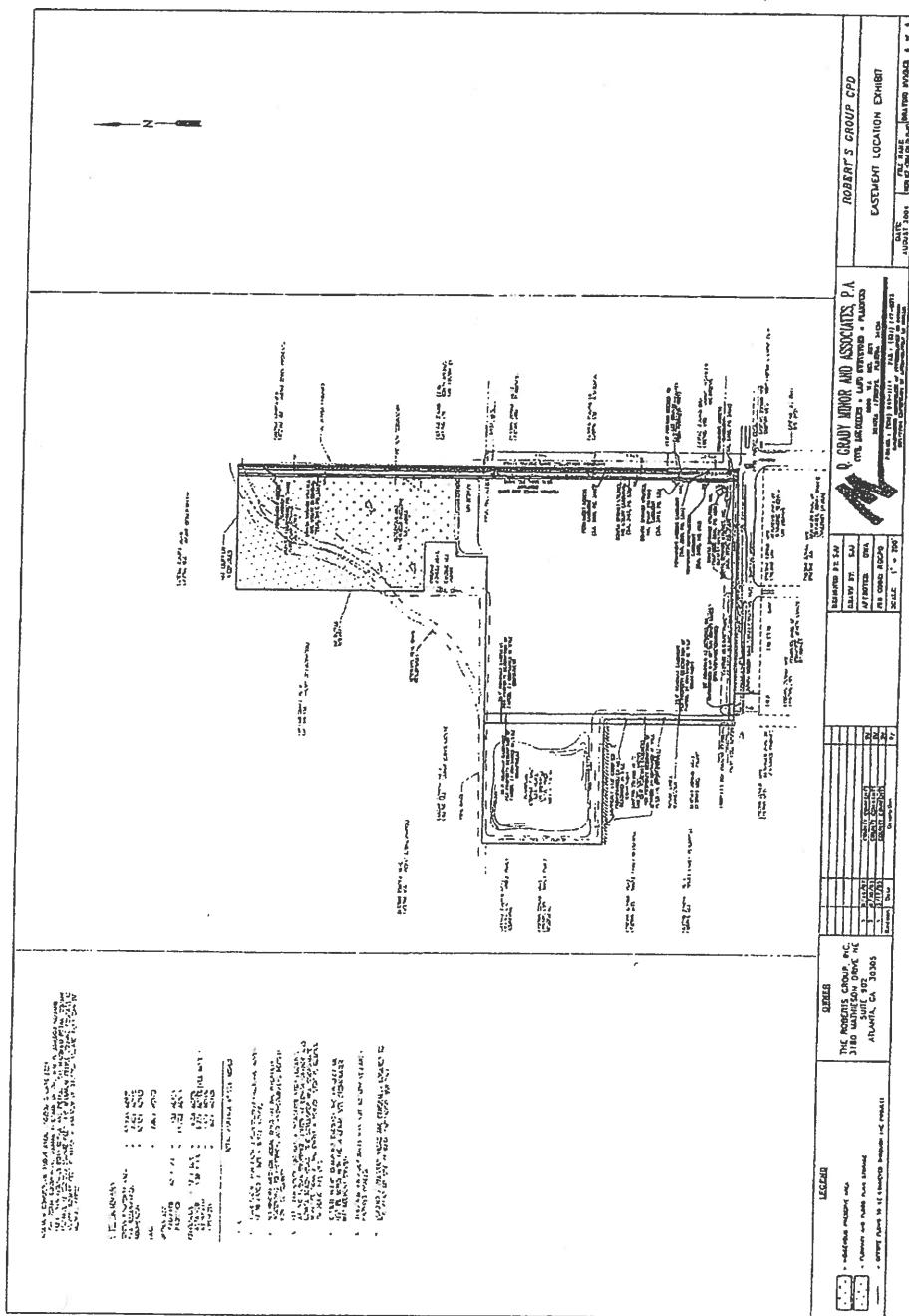
Vote:

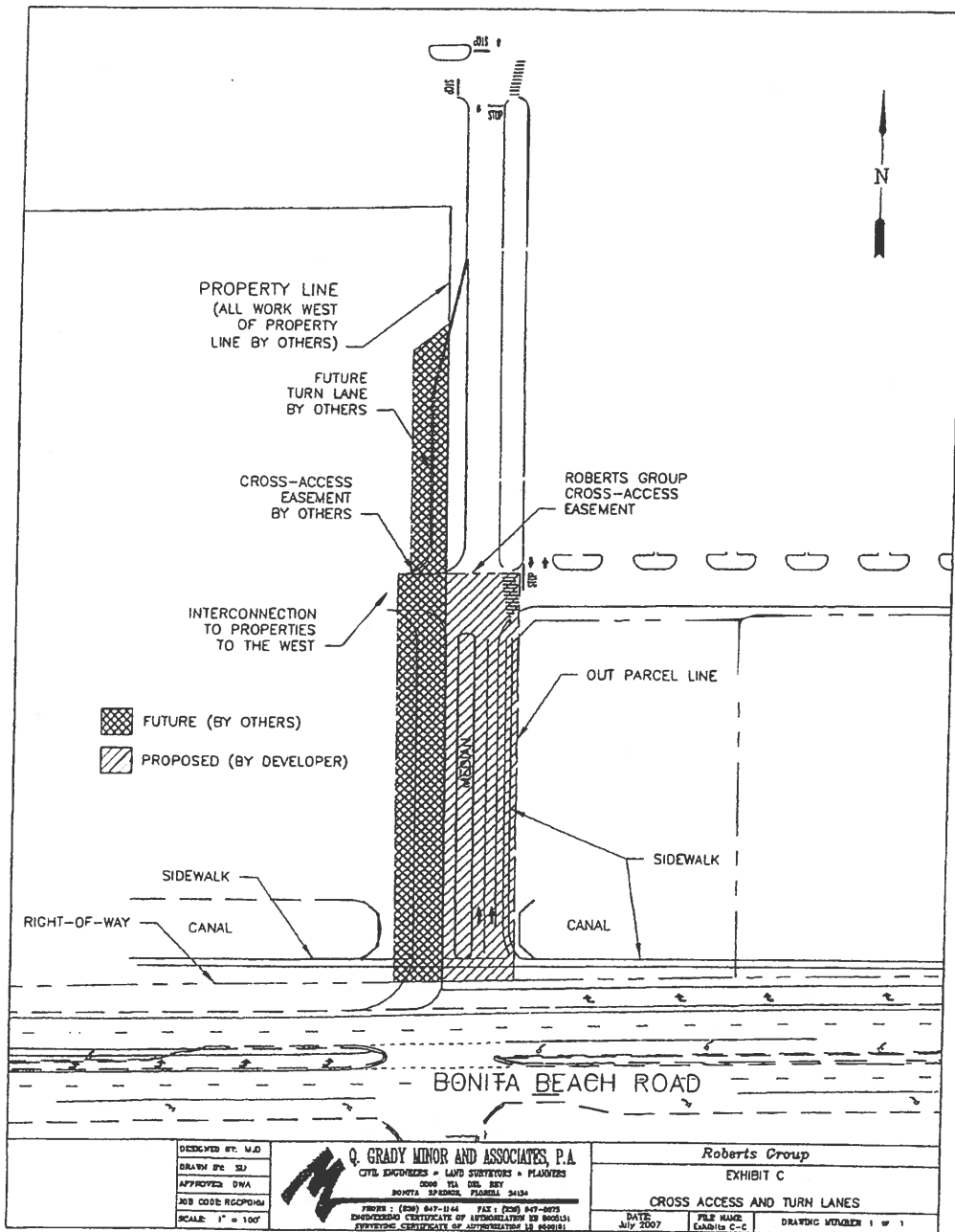
Ferreira	Nay	Nelson	Aye
Lonkart	Nay	Simons	Aye
Martin	Aye	Spear	Aye
McCourt	Nay		

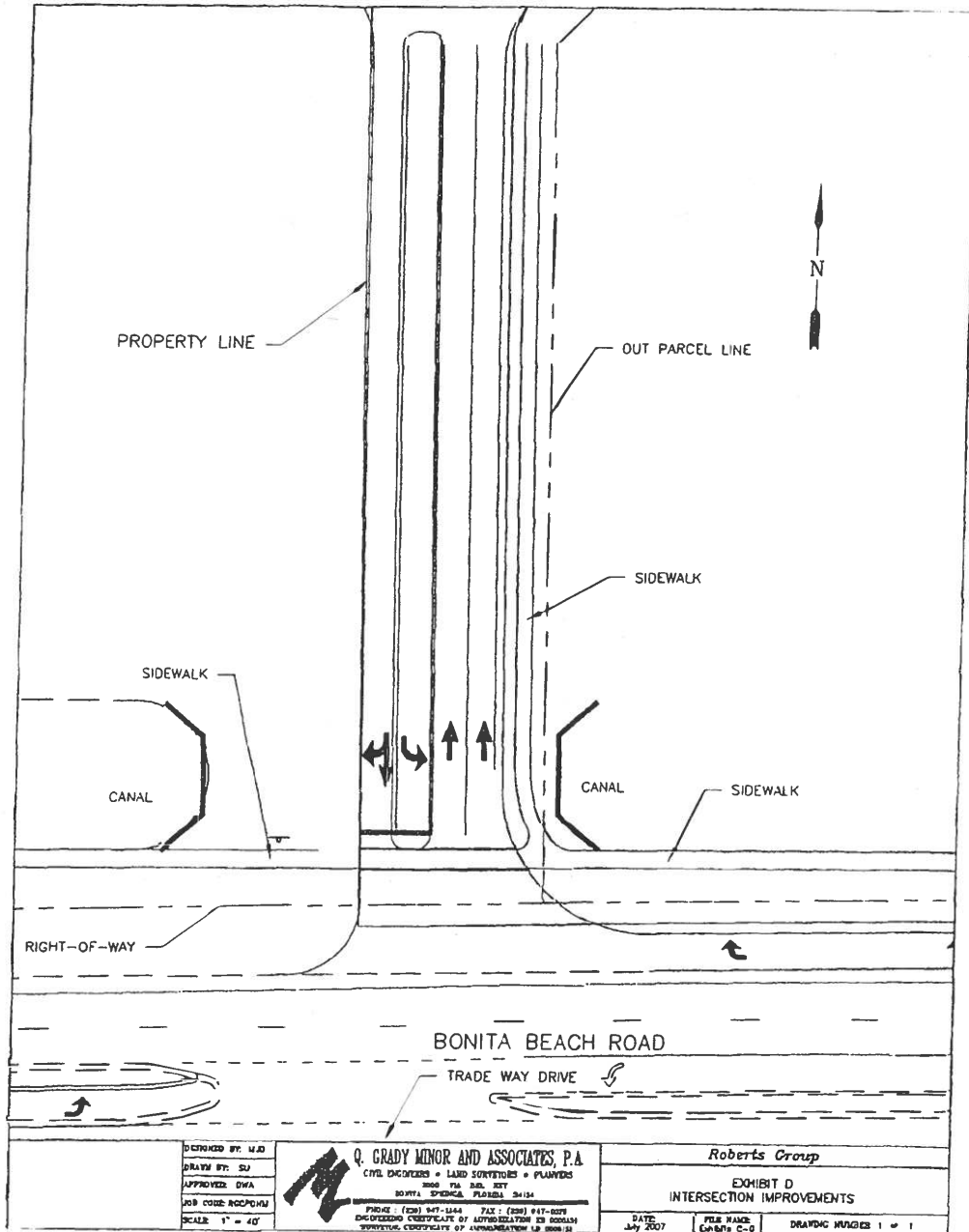
Date filed with City Clerk: 6-19-08

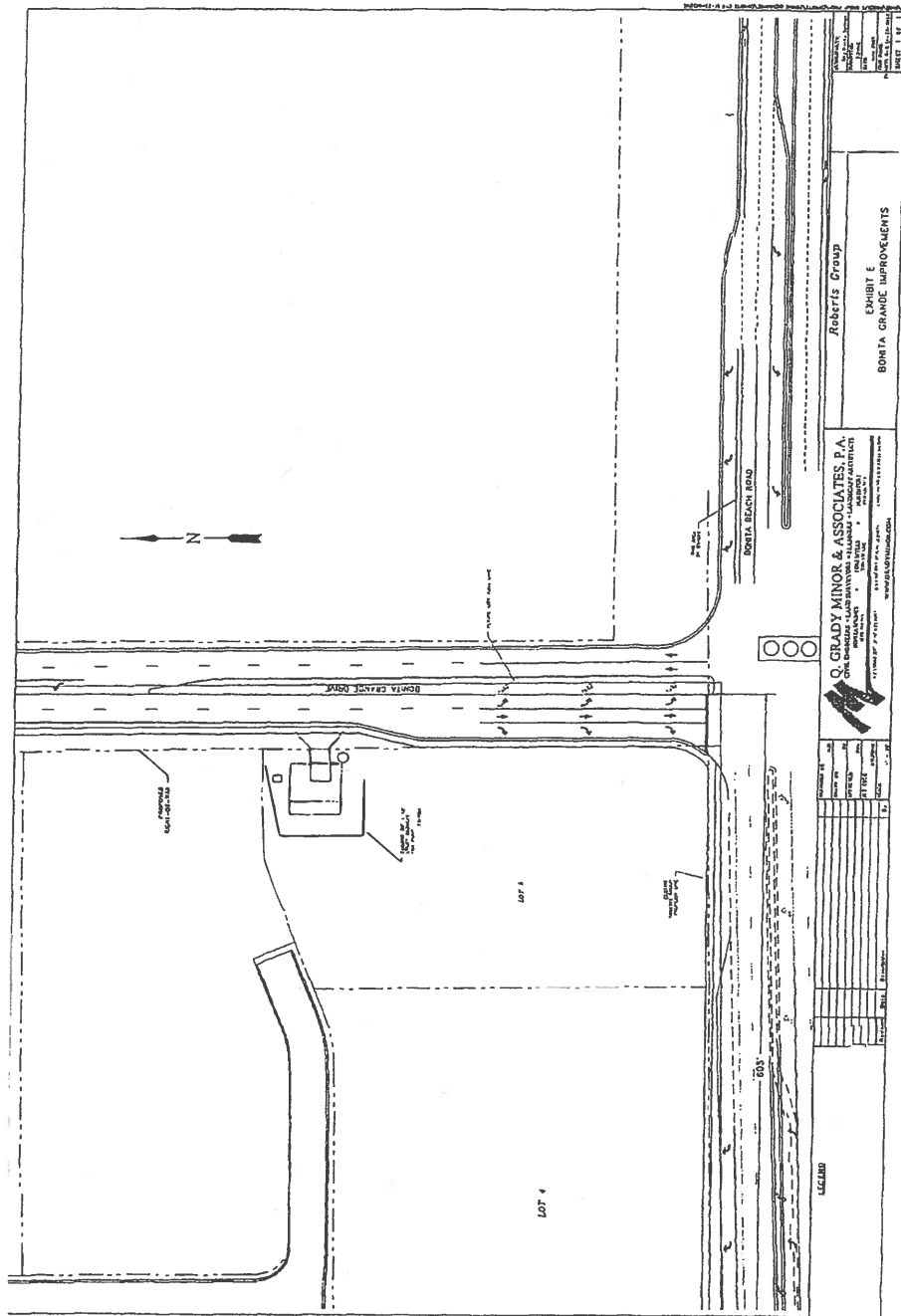
<p>GENERAL NOTES</p> <p>1. THE NCP IS CONCEPTUAL IN NATURE AND IS SUBJECT TO UPON MODIFICATION DURING THE DD PROCESS IN ACCORDANCE WITH CHAPTERS 3 AND 34 OF THE LOC.</p> <p>2. THE DEVELOPMENT WILL MEET THE DEFINITION OF CHAPTERS 3 AND 34 OF THE LOC, UNLESS DEVIATIONS FROM THE LOC ARE AUTHORIZED.</p>		<p>LEGAL DESCRIPTION</p> <p>A PORTION OF THE SOUTHWEST 1/4 OF SECTION 31, TOWNSHIP 47 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:</p> <p>BEGIN AT THE SOUTHWEST CORNER OF SECTION 31, TOWNSHIP 47 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA; THENCE RUN NORTH 00°16'00" EAST, ALONG THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 31, FOR A DISTANCE OF 224.00 FEET; THENCE RUN SOUTH 89°48'15" WEST FOR A DISTANCE OF 17.00 FEET; THENCE RUN NORTH 00°16'00" EAST FOR A DISTANCE OF 134.00 FEET; THENCE RUN NORTH 89°48'15" EAST FOR A DISTANCE OF 17.00 FEET TO A POINT ON THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 31; THENCE RUN NORTH 00°16'00" EAST, ALONG THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 31, FOR A DISTANCE OF 2,245.78 FEET TO A MARK MARKING THE EAST 1/4 CORNER OF SAID SECTION 31; THENCE RUN SOUTH 89°48'15" WEST FOR A DISTANCE OF 661.61 FEET; THENCE RUN SOUTH 00°13'36" WEST FOR A DISTANCE OF 882.83 FEET; THENCE RUN NORTH 89°49'51" EAST FOR A DISTANCE OF 238.18 FEET; THENCE RUN SOUTH 00°15'17" WEST FOR A DISTANCE OF 164.00 FEET; THENCE RUN SOUTH 89°49'51" WEST FOR A DISTANCE OF 75.50 FEET; THENCE RUN SOUTH 00°15'17" WEST FOR A DISTANCE OF 184.00 FEET; THENCE RUN SOUTH 89°49'51" WEST FOR A DISTANCE OF 0.50 FEET; THENCE RUN SOUTH 89°49'51" WEST FOR A DISTANCE OF 881.10 FEET TO A POINT ON THE NORTH LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31; SAID POINT BEING LOCATED 0.47 FOOT WESTERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE EAST LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31; THENCE RUN SOUTH 89°48'29" WEST, ALONG THE NORTH LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31 FOR A DISTANCE OF 840.25 FEET TO THE NORTHWEST CORNER OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31; THENCE RUN SOUTH 00°10'51" WEST, ALONG THE WEST LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31, FOR A DISTANCE OF 829.51 FEET TO A POINT 27.00 FEET NORTHERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE SOUTH LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31; THENCE RUN NORTH 87°47'29" EAST, PARALLEL WITH THE SOUTH LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31, FOR A DISTANCE OF 659.34 FEET TO A POINT 0.47 FOOT WESTERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE EAST LINE OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 31; THENCE RUN SOUTH 00°12'34" WEST FOR A DISTANCE OF 150.02 FEET; THENCE RUN NORTH 89°48'15" EAST FOR A DISTANCE OF 0.52 FOOT; THENCE RUN SOUTH 00°12'34" NORTH 89°48'15" EAST FOR A DISTANCE OF 0.52 FOOT; THENCE RUN SOUTH 00°12'34" WEST FOR A DISTANCE OF 378.50 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 31; THENCE RUN NORTH 89°48'29" EAST, ALONG THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 31, FOR A DISTANCE OF 1320.62 FEET TO THE POINT OF BEGINNING, CONTAINING 87.529 ACRES, MORE OR LESS.</p>																																																																																																																																																																																																																																																																																																																
<p>DEVELOPMENT REGULATIONS</p> <p>MINIMUM LOT AREA: 32,500 SQUARE FEET MINIMUM LOT WIDTH: 100 FEET MINIMUM LOT DEPTH: 100 FEET</p> <p>MINIMUM BUILDING SETBACKS: STREET: TWENTY-FIVE FEET (25') SIDE: FIFTEEN FEET (15') REAR: FIFTEEN FEET (15') ACCESS WAY: FIVE FEET (5')</p> <p>MAXIMUM BUILDING HEIGHT: FIFTY-FIVE FEET (55') TO BUILDING EAVES, EXCEPT AS NOTED ON MAP MAXIMUM LOT COVERAGE: FIFTY PERCENT (50%)</p> <p>MAXIMUM COVERED FLOOR AREA: 350,000 SQUARE FEET THE TOTAL COMMERCIAL SQUARE FOOTAGE OF THE SITE IS 350,000 SQUARE FEET; THIS INCLUDES BOTH OFFICE AND RETAIL. THE MAXIMUM RETAIL SQUARE FOOTAGE IS 350,000 SQUARE FEET; THE MAXIMUM OFFICE SQUARE FOOTAGE IS 45,000 SQUARE FEET IF WHICH A MAXIMUM OF 25,000 SQUARE FEET CAN BE RETAIL OFFICE.</p>		<p>REVISION BY ECU</p> <table border="1"> <tr> <th>REV. 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<p>ISSUED</p>	<p>OWNER</p> <p>THE ROBERTS GROUP, INC. 3110 WINDSOR DRIVE, MC LURIE, MO 65053 ATLANTA, GA 30325</p>	<p>DESIGNER</p> <p>Q. CRABY MOHR AND ASSOCIATES, P.A. CIVIL DESIGNER + LAND SURVEYOR + PLANNING 1000 N. W. 10TH AVENUE, SUITE 1000 MIAMI, FLORIDA 33136 PHONE: 305.575.1100 FAX: 305.575.1101 WWW: QCA.ORG</p>	<p>ROBERT'S GROUP CPD</p> <p>EXHIBIT IV-1-1 GENERAL NOTES</p> <p>DATE: 08/11/05 SHEET NO. OF TOTAL SHEETS: 30 OF 31</p>																																																																																																																																																																																																																																																																																																															

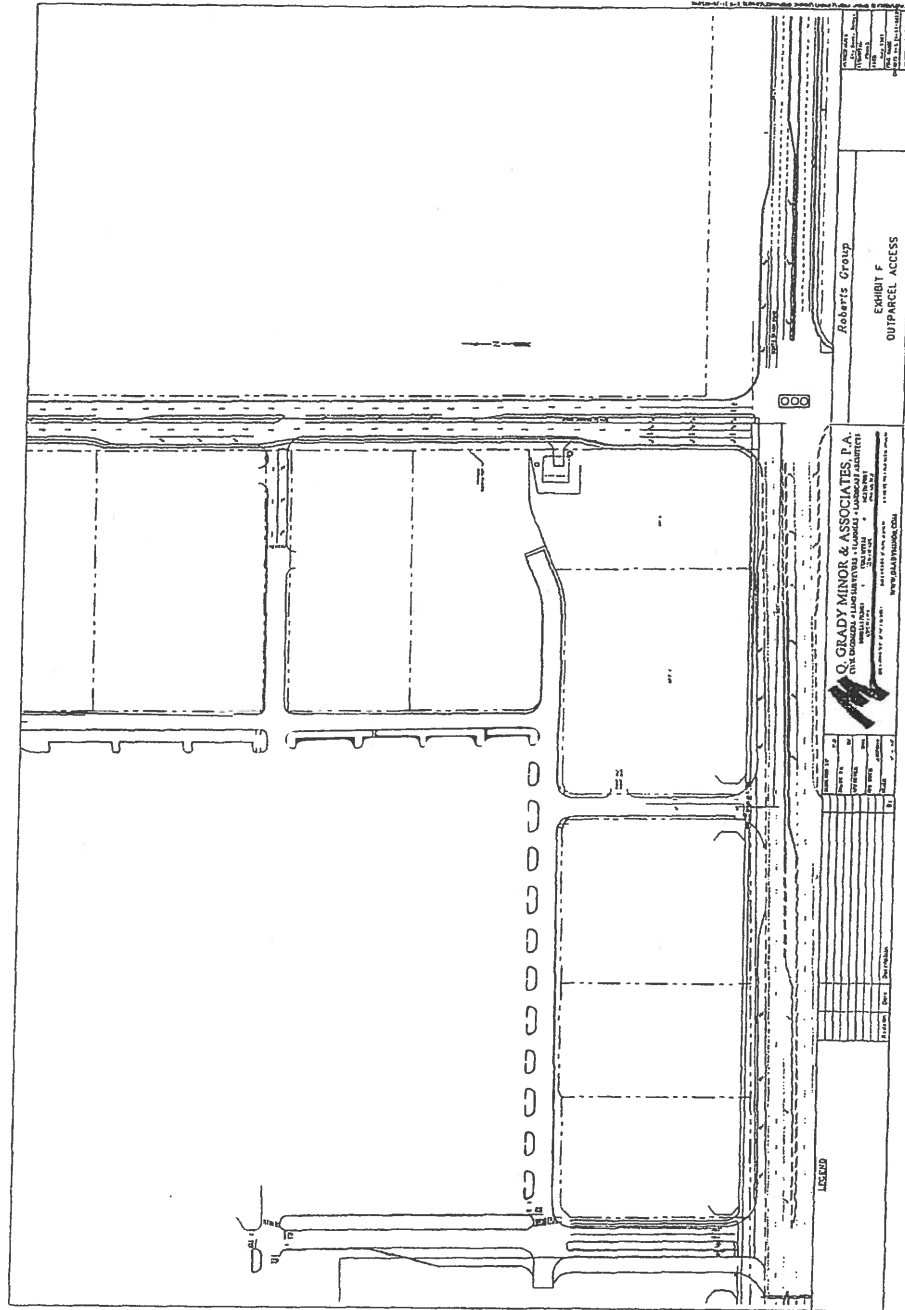


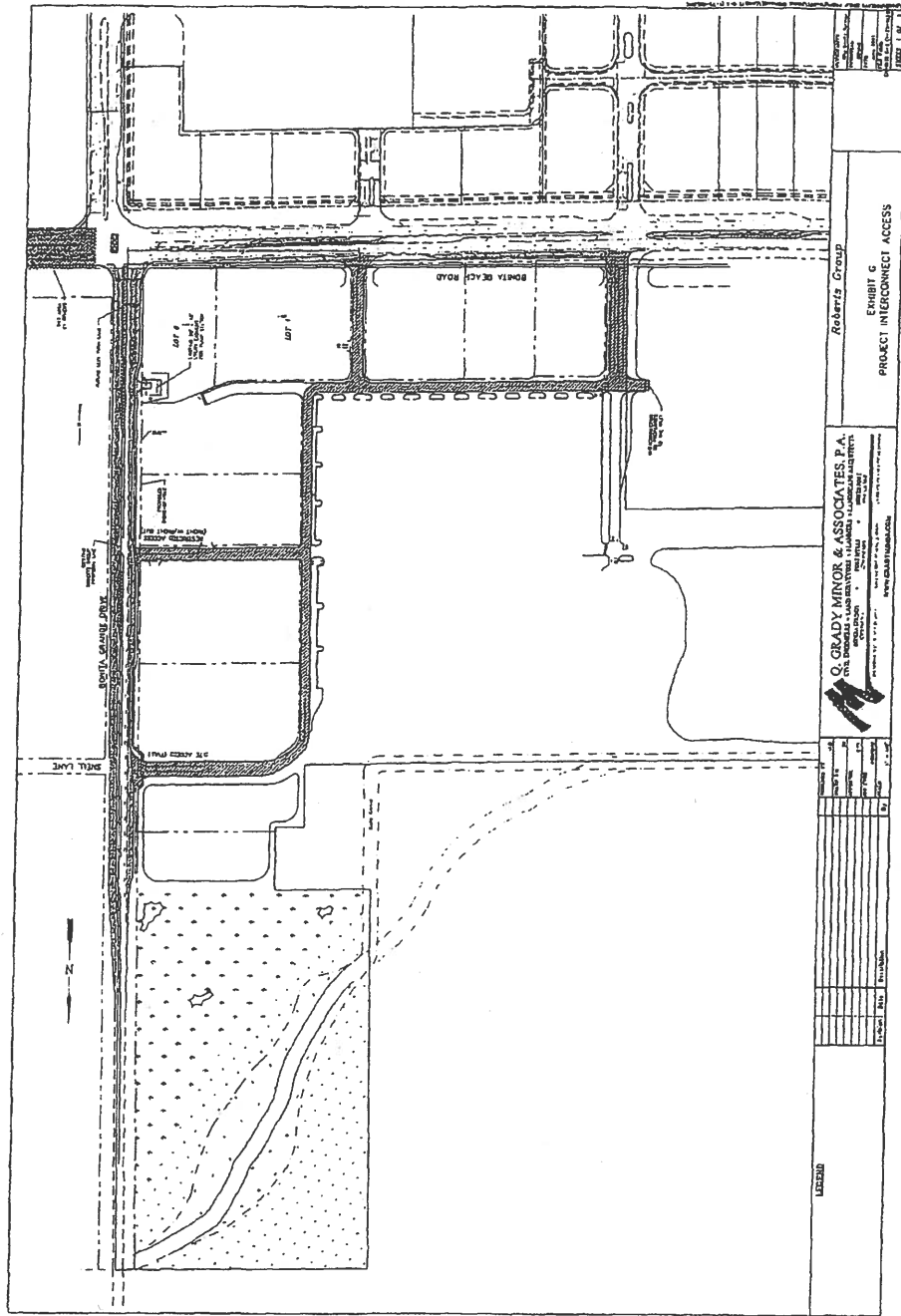




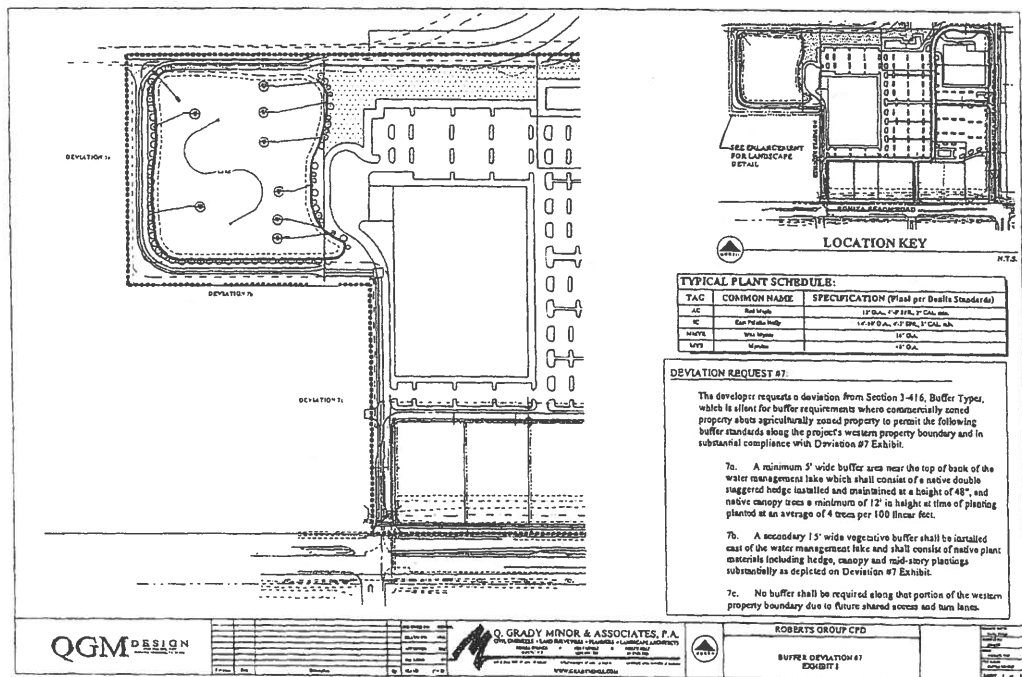


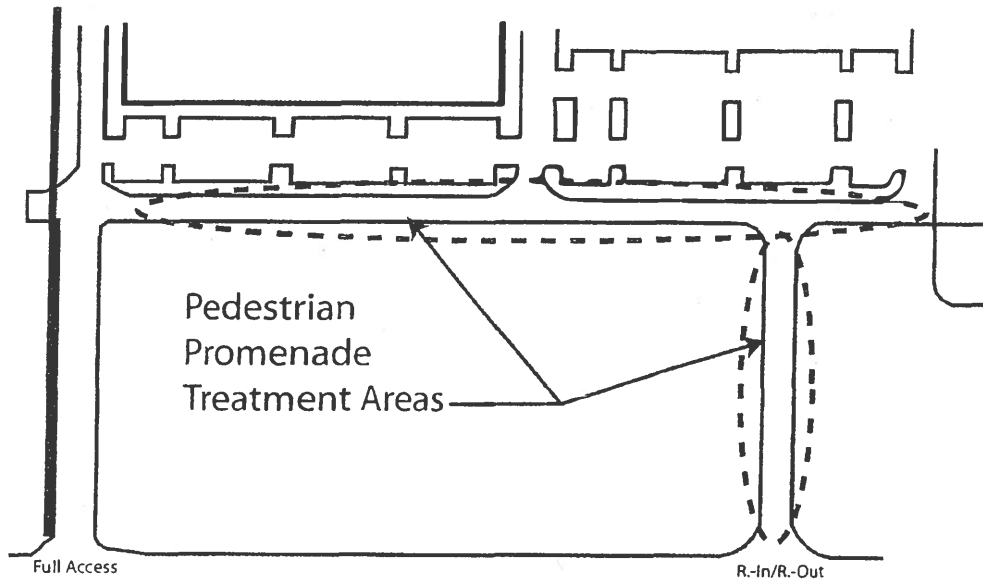




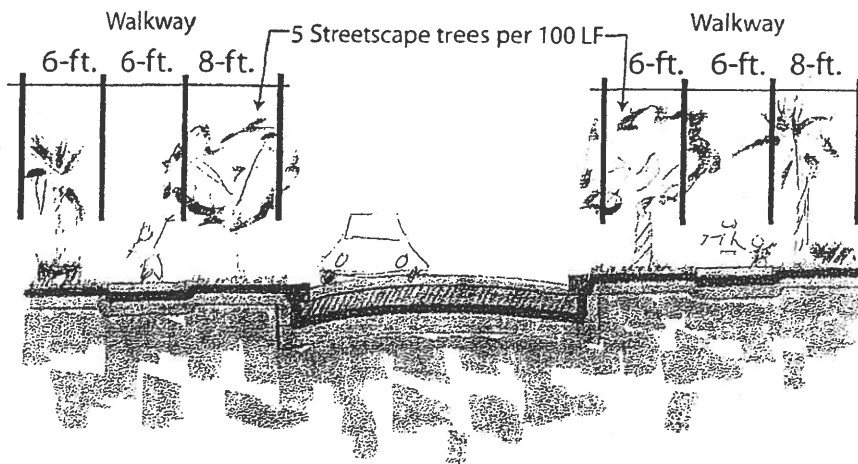


Q. GRADY MINOR & ASSOCIATES, P.A. ARCHITECTS & ENGINEERS 1000 WEST 10TH AVENUE, SUITE 1000 DENVER, CO 80202 PHONE: 303.733.1111 FAX: 303.733.1112 WWW.QGMA.COM		Roberts Group EXHIBIT C PROJECT INTERCONNECT ACCESS	
SHEET NO. 1 OF 1	DATE: 11/11/09	DRAWN BY: J.M.	CHECKED BY: J.M.





Two-sided 20-ft. Wide Landscaped Pedestrian Promenade



A Master Concept Plan Exhibit Alternative
 Condition 29 Pedestrian Promenade Exhibit
 DCI 2005-00023 Settlement Offer

Prepared for: Greg W. Eagle, Trustee

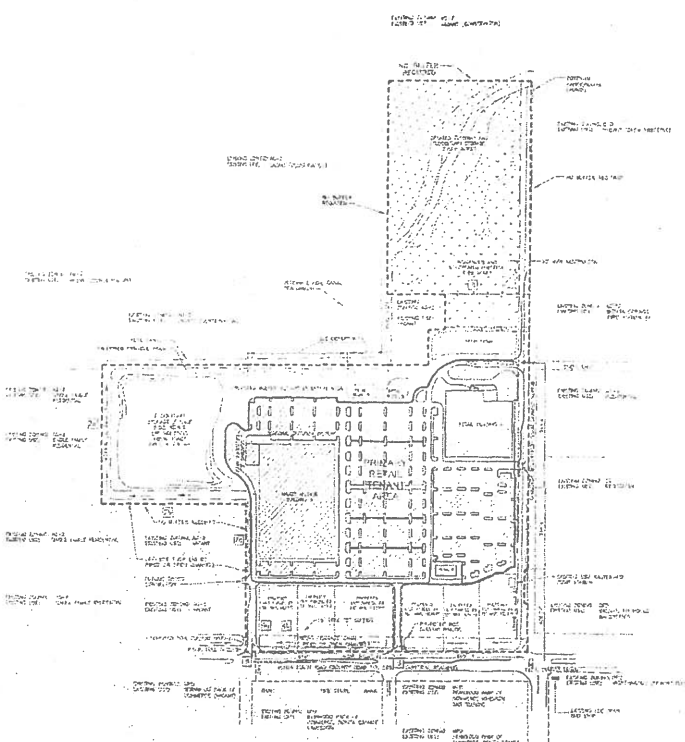
Stuart and Associates
 Planning and Design Services
 3818 Del Prado Blvd., Cape Coral, FL 33904

THIS PLAN IS A PRELIMINARY PLAN AND IS NOT TO BE USED FOR CONSTRUCTION. IT IS SUBJECT TO THE APPROVAL OF THE LOCAL GOVERNMENT AND THE STATE DEPARTMENT OF TRANSPORTATION. ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE ENGINEER OF RECORD.

SITE SUMMARY

STATE OF FLORIDA	1	1,000 ACRES
COUNTY OF ALACHUA	1	1,000 ACRES
TOWNSHIP 30 N	1	1,000 ACRES
RANGE 12 E	1	1,000 ACRES
SECTION 36	1	1,000 ACRES
TOTAL AREA	1	1,000 ACRES

1. THIS PLAN IS A PRELIMINARY PLAN AND IS NOT TO BE USED FOR CONSTRUCTION.
2. THE ENGINEER HAS CONDUCTED A VISUAL INSPECTION OF THE SITE AND HAS FOUND IT TO BE SUITABLE FOR THE PROPOSED DEVELOPMENT.
3. THE ENGINEER HAS CONDUCTED A VISUAL INSPECTION OF THE SURROUNDING AREA AND HAS FOUND IT TO BE SUITABLE FOR THE PROPOSED DEVELOPMENT.
4. THE ENGINEER HAS CONDUCTED A VISUAL INSPECTION OF THE PROPOSED DEVELOPMENT AND HAS FOUND IT TO BE SUITABLE FOR THE PROPOSED DEVELOPMENT.
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APPROVED
 ENGINEER OF RECORD
 DATE: 10/15/2004

<p>OWNER</p> <p>THE ROBERTS GROUP, INC. 3180 MATHEWSON DRIVE NE SUITE 202 ATLANTA, GA 30305</p>	<p>DESIGNED BY SUI</p> <p>STEPH H. SUI PREPARED: 2004 FOR OWNER REVIEW SCALE: 1" = 200'</p>	<p>PROJECT NO. 04-001</p>	<p>DATE: 10/15/2004</p>	<p>FILE NAME: 04-001-01</p>	<p>PROJECT NUMBER: 04-001</p>

Stephanie Karol

From: Flanjack, Alise <AFlanjack@leegov.com>
Sent: Thursday, October 17, 2019 2:26 PM
To: Paula McMichael
Subject: Notification of terminating the Roberts Group
Attachments: RobertsGroup_TerminateAgreement(AIR20160105).pdf; CO letter saying no partnership with developer south of PLP.pdf

Please see the attached documents to confirm that the agreement that was approved by the BoCC in 2007 and 2009, was terminated in Jan 2016.

Thanks, Alise

Alise Flanjack
Deputy Director
Lee County Parks and Recreation
3410 Palm Beach Blvd
Ft. Myers, FL 33916
Desk 239-533-7451
Cell 239-229-0488

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CITY OF BONITA SPRINGS
NOV 06 2019
COMMUNITY DEVELOPMENT
DEPARTMENT

Please note: Florida has a very broad public records law. Most written communications to or from County Employees and officials regarding County business are public records available to the public and media upon request. Your email communication may be subject to public disclosure.

Under Florida law, email addresses are public records. If you do not want your email address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

Blue Sheet No. 20150642	Lee County Board Of County Commissioners Agenda Item Report Meeting Date: 1/5/2016	Item No. 17
-----------------------------------	---	--------------------

TITLE:
Terminate Pine Lake Preserve agreement

ACTION REQUESTED:

- A) Terminate the 2009 agreement with the Bonita Grande Land Trust for relocating the Kehl Canal onto portions of Pinelake Preserve.
- B) Authorize the Board Chair to sign a letter of termination.

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COMMUNITY DEVELOPMENT
DEPARTMENT

FUNDING:

No funding required; BoCC Strategic Priority; Conservation 20/20.

WHAT ACTION ACCOMPLISHES:

In 2007, the Board of County Commissioners entered into an agreement with the Robert's Group who wanted to relocate the Kehl Canal to provide for better hydraulic efficiency, improve safety and water quality, in exchange for compensatory mitigation on Pine Lake Preserve (Blue Sheet No. 20071239). In 2009, a similar license agreement was entered into with the new property owner, Greg Eagle, trustee or successor of the Bonita Grande Land Trust (Blue Sheet No. 20090679). The agreement for rerouting the Kehl Canal arranged in 2007, and then 2009, was never accomplished. The project is no longer necessary since Lee County will be partnering with the City of Bonita Springs for restoration of Pine Lake Preserve. The Kehl Canal will not be relocated onto the preserve.

MANAGEMENT RECOMMENDATION:

Approve

Requirement/Purpose: (specify)	Request Initiated
<input type="checkbox"/> Statute <input type="checkbox"/> Ordinance <input type="checkbox"/> Admin Code <input checked="" type="checkbox"/> Other	Commissioner: Department: PARKS AND RECREATION Division: No Divisions By: Alise Flanjack

Background:

In 2007, the Board of County Commissioners entered into an agreement with the Robert's Group who wanted to relocate the Kehl Canal to provide for better hydraulic efficiency, improve safety and water quality, in exchange for compensatory mitigation on Pine Lake Preserve (Blue Sheet No. 20071239). In 2009, a similar license agreement was entered into with the new property owner, Greg Eagle, trustee or successor of the Bonita Grande Land Trust (Blue Sheet No. 20090679).

The project is no longer necessary since Lee County will be partnering with the City of Bonita Springs for restoration of Pine Lake Preserve. The Kehl Canal will not be relocated onto the preserve.

Since the agreement for rerouting the Kehl Canal arranged in 2007, and then 2009, was never accomplished; the termination of this agreement will allow the Board to end the 2009 agreement and work on other restoration options.

Attachments

- 1. Letter of Termination
- 2. Greg Eagle Agreement

Required Review:					
Alise Flanjack	Anne Henkel	Peter Winton	Corris L. McIntosh Jr.	David Harner	
PARKS AND RECREATION	Budget Analyst	Budget Services	County Attorney	County Manager	



November 23, 2016

John E. Manning
District One

Cecil L. Pendergrass
District Two

Larry Kiker
District Three

Brian Hamman
District Four

Frank Mann
District Five

Roger Desjarlais
County Manager

Richard Wm. Wesch
County Attorney

Donna Marie Collins
Hearing Examiner

Melissa Roberts
2301 McGregor Blvd.
Fort Myers, FL 33901

Re: Bonita Grande Outparcels #2 and #3

Dear Ms. Roberts,

I reviewed your letter to Mr. Emilio Robau dated November 22, 2016 re. Bonita Grande Outparcels #2 and 3. Please note that Lee County does not have an agreement with the project owners or developers for floodplain compensation. As you are aware, a previous agreement occurred between Lee County and the Roberts Group but the permit expired and the successor entity was notified in January 2016 that the agreement was canceled.

Lee County has gone a different route with the restoration of the preserve and will not be partnering with the current developers.

Please contact me if I may answer any additional questions.

Sincerely,

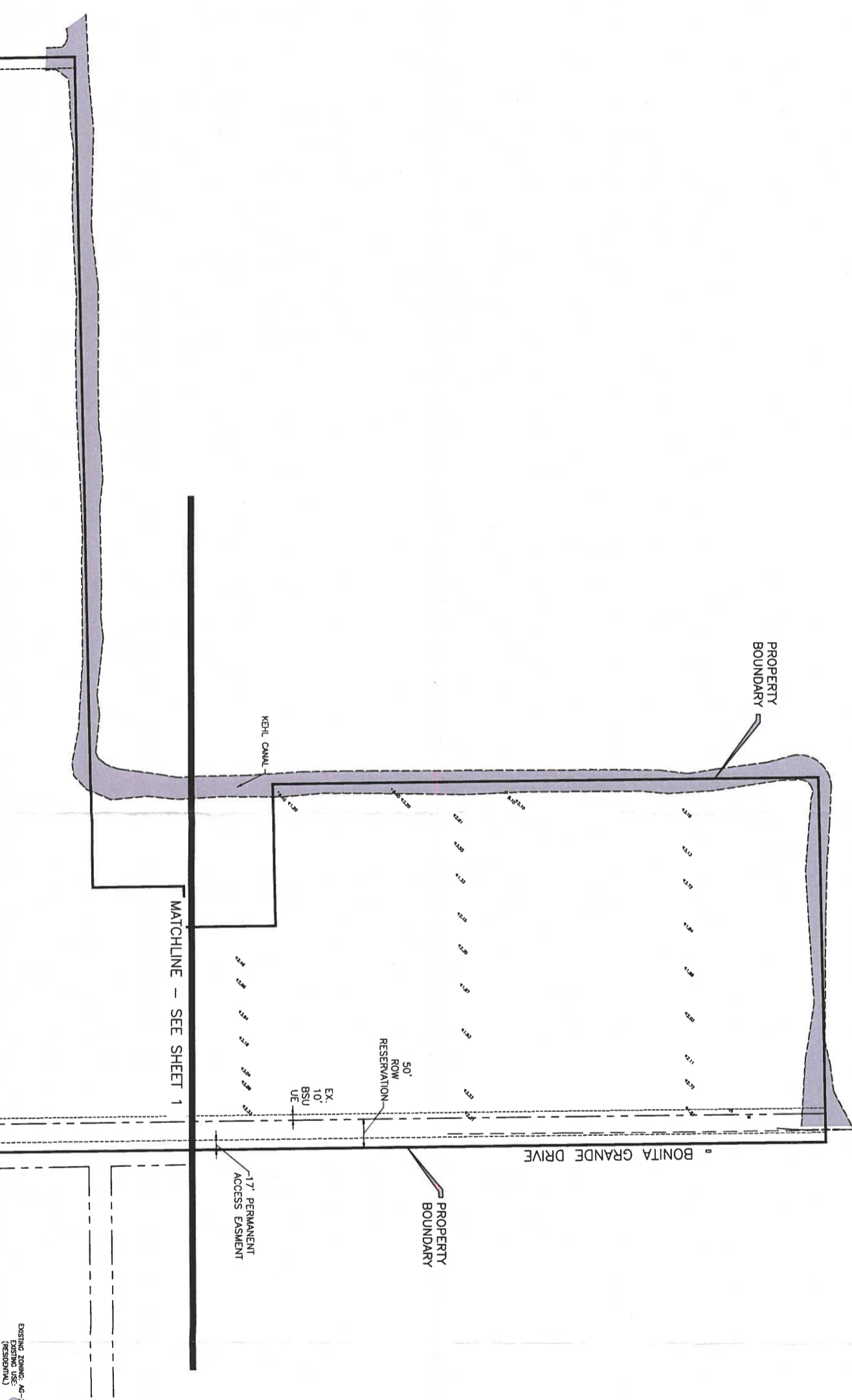
A handwritten signature in cursive script that reads "Cathy Olson".

Cathy Olson
Acting Director
Lee County Parks and Recreation
Colson@leegov.com


cc: Lee Waller, Lee County
Laura Layman, SFWMD
Emilio Robau, Robau and Associates
Andrew Woodruff, Passarella and Associates

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NOV 06 2019
COMMUNITY DEVELOPMENT
DEPARTMENT

S:\7720001\Drawings\Site\018 Midtown at Bonita\018 Midtown at Bonita.dwg
 5/27/2020 10:00 AM
 5770 Bonaventure Drive South, Suite 7, Naples, Florida 34104
 Keith J. Bohan, P.E. P.L. #4 45710
 DESIGNING ENGINEERING ARCHITECTURE
 (RESIDENTIAL)
 Bohan and Associates, LLC Florida Certificate of Authorization No. 000097



PERMIT
 APPLICATION
 SET - NOT FOR
 CONSTRUCTION

 ROBAU & ASSOCIATES <small>ENGINEER'S SEAL STAMPS</small>	REVISION: ▲ REVISED PER CITY OF BONITA SPRINGS COMMENTS DATE: 5/27/20	PROJECT NAME: MIDTOWN AT BONITA <small>819-0018</small>	CLIENT NAME: LYNX ZUCKERMAN BONITA GRANDE, LLC.
	DESIGNED BY: P.J.B. DRAWN BY: K.A.R./J.R.B. CHECKED BY: K.J.L. REVIEWED BY: K.J.L. GRAPHIC SCALE (HORIZONTAL): 1" = 100' GRAPHIC SCALE (VERTICAL): 1" = 200'	DRAWING TITLE: TOPOGRAPHY MAP	
SHEET 2 OF 2			



Traffic Impact Statement

Midtown at Bonita – Mixed-use Planned Development (MPD) Rezone

Section 1 – Traffic Impacts to Area Roadway Network

Bonita Springs, FL
5/26/2020

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JUN 02 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

Prepared for:

The Zuckerman Group
6131 Lyons Road, Suite 200
Coconut Creek, FL 33073
Phone: 954-481-3700

Prepared by:

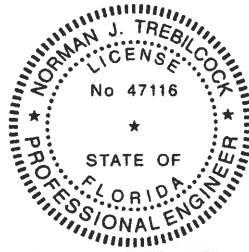
Trebilcock Consulting Solutions, PA
2800 Davis Boulevard, Suite 200
Naples, FL 34104
Phone: 239-566-9551
Email: ntrebilcock@trebilcock.biz

Statement of Certification

I certify that this Traffic Impact Statement has been prepared by me or under my immediate supervision and that I have experience and training in the field of Traffic and Transportation Engineering.

This item has been electronically signed and sealed by Norman J. Trebilcock, AICP, PE, State of Florida license 47116, using a SHA-1 authentication code.

Printed copies of this document are not considered signed and sealed, and the SHA-1 authentication code must be verified on any electronic copies.



A handwritten signature in blue ink, appearing to read "Norman J. Trebilcock".

Digitally signed by Norman Trebilcock
DN: c=US, st=Florida, l=Naples, o=Trebilcock Consulting Solutions, PA, cn=Norman Trebilcock, email=ntrebilcock@trebilcock.biz
Date: 2020.05.27 15:26:11 -04'00'

Norman J. Trebilcock, AICP, P.E.
FL Registration No. 47116
Trebilcock Consulting Solutions, PA
2800 Davis Boulevard, Suite 200
Naples, FL 34104
Company Cert. of Auth. No. 27796

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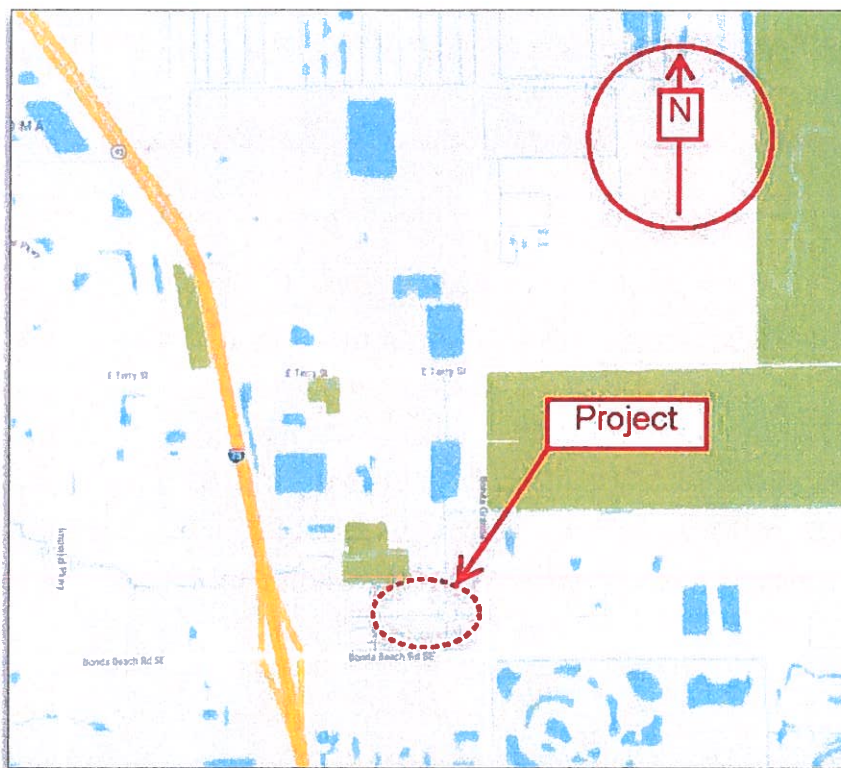
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Project Description

The proposed Midtown at Bonita project is an approved commercial development located in the northwest quadrant of the intersection of Bonita Beach Road and Bonita Grande Drive, within the limits of the City of Bonita Springs. The subject parcels lie in Section 31, Township 47 South, Range 26 East, in the City of Bonita Springs, Lee County, Florida.

For location and layout of the project refer to **Figure 1 – Project Location Map**, which follows, and **Appendix A: Project Master Site Plan**.

Figure 1 – Project Location Map



As illustrated in the City of Bonita Springs, Zoning Ordinance No. 08-09, the subject property (fka Eagle Trust CPD, fka Roberts Group CPD) is currently approved to develop a maximum of 350,000 square feet (sf) of commercial floor area, of which 45,000 sf may be office development (with medical office for up to 22,500 sf of floor area).

The Midtown at Bonita project proposes to rezone the property from Commercial Planned Development (CPD) to Mixed-use Planned Development (MPD), to permit the development of 482 multi-family dwelling units, 165 hotel rooms and 315,000 sf of commercial uses.

The project provides a highest and best use scenario with respect to the project's proposed Institute of Transportation Engineers (ITE) trip generation. The development program is illustrated in **Table 1**. The ITE land use designations are depicted in agreement with the ITE Land Use Code (LUC) descriptions.

**Table 1
Development Program**

Development	Land Use	ITE Land Use Code	Total Size
Approved CPD	Commercial*	820 – Shopping Center*	350,000 square feet
Proposed MPD	Residential Multifamily	220 - Multifamily Housing (Low-Rise)	482 dwelling units
	Hotel	310 - Hotel	165 rooms
	Commercial	820 – Shopping Center	315,000 square feet

Note(s): *LUC 820 is utilized to model projected traffic associated with the proposed commercial land use consistent with the approved Traffic Impact Statement associated with the Zoning Ordinance No. 08-09.

The expected project build-out year for this project is 2023. For purposes of this evaluation and in accordance with the City of Bonita Springs TIS Guidelines, the future traffic conditions with project reflect the build-out year plus one year (year 2024).

The Traffic Impact Statement consists of two reports:

- Section 1 – Traffic Impacts to Area Roadway Network
- Section 2 – Site Access and Intersection Analyses

A proposed methodology – initial meeting checklist is illustrated in **Appendix B: Initial Meeting Checklist (Methodology)**.

As illustrated in the Master Concept Plan, connections to the subject site are proposed as follows: one full movement western access and one left-in/right-in/right-out eastern access onto Bonita Beach Road; one full movement northern access, one left-in/right-in/right-out middle access and one right-in/right-out southern access onto Bonita Grande Drive.

Trip Generation

The project’s site trip generation is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. The software program OTISS, Online Traffic Impact Study Software (most current version) is used to create the raw unadjusted trip generation for the project. The ITE rates and equations have been used for the trip generation calculations as applicable. Detailed calculations can be found in **Appendix C: ITE Trip Generation Calculations**.

The ITE Trip Generation Manual provides three unique land use codes that describe Multifamily Housing. Based on the number of levels (floors) provided, these are illustrated as follows: LUC 220 – Multifamily Housing (Low-Rise), LUC 221 – Multifamily Housing (Mid-Rise) and LUC 222 – Multifamily Housing (High-Rise). As more specific data is not available at this stage, the LUC 220 – Multifamily Housing (Low-Rise) represents the conservative (higher) traffic generator and it is utilized for the purposes of this report.

In addition, in order to account for the most intense impact, the “occupied room” variable is chosen for the trip generation associated with the Hotel land use ITE LUC 310.

The **internal capture** accounts for a reduction in external traffic because of the interaction between the multiple land uses in a site. ITE guidelines used for the calculation of internal capture follow the same recommended procedure presented in the NCHRP Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments.

One of the ITE premises in estimating the internal capture traffic illustrates that the number of trips from a land use within a mixed-use development to another land use within the same development (an internal trip) is a function of the size of the “receiving” land use and the number of trips it attracts, as well as the size of the “originating” land use and the number of trips it sends. The number of trips between a particular pair of internal land uses is limited to the smaller of these two values (ITE procedure of balancing internal trips in a mixed-use development).

For the purposes of this analysis and following City of Bonita Springs TIS Guidelines recommendations, the overall internal capture rate does not exceed 20%.

The **pass-by trips** account for traffic that is already on the external roadway network and stops at the project on the way to a primary trip destination. It should be noted that the driveway volumes are not reduced as a result of the pass-by reduction, only the traffic added to the surrounding streets and intersections. As such, pass-by trips are not deducted for operational turn lane analysis at project accesses (all external traffic is accounted for).

Per FDOT’s (Florida Department of Transportation) Site Impact Handbook (Section 2.4.4) the number of pass-by trips should not exceed 10% of the adjacent street traffic. The FDOT presents this factor as a measure of reasonableness and illustrates that it is a rule-of-thumb and not a statistically studied factor.

Although the ITE LUC 820 PM peak hour pass-by trip percentage is 34%, the pass-by reduction is conservatively limited to 206 two-way PM peak hour trips so that the pass-by reduction illustrated in the approved TIS for Roberts Group CPD dated January 31, 2007 (215 PM peak hour pass-by trips) is not exceeded.

Consistent with a conservative approach, this analysis calculates pass-by trip percentages for LUC 820 – Shopping Center, as follows: daily capture rates at 15%, AM peak hour rates at 25% and PM peak hour rates at 18% (limited to 206 trips).

A summary of the proposed project trip generation calculations is illustrated in **Table 2**.

As depicted in the City of Bonita Springs, Zoning Ordinance No. 08-09, the approved CPD development has a PM peak hour trip count limitation of 1,260 (ITE 8th Edition or a later edition if available at the time of development order). Conservatively, the approved trip count limitation is 1,166 PM peak hour trips as evaluated based on ITE 10th Edition traffic data (refer to **Appendix C**).

The peak hour trip generation illustrated in **Table 2** was compared to the trip generation as currently approved. Based on this exercise, the projected traffic associated with the proposed development does not exceed the approved PM peak hour trip cap limitation (as determined using the ITE Trip Generation Manual, 10th Edition).

**Table 2
Trip Generation (Proposed Conditions) – Average Weekday**

Land Use	Size	24 Hour Two-Way Volume	AM Peak Hour			PM Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
Multifamily Housing (Low-Rise)	482 dwelling units	3,603	49	164	213	151	88	239
Hotel	165 occupied rooms	2,018	59	43	102	59	61	120
Shopping Center	315,000 square feet	13,118	192	117	309	610	660	1,270
Total Traffic		18,739	300	324	624	820	809	1,629
Internal Capture		(390)	(9)	(9)	(18)	(129)	(129)	(258)
Total External		18,349	291	315	606	691	680	1,371
Pass-by		(1,940)	(46)	(29)	(75)	(101)	(105)	(206)
Net External		16,409	245	286	531	590	575	1,165

The capacity analyses of all significantly impacted roadway segments are evaluated based on the net external traffic generated by proposed project.

The site access turn lane analysis will be evaluated in Section 2 – Site Access and Intersection Analyses and will reflect projected total external traffic during the weekday AM and PM peak hour (Table 2).

Trip Distribution and Assignment

The traffic generated by the development is assigned to the adjacent roadway network based on the knowledge of the area and as approved in the methodology meeting.

As illustrated in the adopted Resolution No. 17-76 (establishing the City of Bonita Springs TIS guidelines), significantly impacted roadways are defined as any segment where the directional peak hour project trips exceed 2% or 3%, as applicable, of the directional peak hour capacity of the level of service standard for each segment identified.

In addition, based on the information depicted in the City of Bonita Springs TIS guidelines, directional AM and PM project trips shall be assigned to the area roadway segments. Based on our review of the directional AM and PM peak hour project trips (Table 2), the weekday PM peak hour provides the greatest directional volume (ingress and egress).

Since the Level of Service (LOS) impacts are evaluated based on the peak hour, peak direction, the PM peak hour project traffic is utilized for the LOS impacts – significantly impacted roadways to ensure a worst case scenario in terms of trip generation and impacts to the adjacent roadway network.

The site-generated trip distribution is shown in Table 3, Project Traffic Distribution for Peak Hour and is graphically depicted in Figure 2 – Project Distribution by Percentage and by PM Peak Hour.

**Table 3
Project Traffic Distribution for Peak Hour***

Roadway Link	Roadway Link Location	Distribution of Project Traffic	PM Peak Hr Project Vol.	
			Enter	Exit
Bonita Beach Rd	Imperial St to I-75	30%	<u>EB – 177</u>	WB – 173
Bonita Beach Rd	I-75 to Bonita Grande Dr	50%	EB – 295	<u>WB – 288</u>
Bonita Beach Rd	East of Bonita Grande Dr	35%	WB – 206	<u>EB – 202</u>
Bonita Grande Dr	E Terry St to Bonita Beach Rd	10%	SB – 59	<u>NB – 57</u>
Bonita Grande Dr**	South of Bonita Beach Rd	5%	NB – 30	SB – 29

Note(s): *Peak hour, peak direction roadway link traffic volumes are underlined and **bold**.
 **Not a Bonita Springs, Lee County, or FDOT monitored roadway segment.

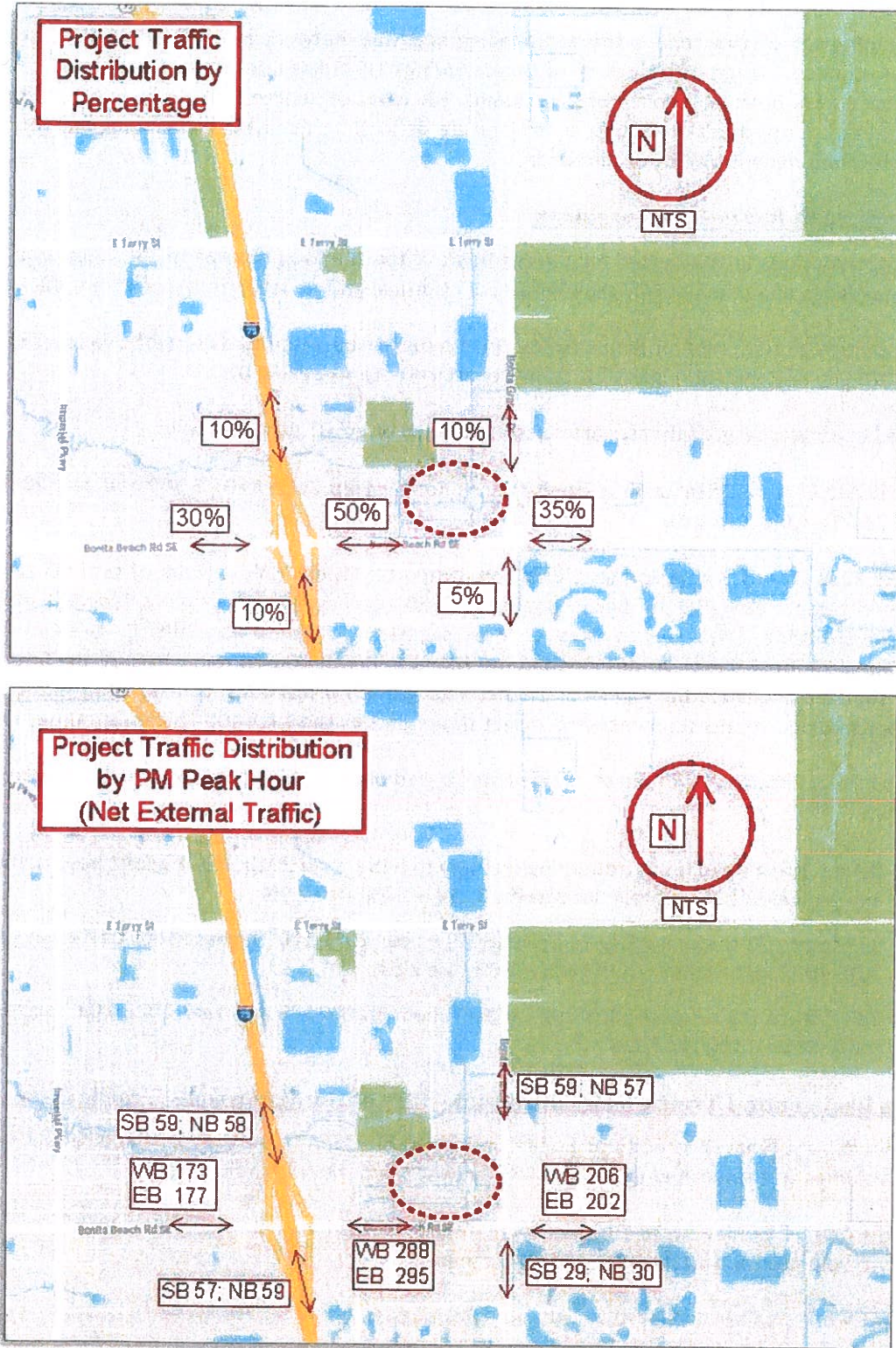
Traffic information has been gathered for the segments of the roadway network in the study area from latest 2019 City of Bonita Springs Traffic Count Report. Per ITE guidelines the project’s estimated PM peak hour reflects average weekday peak hour of adjacent street traffic.

Based on review of the City’s Traffic Count Report, the PM peak hour, peak direction for the roadway segments are determined as follows:

- Bonita Beach Road (BBR): Imperial Parkway to I-75 – Eastbound (EB);
- Bonita Beach Road (BBR): west of Bonita Grande Drive – Westbound (WB);
- Bonita Beach Road (BBR): east of Bonita Grande Drive – Eastbound (EB);
- Bonita Grande Drive: north of Bonita Beach Road – Northbound (NB).

Refer to **Appendix D: Bonita Springs 2019 Traffic Count Data (Excerpts)**.

Figure 2 – Project Distribution by Percentage and by PM Peak Hour



Background Traffic

For the purposes of this report, the surrounding roadway network is analyzed under 2024 traffic conditions. In accordance with the City of Bonita Springs TIS Guidelines, traffic analyses are based on peak season peak hour directional traffic volumes. For Level of Service (LOS) determination, the peak season, peak hour and peak direction conditions are defined as the 100th highest volume hour of the year in the predominant traffic flow direction.

Future Growth Rates Determination

Historic growth rates are estimated for the segments of the roadway network in the study area using a general guidance of a minimum 2% growth rate, or historical growth rates from available traffic counts.

Projected traffic growth rate for Bonita Grande Drive is calculated based on daily traffic volumes as shown in the 2019 City of Bonita Springs traffic count report (refer to **Appendix D**).

Projected linear annual growth rates are calculated based on AADT data as follow:

- Bonita Grande Drive north of Bonita Beach Road – year 2009 AADT 5,300 and year 2019 AADT 7,900 – 4.9%, use 4.9%

Since the 2019 City of Bonita Springs traffic count report provides only 2 years of traffic data for the analyzed segments along Bonita Beach Road, the 2019 Lee County Concurrency Report is utilized to determine projected traffic growth rates for these segments. Refer to **Appendix E: Lee County 2019 Concurrency Report Excerpt**. As described in the 2019 Lee County Concurrency Report, the future (year 2023) estimated LOS adds the higher of 1% per year growth projections, or estimated traffic volume from approved development order traffic impact statements to the 2018 100th highest hour volume.

Projected linear annual growth rates are calculated based on 100th highest hour directional volume data as follow:

- Bonita Beach Road (BBR) from Imperial Pkwy to I-75 – year 2018 100th highest hour traffic 2,135 and year 2023 100th highest hour traffic 2,224 – 1.0%, use 2.0%
- BBR from I-75 to Bonita Grande Drive (BGD) – year 2018 100th highest hour traffic 576 and year 2023 100th highest hour traffic 605 – 1.0%, use 2.0%
- BBR east of BGD – year 2018 100th highest hour traffic 576 and year 2023 100th highest hour traffic 605 – 1.0%, use 2.0%

Future Background Traffic Determination – City of Bonita Springs Traffic Data

The most current (year 2019) City of Bonita Springs traffic count report presents peak hour two-way service volumes and associated LOS values for roadway segments within the City.

The 2019 City of Bonita Springs traffic count report is used to determine the 2019 100th highest directional volumes for the analyzed roadway segments.

The current 2019 LOS for the analyzed roadway segments is illustrated in the City's report as follow:

- Bonita Beach Road (BBR) from Imperial Pkwy to I-75 – LOS F (deficient condition).
- BBR from I-75 to Bonita Grande Drive (BGD) – LOS C
- BBR east of BGD – LOS C
- BGD north of BBR – LOS D

The 2019 peak season, peak hour, peak direction volume is determined as the highest direction volume of a typical weekday during peak season (per City's traffic count report – three day average adjusted for peak season conditions).

The City's traffic counts (FTE Station Numbers 1202, 0017, 0018 and 0019) are used to determine the 2019 peak season, peak hour, and peak direction volume for the analyzed roadway segments as follows:

- Bonita Beach Road (BBR) from Imperial Pkwy to I-75 – highest directional volume EB = 2,225, Two-way Volume = 3,946, D = 56.4%; PSCF = 1. This represents a $K = 3,946/50,300 = 7.9\%$
- BBR from I-75 to Bonita Grande Drive (BGD) – highest directional volume WB = 897 (AM Peak Hour), Two-way Volume = 1,730, D = 51.8%; PSCF = 1. This represents a $K = 1,730/21,400 = 8.1\%$. For the purposes of this report, highest directional volume considered is WB = 897 – PM Peak Hour.
- BBR east of BGD – highest directional volume WB = 732 (AM Peak Hour), Two-way Volume = 1,324, D = 55.3%; PSCF = 1. This represents a $K = 1,324/15,900 = 8.3\%$. For the purposes of this report, highest directional volume considered is EB = 732 – PM Peak Hour.
- BGD north of BBR – highest directional volume NB = 359, Two-way Volume = 636, D = 56.4%; PSCF = 1. This represents a $K = 636/7,900 = 8.1\%$

As illustrated in the FDOT 2014 Project Traffic Forecasting Handbook, Standard K factors are implemented based on area type and facility type with consideration to typical peak periods of the day. Per Figure 2.4 – FDOT Standard K Factors, FDOT 2014 Project Traffic Forecasting Handbook, pg. 2-33, the recommended K factor for arterials and highways would be 9.0. It is noted that lower K factors represent the promotion of a multi-hour peak period rather than a single peak hour analysis. A 7.5% K factor is applicable for roadways within Multimodal Transportation Districts where there is an emphasis on alternative means of transportation such as walking, bicycling etc.

Table 4 illustrates the calculated background (without project) peak hour peak season peak direction traffic volume for the planning horizon year of 2024.

This report calculates future background traffic using growth rates based on historical traffic data to account for additional traffic from future surrounding development.

Table 4
Background Traffic without Project (2019 – 2024) – City of Bonita Springs Traffic Data

Roadway Link (Data Source)	Roadway Link Location	2019 100 th Highest Hour Directional Vol*	Projected Traffic Annual Growth Rate**	Growth Factor	Projected 2024 Future Volume***
Bonita Beach Rd	Imperial Pkwy to I-75	2,225	2.0%	1.1041	<u>2,457</u>
Bonita Beach Rd	I-75 to Bonita Grande Dr	897	2.0%	1.1041	<u>991</u>
Bonita Beach Rd	East of Bonita Grande Dr	732	2.0%	1.1041	<u>809</u>
Bonita Grande Dr	E Terry St to BBR	359	4.9%	1.2702	<u>456</u>

Note(s): The projected 2024 Peak Hour – Peak Direction Background Traffic is **underlined** and **bold** as applicable.
 *Based on the 2019 City of Bonita Springs Traffic Count Report.
 ** Calculated based on traffic data illustrated in the City of Bonita Springs 2019 Traffic Count Report and 2019 Lee County Concurrency Report, 2% minimum.
 ***Growth Factor = (1 + Annual Growth Rate)⁵; 2024 Projected Volume = 2019 Volume x Growth Factor.

Existing and Future Roadway Network

Based on Lee County AC-11-1 – Functional Classification of Roadways data, Bonita Grande Drive is a Lee County maintained major collector and Bonita Beach Road is a Lee County maintained arterial.

The existing roadway conditions are extracted from the Lee County 2018 Concurrency Report. Roadway improvements that are currently under construction or are scheduled to be constructed within the first five years of the current Capital Improvement Program (CIP), are considered to be committed improvements for the purposes of this study. The existing and future roadway conditions are illustrated in Table 5.

Table 5
Existing and Future Roadway Conditions

Roadway Link	Roadway Link Location	2019 Roadway Conditions	2019 Standard LOS	2019 Standard Capacity Volume*	2024 Roadway Conditions	2019 Standard LOS	2024 Standard Capacity Volume*
Bonita Beach Rd	Imperial St to I-75	6LD	E	2,800 (EB)	6LD	E	2,800 (EB)
Bonita Beach Rd	I-75 to Bonita Grande Dr	4LD	E	2,020 (WB)	4LD	E	2,020 (WB)
Bonita Beach Rd	East of Bonita Grande Dr	4LD	E	2,020 (EB)	4LD	E	2,020 (EB)
Bonita Grande Dr	E Terry St to BBR	2LN	E	860 (NB)	2LN	E	860 (NB)

Note(s): 2LN = 2-lane narrow roadway; 4LD, 6LD = 4-lane, 6-lane divided roadway, respectively; LOS = Level of Service.
 *Capacity volumes, Peak Hour, Peak Direction from the latest 2019 City of Bonita Springs traffic counts and 2019 Lee County Concurrency Report.

Project Impacts to Area Roadway Network – Roadway Link Analysis

Significant impacts and LOS determination for the area roadway network are evaluated to establish the project impacts for the horizon year 2024.

This report provides a Level of Service (LOS) analysis of the nearest arterial or collector streets to which the proposed project will discharge its traffic. The LOS evaluation is based on the most current Lee County Generalized Level of Service Thresholds (refer to **Appendix F**).

LOS projections for the future (year 2024) background traffic without the project are illustrated in **Table 6A**.

Table 6A
2024 Background Traffic without Project – Level of Service

Roadway Link (Data Source)	Roadway Link Location	City of Bonita Springs Traffic Data – LOS*
Bonita Beach Rd	Imperial Pkwy to I-75	<u>2,457 - C</u>
Bonita Beach Rd	I-75 to Bonita Grande Dr	<u>991 - B</u>
Bonita Beach Rd	East of Bonita Grande Dr	<u>809 - B</u>
Bonita Grande Dr	E Terry St to BBR	<u>456 - C</u>

Note(s): The projected 2024 Peak Hour – Peak Direction Background Traffic is underlined and **bold** as applicable.

* Refer to **Table 4** and **Appendix F**.

The estimated project impacts are evaluated based on City of Bonita Springs traffic count data for future 2024 background traffic.

Significantly impacted roadways are defined as any segment where the directional peak hour project trips exceed 2% or 3%, as applicable, of the directional peak hour capacity of the level of service standard for each segment as identified in Subsection 5.03, Link Trips, of the City of Bonita Springs TIS Guidelines. Based on these criteria, the projects impacts are significant on all analyzed roadway segments.

Future projected background traffic volumes are combined with estimated project trips, as illustrated in **Table 6B**. As illustrated in **Table 6B**, the analyzed roadway segments are not projected to exceed the LOS standard capacity volume with or without the project at 2024 future conditions.

Table 6B
Roadway LOS – Traffic Impact – PM Peak Hour

Roadway Link	Performance LOS – Capacity Volume ⁽¹⁾	2024 Background Pk Dir Vol (trips/hr) – LOS ⁽²⁾	PM Pk Hr, Pk Dir, Project Vol Added ⁽³⁾	2024 Total PM Pk Hr, Pk Dir Roadway Link Volume – LOS ⁽⁴⁾	Project PM Pk Hr, Pk Dir as % of Performance Capacity	2024 Background Volume exceeds Performance Capacity? Yes/No	2024 Total Volume w/Project exceeds Performance Capacity? Yes/No
Bonita Beach Rd	E – 2,800	2,457 – C	EB – 177	2,634 – C	6.3%	No	No
Bonita Beach Rd	E – 2,020	991 – B	WB – 288	1,279 – B	14.3%	No	No
Bonita Beach Rd	E – 2,020	809 – B	EB – 202	1,011 – B	10.0%	No	No
Bonita Grande Dr	E – 860	456 – C	NB – 57	513 – C	6.6%	No	No

- Note(s): ⁽¹⁾ Refer to Table 5 from this report.
⁽²⁾ Refer to Table 4B from this report and Appendix F.
⁽³⁾ Refer to Table 3 from this report.
⁽⁴⁾ 2024 Projected Volume = 2024 background + Project Volume added and Appendix F.

Site Access Considerations

As illustrated in the Master Concept Plan, connections to the subject site are proposed as follows: one full movement western access and one left-in/right-in/right-out eastern access onto Bonita Beach Road; one full movement northern access, one left-in/right-in/right-out middle access and one right-in/right-out southern access onto Bonita Grande Drive. For more details refer to **Appendix A: Project Master Site Plan**.

Proposed accesses meet or exceed spacing and connection separation criteria illustrated in Lee County AC-11-1 – Functional Classification of Roadways, Exhibit 2. A detailed evaluation of applicable access points/intersections will be performed in Section 2 – Site Access and Intersection Analyses.

Improvement Analysis

Based on the link analysis and trip distribution, projected traffic impacts are significant on the analyzed roadway segments.

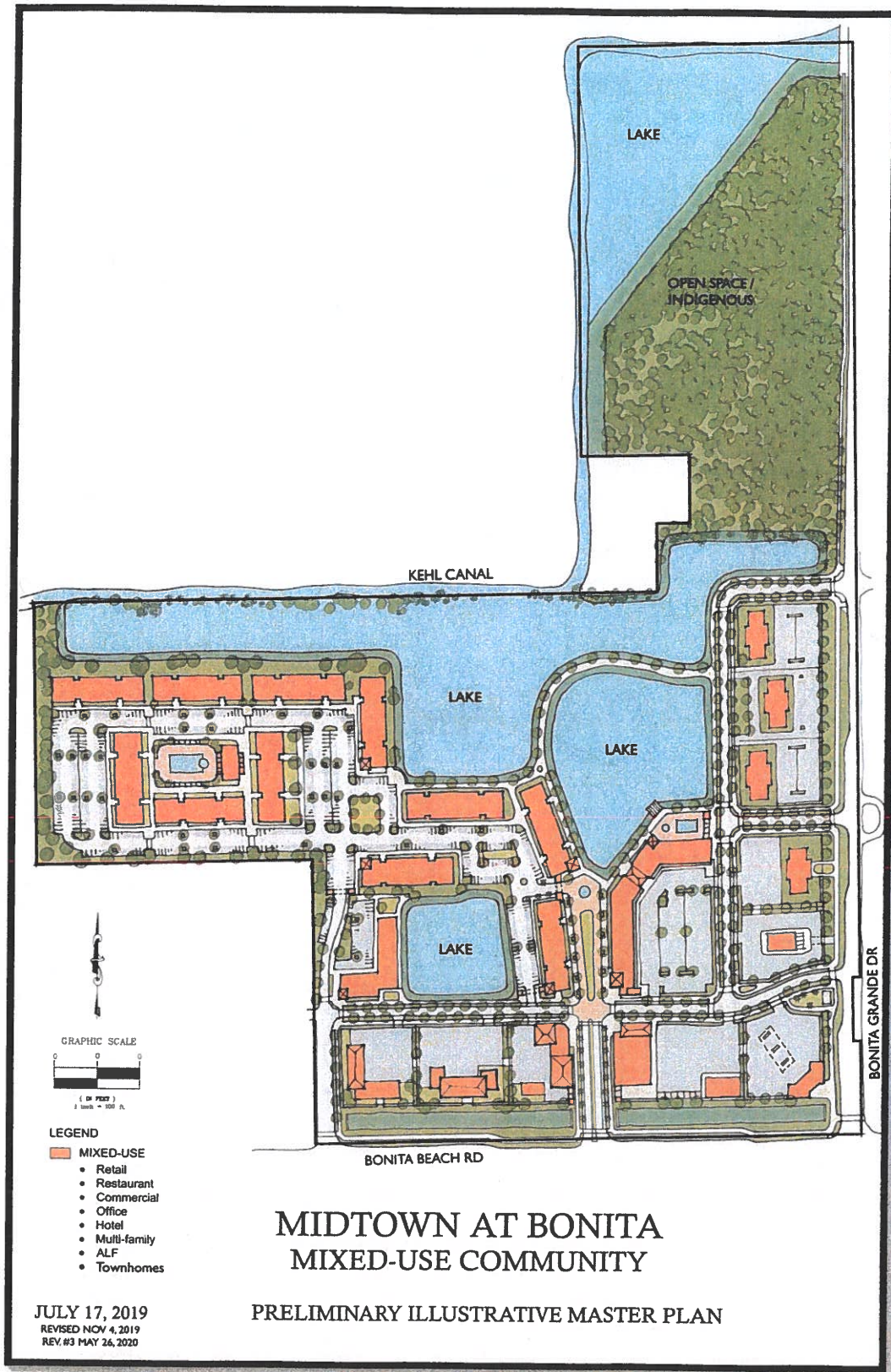
There is adequate and sufficient roadway capacity on all analyzed roadway links to accommodate the proposed development at 2024 build-out conditions.

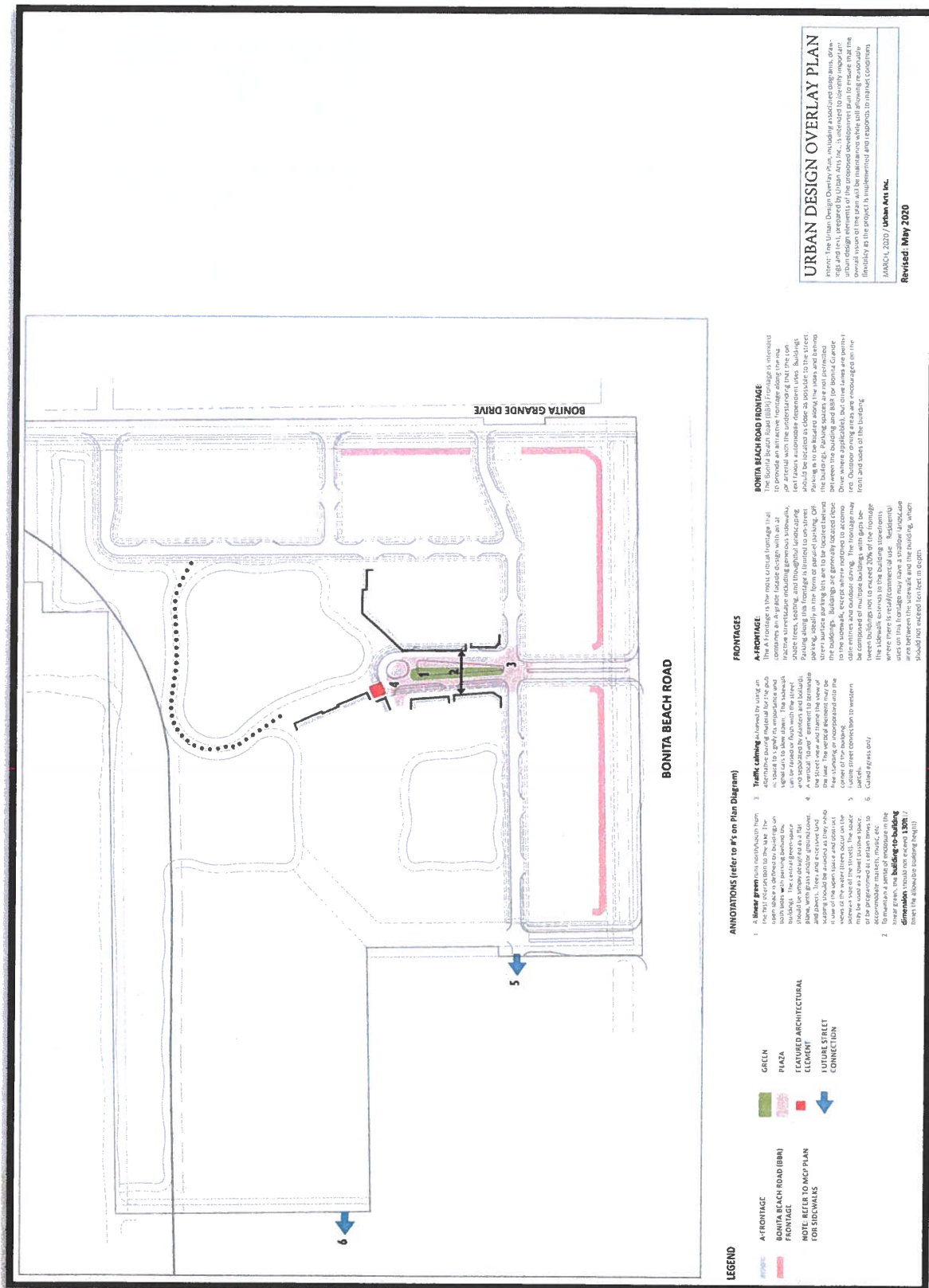
The maximum total daily trip generation for the proposed MPD development shall not exceed 1,166 two-way PM peak hour net external trips based on the land use codes in the ITE Trip Generation Manual in effect at the time of future development order applications.

Mitigation of Impact

The developer proposes to pay the appropriate City of Bonita Springs/Lee County transportation impact fees, as applicable, as building permits are issued for the project.

Appendix A:
Project Master Site Plan





Appendix B:
Initial Meeting Checklist (Methodology)

METHODOLOGY - INITIAL MEETING CHECKLIST

Date: July 12, 2019 Time: N/A

Location: N/A – Via Email

People Attending:

Name, Organization, and Telephone Numbers

- 1) Tom Ross, PE
- 2) Norman Trebilcock, TCS
- 3) Ciprian Malaescu, TCS
- 4) Daniel Doyle, TCS

Study Preparer:

Preparer's Name and Title: Norman Trebilcock, AICP, PE

Organization: Trebilcock Consulting Solutions, PA

Address & Telephone Number: 2800 Davis Boulevard, Suite 200, Naples, FL 34104; ph 239-566-9551

Reviewer(s):

Reviewer's Name & Title: Tom Ross, PE

Address: 225 East Robinson St., Suite 505, Orlando, FL 32801

Telephone Number: 407-423-0030

Applicant:

Applicant's Name: The Zuckerman Group

Address: 6131 Lyons Road, Suite 200, FL 33073

Telephone Number: 954-481-3700

Proposed Development:

Name: Bonita Grande MPD – fka Eagle Trust CPD/fka Roberts Group CPD

Location: The northwest quadrant of the intersection of Bonita Beach Road and Bonita Grande Drive, Bonita Springs, FL – refer to Figure 1 on next page

ITE Land Use Type: Multifamily Housing (Low-Rise), Hotel and Shopping Center

ITE Code #: Land Use Code (LUC) 220, 310 and 820

Description:

The property is currently approved as Commercial Planned Development (CPD) and allows up to a maximum of 350,000 sf of commercial floor area (City of Bonita Springs, Zoning Ordinance No. 08-09). The project proposes to allow for a new Mixed-Use Planned Development (MPD) to consist of up to 500 multifamily dwelling units, 150 hotel rooms and 350,000 sf of shopping center.

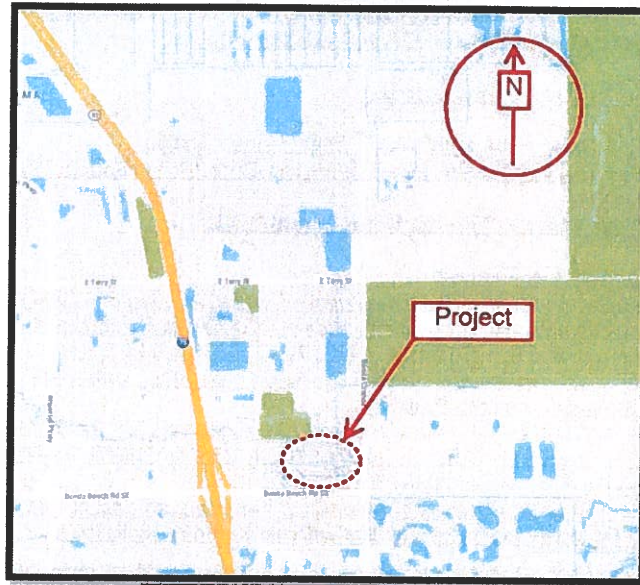
Zoning:

Existing: Commercial Planned Development (CPD)

Comprehensive plan recommendation: N/A

Requested: Zoning change to MPD

Figure 1 – Location Map



Findings of the Preliminary Study:

As illustrated in the approved Ord. 08-09, the development is limited to a trip count of 1,260 PM peak hour. As illustrated in the 8th Edition trip generation, the pass-by traffic was limited to 213 PM peak hour trips.

The TIS will include AM/PM peak hour trip generation, traffic distribution and assignments and significance test.

Concurrency analysis based on projected net new PM peak hour of the adjacent street (proposed scenario versus existing approved development parameters).

Internal capture is calculated based on ITE recommendations and City of Bonita Springs TIS Guidelines 20% maximum internal capture limitation.

Pass-by – assumed 15% daily (2,086 trips), 25% AM pk hr (80 trips) and 25% PM pk hr (311 trips). PM pk hr pass-by was further reduced to 17% (212 trips) to comply with the FDOT 10% rule of the adjacent traffic as approved for the CPD.

Site access turn lanes analysis – AM-PM peak hour external traffic at buildout conditions – based on Lee County Turn Lane Policy AC 11-4.

Study Area:

Roadway Links: Bonita Beach Road, Bonita Grande Drive
Additional intersections to be analyzed: N/A
Build Out Year: 2023
Horizon Year: 2024
Analysis Time Period(s): AM/PM peak hour
Future Off-Site Developments: to be determined
Source of Trip Generation Rates: ITE 10th – OTISS software

Reductions in Trip Generation Rates:

None: N/A
Pass-by trips: Based on approved ITE 8th Edition trip generation
Internal trips: Based on ITE recommendations and City of Bonita Springs TIS Guidelines
Transit use: N/A

Horizon Year Roadway Network Improvements: 2023

Methodology & Assumptions:

Non-site traffic estimates: 2018 Lee County Concurrency Report; 2018 Lee County Traffic Count Report; and City of Bonita Springs 2018 Traffic Count Report
Site-trip generation: ITE 10th Edition - LUC 220, LUC 310 and LUC 820
Trip distribution - assignment method: Generally consistent with 2007 TIS Project Traffic Distribution – refer to Figure 2
Traffic site access turn lane analysis method: Based on 2007 TIS Total PM Peak Hour Site Traffic Assignment – Generally consistent with 2007 TIS Traffic Assignment to the Site Access Drives – refer to Figure 3
Traffic growth rate: growth rate 2% minimum or historical traffic count data as contained within Lee County or Bonita Springs Traffic Count Report as applicable.

Figure 2 – Project Trip Distribution Map by Percentage

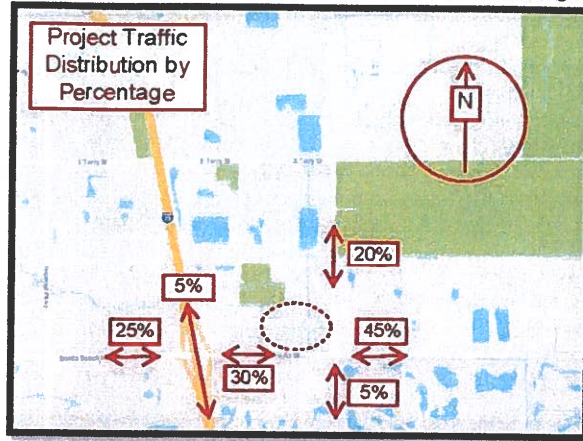
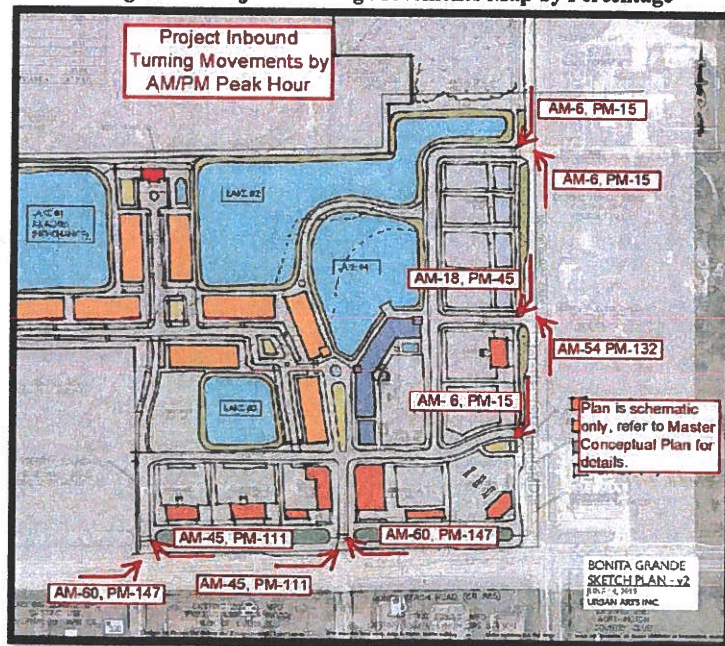


Figure 3 – Project Turning Movements Map by Percentage



Special Features: (from preliminary study or prior experience)
Accidents locations: N/A
Sight distance: N/A
Queuing: to be determined
Access location & configuration: N/A
Traffic control: MUTCD
Signal system location & progression needs: N/A
On-site parking needs: N/A
Data Sources: ITE 10th Edition – Trip Generation OTISS Software
Base maps: N/A
Prior study reports: N/A
Access policy and jurisdiction: N/A
Review process: N/A
Requirements: N/A
Miscellaneous: N/A

SIGNATURES

Norman Trebilcock

Study Preparer—Norman Trebilcock

City Staff Comments - 7-23-2019

We have reviewed the proposed methodology and provide the following comments:

1. All City of Bonita Springs TIS Guideline requirements shall be satisfied.
2. Include an arterial analysis of Bonita Beach Road, using the latest version of Synchro, from Imperial Parkway to Bonita Grande Drive.
3. Include the proposed signal at Trade Way Two in the proposed conditions.
4. Analyses shall be performed for existing, background and proposed (background with project traffic) conditions for the AM and PM peak periods.
5. Use the latest City of Bonita Springs traffic counts where available (currently 2019).
6. Background traffic shall include all vested trips as provided by Community Development including all approved PUDs along Bonita Beach Road between Imperial Parkway and one-half mile east of Bonita Grande Drive. The approved CPD for this site may also be included in the background conditions, however, the trip generation shall be based on the ITE 10th Edition Trip Generation rates with the allowed uses as specified and limited in Zoning Ordinance No. 08-09.
7. Community Development does not agree with the traffic distribution as proposed. Community Development will accept the following changes:
 - a. 10% to the north on Bonita Grande Drive
 - b. 35% to the east on Bonita Beach Road
 - c. 10% to the north and 10% to south on I-75
 - d. 5% to the south on Bonita Grande Drive is acceptable
 - e. Adjust remainder to west of I-75 on Bonita Beach Road

Appendix C:
ITE Trip Generation Calculations

Proposed Conditions – ITE 10th Edition

Project Information							
Project Name:	Bonita Grande - MPD Zoning--2--482 MF Units						
No:							
Date:	5/21/2020						
City:							
State/Province:							
Zip/Postal Code:							
Country:							
Client Name:							
Analyst's Name:							
Edition:	Trip Gen Manual, 10th Ed						

Land Use	Size	Weekday		AM Peak Hour		PM Peak Hour	
		Entry	Exit	Entry	Exit	Entry	Exit
220 - Multifamily Housing (Low-Rise) (General Urban/Suburban)	482 Dwelling Units	1802	1801	49	164	151	88
Reduction		0	0	0	0	0	0
Internal		36	18	1	2	69	40
Pass-by		0	0	0	0	0	0
Non-pass-by		1766	1783	48	162	82	48
310 - Hotel (General Urban/Suburban)	165 Occupied Rooms	1009	1009	59	43	59	61
Reduction		0	0	0	0	0	0
Internal		0	141	0	6	13	10
Pass-by		0	0	0	0	0	0
Non-pass-by		1009	868	59	37	46	51
820 - Shopping Center (General Urban/Suburban)	315.4 1000 Sq. Ft. GLA	6565	6564	192	117	610	661
Reduction		0	0	0	0	0	0
Internal		159	36	8	1	47	79
Pass-by		961	979	46	29	101	105
Non-pass-by		5445	5549	138	87	462	477
Total		9376	9374	300	324	820	810
Total Reduction		0	0	0	0	0	0
Total Internal		195	195	9	9	129	129
Total Pass-by		961	979	46	29	101	105
Total Non-pass-by		8220	8200	245	286	590	576

PERIOD SETTING

Analysis Name : Weekday
Project Name : Bonita Grande - MPD Zoning- No :
 -2-482 MF Units
Date: 5/21/2020 **City:**
State/Province: **Zip/Postal Code:**
Country: **Client Name:**
Analyst's Name: **Edition:** Trip Gen Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise) (General Urban/Suburban)	Dwelling Units	482	Weekday	Best Fit (LIN) T = 7.56 (X)+-40.86	1802 50%	1801 50%	3603
310 - Hotel (General Urban/Suburban)	Occupied Rooms	165 ⁽⁰⁾	Weekday	Average 12.23	1009 ⁽¹⁾ 50%	1009 ⁽¹⁾ 50%	2018 ⁽¹⁾
820 - Shopping Center (General Urban/Suburban)	1000 Sq. Ft. GLA	315.4	Weekday	Best Fit (LOG) Ln(T) = 0.68Ln(X) +5.57	6565 50%	6564 50%	13129

(0) indicates size out of range.
 (1) indicates small sample size, use carefully.

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
220 - Multifamily Housing (Low-Rise)	0 %	1802	0 %	1801
310 - Hotel	0 %	1009	0 %	1009
820 - Shopping Center	0 %	6565	0 %	6564

INTERNAL TRIPS

220 - Multifamily Housing (Low-Rise)				310 - Hotel			
Exit	1801	Demand Exit:	0 % (0)	Balanced:	0	Demand Entry:	0 % (0)
Entry	1802	Demand Entry:	0 % (0)	Balanced:	0	Demand Exit:	0 % (0)
220 - Multifamily Housing (Low-Rise)				820 - Shopping Center			
Exit	1801	Demand Exit:	1 % (18)	Balanced:	18	Demand Entry:	17 % (1116)
Entry	1802	Demand Entry:	2 % (36)	Balanced:	36	Demand Exit:	14 % (919)
310 - Hotel				820 - Shopping Center			

Exit 1009	Demand Exit: 14 % (141)	Balanced: 141	Demand Entry: 4 % (263)	Entry 6565
Entry 1009	Demand Entry: 0 % (0)	Balanced: 0	Demand Exit: 0 % (0)	Exit 6564

220 - Multifamily Housing (Low-Rise)

	Total Trips	Internal Trips			External Trips
		310 - Hotel	820 - Shopping Center	Total	
Entry	1802 (100%)	0 (0%)	36 (2%)	36 (2%)	1766 (98%)
Exit	1801 (100%)	0 (0%)	18 (1%)	18 (1%)	1783 (99%)
Total	3603 (100%)	0 (0%)	54 (1%)	54 (1%)	3549 (99%)

310 - Hotel

	Total Trips	Internal Trips			External Trips
		220 - Multifamily Housing (Low-Rise)	820 - Shopping Center	Total	
Entry	1009 (100%)	0 (0%)	0 (0%)	0 (0%)	1009 (100%)
Exit	1009 (100%)	0 (0%)	141 (14%)	141 (14%)	868 (86%)
Total	2018 (100%)	0 (0%)	141 (7%)	141 (7%)	1877 (93%)

820 - Shopping Center

	Total Trips	Internal Trips			External Trips
		220 - Multifamily Housing (Low-Rise)	310 - Hotel	Total	
Entry	6565 (100%)	18 (0%)	141 (2%)	159 (2%)	6406 (98%)
Exit	6564 (100%)	36 (1%)	0 (0%)	36 (1%)	6528 (99%)
Total	13129 (100%)	54 (0%)	141 (1%)	195 (1%)	12934 (99%)

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
220 - Multifamily Housing (Low-Rise)	3549	0	0	3549
310 - Hotel	1877	0	0	1877
820 - Shopping Center	12934	15	1940	10994

ITE DEVIATION DETAILS

Weekday	
Landuse	No deviations from ITE.
Methods	No deviations from ITE.

weekday

External Trips 220 - Multifamily Housing (Low-Rise) (General Urban/Suburban)
 ITE does not recommend a particular pass-by% for this case.

310 - Hotel (General Urban/Suburban)
 ITE does not recommend a particular pass-by% for this case.

820 - Shopping Center (General Urban/Suburban)
 ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	9376
Total Exiting	9374
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	195
Total Exiting Internal Capture Reduction	195
Total Entering Pass-by Reduction	961
Total Exiting Pass-by Reduction	979
Total Entering Non-Pass-by Trips	8220
Total Exiting Non-Pass-by Trips	8200

PERIOD SETTING							
Analysis Name :		AM Peak Hour					
Project Name :		Bonita Grande - MPD Zoning- No : -2-482 MF Units					
Date:		5/21/2020		City:			
State/Province:				Zip/Postal Code:			
Country:				Client Name:			
Analyst's Name:				Edition:		Trip Gen Manual, 10th Ed	
Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise) (General Urban/Suburban)	Dwelling Units	482	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG) $\ln(T) = 0.95\ln(X) + -0.51$	49 23%	164 77%	213
310 - Hotel (General Urban/Suburban)	Occupied Rooms	165	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 0.62	59 58%	43 42%	102
820 - Shopping Center (General Urban/Suburban)	1000 Sq. Ft. GLA	315.4	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN) $T = 0.5 (X) + 151.78$	192 62%	117 38%	309
TRAFFIC REDUCTIONS							
Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit			
220 - Multifamily Housing (Low-Rise)	0 %	49	0 %	164			
310 - Hotel	0 %	59	0 %	43			
820 - Shopping Center	0 %	192	0 %	117			
INTERNAL TRIPS							
220 - Multifamily Housing (Low-Rise)				310 - Hotel			
Exit 164	Demand Exit: 0 % (0)	Balanced: 0	Demand Entry: 0 % (0)	Entry 59			
Entry 49	Demand Entry: 0 % (0)	Balanced: 0	Demand Exit: 0 % (0)	Exit 43			
220 - Multifamily Housing (Low-Rise)				820 - Shopping Center			

Exit	164	Demand Exit:	1 % (2)	Balanced:	2	Demand Entry:	17 % (33)	Entry	192
Entry	49	Demand Entry:	2 % (1)	Balanced:	1	Demand Exit:	14 % (16)	Exit	117

310 - Hotel

820 - Shopping Center

Exit	43	Demand Exit:	14 % (6)	Balanced:	6	Demand Entry:	4 % (8)	Entry	192
Entry	59	Demand Entry:	0 % (0)	Balanced:	0	Demand Exit:	0 % (0)	Exit	117

220 - Multifamily Housing (Low-Rise)

	Total Trips	Internal Trips			External Trips
		310 - Hotel	820 - Shopping Center	Total	
Entry	49 (100%)	0 (0%)	1 (2%)	1 (2%)	48 (98%)
Exit	164 (100%)	0 (0%)	2 (1%)	2 (1%)	162 (99%)
Total	213 (100%)	0 (0%)	3 (1%)	3 (1%)	210 (99%)

310 - Hotel

	Total Trips	Internal Trips			External Trips
		220 - Multifamily Housing (Low-Rise)	820 - Shopping Center	Total	
Entry	59 (100%)	0 (0%)	0 (0%)	0 (0%)	59 (100%)
Exit	43 (100%)	0 (0%)	6 (14%)	6 (14%)	37 (86%)
Total	102 (100%)	0 (0%)	6 (6%)	6 (6%)	96 (94%)

820 - Shopping Center

	Total Trips	Internal Trips			External Trips
		220 - Multifamily Housing (Low-Rise)	310 - Hotel	Total	
Entry	192 (100%)	2 (1%)	6 (3%)	8 (4%)	184 (96%)
Exit	117 (100%)	1 (1%)	0 (0%)	1 (1%)	116 (99%)
Total	309 (100%)	3 (1%)	6 (2%)	9 (3%)	300 (97%)

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
220 - Multifamily Housing (Low-Rise)	210	0	0	210
310 - Hotel	96	0	0	96
820 - Shopping Center	300	25	75	225

ITE DEVIATION DETAILS

Weekday Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 220 - Multifamily Housing (Low-Rise) (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

310 - Hotel (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

820 - Shopping Center (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	300
Total Exiting	324
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	9
Total Exiting Internal Capture Reduction	9
Total Entering Pass-by Reduction	46
Total Exiting Pass-by Reduction	29
Total Entering Non-Pass-by Trips	245
Total Exiting Non-Pass-by Trips	286

PERIOD SETTING

Analysis Name : PM Peak Hour
Project Name : Bonita Grande - MPD Zoning- No :
 -2-482 MF Units
Date: 5/21/2020 **City:**
State/Province: **Zip/Postal Code:**
Country: **Client Name:**
Analyst's Name: **Edition:** Trip Gen Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
220 - Multifamily Housing (Low-Rise) (General Urban/Suburban)	Dwelling Units	482	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $Ln(T) = 0.89Ln(X) + -0.02$	151 63%	88 37%	239
310 - Hotel (General Urban/Suburban)	Occupied Rooms	165	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average 0.73	59 49%	61 51%	120
820 - Shopping Center (General Urban/Suburban)	1000 Sq. Ft. GLA	315.4	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $Ln(T) = 0.74Ln(X) + 2.89$	610 48%	661 52%	1271

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
220 - Multifamily Housing (Low-Rise)	0 %	151	0 %	88
310 - Hotel	0 %	59	0 %	61
820 - Shopping Center	0 %	610	0 %	661

INTERNAL TRIPS

220 - Multifamily Housing (Low-Rise)			310 - Hotel		
Exit	88	Demand Exit: 3 % (3)	Balanced: 3	Demand Entry: 12 % (7)	Entry 59
Entry	151	Demand Entry: 0 % (0)	Balanced: 0	Demand Exit: 2 % (1)	Exit 61
220 - Multifamily Housing (Low-Rise)			820 - Shopping Center		

Exit 88	Demand Exit: 42 % (37)	Balanced: 37	Demand Entry: 10 % (61)	Entry 610
Entry 151	Demand Entry: 46 % (69)	Balanced: 69	Demand Exit: 26 % (172)	Exit 661
310 - Hotel			820 - Shopping Center	
Exit 61	Demand Exit: 16 % (10)	Balanced: 10	Demand Entry: 2 % (12)	Entry 610
Entry 59	Demand Entry: 17 % (10)	Balanced: 10	Demand Exit: 5 % (33)	Exit 661

220 - Multifamily Housing (Low-Rise)

	Total Trips	Internal Trips			External Trips
		310 - Hotel	820 - Shopping Center	Total	
Entry	151 (100%)	0 (0%)	69 (46%)	69 (46%)	82 (54%)
Exit	88 (100%)	3 (3%)	37 (42%)	40 (45%)	48 (55%)
Total	239 (100%)	3 (1%)	106 (44%)	109 (46%)	130 (54%)

310 - Hotel

	Total Trips	Internal Trips			External Trips
		220 - Multifamily Housing (Low-Rise)	820 - Shopping Center	Total	
Entry	59 (100%)	3 (5%)	10 (17%)	13 (22%)	46 (78%)
Exit	61 (100%)	0 (0%)	10 (16%)	10 (16%)	51 (84%)
Total	120 (100%)	3 (3%)	20 (17%)	23 (19%)	97 (81%)

820 - Shopping Center

	Total Trips	Internal Trips			External Trips
		220 - Multifamily Housing (Low-Rise)	310 - Hotel	Total	
Entry	610 (100%)	37 (6%)	10 (2%)	47 (8%)	563 (92%)
Exit	661 (100%)	69 (10%)	10 (2%)	79 (12%)	582 (88%)
Total	1271 (100%)	106 (8%)	20 (2%)	126 (10%)	1145 (90%)

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
220 - Multifamily Housing (Low-Rise)	130	0	0	130
310 - Hotel	97	0	0	97
820 - Shopping Center	1145	18	206	939

ITE DEVIATION DETAILS

Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 220 - Multifamily Housing (Low-Rise) (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

310 - Hotel (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

820 - Shopping Center (General Urban/Suburban)
The chosen pass-by% (18) is not provided by ITE. ITE recommends 34.

SUMMARY

Total Entering	820
Total Exiting	810
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	129
Total Exiting Internal Capture Reduction	129
Total Entering Pass-by Reduction	101
Total Exiting Pass-by Reduction	105
Total Entering Non-Pass-by Trips	590
Total Exiting Non-Pass-by Trips	576

Approved Conditions – Trip Generation PM Peak Hour – ITE 8th Edition

PERIOD SETTING							
Analysis Name :	PM Peak Hour						
Project Name :	Bonita Grande- BBR NW Corner - Approved			No :			
Date:	4/25/2019		City:				
State/Province:				Zip/Postal Code:			
Country:				Client Name:			
Analyst's Name:				Edition:	Trip Generation Manual, 8th Ed		
Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
820 - Shopping Center (General Urban/Suburban)	1000 Sq. Feet Gross Leasable Area	350	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $\ln(T) = 0.67\ln(X) + 3.37$	722 49%	751 51%	1473
TRAFFIC REDUCTIONS							
Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit			
820 - Shopping Center	0 %	722	0 %	751			
EXTERNAL TRIPS							
Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips			
820 - Shopping Center	1473	N/A	213	1,260			
		10% Adjacent Street Traffic					

Approved Conditions – Trip Generation PM Peak Hour – ITE 10th Edition

PERIOD SETTING							
Analysis Name :	PM Peak Hour						
Project Name :	Bonita Grande - Approved	No :					
Date:	7/16/2019	City:					
State/Province:		Zip/Postal Code:					
Country:		Client Name:					
Analyst's Name:		Edition:	Trip Generation Manual, 10th Ed				
Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
820 - Shopping Center (General Urban/Suburban)	1000 Sq. Ft. GLA	350	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $Ln(T) = 0.74Ln(X) + 2.89$	659 48%	714 52%	1373
TRAFFIC REDUCTIONS							
Land Use		Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit		
820 - Shopping Center		0 %	659	0 %	714		
EXTERNAL TRIPS							
Land Use		External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips		
820 - Shopping Center		1373	15	206	1167		

Appendix D:
Bonita Springs 2019 Traffic Count Data (Excerpts)

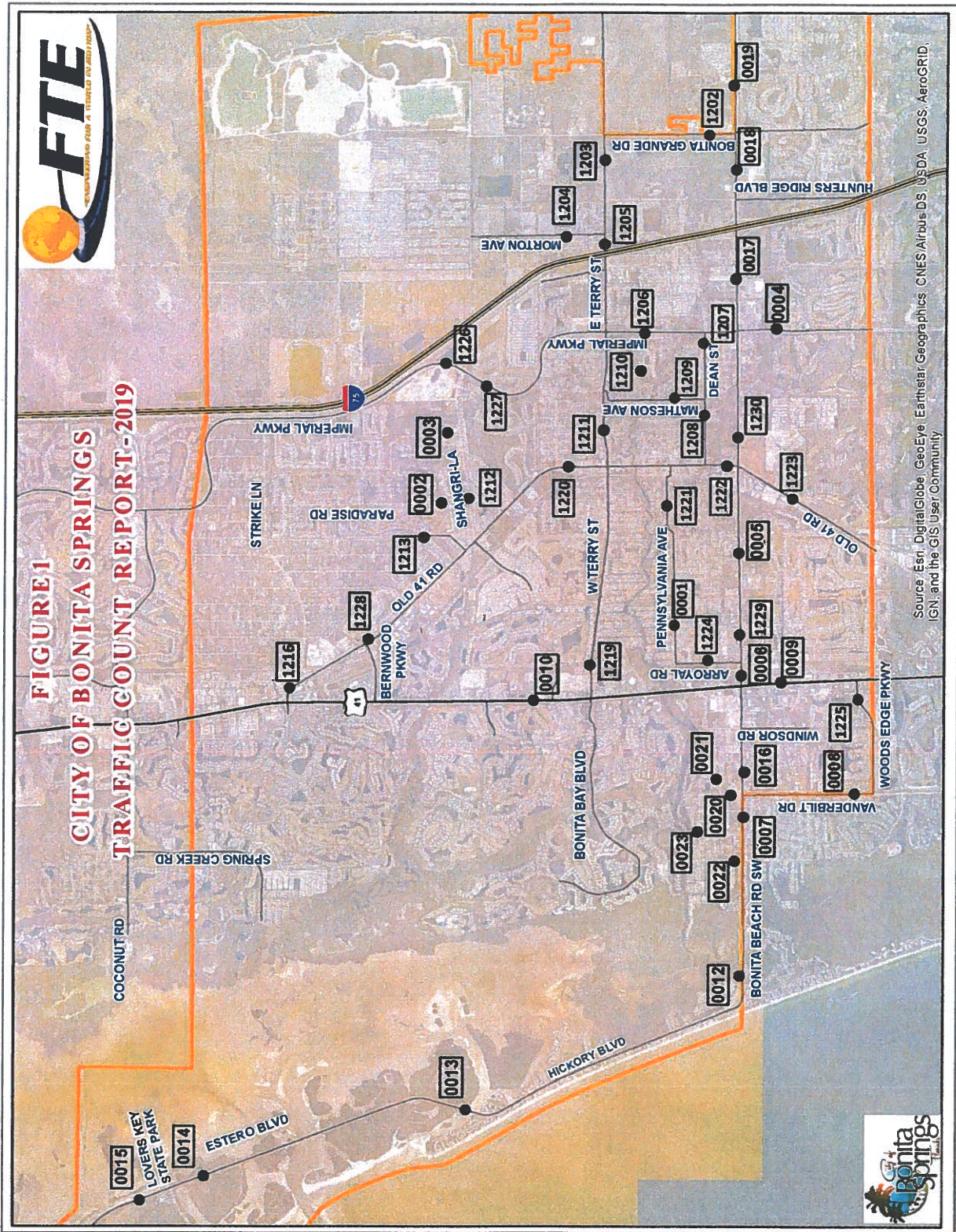




TABLE 1 2019 TRAFFIC COUNT SUMMARY
CITY OF BONITA SPRINGS, FL

FTE Station Number	Reference Lee County Station Number	Location	Start Date	Direction 1 and 2	3 Day Average Direction 1	3 Day Average Direction 2	ADT Direction 1 and 2	FDOT Seasonal Factor	AADT Direction 1 and 2	K Factor from Lee County	D Factor from Lee County	Peak Hour Two-way Service Volumes	Level Of Service (LOS)	Lee County PCS
1224	496	Arroyal Rd N of Bonita Beach Rd	2-Apr-19	N/S	3991	3102	7093	0.95	6700	15%	57%	1005	D	42
0005	N/A	Bonita Beach Rd between Wisconsin St & Michigan St	2-Apr-19	E/W	16064	15994	32058	0.95	30500	15%	57%	4575	F	42
0016	7	Bonita Beach Rd E. of Vandebilt Dr	2-Apr-19	E/W	15029	15120	30149	0.95	28600	10%	55%	2860	C	7
1229	221	Bonita Beach Rd East of Arroyal Rd	2-Apr-19	E/W	17672	16894	34566	0.95	32800	15%	57%	4920	C	42
0006	N/A	Bonita Beach Rd W. of Arroyal Rd	2-Apr-19	E/W	18953	17386	36339	0.95	34500	10%	51%	3450	C	92
1230	N/A	Bonita Beach Rd W of Race Track Rd	2-Apr-19	E/W	22038	21127	43165	0.95	41000	15%	57%	6150	F	42
0012**	N/A	Bonita Beach Rd E. of Birdfoot Blvd	2-Apr-19	E/W	11324	11118	22442	0.95	21300	10%	55%	2130	C	7
0007**	N/A	Bonita Beach Rd W. of Vandebilt Dr	2-Apr-19	E/W	14059	14119	28178	0.95	26800	10%	55%	2680	C	7
1202	519	Bonita Grande Dr N of Bonita Beach Rd	2-Apr-19	N/S	4176	4149	8325	0.95	7900	15%	57%	1185	D	42
1213	N/A	Cockleshill Dr N of Shangri-La Rd	2-Apr-19	N/S	1024	657	1681	0.95	1600	11%	63%	176	C	16
1207	N/A	Dean St E of Lime St	2-Apr-19	E/W	1828	1801	3629	0.95	3400	15%	57%	510	C	42
1208	N/A	Dean St W of Matheson Ave	2-Apr-19	E/W	1454	1283	2737	0.95	2600	15%	57%	390	C	42
1205	N/A	E Terry St E of I-75	2-Apr-19	E/W	5291	5390	10681	0.95	10100	15%	57%	1515	D	42
1211	271	E Terry St E of Old 41 Rd	2-Apr-19	E/W	7839	8675	16514	0.95	15700	15%	57%	2355	C	42
1203	N/A	E Terry St W of Bonita Grande Dr	2-Apr-19	E/W	3603	3629	7232	0.95	6900	15%	57%	1035	D	42
0013**	N/A	Espero Blvd N. of Hickory Blvd	2-Apr-19	N/S	5178	5380	10558	0.95	10000	9%	52%	900	D	44
0015***	N/A	Espero Blvd N. of Lovens Key State Park	2-Apr-19	N/S	4938	5151	10089	0.95	9600	9%	52%	864	C	44
0014**	N/A	Espero Blvd S. of Lovens Key State Park	2-Apr-19	N/S	4995	5187	10182	0.95	9700	9%	52%	873	C	44
1206	N/A	Imperial Pkwy Between Bonita Beach Rd and E Terry St	2-Apr-19	N/S	14559	14248	28807	0.95	27400	14%	55%	3836	C	63
1226	N/A	Imperial Pkwy N/O Shangri-La	2-Apr-19	N/S	10587	10361	20948	0.95	19900	14%	55%	2786	C	63
0004	N/A	Imperial Pkwy S. of Tropic Dr	2-Apr-19	N/S	13153	13312	26465	0.95	25100	14%	55%	3514	C	63
1227	N/A	Imperial Pkwy S/O Shangri-La	2-Apr-19	N/S	11573	10942	22515	0.95	21400	14%	55%	2996	C	63
1209	N/A	Matheson Ave N of Dean St	2-Apr-19	N/S	1095	1015	2110	0.95	2000	15%	57%	300	C	42
1204	N/A	Merton Ave N of East Terry St	2-Apr-19	N/S	3418	3550	6968	0.95	6600	15%	57%	990	D	42

Midtown at Bonita – MPD Rezone – TIS – May 2020

FTE Station Number	Reference Lee County Station Number	Location	Start Date	Direction 1 and 2	3 Day Average Direction 1	3 Day Average Direction 2	ADT Direction 1 and 2	FDOF Seasonal Factor	AVDT Direction 1 and 2	K Factor from Lee County	D Factor from Lee County	Peak Hour Two-way Service Volumes	Level Of Service (LOS)	Lee County PCS
1223	N/A	Old 41 Rd Between Collier County Line to Bonita Beach Rd	2-Apr-19	N/S	9739	8787	18526	0.95	17600	11%	63%	1936	F	16
1222	N/A	Old 41 Rd N of Bonita Beach Rd	2-Apr-19	N/S	6215	6665	12880	0.95	12200	11%	63%	1342	D	16
1220	N/A	Old 41 Rd N of E/W Terry St	2-Apr-19	N/S	6348	6204	12552	0.95	11900	11%	63%	1309	C	16
1216	N/A	Old 41 Rd S of US 41	2-Apr-19	N/S	8132	6068	14200	0.95	13500	11%	63%	1485	C	16
1228	N/A	Old 41 S/O Bernwood Pkwy	2-Apr-19	N/S	8441	8033	16474	0.95	15700	11%	63%	1727	C	16
0002	N/A	Paradise Rd N. of Shangri-La	2-Apr-19	N/S	1882	1774	3656	0.95	3500	14%	59%	490	C	63
0001	N/A	Pennsylvania Ave E. of Los Amigos Lane	2-Apr-19	E/W	2100	2271	4371	0.95	4200	10%	51%	420	C	92
1221	494	Pennsylvania Ave W of Old 41 Rd	2-Apr-19	E/W	2538	2506	5064	0.95	4800	15%	57%	720	C	42
0003	N/A	Tropical Acacia Dr N. of Shangri-La	2-Apr-19	N/S	246	288	534	0.95	500	14%	59%	70	C	63
1212	N/A	Shangri-La Rd E of Old US 41	2-Apr-19	E/W	3917	3575	7492	0.95	7100	11%	63%	781	C	16
0010	N/A	US-41, N. of Shopping Center Entrance	2-Apr-19	N/S	29450	27554	57004	0.95	54200	10%	57%	5420	F	93
0009	N/A	US-41, S. of Beaumont Rd	2-Apr-19	N/S	23327	22996	46323	0.95	44000	10%	51%	4400	F	92
0008	N/A	Vanderbilt Dr N. of Woods Edge Pkwy	2-Apr-19	N/S	4975	4975	9950	0.95	9500	10%	55%	950	C	7
1219	N/A	W Terry St/E of US 41	2-Apr-19	E/W	6274	7142	13416	0.95	12700	15%	57%	1905	F	42
1225	N/A	Woods Edge Pkwy W of US 41	2-Apr-19	E/W	2952	2418	5370	0.95	5100	11%	57%	561	C	23
1210	N/A	Longfellow Ln W of Imperial Pkwy	2-Apr-19	E/W	394	447	841	0.95	800			0		NA
0017	N/A	Bonita Beach Rd between Imperial Parkway and I-75	2-Apr-19	E/W	27009	25942	52951	0.95	50300	15%	57%	7545	F	42
0018	N/A	Bonita Beach Rd between Hunters Ridge Blvd and Bonita Grande Dr	2-Apr-19	E/W	11287	11278	22565	0.95	21400	15%	57%	3210	C	42
0019	N/A	Bonita Beach Rd E. of Bonita Grande Dr	2-Apr-19	E/W	8302	8440	16742	0.95	15900	15%	57%	2385	C	42
0020	N/A	Lake St between Kansas Way and Bonita Beach Rd	2-Apr-19	N/S	340	487	827	0.95	800	12%	55%	96	C	7
0021	N/A	Quail Walk/E. of Luke St	2-Apr-19	E/W	230	206	436	0.95	400	12%	55%	48	C	7
0022	N/A	Imperial Shores Blvd S. of Vanda Dr	2-Apr-19	N/S	1148	1202	2350	0.95	2200			0		NA
0023	N/A	Turpon Avenue E. of Sherry Ln	2-Apr-19	E/W	455	368	823	0.95	800			0		NA



*** Collected weekend counts also.



TABLE 2 HISTORIC TRAFFIC COUNT SUMMARY
CITY OF BONITA SPRINGS, FL

PTE Station Number	Reference Lee County Station Number	Location	Obtained from the Lee County Traffic Count Report 2012												Counts performed by FTE or obtained from Lee County											
			2003	2004	2005	2006	2007	2008	Dec-09	Dec-10	Feb-12	Jun-14	Feb-15	Feb-16	March-17	March-18	19-Apr									
1224	0496	Arroyal Rd N of Bonita Beach Rd	5000	6200	6500	6400	5500	4700	6000	5000	5900	5500	6300	6100	6300	6700										
0005	N/A	Bonita Beach Rd between Wisconsin St & Michigan St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28500	26700	30500										
0016	0007	Bonita Beach Rd E. of Vandebilt Dr	N/A	N/A	N/A	N/A	U/C	23400	24800	23300	24600	25700	30300	30300	25300	28600										
1229	0221	Bonita Beach Rd East of Arroyal Rd	N/A	27000	25200	25600	26300	26300	22900	N/A	N/A	N/A	32300	31100	28800	32800										
0006	N/A	Bonita Beach Rd W. of Arroyal Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30700	30500	34500										
1230	N/A	Bonita Beach Rd W. of Race Track Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37500	36100	34900	41000										
0012**	N/A	Bonita Beach Rd E. of Barfoot Blvd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19400	19000	21500										
0007**	N/A	Bonita Beach Rd W. of Vandebilt Dr	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25300	24700	26800										
1202	0319	Bonita Grande Dr N of Bonita Beach Rd	5400	7400	7100	8200	6800	5300	5600	6100	5500	6200	6600	6300	7200	7900										
1213	N/A	Cocklehill Dr N of Shampri-LA Rd	N/A	N/A	N/A	N/A	N/A	N/A	1900	2300	1700	1900	3900	3700	2100	1600										
1207	N/A	Dean St E. of Lane St	N/A	N/A	N/A	N/A	N/A	N/A	3400	3300	2800	2700	3000	2800	2600	3400										
1208	N/A	Dean St W. of Metheson Ave	N/A	N/A	N/A	N/A	N/A	N/A	2800	2400	2000	2000	2500	2400	2100	2600										
1205	N/A	E Terry St E. of I-75	N/A	N/A	N/A	N/A	N/A	N/A	8100	7900	7800	8100	9000	8600	8700	10100										
1211	0271	E Terry St E. of Old 41 Rd	9900	12000	13800	U/C	10000	14400	14300	14800	13400	12700	14800	14200	13200	15700										
1205	N/A	E Terry St W. of Bonita Grande Dr	N/A	N/A	N/A	N/A	N/A	N/A	4600	4300	4400	4300	5600	5400	5700	6900										
0013**	N/A	Estero Blvd N. of Hickory Blvd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9100	9000	10000										
0015**	N/A	Estero Blvd N. of Lovers Key State Park	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8600	9000	9600										
0014**	N/A	Estero Blvd S. of Lovers Key State Park	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8800	9100	9700										
1206	N/A	Imperial Pkwy Between Bonita Beach Rd and E Terry St	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19600	20600	23300	21100	23300	27400										
1226	N/A	Imperial Pkwy N/O Shampri-LA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13000	15900	15300	15700	19900										
0004	N/A	Imperial Pkwy S. of Terry Dr	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20200	20500	25100										
1227	N/A	Imperial Pkwy S/O Shampri-LA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16600	18000	21400										
1209	N/A	Metheson Ave N. of Dean St	N/A	N/A	N/A	N/A	N/A	N/A	1900	1700	1800	1300	2100	2100	1600	2000										
1204	N/A	Monon Ave N. of East Terry St	N/A	N/A	N/A	N/A	N/A	N/A	5800	5400	5300	5300	5900	5700	5600	6600										
1223	N/A	Old 41 Rd Between Collier County Line to Bonita Beach Rd	12600	13700	14000	14000	13000	11600	N/A	15200	14100	14900	14700	14200	15200	17600										
1222	N/A	Old 41 Rd N. of Bonita Beach Rd	16500	18100	17600	17400	18300	13200	15400	14700	13500	13100	9000	8700	10500	12200										
1220	N/A	Old 41 Rd N. of E/W Terry St	22000	24600	26300	26700	23500	19900	23800	28300	25200	20700	18400	17700	19000	11900										
1216	N/A	Old 41 Rd S. of US 41	13000	14200	15000	16000	19300	N/A	12000	12500	12100	12000	11900	11500	11800	13500										

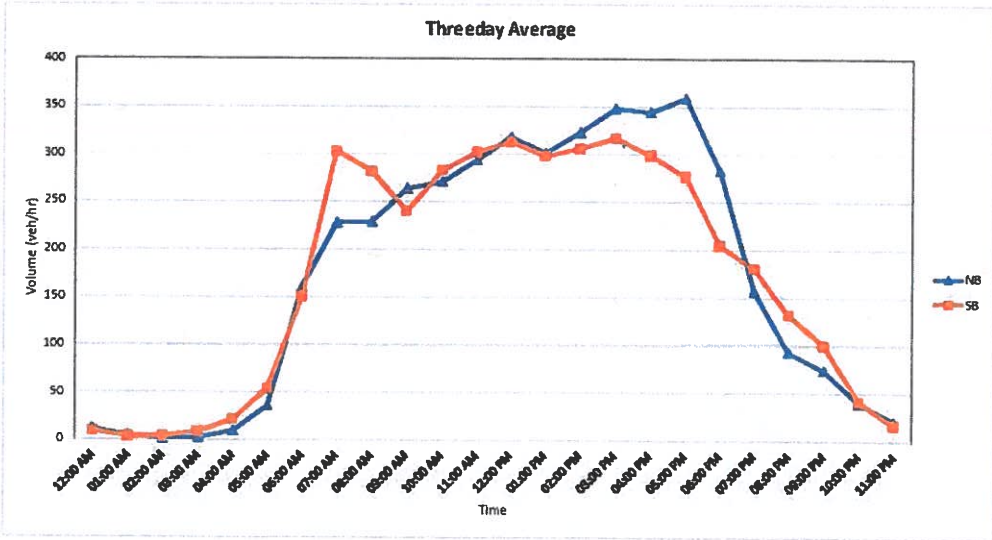
Midtown at Bonita – MPD Rezone – TIS – May 2020

1202_Bonita Grande Dr N of Bonita Beach Rd
Bonita Springs, FL



8250 Pascal Dr
Punta Gorda, FL
PH# (841) 639 2818
Fax# (841) 639 4851

Time	Tuesday 4/2/2019		Wednesday 4/3/2019		Thursday 4/4/2019		Threeday Average	
	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	10	10	9	8	17	11	12	10
01:00 AM	8	6	2	4	4	3	5	4
02:00 AM	2	4	4	4	1	5	2	4
03:00 AM	3	10	3	9	3	8	3	9
04:00 AM	14	22	7	24	8	20	10	22
05:00 AM	36	52	28	62	43	49	36	54
06:00 AM	161	143	166	151	155	156	161	150
07:00 AM	222	311	254	295	208	304	228	303
08:00 AM	222	265	227	290	238	290	229	262
09:00 AM	285	240	242	254	265	227	264	240
10:00 AM	283	282	265	266	265	262	271	263
11:00 AM	313	322	279	270	290	315	294	302
12:00 PM	347	324	277	297	331	319	316	313
01:00 PM	285	304	314	307	305	284	301	298
02:00 PM	353	290	309	309	307	320	323	306
03:00 PM	356	344	336	285	353	322	349	317
04:00 PM	363	326	343	271	327	298	344	299
05:00 PM	348	294	323	269	405	268	359	277
06:00 PM	272	230	237	172	341	212	263	205
07:00 PM	146	167	143	142	160	211	157	180
08:00 PM	97	157	94	130	89	110	93	132
09:00 PM	77	101	68	70	78	130	74	100
10:00 PM	34	38	44	56	43	32	40	42
11:00 PM	14	13	26	19	24	18	21	17
Day Total	4253	4277	4000	3984	4280	4194	4176	4149
Combine Totals	8530		7984		8474		8325	

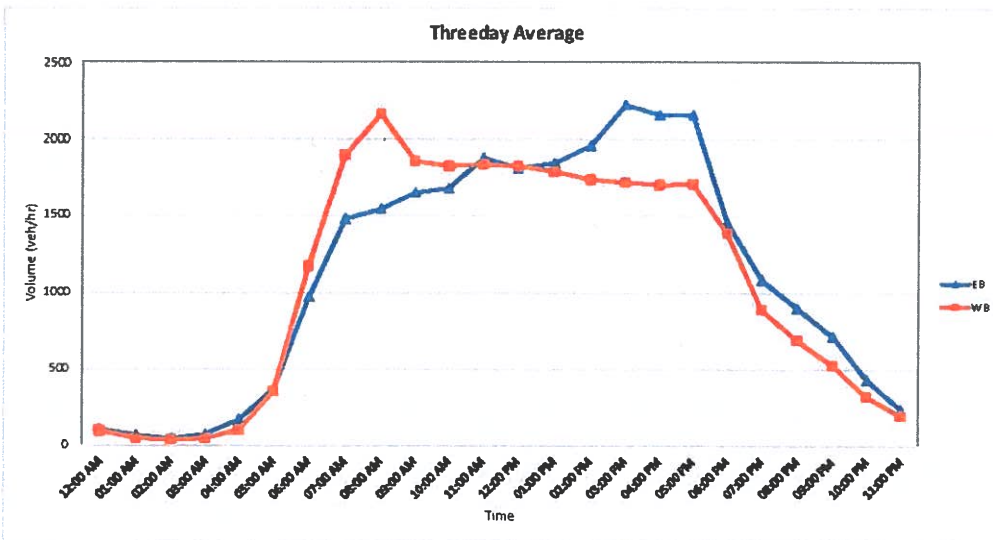


0017_Bonita Beach Rd btw Imperial Pkwy & I-7
Bonita Springs, FL



8250 Pascal Dr
Punta Gorda, FL
Ph# (841) 639 2818
Fax# (841) 639 4851

Time	Tuesday 4/2/2019		Wednesday 4/3/2019		Thursday 4/4/2019		Threeday Average	
	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	103	100	109	101	114	100	109	100
01:00 AM	56	53	65	50	86	46	69	50
02:00 AM	56	35	39	37	40	45	45	39
03:00 AM	87	59	70	46	66	40	74	48
04:00 AM	173	106	182	111	157	93	171	103
05:00 AM	382	354	367	375	356	343	368	357
06:00 AM	1016	1185	948	1141	943	1202	969	1175
07:00 AM	1525	1863	1449	1974	1465	1851	1480	1896
08:00 AM	1537	2219	1555	2156	1534	2114	1542	2166
09:00 AM	1581	1857	1723	1883	1649	1830	1651	1857
10:00 AM	1885	1827	1846	1846	1709	1804	1880	1826
11:00 AM	1892	1821	1838	1821	1907	1869	1879	1837
12:00 PM	1814	1790	1799	1859	1827	1830	1813	1826
01:00 PM	1818	1835	1813	1789	1905	1753	1845	1792
02:00 PM	1972	1801	1952	1893	1949	1716	1958	1737
03:00 PM	2233	1698	2209	1676	2234	1789	2225	1721
04:00 PM	2232	1706	2072	1742	2177	1661	2160	1703
05:00 PM	2180	1804	2242	1647	2046	1877	2156	1709
06:00 PM	1416	1315	1572	1342	1382	1496	1457	1384
07:00 PM	1042	879	1103	915	1104	852	1063	885
08:00 PM	869	659	919	707	901	698	896	688
09:00 PM	711	542	729	465	697	566	712	525
10:00 PM	405	287	459	336	427	340	430	321
11:00 PM	219	163	240	195	262	230	237	196
Day Total	27004	25758	27100	25919	26927	26155	27009	25942
Combine Totals	52762		53019		53082		52961	

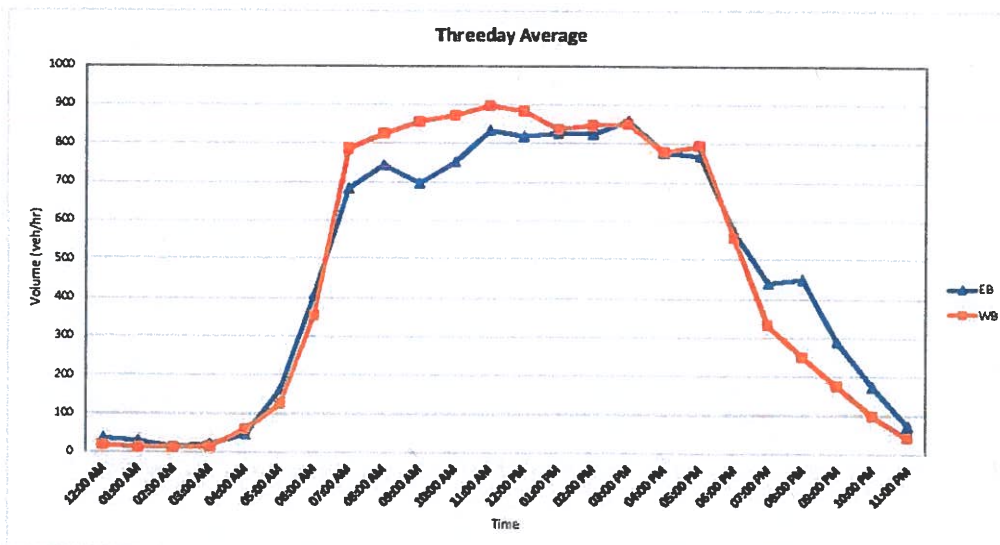


0018_Bonita Bch btw Hunters & Bonita Grande
Bonita Springs, FL



8260 Pascal Dr
Punta Gorda, FL
Ph# (841) 639 2818
Fax# (841) 639 4851

Time	Tuesday 4/2/2019		Wednesday 4/3/2019		Thursday 4/4/2019		Threeday Average	
	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	31	20	29	16	47	22	35	19
01:00 AM	32	14	28	12	26	10	29	12
02:00 AM	23	21	11	10	8	11	14	14
03:00 AM	20	13	24	18	22	14	22	15
04:00 AM	53	74	44	51	42	52	46	59
05:00 AM	168	127	152	133	162	114	161	125
06:00 AM	417	382	410	338	393	346	407	355
07:00 AM	666	775	708	791	673	788	682	785
08:00 AM	752	868	727	785	750	818	743	824
09:00 AM	664	836	723	847	701	884	695	856
10:00 AM	765	829	748	906	741	881	751	872
11:00 AM	835	905	912	935	752	851	833	897
12:00 PM	760	848	848	872	845	930	818	883
01:00 PM	847	850	816	850	816	807	826	836
02:00 PM	801	823	816	890	654	826	824	846
03:00 PM	852	790	831	902	690	858	858	850
04:00 PM	792	762	791	766	746	815	776	778
05:00 PM	808	786	750	814	743	781	767	794
06:00 PM	597	657	549	605	570	618	572	568
07:00 PM	449	352	412	310	459	335	440	332
08:00 PM	443	273	423	216	485	264	450	251
09:00 PM	289	219	272	139	305	169	289	176
10:00 PM	168	94	155	105	198	94	174	98
11:00 PM	61	38	68	34	89	57	73	43
Day Total	11303	11256	11247	11235	11307	11340	11287	11278
Combine Totals	22559		22482		22647		22565	

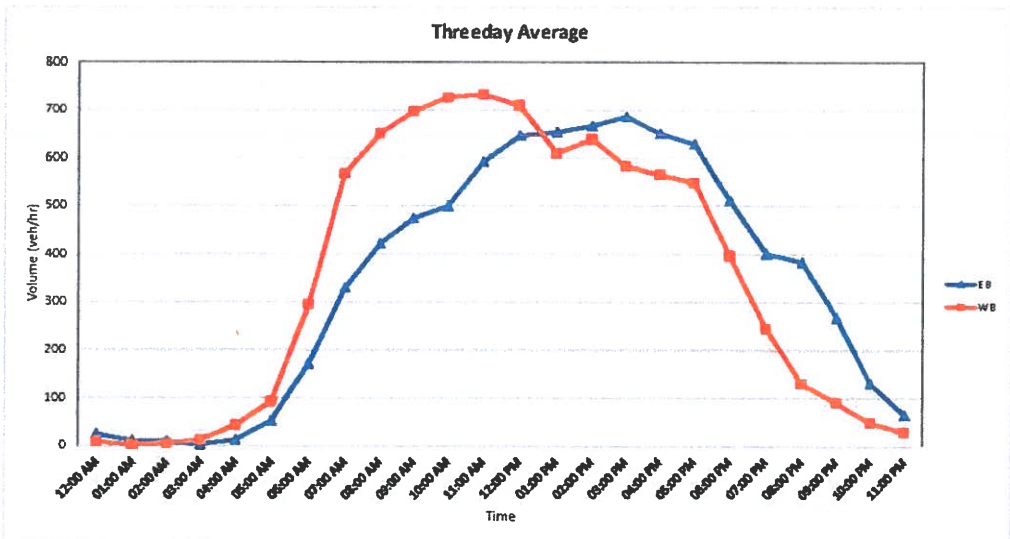


0019_Bonita Beach Rd E. of Bonita Grande Dr
Bonita Springs, FL



8250 Pascal Dr
Punta Gorda, FL
Ph# (941) 639 2818
Fax# (941) 639 4851

Time	Tuesday 4/2/2019		Wednesday 4/3/2019		Thursday 4/4/2019		Threeday Average	
	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	21	9	30	11	23	10	25	10
01:00 AM	9	0	8	4	19	8	12	4
02:00 AM	8	5	10	7	11	8	10	7
03:00 AM	4	15	4	13	4	10	4	13
04:00 AM	16	43	15	47	8	43	13	44
05:00 AM	53	81	58	101	47	96	53	93
06:00 AM	171	299	178	276	167	311	172	295
07:00 AM	343	570	324	598	324	537	330	568
08:00 AM	388	671	451	655	428	628	422	651
09:00 AM	473	693	511	700	437	699	474	697
10:00 AM	515	714	481	741	501	722	493	726
11:00 AM	648	747	551	716	577	734	592	732
12:00 PM	668	735	637	702	635	690	647	709
01:00 PM	669	610	635	605	658	616	654	610
02:00 PM	680	670	663	621	659	625	667	639
03:00 PM	696	607	710	538	649	605	685	584
04:00 PM	652	575	642	568	680	551	651	565
05:00 PM	633	539	647	564	606	544	629	549
06:00 PM	603	382	491	414	538	395	511	397
07:00 PM	395	240	375	230	432	266	401	245
08:00 PM	388	132	416	132	349	130	394	131
09:00 PM	284	107	241	65	279	101	268	91
10:00 PM	113	43	137	59	147	48	132	50
11:00 PM	51	29	64	25	83	35	66	30
Day Total	8383	8516	8279	8392	8241	8413	8302	8440
Combine Totals	16899		16671		16654		16742	



Midtown at Bonita – MPD Rezone – TIS – May 2020

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: DISTRICT
 CATEGORY: 1252 BONITA SPRINGS AREA

WEEK	DATES	SF	MOCF: 0.95 PSCF
1	01/01/2018 - 01/06/2018	1.00	1.05
2	01/07/2018 - 01/13/2018	1.00	1.05
3	01/14/2018 - 01/20/2018	0.99	1.04
4	01/21/2018 - 01/27/2018	0.98	1.03
* 5	01/28/2018 - 02/03/2018	0.97	1.02
* 6	02/04/2018 - 02/10/2018	0.95	1.00
* 7	02/11/2018 - 02/17/2018	0.94	0.99
* 8	02/18/2018 - 02/24/2018	0.94	0.99
* 9	02/25/2018 - 03/03/2018	0.94	0.99
*10	03/04/2018 - 03/10/2018	0.93	0.98
*11	03/11/2018 - 03/17/2018	0.93	0.98
*12	03/18/2018 - 03/24/2018	0.94	0.99
*13	03/25/2018 - 03/31/2018	0.95	1.00
*14	04/01/2018 - 04/07/2018	0.95	1.00
*15	04/08/2018 - 04/14/2018	0.96	1.01
*16	04/15/2018 - 04/21/2018	0.97	1.02
*17	04/22/2018 - 04/28/2018	0.98	1.03
18	04/29/2018 - 05/05/2018	1.00	1.05
19	05/06/2018 - 05/12/2018	1.01	1.06
20	05/13/2018 - 05/19/2018	1.02	1.07
21	05/20/2018 - 05/26/2018	1.03	1.08
22	05/27/2018 - 06/02/2018	1.03	1.08
23	06/03/2018 - 06/09/2018	1.04	1.09
24	06/10/2018 - 06/16/2018	1.04	1.09
25	06/17/2018 - 06/23/2018	1.05	1.11
26	06/24/2018 - 06/30/2018	1.05	1.11
27	07/01/2018 - 07/07/2018	1.06	1.12
28	07/08/2018 - 07/14/2018	1.06	1.12
29	07/15/2018 - 07/21/2018	1.07	1.13
30	07/22/2018 - 07/28/2018	1.06	1.12
31	07/29/2018 - 08/04/2018	1.05	1.11
32	08/05/2018 - 08/11/2018	1.04	1.09
33	08/12/2018 - 08/18/2018	1.03	1.08
34	08/19/2018 - 08/25/2018	1.04	1.09
35	08/26/2018 - 09/01/2018	1.04	1.09
36	09/02/2018 - 09/08/2018	1.05	1.11
37	09/09/2018 - 09/15/2018	1.05	1.11
38	09/16/2018 - 09/22/2018	1.04	1.09
39	09/23/2018 - 09/29/2018	1.03	1.08
40	09/30/2018 - 10/06/2018	1.02	1.07
41	10/07/2018 - 10/13/2018	1.01	1.06
42	10/14/2018 - 10/20/2018	1.00	1.05
43	10/21/2018 - 10/27/2018	1.00	1.05
44	10/28/2018 - 11/03/2018	1.00	1.05
45	11/04/2018 - 11/10/2018	1.00	1.05
46	11/11/2018 - 11/17/2018	1.00	1.05
47	11/18/2018 - 11/24/2018	1.00	1.05
48	11/25/2018 - 12/01/2018	1.00	1.05
49	12/02/2018 - 12/08/2018	1.00	1.05
50	12/09/2018 - 12/15/2018	1.00	1.05
51	12/16/2018 - 12/22/2018	1.00	1.05
52	12/23/2018 - 12/29/2018	0.99	1.04
53	12/30/2018 - 12/31/2018	0.99	1.04

* PEAK SEASON

26-FEB-2019 18:31:28

830UPD

1_1252_PKSEASON.TXT

Appendix E:
Lee County 2019 Concurrency Report (Excerpt)

Table 20: County-Maintained Roadways in Incorporated Areas. Existing and Future LOS

ROADWAY LINK				100TH HIGHEST HOUR DIRECTIONAL VOLUMES						NOTES
				STANDARD		2018		2023		
NAME	FROM	TO	TYPE	LOS	MAX	LOS	EXISTING	LOS	FUTURE	
BEN HILL GRIFFIN PKWY	CORKSCREW RD	ESTERO PKWY	4LD	E	2,000	B	1,224	B	1,626	
BONITA BEACH RD	HICKORY BLVD	VANDERBILT DR	4LD	E	1,900	C	696	C	731	Constrained in City Plan, 2017 count
	VANDERBILT DR	US 41	4LD	E	1,900	C	1,550	C	1,629	v/c = 0.81/0.85 Constrained in City Plan
	US 41	OLD 41	4LD	E	1,860	C	1,167	C	1,318	Constrained, 2010 old count projection
	OLD 41	IMPERIAL ST	6LD	E	2,800	C	1,888	C	1,984	Constrained in City Plan, 2010 count
	IMPERIAL ST	W OF I-75	6LD	E	2,800	C	2,135	C	2,224	Constrained in City Plan
	E OF I-75	BONITA GRAND DR	4LD	E	2,020	B	576	B	605	Constrained in City Plan, 2010 count
BONITA GRANDE DR	BONITA GRANDE DR	BELLO BLVD	4LD	E	2,020	B	576	B	605	Constrained in City Plan, 2010 count
BONITA GRANDE DR	BONITA BEACH RD	E TERRY ST	2LN	E	860	D	692	E	782	v/c = 0.80/0.91 2009 count
BOYSCOUT RD	SUMMERLIN RD	US 41	6LN	E	2,520	E	1,819	E	1,912	2010 count
BURNT STORE RD	SR 78	VAN BUREN PKWY	2LN/4 LD	E	1,140/ 2,950	D	766	A	805	4L under constr
	VAN BUREN PKWY	COUNTY LINE	2LN	E	1,140	C	451	C	549	
CAPE CORAL BRIDGE	DEL PRADO BLVD	McGREGOR BLVD	4LB	E	4,000	C	2,772	D	2,914	
COLONIAL BLVD	McGREGOR BLVD	SUMMERLIN RD	6LD	E	2,840	F	3,049	F	3,204	v/c = 1.07/1.13 programmed alt. analysis
	SUMMERLIN RD	US 41	6LD	E	2,840	F	2,854	F	2,999	v/c = 1.00/1.06 programmed alt. analysis
	DYNASTY DR	SR 82	6LD	D	3,040	B	2,216	C	2,329	2017 count
CORBETT RD	SR 78 (PINE ISLAND RD)	LITTLETON RD	2LN	E	860	C	22	C	226	old count, added VA clinic
CORKSCREW RD	US 41	THREE OAKS PKWY	4LD	E	1,900	C	840	C	1,105	Galleria at Corkscrew, 2017 count
	THREE OAKS PKWY	W OF I-75	4LD	E	1,900	F	1,967	F	2,224	v/c = 1.04/1.17 Estero Crossing
	E OF I-75	BEN HILL GRIFFIN PKWY	4LD	E	1,900	C	1,193	C	1,203	2017 count
	BEN HILL GRIFFIN PKWY	WILDCAT RUN DR	2LD	E	1,200/ 1,960	C	903	C	1,296	2017 count, 4L CST 20/21
	WILDCAT RUN DR	BELLA TERRA BLVD	2LD	E	1,200/ 1,960	B	696	C	1,089	2017 count, 4L CST 20/21
DEL PRADO BLVD	CAPE CORAL PKWY	SE 48TH ST	6LD	E	2,660	C	1,404	C	1,586	2009 count
	SE 48TH ST	CORONADO PKWY	6LD	E	2,660	C	1,404	C	1,586	2009 count
	CORONADO PKWY	VETERANS PKWY	6LD	E	2,660	D	2,000	D	2,102	2009 count Changed segment end from Cornwallis to Veterans
	VETERANS PKWY	CORAL POINT DR	6LD	E	2,660	F	2,842	F	2,987	v/c = 1.07/1.12
	CORAL POINT DR	HANCOCK B. PKWY	6LD	E	2,800	D	2,092	D	2,257	v/c = 0.75/0.81
ESTERO BLVD	HANCOCK B. PKWY	SR 78	6LD	E	2,800	C	1,527	C	1,604	2010 count
	BIG CARLOS PASS BRIDGE	PESCADORA AVE	2LN	E	726	A	512	A	538	Constrained, 2017 count
	PESCADORA AVE	VOORHIS ST	2LN	E	726	B	590	C	620	Constrained, 2018 count
	VOORHIS ST	TROPICAL SHORES WAY	2LN	E	726	B	590	C	620	Constrained, 2016 count
ESTERO PKWY	TROPICAL SHORES WAY	CENTER ST	2LN	E	671	F	716	F	809	Constrained, 2010 count
	US 41	THREE OAKS PKWY	4LD	E	2,000	B	801	B	1,094	East & West Cypress View, 2017 count
	THREE OAKS PKWY	BEN HILL GRIFFIN PKWY	4LD	E	2,000	B	964	B	1,013	2017 count

Appendix F:
Lee County Link-Specific Service Volumes (Excerpts)

LINK-SPECIFIC SERVICE VOLUMES ON ARTERIALS IN LEE COUNTY (2016 DATA)

TRAFFIC LENGTH ROAD SERVICE VOLUMES (PEAK HOUR--PEAK DIRECTION) SERVICE VOLUMES (PEAK HOUR--BOTH DIRECTIONS)

H:\LOS\CAPACITY15.xls JUNE, 2016 PAGE 1

ROAD SEGMENT	FROM	TO	TRAFIC DISTRIC	LENGTH (MILE)	ROAD TYPE	A	B	C	D	E	A	B	C	D	E
ALABAMA RD	SR 82	MILWAUKEE BLVD	3	1.9	2LN	110	260	440	590	990	210	490	820	1,100	1,840
		HOMESTEAD RD	3	1.7	2LN	110	260	440	590	990	210	490	820	1,100	1,840
	SR 82	MILWAUKEE BLVD	3	2.3	2LN	120	290	480	660	990	230	540	890	1,230	1,840
ALEXANDER BELL BLVD		LEELAND HEIGHTS	3	3.4	2LN	120	290	480	660	990	230	540	890	1,230	1,840
	US 41	DUSTY RD	4	0.5	4LD	0	1,930	1,980	1,980	1,980	0	3,720	3,800	3,800	3,800
ALICOR RD		LEE RD	4	1.6	6LD	0	2,960	2,960	2,960	2,960	0	5,700	5,700	5,700	5,700
		THREE OAKS PKWY	4	0.8	6LD	0	2,960	2,960	2,960	2,960	0	5,700	5,700	5,700	5,700
		1-75	4	0.5	6LD	0	2,960	2,960	2,960	2,960	0	5,700	5,700	5,700	5,700
		BEN HILL GRIFFIN PKWY	3	6.9	2LN	70	280	540	760	1,100	140	540	1,040	1,470	2,120
BEN HILL GRIFFIN PKWY		CORKSCREW RD	3	2.2	4LD	940	2,000	2,000	2,000	2,000	1,750	3,690	3,690	3,690	3,690
		FOGU ENTRANCE	3	1.8	4LD	940	2,000	2,000	2,000	2,000	1,750	3,690	3,690	3,690	3,690
		COLLEGE CLUB DR	3	0.5	6LD	1,450	3,000	3,000	3,000	3,000	2,690	5,560	5,560	5,560	5,560
BONITA BEACH RD		HICKORY BLVD	8	1.5	4LD	0	530	1,900	1,900	1,900	0	1,000	3,600	3,600	3,600
		VANDERBILT DR	8	0.7	4LD	0	530	1,900	1,900	1,900	0	1,000	3,600	3,600	3,600
		US 41	8	0.7	4LD	0	340	1,860	1,860	1,860	0	630	3,450	3,450	3,450
		HACIENDA VILLAGE	8	1.0	4LD	0	340	1,860	1,860	1,860	0	630	3,450	3,450	3,450
		OLD 41	8	1.1	6LD	0	530	2,800	2,800	2,800	0	990	5,190	5,190	5,190
		IMPERIAL ST	8	0.7	6LD	0	530	2,800	2,800	2,800	0	990	5,190	5,190	5,190
		1-75	8	0.7	6LD	0	1,690	2,020	2,020	2,020	0	3,130	3,750	3,750	3,750
		BONITA GRANDE DR	8	1.0	4LD	0	1,690	2,020	2,020	2,020	0	3,130	3,750	3,750	3,750
		END OF CO. MAINTAINED	8	1.0	4LD	0	1,690	2,020	2,020	2,020	0	3,130	3,750	3,750	3,750
		SUMMERLIN RD	1	0.3	6LN	0	0	0	940	2,520	0	0	1,700	4,550	4,550
BOYSCOUT RD		CLAYTON CT	1	0.2	6LN	0	0	0	940	2,520	0	0	1,700	4,550	
		US 41	3	7.8	2LN	60	190	430	620	990	120	360	820	1,170	1,870
BUCKINGHAM RD		ORANGE RIVER BLVD	3	2.6	2LN	60	190	430	620	990	120	360	820	1,170	1,870
		SR 80	5	3.6	4LD	870	1,490	2,100	2,660	2,950	1,530	2,620	3,690	4,670	5,180
BURNT STORE RD		VAN BUREN PKWY	5	6.3	2LN	150	390	640	880	1,140	270	690	1,130	1,550	2,010
		COUNTY LINE	2	1.2	6LB	1,440	2,440	3,450	4,420	5,120	2,220	3,760	5,310	6,800	7,880
BUSINESS 41		N. END OF BRIDGE	2	0.5	6LD	0	2,460	2,780	2,780	2,780	0	3,790	4,270	4,270	4,270
		PONDELLA RD	2	1.1	6LD	0	2,460	2,780	2,780	2,780	0	3,790	4,270	4,270	4,270
		SR 78	2	1.3	4LD	0	1,580	1,840	1,840	1,840	0	2,440	2,870	2,870	2,870
		LITTLETON RD	2	1.3	4LD	0	1,580	1,840	1,840	1,840	0	2,440	2,870	2,870	2,870
CAPE CORAL BRIDGE		US 41	4 & 5	0.4	4LD	0	0	1,340	1,900	1,900	0	2,280	3,230	3,230	3,230
		DEL PRADO BLVD	4 & 5	1.3	4LB	1,120	1,900	2,680	3,440	4,000	1,910	3,230	4,540	5,820	6,790
COLLEGE PKWY		WINKLER RD	4	0.8	6LD	0	0	1,290	2,800	2,980	0	0	2,190	4,750	5,040
		WHISKEY CREEK DR	4	0.8	6LD	0	0	1,290	2,800	2,980	0	0	2,190	4,750	5,040
		SUMMERLIN RD	4	0.9	6LD	0	0	1,290	2,800	2,980	0	0	2,190	4,750	5,040
		US 41	1	0.4	6LD	0	0	1,530	2,840	2,840	0	0	2,560	4,740	4,740
COLONIAL BLVD		SUMMERLIN RD	1	0.7	6LD	0	0	1,530	2,840	2,840	0	0	2,560	4,740	4,740
		US 41	1	0.5	6LD	0	0	1,530	2,840	2,840	0	0	2,560	4,740	4,740
FOWLER ST		FOWLER ST	1	0.8	6LD	0	0	1,530	2,840	2,840	0	0	2,560	4,740	4,740
		METRO PKWY	1	2.1	6LD	0	0	1,530	2,840	2,840	0	0	2,560	4,740	4,740
WINKLER AVE		WINKLER AVE	1	0.8	6LD	0	0	1,530	2,840	2,840	0	0	2,560	4,740	4,740
		SIX MILE PKWY	1	0.7	6LD	0	0	2,630	3,100	3,100	0	4,390	5,180	5,180	5,180

ROAD SEGMENT	FROM	TO	DISTRIC	(MILE)	TYPE	A	B	C	D	E	A	B	C	D	E
VETERANS MEM. PKWY	McGREGOR BLVD	DEL PRADO BLVD	1 & 5	3.5	4LB	1,120	1,900	2,680	3,440	4,000	1,880	3,170	4,460	5,720	6,680
	DEL PRADO BLVD	SANTA BARBARA BLVD		2.0	6LD	2,190	3,080	3,080	3,080	3,080	3,660	5,150	5,150	5,150	5,150
	SANTA BARBARA BLVD	SKYLINE BLVD		1.0	6LD	2,190	3,080	3,080	3,080	3,080	3,660	5,150	5,150	5,150	5,150
	SKYLINE BLVD	SR 78		3.5	4LD	1,400	2,040	2,040	2,040	2,040	2,340	3,420	3,420	3,420	3,420
	SR 78	WINKLER RD		0.4	4LD	0	0	590	1,520	1,520	0	0	990	2,530	2,530
WINKLER RD	SUMMERLIN RD	GLADIOLUS DR		0.9	2LN	0	750	880	880	880	0	1,260	1,460	1,460	1,460
	GLADIOLUS DR	BRANDYWINE CIR		0.9	2LN	0	750	880	880	880	0	1,260	1,460	1,460	1,460
	BRANDYWINE CIR	CYPRESS LAKE DR		0.7	4LD	0	0	610	1,780	1,780	0	0	1,020	2,960	2,960
	CYPRESS LAKE DR	COLLEGE PKWY		0.5	2LN	0	770	800	800	800	0	1,290	1,330	1,330	1,330
	COLLEGE PKWY	SUNSET VISTA		0.8	2LN	0	770	800	800	800	0	1,290	1,330	1,330	1,330

SERVICE VOLUMES ON COLLECTORS IN LEE COUNTY (2015 DATA)

ROAD SEGMENT	FROM	TO	DISTRIC	(MILE)	TYPE	A	B	C	D	E	A	B	C	D	E
COLLECTORS	McGREGOR BLVD	DEL PRADO BLVD	1 & 5	3.5	4LB	1,120	1,900	2,680	3,440	4,000	1,880	3,170	4,460	5,720	6,680
	DEL PRADO BLVD	SANTA BARBARA BLVD		2.0	6LD	2,190	3,080	3,080	3,080	3,080	3,660	5,150	5,150	5,150	5,150
	SANTA BARBARA BLVD	SKYLINE BLVD		1.0	6LD	2,190	3,080	3,080	3,080	3,080	3,660	5,150	5,150	5,150	5,150
	SKYLINE BLVD	SR 78		3.5	4LD	1,400	2,040	2,040	2,040	2,040	2,340	3,420	3,420	3,420	3,420



Traffic Impact Statement

Bonita Grande Drive – Mixed-use Planned Development (MPD) Rezone

Section 2 – Arterial and Intersection Analysis

Prepared by TR Transportation Consultants, Inc.

Bonita Springs, FL
3/12/2020

RECEIVED
CITY OF BONITA SPRINGS
MAR 20 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

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Intersection and Arterial Improvements

In agreement with Florida statute, the developer is not responsible to address transportation deficiencies which occur regardless of the project's traffic.

The analysis provides Synchro Analysis results requested by staff for conditions along Bonita Beach Road between Imperial and Bonita Grande Dr. Project accesses are provided in the analysis. The western site access is analyzed as a signalized condition as requested by staff. A future growth with the project as well as a future condition with vested trips are provided as well. We believe under the vested condition, there is an overlap of trips. The future growth with the project illustrates sufficient capacity for the proposed project.

Appendix A:

AM & PM Bonita Beach Rd Arterial Analysis

Arterial Level of Service 2024 AM Pk Hr Background (Without Vested Traffic)
02/26/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St	II	45	45.3	35.1	80.4	0.51	23.0	G
Downs Dr	II	45	33.5	28.2	61.7	0.35	20.3	D
Oakland	II	45	22.6	2.0	24.6	0.21	30.3	B
I75 SB Ent	II	45	16.2	7.4	23.6	0.15	22.7	C
I75 NB Ent	II	45	14.9	3.6	18.5	0.14	26.7	C
Trade Way Two	II	45	37.4	8.0	45.4	0.40	31.6	B
Bonita Grande	II	45	26.7	25.5	52.2	0.26	17.7	D
Total	II		196.6	109.8	306.4	2.01	23.6	C

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	32.5	74.7	0.53	25.4	C
Trade Way Two	II	45	26.7	9.4	36.1	0.26	25.6	C
I75 NB Ent	II	45	37.4	53.0	90.4	0.40	15.9	E
I-75 SB Ent	II	45	14.9	1.9	16.8	0.14	29.4	B
Oakland	II	45	16.2	13.2	29.4	0.15	18.2	D
Downs Dr	II	45	22.6	9.6	32.2	0.21	23.2	C
Imperial St	II	45	33.5	30.3	63.8	0.35	19.7	D
Total	II		193.5	149.9	343.4	2.02	21.2	D

Arterial Level of Service

2024 AM Pk Hr Background (With Vested Traffic)

02/26/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St	II	45	45.3	48.9	94.2	0.51	19.7	D
Downs Dr	II	45	33.5	64.8	98.3	0.35	12.8	F
Oakland	II	45	22.6	6.7	29.3	0.21	25.5	C
I75 SB Ent	II	45	16.2	11.9	28.1	0.15	19.0	D
I75 NB Ent	II	45	14.9	71.8	86.7	0.14	5.7	F
Trade Way Two	II	45	37.4	22.0	59.4	0.40	24.1	C
Bonita Grande	II	45	26.7	292.2	318.9	0.26	2.9	F
Total	II		196.6	518.3	714.9	2.01	10.1	F

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	611.1	653.3	0.53	2.9	F
Trade Way Two	II	45	26.7	108.3	135.0	0.26	6.8	F
I75 NB Ent	II	45	37.4	644.5	681.9	0.40	2.1	F
I-75 SB Ent	II	45	14.9	161.2	176.1	0.14	2.8	F
Oakland	II	45	16.2	125.6	141.8	0.15	3.8	F
Downs Dr	II	45	22.6	131.5	154.1	0.21	4.8	F
Imperial St	II	45	33.5	170.4	203.9	0.35	6.2	F
Total	II		193.5	1952.6	2146.1	2.02	3.4	F

Arterial Level of Service 2024 AM Pk Hr Background + Project (Without Vested)

03/10/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St.	II	45	45.3	35.4	80.7	0.51	23.0	C
Downs Dr	II	45	33.5	28.8	62.3	0.35	20.1	D
Oakland	II	45	22.6	2.2	24.8	0.21	30.1	B
I75 SB Ent	II	45	16.2	7.4	23.6	0.15	22.7	C
I75 NB Ent	II	45	14.9	3.6	18.5	0.14	26.7	C
Trade Way Two	II	45	37.4	17.9	55.3	0.40	25.9	C
Bonita Grande	II	45	26.7	27.4	54.1	0.26	17.1	D
Total	II		196.6	122.7	319.3	2.01	22.7	C

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	36.6	78.8	0.53	24.1	C
W. Site Access	II	45	26.7	26.7	53.4	0.26	17.3	D
I75 NB Ent	II	45	37.4	56.2	93.6	0.40	15.3	E
I-75 SB Ent	II	45	14.9	2.1	17.0	0.14	29.0	B
Oakland	II	45	16.2	13.2	29.4	0.15	18.2	D
Downs Dr	II	45	22.6	11.9	34.5	0.21	21.6	D
Imperial St	II	45	33.5	31.6	65.1	0.35	19.3	D
Total	II		193.5	178.3	371.8	2.02	19.6	D

Arterial Level of Service

2024 AM Pk Hr Background + Vested + Project
03/10/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St	II	45	45.3	50.7	96.0	0.51	19.3	D
Downs Dr	II	45	33.5	80.4	113.9	0.35	11.0	F
Oakland	II	45	22.6	7.1	29.7	0.21	25.1	C
I75 SB Ent	II	45	16.2	13.5	29.7	0.15	18.0	D
I75 NB Ent	II	45	14.9	93.5	108.4	0.14	4.6	F
Trade Way Two	II	45	37.4	118.3	155.7	0.40	9.2	F
Bonita Grande	II	45	26.7	331.1	357.8	0.26	2.6	F
Total	II		196.6	694.6	891.2	2.01	8.1	F

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	694.4	736.6	0.53	2.6	F
W. Site Access	II	45	26.7	259.2	285.9	0.26	3.2	F
I75 NB Ent	II	45	37.4	686.3	723.7	0.40	2.0	F
I-75 SB Ent	II	45	14.9	177.5	192.4	0.14	2.6	F
Oakland	II	45	16.2	138.2	154.4	0.15	3.5	F
Downs Dr	II	45	22.6	143.6	166.2	0.21	4.5	F
Imperial St	II	45	33.5	179.8	213.3	0.35	5.9	F
Total	II		193.5	2279.0	2472.5	2.02	2.9	F

Arterial Level of Service

2024 PM Pk Hr Background (Without Vested Traffic)

02/26/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St.	II	45	45.3	50.7	96.0	0.51	19.3	D
Downs Dr	II	45	33.5	19.4	52.9	0.35	23.7	C
Oakland	II	45	22.6	1.4	24.0	0.21	31.1	B
I75 SB Ent	II	45	16.2	9.2	25.4	0.15	21.1	D
I75 NB Ent	II	45	14.9	4.0	18.9	0.14	26.1	C
Trade Way Two	II	45	37.4	11.2	48.6	0.40	29.5	B
Bonita Grande	II	45	26.7	30.2	56.9	0.26	16.2	E
Total	II		196.6	126.1	322.7	2.01	22.4	C

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	38.0	80.2	0.53	23.7	G
Trade Way Two	II	45	26.7	12.1	38.8	0.26	23.8	C
I75 NB Ent	II	45	37.4	54.0	91.4	0.40	15.7	E
I-75 SB Ent	II	45	14.9	7.0	21.9	0.14	22.5	C
Oakland	II	45	16.2	8.0	24.2	0.15	22.1	G
Downs Dr	II	45	22.6	2.8	25.4	0.21	29.4	B
Imperial St	II	45	33.5	29.5	63.0	0.35	19.9	D
Total	II		193.5	151.4	344.9	2.02	21.1	D

Arterial Level of Service

2024 PM Pk Hr Background (With Vested Traffic)

02/26/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St	II	45	45.3	275.0	320.3	0.51	5.8	F
Downs Dr	II	45	33.5	235.6	269.1	0.35	4.7	F
Oakland	II	45	22.6	87.5	140.1	0.21	6.8	F
I75 SB Ent	II	45	16.2	69.2	85.4	0.15	6.3	F
I75 NB Ent	II	45	14.9	101.8	116.7	0.14	4.2	F
Trade Way Two	II	45	37.4	117.7	155.1	0.40	9.2	F
Bonita Grande	II	45	26.7	497.2	523.9	0.26	1.8	F
Total	II		196.6	1384.0	1580.6	2.01	4.6	F

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	493.7	535.9	0.53	3.5	F
Trade Way Two	II	45	26.7	56.7	83.4	0.26	11.1	F
I75 NB Ent	II	45	37.4	620.3	657.7	0.40	2.2	F
I-75 SB Ent	II	45	14.9	26.1	41.0	0.14	12.0	F
Oakland	II	45	16.2	21.9	38.1	0.15	14.0	E
Downs Dr	II	45	22.6	26.5	49.1	0.21	15.2	E
Imperial St	II	45	33.5	43.3	76.8	0.35	16.3	E
Total	II		193.5	1288.5	1482.0	2.02	4.9	F

Arterial Level of Service 2024 PM Pk Hr Background + Project (Without Vested)
03/10/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St.	II	45	45.3	58.4	103.7	0.51	17.9	D
Downs Dr	II	45	33.5	27.3	60.8	0.35	20.6	D
Oakland	II	45	22.6	2.4	25.0	0.21	29.8	B
I75 SB Ent	II	45	16.2	8.9	25.1	0.15	21.3	D
I75 NB Ent	II	45	14.9	5.0	19.9	0.14	24.8	C
Trade Way Two	II	45	37.4	18.8	56.2	0.40	25.5	C
Bonita Grande	II	45	26.7	33.2	59.9	0.26	15.4	E
Total	II		196.6	154.0	350.6	2.01	20.7	D

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	45.1	87.3	0.53	21.7	D
W. Site Access	II	45	26.7	28.1	54.8	0.26	16.9	E
I75 NB Ent	II	45	37.4	62.1	99.5	0.40	14.4	E
I-75 SB Ent	II	45	14.9	6.3	21.2	0.14	23.3	C
Oakland	II	45	16.2	8.5	24.7	0.15	21.7	D
Downs Dr	II	45	22.6	5.8	28.4	0.21	26.3	C
Imperial St	II	45	33.5	26.2	59.7	0.35	21.0	D
Total	II		193.5	182.1	375.6	2.02	19.4	D

Arterial Level of Service

2024 PM Pk Hr Background + Vested + Project
03/10/2020

Arterial Level of Service: EB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Imperial St	II	45	45.3	296.5	341.8	0.51	5.4	F
Downs Dr	II	45	33.5	277.4	310.9	0.35	4.0	F
Oakland	II	45	22.6	109.9	132.5	0.21	5.6	F
I75 SB Ent	II	45	16.2	98.9	115.1	0.15	4.7	F
I75 NB Ent	II	45	14.9	147.9	162.8	0.14	3.0	F
Trade Way Two	II	45	37.4	278.7	316.1	0.40	4.5	F
Bonita Grande	II	45	26.7	554.1	580.8	0.26	1.6	F
Total	II		196.6	1763.4	1960.0	2.01	3.7	F

Arterial Level of Service: WB Bonita Bch

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Bonita Grande	II	45	42.2	662.5	704.7	0.53	2.7	F
W. Site Access	II	45	26.7	244.1	270.8	0.26	3.4	F
I75 NB Ent	II	45	37.4	716.0	753.4	0.40	1.9	F
I-75 SB Ent	II	45	14.9	35.9	50.8	0.14	9.7	F
Oakland	II	45	16.2	24.2	40.4	0.15	13.2	E
Downs Dr	II	45	22.6	39.2	61.8	0.21	12.1	F
Imperial St	II	45	33.5	54.9	88.4	0.35	14.2	E
Total	II		193.5	1776.8	1970.3	2.02	3.7	F

Appendix B:

**AM & PM Intersection Analysis @ Bonita Beach Rd & Site
Access Connections**

Lanes, Volumes, Timings 2024 AM Pk Hr Background + Project (Without Vested)
 37: Trade Way Two/W. Site Access & Bonita Bch 03/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	738	91	50	937	29	34	0	9	81	0	74
Future Volume (vph)	77	738	91	50	937	29	34	0	9	81	0	74
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	180		420	410		290	0		0	0		0
Storage Lanes	1		1	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1614	3228	1444	1614	3228	1444	3131	1444	0	3131	1444	0
Flt Permitted	0.181			0.300			0.950			0.950		
Satd. Flow (perm)	308	3228	1444	510	3228	1444	3131	1444	0	3131	1444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			286			286		205			390	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1306			690			550			420	
Travel Time (s)		19.8			10.5			15.0			11.5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	77	738	91	50	937	29	34	0	9	81	0	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	738	91	50	937	29	34	9	0	81	74	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	22.0	22.0		10.0	22.0	
Total Split (s)	10.0	26.0	26.0	10.0	26.0	26.0	22.0	33.0		11.0	22.0	
Total Split (%)	12.5%	32.5%	32.5%	12.5%	32.5%	32.5%	27.5%	41.3%		13.8%	27.5%	
Maximum Green (s)	4.0	20.0	20.0	4.0	20.0	20.0	16.0	27.0		5.0	16.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	
Act Effct Green (s)	24.4	22.1	22.1	23.2	20.1	20.1	6.2	9.3		5.0	5.5	
Actuated g/C Ratio	0.42	0.38	0.38	0.40	0.35	0.35	0.11	0.16		0.09	0.10	
v/c Ratio	0.35	0.60	0.12	0.18	0.83	0.04	0.10	0.02		0.30	0.15	
Control Delay	12.9	17.9	0.4	9.7	26.7	0.1	24.9	0.1		29.0	0.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	12.9	17.9	0.4	9.7	26.7	0.1	24.9	0.1		29.0	0.6	

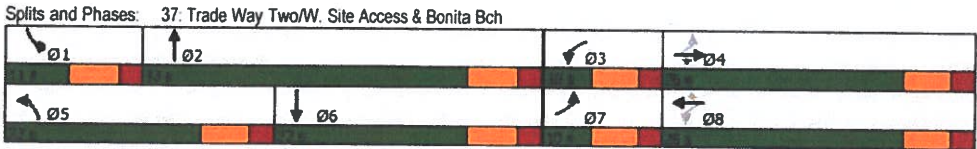
Zone 54 pm pk 5:00 pm 02/26/2019 signal timing optimization
 gjc

Synchro 10 Report
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Lanes, Volumes, Timings 2024 AM Pk Hr Background + Project (Without Vested)
 37: Trade Way Two/W. Site Access & Bonita Bch 03/10/2020

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	B	A	A	C	A	C	A		C	A	
Approach Delay		15.7			25.1			19.7			15.5	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	13	117	0	9	162	0	5	0		14	0	
Queue Length 95th (ft)	32	176	0	23	#272	0	17	0		32	0	
Internal Link Dist (ft)		1226			610			470			340	
Turn Bay Length (ft)	180		420	410		290						
Base Capacity (vph)	221	1236	729	282	1127	690	874	788		273	684	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.35	0.60	0.12	0.18	0.83	0.04	0.04	0.01		0.30	0.11	

Intersection Summary
 Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 57.7
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 20.3
 Intersection LOS: C
 Intersection Capacity Utilization 56.9%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 2010 TWSC 2024 AM Pk Hr Background + Project (Without Vested)
 17: Trade Way Three/E. Site Access & Bonita Bch 03/10/2020

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘			↖			↖
Traffic Vol, veh/h	37	785	13	4	964	58	0	0	1	0	0	49
Future Vol, veh/h	37	785	13	4	964	58	0	0	1	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	515	270	-	290	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	37	785	13	4	964	58	0	0	1	0	0	49
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1022	0	0	798	0	0	-	-	393	-	-	482
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	4.16	-	-	-	-	6.96	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	-	-	3.33	-	-	3.33
Pol Cap-1 Maneuver	669	-	-	814	-	-	0	0	603	0	0	528
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	669	-	-	814	-	-	-	-	603	-	-	528
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0			11			12.5		
HCM LOS	B			B			B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	603	669	-	-	814	-	-	528				
HCM Lane V/C Ratio	0.002	0.055	-	-	0.005	-	-	0.093				
HCM Control Delay (s)	11	10.7	-	-	9.4	-	-	12.5				
HCM Lane LOS	B	B	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.3				

Lanes, Volumes, Timings 2024 AM Pk Hr Background + Vested + Project
 37: Trade Way Two/W. Site Access & Bonita Bch 03/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	2736	91	50	3379	29	34	0	9	81	0	74
Future Volume (vph)	77	2736	91	50	3379	29	34	0	9	81	0	74
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	180		420	410		290	0		0	0		0
Storage Lanes	1		1	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1614	3228	1444	1614	3228	1444	3131	1444	0	3131	1444	0
Flt Permitted	0.043			0.044			0.950			0.950		
Satd. Flow (perm)	73	3228	1444	75	3228	1444	3131	1444	0	3131	1444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			153		109				153
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1306			690			550				420
Travel Time (s)		19.8			10.5			15.0				11.5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	77	2736	91	50	3379	29	34	0	9	81	0	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	2736	91	50	3379	29	34	9	0	81	74	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	22.0	22.0		10.0	22.0	
Total Split (s)	10.0	96.0	96.0	10.0	96.0	96.0	22.0	31.0		19.0	22.0	
Total Split (%)	6.7%	64.0%	64.0%	6.7%	64.0%	64.0%	14.7%	20.7%		8.7%	14.7%	
Maximum Green (s)	4.0	90.0	90.0	4.0	90.0	90.0	16.0	25.0		7.0	16.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	
Act Effct Green (s)	95.2	92.0	92.0	94.0	90.0	90.0	6.9	5.9		6.9	5.9	
Actuated g/C Ratio	0.73	0.70	0.70	0.72	0.69	0.69	0.05	0.05		0.05	0.05	
v/c Ratio	0.77	1.20	0.09	0.50	1.52	0.03	0.21	0.05		0.49	0.35	
Control Delay	64.9	118.3	0.2	28.0	259.2	0.0	62.1	0.6		70.9	4.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	64.9	118.3	0.2	28.0	259.2	0.0	62.1	0.6		70.9	4.6	

Zone 54 pm pk 5:00 pm 02/26/2019 signal timing optimization
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Lanes, Volumes, Timings 2024 AM Pk Hr Background + Vested + Project
 37: Trade Way Two/W. Site Access & Bonita Bch 03/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	F	A	C	F	A	E	A		E	A	
Approach Delay		113.2			253.6			49.2			39.2	
Approach LOS		F			F			D			D	
Queue Length 50th (ft)	20	-1501	0	9	-2096	0	14	0		35	0	
Queue Length 95th (ft)	#68	#1651	1	40	#2235	0	32	0		63	0	
Internal Link Dist (ft)		1226			610			470			340	
Turn Bay Length (ft)	180		420	410		290						
Base Capacity (vph)	100	2271	1061	101	2221	1041	382	364		167	311	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.77	1.20	0.09	0.50	1.52	0.03	0.09	0.02		0.49	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 130.8

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.52

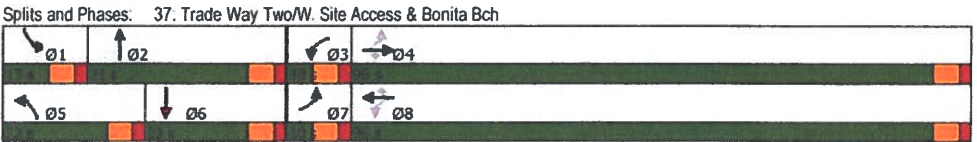
Intersection Signal Delay: 185.1 Intersection LOS: F

Intersection Capacity Utilization 120.6% ICU Level of Service H

Analysis Period (min) 15

- Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 2010 TWSC 2024 AM Pk Hr Background + Vested + Project
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Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Vol, veh/h	37	2783	13	4	3406	58	0	0	1	0	0	49
Future Vol, veh/h	37	2783	13	4	3406	58	0	0	1	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	515	270	-	290	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	37	2783	13	4	3406	58	0	0	1	0	0	49

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	3464	0	0	2796
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.16	-	-	4.16
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.23	-	-	2.23
Pot Cap-1 Maneuver	72	-	-	134
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	72	-	-	134
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0	32.9	104.3
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	130	72	-	-	134	-	-	80
HCM Lane V/C Ratio	0.008	0.514	-	-	0.03	-	-	0.613
HCM Control Delay (s)	32.9	99	-	-	32.7	-	-	104.3
HCM Lane LOS	D	F	-	-	D	-	-	F
HCM 95th %tile Q(veh)	0	2.1	-	-	0.1	-	-	2.8

Lanes, Volumes, Timings 2024 PM Pk Hr Background + Project (Without Vested)
 37: Trade Way Two/W. Site Access & Bonita Bch 03/10/2020

	↖	→	↘	↙	←	↗	↖	↑	↘	↙	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖	↖	↖	↖↖	↖	↖↖	↖	↖	↖↖	↖	↖
Traffic Volume (vph)	183	825	101	55	926	69	200	0	71	181	0	155
Future Volume (vph)	183	825	101	55	926	69	200	0	71	181	0	155
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	180		420	410		290	0		0	0		0
Storage Lanes	1		1	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Frnt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1614	3228	1444	1614	3228	1444	3131	1444	0	3131	1444	0
Flt Permitted	0.166			0.294			0.950			0.950		
Satd. Flow (perm)	282	3228	1444	500	3228	1444	3131	1444	0	3131	1444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			182			182			182
Link Speed (mph)		45			45			25			45	
Link Distance (ft)		1306			690			550			411	
Travel Time (s)		19.8			10.5			15.0			6.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	183	825	101	55	926	69	200	0	71	181	0	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	183	825	101	55	926	69	200	71	0	181	155	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	22.0	22.0		10.0	22.0	
Total Split (s)	12.0	35.0	35.0	10.0	33.0	33.0	33.0	22.0		16.0	23.0	
Total Split (%)	13.3%	38.9%	38.9%	11.1%	36.7%	36.7%	24.4%	32.2%		17.8%	25.6%	
Maximum Green (s)	6.0	29.0	29.0	4.0	27.0	27.0	16.0	23.0		10.0	17.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0			0	
Act Effect Green (s)	35.8	32.4	32.4	30.1	26.1	26.1	10.0	7.5		8.9	6.5	
Actuated g/C Ratio	0.49	0.45	0.45	0.41	0.36	0.36	0.14	0.10		0.12	0.09	
v/c Ratio	0.73	0.57	0.14	0.21	0.80	0.11	0.47	0.23		0.47	0.53	
Control Delay	32.2	18.8	0.5	11.9	28.1	0.3	33.1	1.7		34.8	10.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	32.2	18.8	0.5	11.9	28.1	0.3	33.1	1.7		34.8	10.8	

Zone 54 pm pk 5:00 pm 02/26/2019 signal timing optimization
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	↖	→	↘	↙	←	↖	↘	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	B	A	B	C	A	C	A		C	B	
Approach Delay		19.4			25.4			24.9			23.7	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	39	152	0	11	186	0	43	0		39	0	
Queue Length 95th (ft)	#144	249	3	33	#330	0	77	0		75	38	
Internal Link Dist (ft)		1226			610			470			331	
Turn Bay Length (ft)	180		420	410		290						
Base Capacity (vph)	249	1437	744	268	1203	652	691	582		432	478	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.73	0.57	0.14	0.21	0.77	0.11	0.29	0.12		0.42	0.32	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 72.7

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

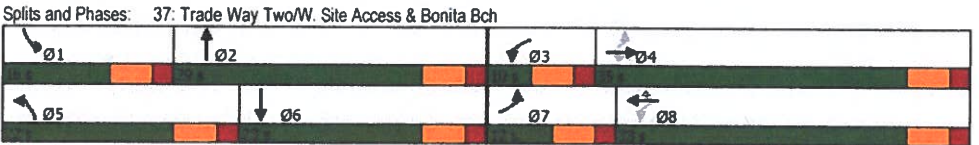
Maximum v/c Ratio: 0.80

Intersection Signal Delay: 22.7 Intersection LOS: C

Intersection Capacity Utilization 75.4% ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 2010 TWSC 2024 PM Pk Hr Background + Project (Without Vested)
 17: Trade Way Three/E. Site Access & Bonita Bch 03/10/2020

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕	↗	↘	↕	↗						
Traffic Vol, veh/h	88	978	11	4	942	138	0	0	6	0	0	108
Future Vol, veh/h	88	978	11	4	942	138	0	0	6	0	0	108
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	515	270	-	290	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	88	978	11	4	942	138	0	0	6	0	0	108
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1080	0	0	989	0	0	-	-	489	-	-	471
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	4.16	-	-	-	-	6.96	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	-	-	3.33	-	-	3.33
Pot Cap-1 Maneuver	636	-	-	689	-	-	0	0	522	0	0	536
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	636	-	-	689	-	-	-	-	522	-	-	536
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			0			12			13.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	522	636	-	-	689	-	-	536				
HCM Lane V/C Ratio	0.011	0.138	-	-	0.006	-	-	0.201				
HCM Control Delay (s)	12	11.6	-	-	10.3	-	-	13.4				
HCM Lane LOS	B	B	-	-	B	-	-	B				
HCM 95th %tile Q(veh)	0	0.5	-	-	0	-	-	0.7				

Lanes, Volumes, Timings 2024 PM Pk Hr Background + Vested + Project
 37: Trade Way Two/W. Site Access & Bonita Bch 03/10/2020

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↖	↖	↖	↖↖	↖	↖↖	↖	↖	↖↖	↖	↖
Traffic Volume (vph)	183	3267	101	55	2924	69	200	0	71	181	0	155
Future Volume (vph)	183	3267	101	55	2924	69	200	0	71	181	0	155
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	180		420	410		290	0		0	0		0
Storage Lanes	1		1	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Frt			0.850			0.850		0.850			0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1614	3228	1444	1614	3228	1444	3131	1444	0	3131	1444	0
Flt Permitted	0.043			0.045			0.950			0.950		
Satd. Flow (perm)	73	3228	1444	76	3228	1444	3131	1444	0	3131	1444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			109			109			109
Link Speed (mph)		45			45			25				45
Link Distance (ft)		1306			690			550				411
Travel Time (s)		19.8			10.5			15.0				6.2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	183	3267	101	55	2924	69	200	0	71	181	0	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	183	3267	101	55	2924	69	200	71	0	181	155	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	22.0	22.0		10.0	22.0	
Total Split (s)	13.0	96.0	96.0	10.0	93.0	93.0	22.0	24.0		20.0	22.0	
Total Split (%)	8.7%	64.0%	64.0%	6.7%	62.0%	62.0%	14.7%	16.0%		13.3%	14.7%	
Maximum Green (s)	7.0	90.0	90.0	4.0	87.0	87.0	16.0	18.0		14.0	16.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Walk Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effect Green (s)	97.8	92.3	92.3	91.2	87.2	87.2	13.7	11.6		12.5	10.4	
Actuated g/C Ratio	0.69	0.65	0.65	0.64	0.61	0.61	0.10	0.08		0.09	0.07	
v/c Ratio	1.45	1.56	0.10	0.60	1.48	0.07	0.66	0.33		0.66	0.75	
Control Delay	271.8	278.7	2.0	43.5	244.1	0.6	73.8	6.5		75.6	44.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	271.8	278.7	2.0	43.5	244.1	0.6	73.8	6.5		75.6	44.3	

Zone 54 pm pk 5:00 pm 02/26/2019 signal timing optimization
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Synchro 10 Report
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Lanes, Volumes, Timings 2024 PM Pk Hr Background + Vested + Project
 37: Trade Way Two/W. Site Access & Bonita Bch 03/10/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	F	A	D	F	A	E	A		E	D	
Approach Delay		270.5			235.0			56.2			61.1	
Approach LOS		F			F			E			E	
Queue Length 50th (ft)	-188	-2281	0	15	-1967	0	93	0		84	42	
Queue Length 95th (ft)	#371	#2547	21	#51	#2228	5	142	14		131	123	
Internal Link Dist (ft)		1226			610			470			331	
Turn Bay Length (ft)	180		420	410		290						
Base Capacity (vph)	126	2093	974	92	1977	926	352	278		308	259	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	1.45	1.56	0.10	0.60	1.48	0.07	0.57	0.26		0.59	0.60	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 142.3

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.56

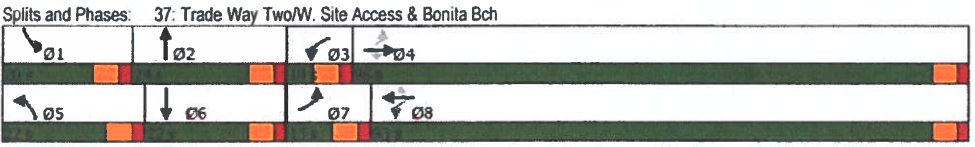
Intersection Signal Delay: 237.7 Intersection LOS: F

Intersection Capacity Utilization 138.0% ICU Level of Service H

Analysis Period (min) 15

- Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



HCM 2010 TWSC 2024 PM Pk Hr Background + Vested + Project
 17: Trade Way Three/E. Site Access & Bonita Bch 03/10/2020

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘	↗	↘				↘		↘
Traffic Vol, veh/h	88	3420	11	4	2940	138	0	0	6	0	0	108
Future Vol, veh/h	88	3420	11	4	2940	138	0	0	6	0	0	108
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	190	-	515	270	-	290	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	88	3420	11	4	2940	138	0	0	6	0	0	108
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3078	0	0	3431	0	0	-	-	1710	-	-	1470
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	4.16	-	-	-	-	6.96	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	-	-	3.33	-	-	3.33
Pot Cap-1 Maneuver	103	-	-	74	-	-	0	0	79	0	0	115
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	103	-	-	74	-	-	-	-	79	-	-	115
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.2			0.1			54.3			138.4		
HCM LOS	F			F			F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	79	103	-	-	74	-	-	115				
HCM Lane V/C Ratio	0.076	0.854	-	-	0.054	-	-	0.939				
HCM Control Delay (s)	54.3	127.6	-	-	56.4	-	-	138.4				
HCM Lane LOS	F	F	-	-	F	-	-	F				
HCM 95th %tile Q(veh)	0.2	4.9	-	-	0.2	-	-	5.9				

Appendix C:

**AM & PM Intersection Analysis @ Bonita Grande & Site
Access Connections**

HCM 2010 TWSC
39: Bonita Grande & North Site Access

2024 AM Pk Hr Background + Vested + Project
03/10/2020

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘		↘	↑	↗	
Traffic Vol, veh/h	36	14	18	255	381	7
Future Vol, veh/h	36	14	18	255	381	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	340	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	36	14	18	255	381	7
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	676	385	388	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	291	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	417	660	1165	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	411	660	1165	-	-	-
Mov Cap-2 Maneuver	411	-	-	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	13.8	0.5	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1165	-	460	-	-	
HCM Lane V/C Ratio	0.015	-	0.109	-	-	
HCM Control Delay (s)	8.1	-	13.8	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.4	-	-	

HCM 2010 TWSC
39: Bonita Grande & North Site Access

2024 AM Pk Hr Background + Vested + Project
03/10/2020

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑		↑	↑	↑	
Traffic Vol, veh/h	36	14	18	255	381	7
Future Vol, veh/h	36	14	18	255	381	7
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	340	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	36	14	18	255	381	7

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	676	385	388	0	- 0
Stage 1	385	-	-	-	-
Stage 2	291	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	417	660	1165	-	-
Stage 1	686	-	-	-	-
Stage 2	756	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	411	660	1165	-	-
Mov Cap-2 Maneuver	411	-	-	-	-
Stage 1	676	-	-	-	-
Stage 2	756	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.8	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1165	-	460	-	-
HCM Lane V/C Ratio	0.015	-	0.109	-	-
HCM Control Delay (s)	8.1	-	13.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

HCM 2010 TWSC
35: Bonita Grande & Center Site Access

2024 AM Pk Hr Background + Vested + Project
03/10/2020

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑	↑	
Traffic Vol, veh/h	0	32	44	273	378	17
Future Vol, veh/h	0	32	44	273	378	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	32	44	273	378	17
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	387	395	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	0	659	1158	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	659	1158	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	10.7	1.1	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1158	-	659	-	-	
HCM Lane V/C Ratio	0.038	-	0.049	-	-	
HCM Control Delay (s)	8.2	0	10.7	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	

Zone 54 pm pk 5.00 pm 02/26/2019 signal timing optimization
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Synchro 10 Report
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HCM 2010 TWSC
14: Bonita Grande & S. Site Access

2024 AM Pk Hr Background + Vested + Project
03/10/2020

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑	↓	
Traffic Vol. veh/h	0	29	0	317	405	5
Future Vol. veh/h	0	29	0	317	405	5
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	29	0	317	405	5
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	408	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	-	-
Pot. Cap-1 Maneuver	0	641	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	641	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	10.9	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	641	-	-		
HCM Lane V/C Ratio	-	0.045	-	-		
HCM Control Delay (s)	-	10.9	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %tile Q(veh)	-	0.1	-	-		

HCM 2010 TWSC 2024 PM Pk Hr Background + Vested + Project
 41: Bonita Grande & N. Site Access 02/26/2020

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑	
Traffic Vol, veh/h	84	29	39	412	485	17
Future Vol, veh/h	84	29	39	412	485	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	340	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	84	29	39	412	485	17

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	984	494	502
Stage 1	494	-	-
Stage 2	490	-	-
Critical Hdwy	6.43	6.23	4.13
Critical Hdwy Stg 1	5.43	-	-
Critical Hdwy Stg 2	5.43	-	-
Follow-up Hdwy	3.527	3.327	2.227
Pot Cap-1 Maneuver	274	573	1057
Stage 1	611	-	-
Stage 2	614	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	264	573	1057
Mov Cap-2 Maneuver	264	-	-
Stage 1	588	-	-
Stage 2	614	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.5	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1057	-	306	-	-
HCM Lane V/C Ratio	0.037	-	0.369	-	-
HCM Control Delay (s)	8.5	-	23.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

HCM 2010 TWSC
39: Bonita Grande & Center Site Access

2024 PM Pk Hr Background + Vested + Project
02/26/2020

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↖	↘	
Traffic Vol, veh/h	0	69	103	451	474	40
Future Vol, veh/h	0	69	103	451	474	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	69	103	451	474	40

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	494	514	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.23	4.13	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.327	2.227	-	-
Pot Cap-1 Maneuver	0	573	1046	-	-
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	573	1046	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1046	-	573	-	-
HCM Lane V/C Ratio	0.098	-	0.12	-	-
HCM Control Delay (s)	8.8	0	12.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

HCM 2010 TWSC
35: Bonita Grande & S. Site Access

2024 PM Pk Hr Background + Vested + Project
02/26/2020

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↖		↗	↘	
Traffic Vol, veh/h	0	58	0	554	531	12
Future Vol, veh/h	0	58	0	554	531	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	58	0	554	531	12
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	537	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	-	-
Pot Cap-1 Maneuver	0	542	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	542	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.4	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	542	-	-		
HCM Lane V/C Ratio	-	0.107	-	-		
HCM Control Delay (s)	-	12.4	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %tile Q(veh)	-	0.4	-	-		

Zone 54 pm pk 5:00 pm 02/26/2019 signal timing optimization
gjc

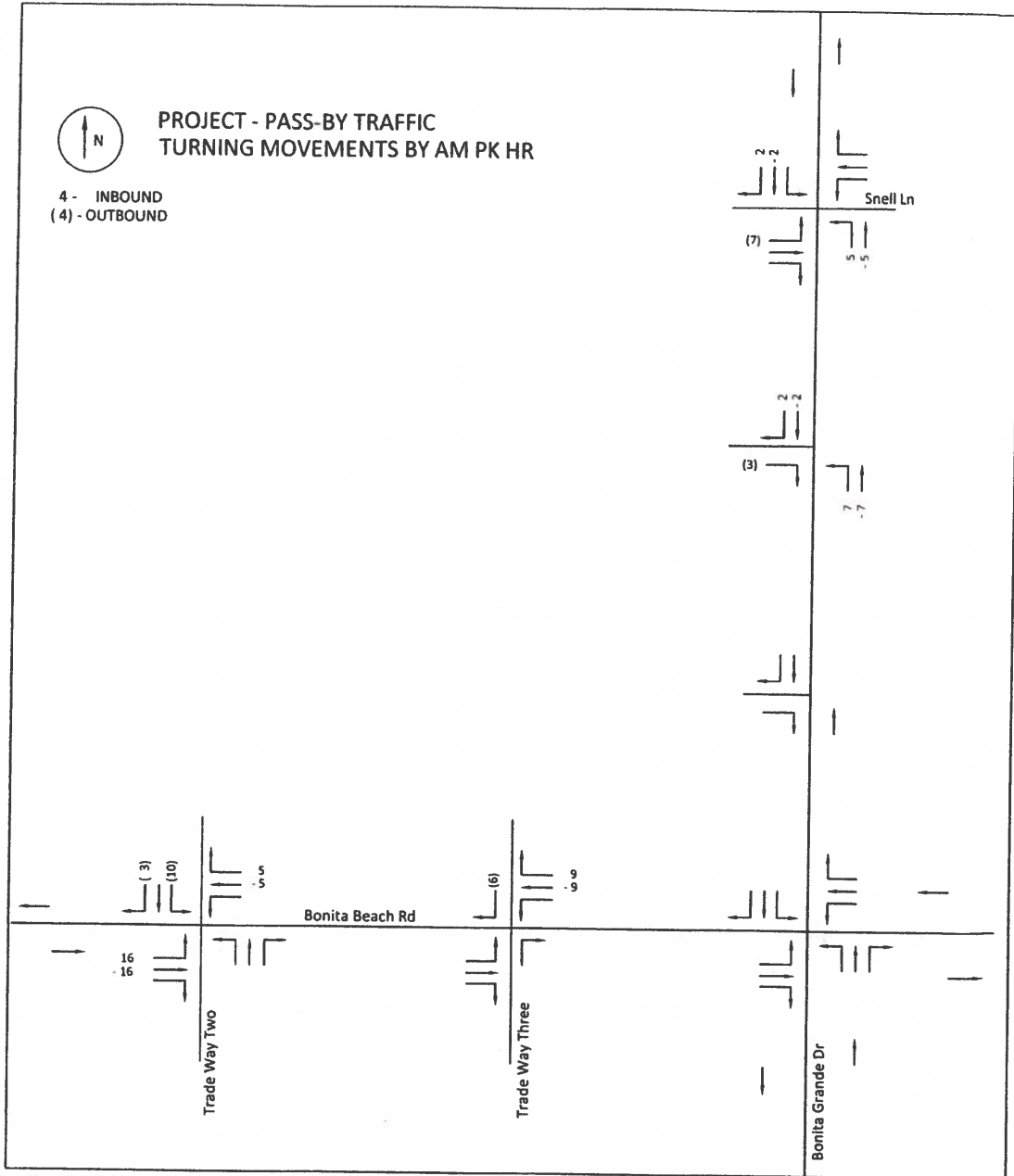
Synchro 10 Report
Page 1

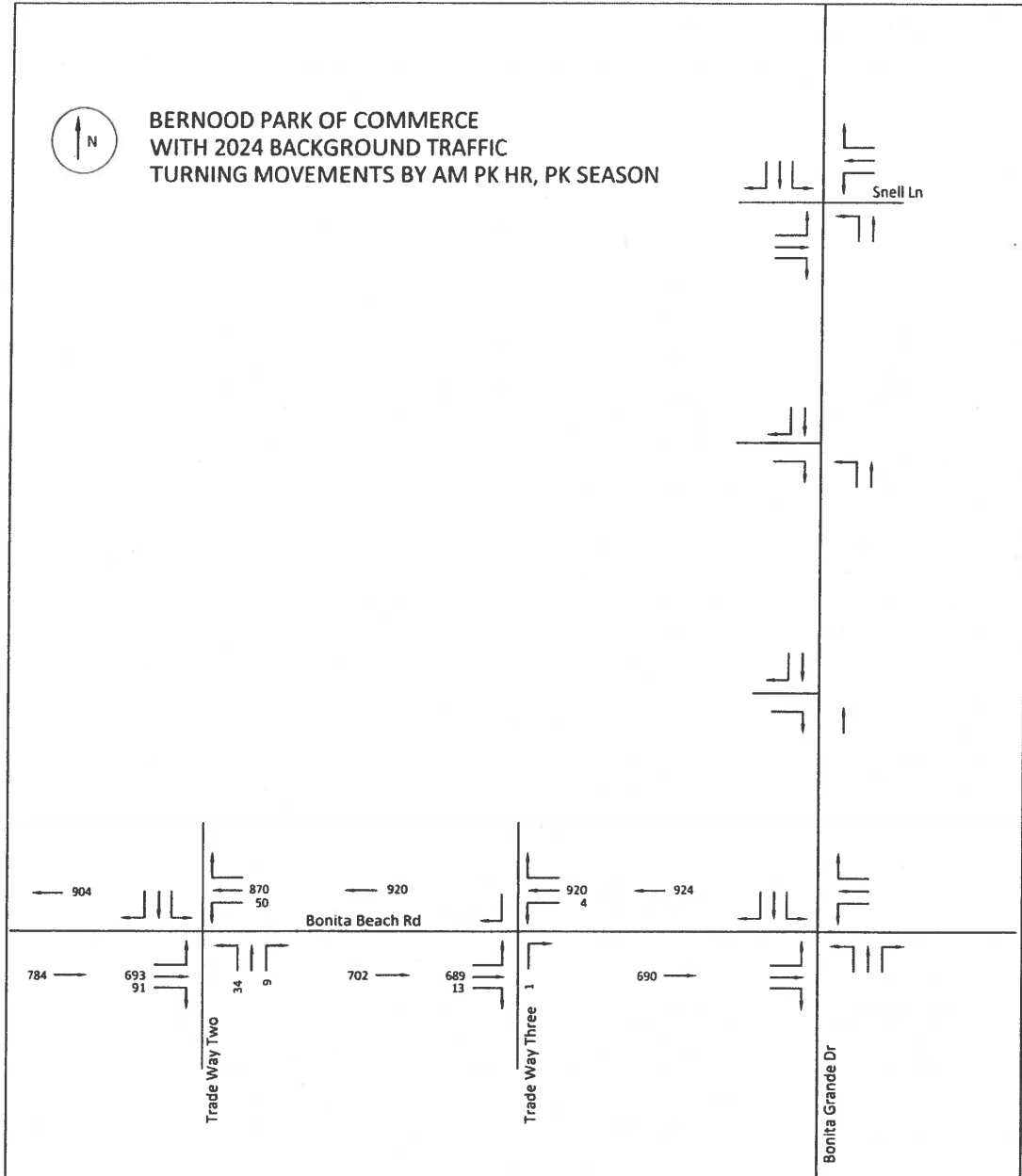
Appendix D:
AM Distribution Graphics

Bonita Grande Drive – MPD Rezone – TIS – March 2020

Project - Net External Traffic
 Turning Movement by AM PM
 US - Inbound
 (HS) - Outbound



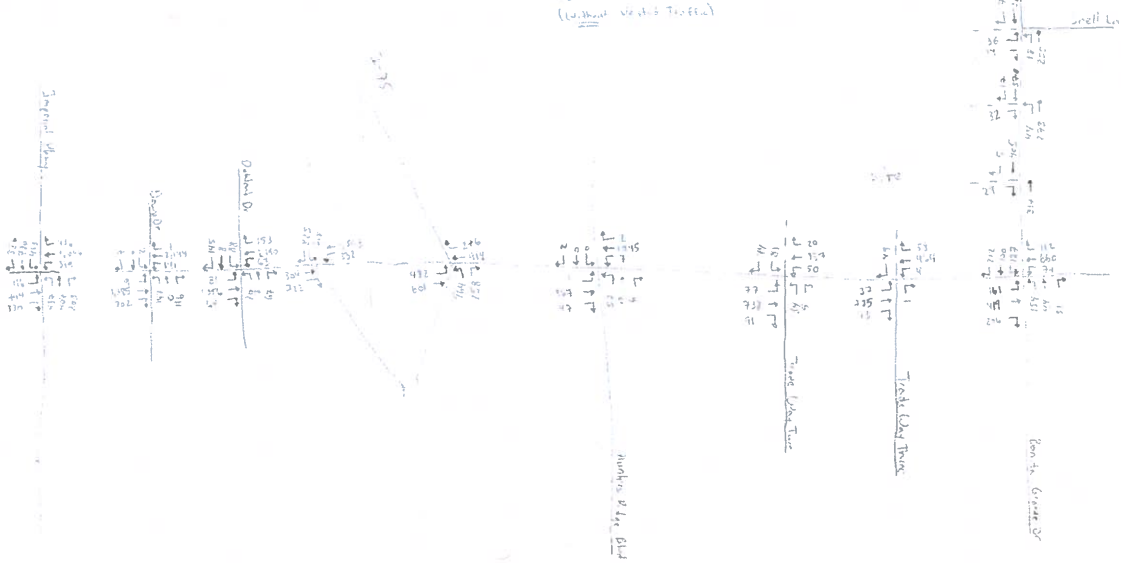




Bonita Grande Drive – MPD Rezone – TIS – March 2020



2024 Total Traffic Volumes
 Times Accounts by AM Peak
 (Light Vehicle Traffic)



2024 Total Traffic Volumes
 Times Accounts by AM Peak
 (Light Vehicle Traffic)



Appendix E:

**Development of Future Year Background Turning
Volumes**

Development of Future Year Background Turning Volumes

Bonita Beach Rd at Bonita Grande Drive
 March 2019
 2024

Intersection
 Count Date
 Build-Out Year

	NBL		NBT		NBR		SBL		SBT		SBR		EBL		EBT		EBR		WBL		WBT		WBR		
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	
RAW Turning Movement Counts	128	39	128	39	128	39	128	77	67	144	144	123	315	186	69	542	78	186	69	542	78	186	69	542	78
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Current Peak Season Volumes	128	39	128	39	128	39	128	77	67	144	144	123	315	186	69	542	78	186	69	542	78	186	69	542	78
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	4.90%	4.90%	4.90%	4.90%	4.90%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	142	44	142	44	142	44	142	98	86	183	183	136	348	206	77	599	87	206	77	599	87	206	77	599	87
Vested Trips Turning Volumes												1,998				2,442									
Project Turning Volumes	12		12		12		29	14	29	14	29	25	71	61	25	61	25	71	61	25	61	25	71	61	25
2024 Background + Vested	142	44	142	44	142	44	142	98	86	183	183	136	348	206	77	599	87	206	77	599	87	206	77	599	87
2024 Background + Project	154	44	154	44	154	44	127	100	212	212	161	419	206	77	660	112	206	77	660	112	206	77	660	112	206
2019 Background + Vested + Project	154	44	154	44	154	44	127	100	212	212	161	419	206	77	660	112	206	77	660	112	206	77	660	112	206

	NBL		NBT		NBR		SBL		SBT		SBR		EBL		EBT		EBR		WBL		WBT		WBR				
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate			
RAW Turning Movement Counts	159	115	159	115	159	115	159	111	75	164	164	182	446	78	66	422	98	78	66	422	98	182	446	78	66	422	98
Peak Season Correction Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Current Peak Season Volumes	159	115	159	115	159	115	159	111	75	164	164	182	446	78	66	422	98	78	66	422	98	182	446	78	66	422	98
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	4.90%	4.90%	4.90%	4.90%	4.90%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%		
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
2024 Background Turning Volumes	176	127	176	127	176	127	176	141	95	208	208	201	492	86	73	466	108	86	73	466	108	201	492	86	73	466	108
Vested Trips Turning Volumes												2,442				1,998											
Project Turning Volumes	29		29		29		58	29	58	29	58	59	145	147	59	147	59	145	147	59	145	147	59	147	59		
2024 Background + Vested	176	127	176	127	176	127	176	141	95	208	208	201	492	86	73	466	108	86	73	466	108	201	492	86	73	466	108
2024 Background + Project	205	127	205	127	205	127	199	124	266	266	260	637	86	73	613	167	86	73	613	167	260	637	86	73	613	167	
2024 Background + Vested + Project	205	127	205	127	205	127	199	124	266	266	260	637	86	73	613	167	86	73	613	167	260	637	86	73	613	167	

Development of Future Year Background Turning Volumes

Bonita Beach Rd at Hunters Ridge Blvd
January 2019
2024

Intersection
Count Date
Build-Out Year

	AM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	50	0	5	0	0	2	1	736	41	6	786	2
Peak Season Correction Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Current Peak Season Volumes	52	0	5	0	0	2	1	765	43	6	817	2
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	57	0	6	0	0	2	1	845	47	7	902	2
Vested Trips Turning Volumes								1998			2442	
Project Turning Volumes								122			143	
2024 Background + Vested	57	0	6	0	0	2	1	2,843	47	7	3,344	2
2024 Background + Project	57	0	6	0	0	2	1	967	47	7	1,045	2
2024 Background + Vested + Project	57	0	6	0	0	2	1	2,965	47	7	3,487	2

	PM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	50	0	5	1	0	1	2	835	28	0	912	1
Peak Season Correction Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Current Peak Season Volumes	52	0	5	1	0	1	2	868	29	0	948	1
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	57	0	6	1	0	1	2	958	32	0	1,047	1
Vested Trips Turning Volumes								2,442			1,998	
Project Turning Volumes								295			288	
2024 Background + Vested	57	0	6	1	0	1	2	3,400	32	0	3,045	1
2024 Background + Project	57	0	6	1	0	1	2	1,253	32	0	1,335	1
2024 Background + Vested + Project	57	0	6	1	0	1	2	3,695	32	0	3,333	1

Development of Future Year Background Turning Volumes

Bonita Beach Rd at I-75 NB Ramp
 February 2019
 2024

Intersection
 Count Date
 Build-Out Year

	AM Peak Hour										PM Peak Hour																							
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR										
RAW Turning Movement Counts	882	0	214	0	0	0	441	461	0	0	0	732	226	420	0	202	0	0	785	697	0	683	305	416	0	200	0	0	777	690	0	676	302	
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Current Peak Season Volumes	873	0	212	0	0	0	437	456	0	0	0	725	224	416	0	200	0	0	777	690	0	676	302	416	0	200	0	0	777	690	0	676	302	
Growth Rate	2.00%	0.00%	2.00%	0.00%	0.00%	0.00%	2.00%	2.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	0.00%	2.00%	0.00%	0.00%	2.00%	2.00%	0.00%	2.00%	2.00%	2.00%	2.00%	0.00%	2.00%	0.00%	2.00%	0.00%	2.00%	2.00%		
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
2024 Background Turning Volumes	964	0	234	0	0	0	482	503	0	0	0	800	247	459	0	221	0	0	858	762	0	746	333	459	0	221	0	0	858	762	0	746	333	
Vested Trips Turning Volumes			254				1,744					2,044	398			496			1,946			1,708	290											
Project Turning Volumes			24				98					114	29			60			235			231	57											
2024 Background + Vested	964	0	488	0	0	0	482	2,247	0	0	0	2,844	645	964	0	717	0	0	2,708	0	0	2,454	623	964	0	258	0	0	914	276	964	0	276	674
2024 Background + Project	964	0	258	0	0	0	482	601	0	0	0	914	276	964	0	281	0	0	997	390	0	977	390	964	0	258	0	0	914	276	964	0	276	674
2024 Background + Vested + Project	964	0	512	0	0	0	482	2,345	0	0	0	2,958	674	964	0	777	0	0	2,943	0	0	2,685	680	964	0	258	0	0	914	276	964	0	276	674
RAW Turning Movement Counts	420	0	202	0	0	0	785	697	0	0	0	683	305	420	0	202	0	0	785	697	0	683	305	420	0	200	0	0	777	690	0	676	302	
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Current Peak Season Volumes	416	0	200	0	0	0	777	690	0	0	0	676	302	416	0	200	0	0	777	690	0	676	302	416	0	200	0	0	777	690	0	676	302	
Growth Rate	2.00%	0.00%	2.00%	0.00%	0.00%	0.00%	2.00%	2.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	0.00%	2.00%	0.00%	0.00%	2.00%	2.00%	0.00%	2.00%	2.00%	2.00%	2.00%	0.00%	2.00%	0.00%	2.00%	0.00%	2.00%	2.00%		
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
2024 Background Turning Volumes	459	0	221	0	0	0	858	762	0	0	0	746	333	459	0	221	0	0	858	762	0	746	333	459	0	221	0	0	858	762	0	746	333	
Vested Trips Turning Volumes			496				1,946					1,708	290			496			1,946			1,708	290											
Project Turning Volumes			60				235					231	57			60			235			231	57											
2024 Background + Vested	459	0	717	0	0	0	858	2,708	0	0	0	2,454	623	459	0	717	0	0	2,708	0	0	2,454	623	459	0	258	0	0	914	276	459	0	276	674
2024 Background + Project	459	0	281	0	0	0	858	997	0	0	0	977	390	459	0	281	0	0	997	390	0	977	390	459	0	258	0	0	914	276	459	0	276	674
2024 Background + Vested + Project	459	0	777	0	0	0	858	2,943	0	0	0	2,685	680	459	0	777	0	0	2,943	0	0	2,685	680	459	0	258	0	0	914	276	459	0	276	674

Development of Future Year Background Turning Volumes

Bonita Beach Rd at I-75 SB Ramp
February 2019
2024

Intersection
Count Date
Build-Out Year

	AM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	0.99	0.99	0.99	269	0.99	755	0.99	668	661	277	1,357	0.99
Peak Season Correction Factor	0	0	0	266	0	747	0	661	654	274	1,343	0
Current Peak Season Volumes	0.00%	0.00%	0.00%	2.00%	0.00%	2.00%	0.00%	2.00%	2.00%	2.00%	2.00%	0.00%
Growth Rate	5	5	5	5	5	5	5	5	5	5	5	5
Years to Build-out	0	0	0	294	0	825	0	730	722	303	1,483	0
2024 Background Turning Volumes												
Vested Trips Turning Volumes				471			1273			487	1557	
Project Turning Volumes	0	0	0	24	0	825	0	74	722	29	85	0
2024 Background + Vested	0	0	0	765	0	825	0	2,003	722	790	3,040	0
2024 Background + Project	0	0	0	318	0	825	0	804	722	332	1,568	0
2024 Background + Vested + Project	0	0	0	789	0	825	0	2,077	722	819	3,125	0

	PM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	0.99	0.99	0.99	200	0.99	518	0.99	1,326	677	260	863	0.99
Peak Season Correction Factor	0	0	0	198	0	513	0	1,313	670	257	854	0
Current Peak Season Volumes	0.00%	0.00%	0.00%	2.00%	0.00%	2.00%	0.00%	2.00%	2.00%	2.00%	2.00%	0.00%
Growth Rate	5	5	5	5	5	5	5	5	5	5	5	5
Years to Build-out	0	0	0	219	0	566	0	1,450	740	284	943	0
2024 Background Turning Volumes												
Vested Trips Turning Volumes				389			1,557			435	1,273	
Project Turning Volumes	0	0	0	59	0	566	0	176	740	58	174	0
2024 Background + Vested	0	0	0	608	0	566	0	3,007	740	719	2,216	0
2024 Background + Project	0	0	0	278	0	566	0	1,626	740	342	1,117	0
2024 Background + Vested + Project	0	0	0	667	0	566	0	3,183	740	777	2,390	0

Development of Future Year Background Turning Volumes

Bonita Beach Rd at Oakland Drive
February 2019
2024

Intersection
Count Date
Build-Out Year

	AM Peak Hour												PM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	18	6	62	81	7	132	74	1,173	59	58	1,926	140	12	5	77	74	3	112	70	1,971	49	20	1,273	98
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Current Peak Season Volumes	18	6	61	80	7	131	73	1,161	58	57	1,907	139	12	5	76	73	3	111	69	1,951	49	20	1,260	97
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	20	7	67	88	8	145	81	1,282	64	63	2,105	153	13	6	84	81	3	123	76	2,154	54	22	1,391	107
Vested Trips Turning Volumes								1,273			1,557								1,557			1,273		
Project Turning Volumes								74			85								74			85		
2024 Background + Vested	20	7	67	88	8	145	81	2,555	64	63	3,662	153	13	6	84	81	3	123	76	3,711	54	22	2,664	107
2024 Background + Project	20	7	67	88	8	145	81	1,356	64	63	2,190	153	13	6	84	81	3	123	76	2,330	54	22	1,565	107
2024 Background + Vested + Project	20	7	67	88	8	145	81	2,629	64	63	3,747	153	13	6	84	81	3	123	76	3,887	54	22	2,838	107
RAW Turning Movement Counts	12	5	77	74	3	112	70	1,971	49	20	1,273	98	12	5	77	74	3	112	70	1,971	49	20	1,273	98
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Current Peak Season Volumes	12	5	76	73	3	111	69	1,951	49	20	1,260	97	12	5	76	73	3	111	69	1,951	49	20	1,260	97
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	13	6	84	81	3	123	76	2,154	54	22	1,391	107	13	6	84	81	3	123	76	2,154	54	22	1,391	107
Vested Trips Turning Volumes								1,557			1,273								1,557			1,273		
Project Turning Volumes								176			174								176			174		
2024 Background + Vested	13	6	84	81	3	123	76	3,711	54	22	2,664	107	13	6	84	81	3	123	76	3,711	54	22	2,664	107
2024 Background + Project	13	6	84	81	3	123	76	2,330	54	22	1,565	107	13	6	84	81	3	123	76	2,330	54	22	1,565	107
2024 Background + Vested + Project	13	6	84	81	3	123	76	3,887	54	22	2,838	107	13	6	84	81	3	123	76	3,887	54	22	2,838	107

Development of Future Year Background Turning Volumes

Bonita Beach Rd at Downs Dr
February 2019
2024

Intersection
Count Date
Build-Out Year

	AM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	134	0	95	2	0	6	8	1,210	185	116	1,897	1
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Current Peak Season Volumes	133	0	94	2	0	6	8	1,198	183	115	1,878	1
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	147	0	104	2	0	7	9	1,323	202	127	2,073	1
Vested Trips Turning Volumes								1,273			1,557	
Project Turning Volumes	147	0	104	2	0	7	9	62	202	14	71	1
2024 Background + Vested	147	0	116	2	0	7	9	2,596	202	127	3,630	1
2024 Background + Project	147	0	116	2	0	7	9	1,385	202	141	2,144	1
2024 Background + Vested + Project	147	0	116	2	0	7	9	2,858	202	141	3,701	1

	PM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	189	2	124	1	0	6	9	1,947	141	77	1,295	6
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Current Peak Season Volumes	187	2	123	1	0	6	9	1,928	140	76	1,282	6
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	206	2	136	1	0	7	10	2,129	155	84	1,415	7
Vested Trips Turning Volumes								1,557			1,273	
Project Turning Volumes	206	2	136	1	0	7	10	147	155	29	145	7
2024 Background + Vested	206	2	165	1	0	7	10	3,686	155	84	2,688	7
2024 Background + Project	206	2	165	1	0	7	10	2,276	155	113	1,560	7
2024 Background + Vested + Project	206	2	165	1	0	7	10	3,833	155	113	2,833	7

Development of Future Year Background Turning Volumes

Intersection
 Count Date
 Build-Out Year

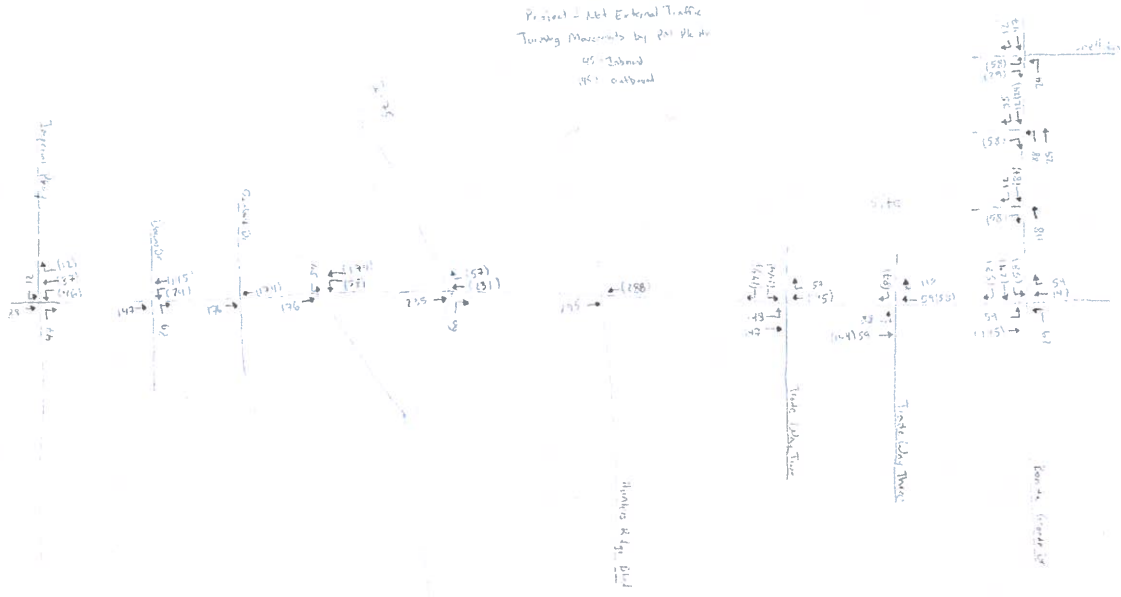
Bonita Beach Rd at Imperial Pkwy
 February 2019
 2024

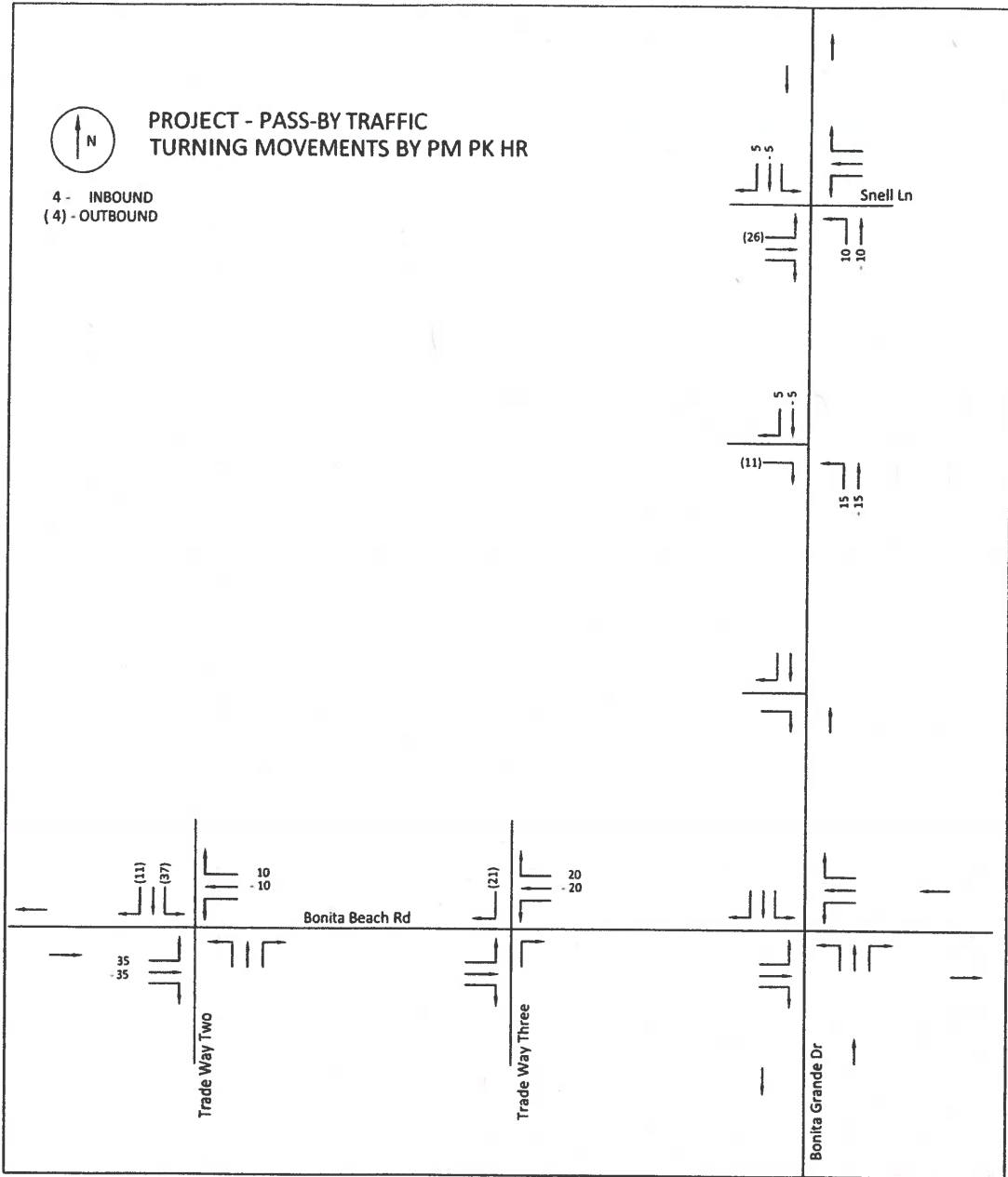
	AM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	400	373	172	423	719	298	106	876	302	272	1,467	375
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Current Peak Season Volumes	396	369	170	419	712	295	105	867	299	269	1,452	371
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	437	407	188	463	786	326	116	957	330	297	1,603	410
Vested Trips Turning Volumes			153	356				764		202	1075	280
Project Turning Volumes			20	5				37		22	43	6
2024 Background + Vested	437	407	341	819	786	326	116	1,721	330	499	2,678	690
2024 Background + Project	437	407	208	468	786	326	116	994	330	319	1,646	416
2024 Background + Vested + Project	437	407	361	824	786	326	116	1,758	330	521	2,721	696

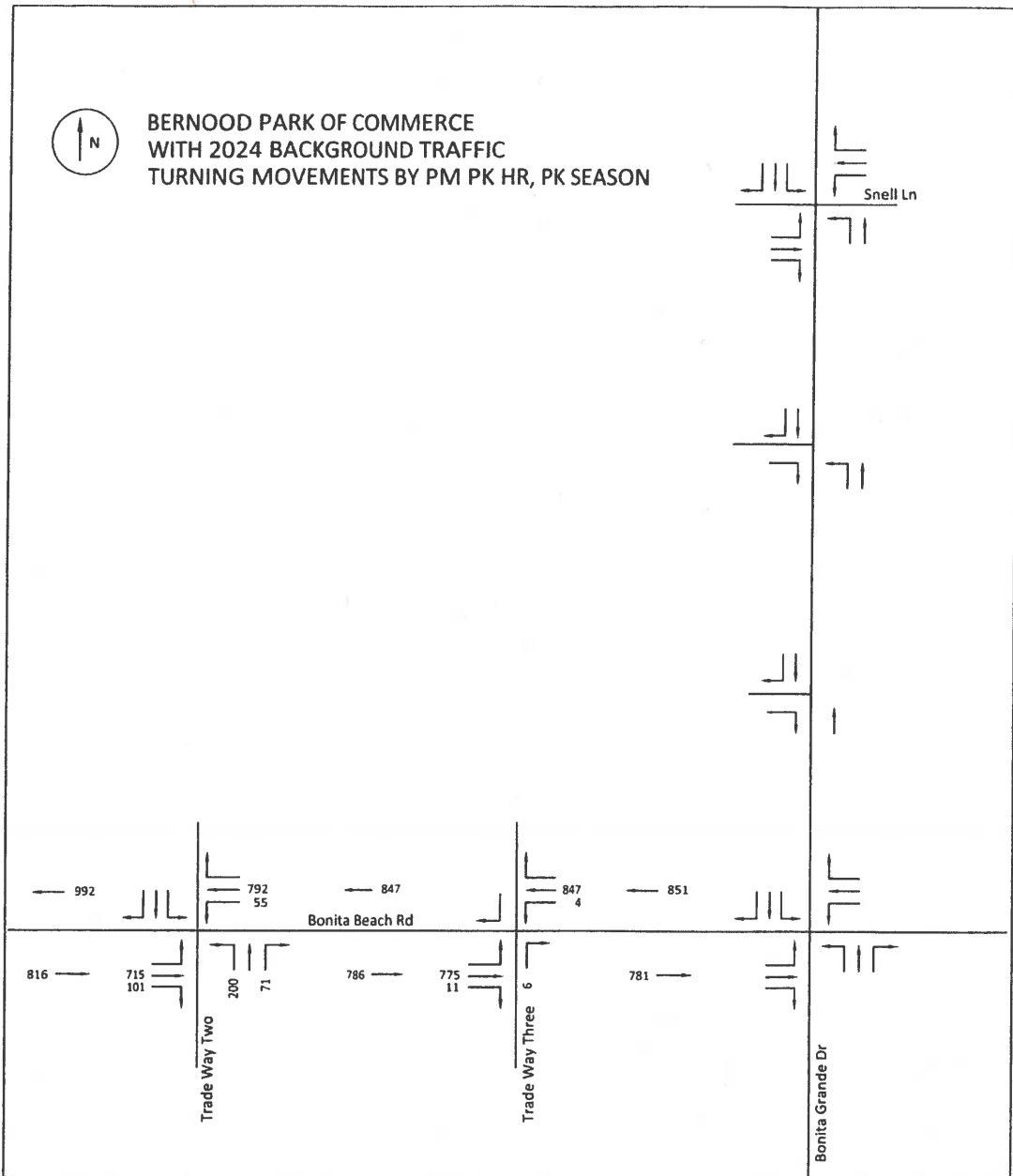
	PM Peak Hour											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
RAW Turning Movement Counts	244	770	282	396	410	189	378	1,475	300	170	844	452
Peak Season Correction Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Current Peak Season Volumes	242	762	279	392	406	187	374	1,460	297	168	836	447
Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
2024 Background Turning Volumes	267	841	308	433	448	206	413	1,612	328	185	923	494
Vested Trips Turning Volumes			202	280				1,075		153	738	382
Project Turning Volumes			47	12				88		46	87	12
2024 Background + Vested	267	841	510	713	448	206	413	2,687	328	338	1,661	876
2024 Background + Project	267	841	355	445	448	206	413	1,700	328	231	1,010	506
2024 Background + Vested + Project	267	841	557	725	448	206	413	2,775	328	384	1,748	888

Appendix F:
Peak Season Factors

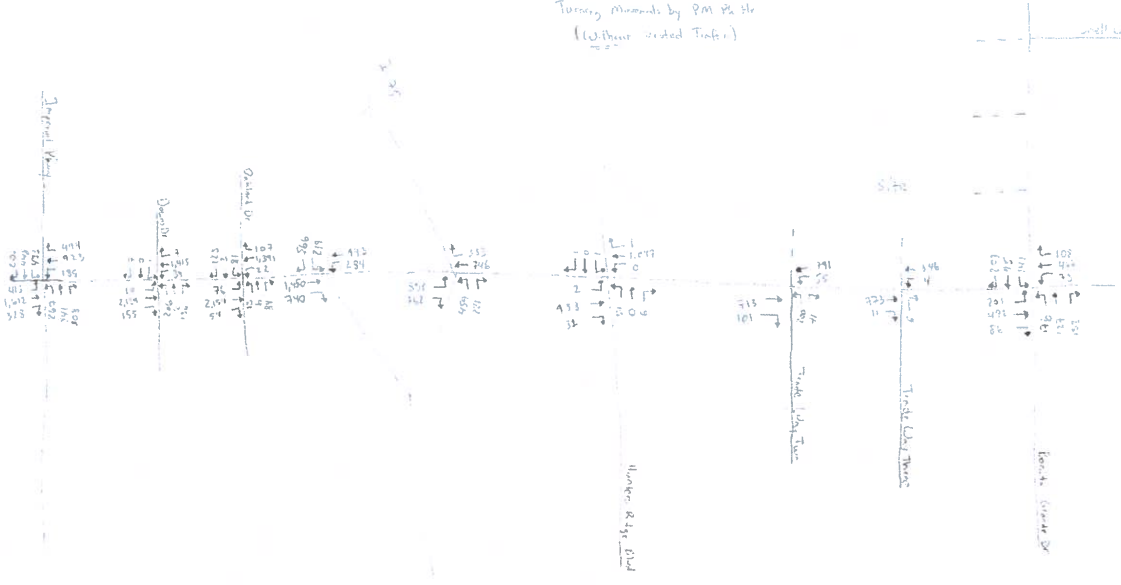
Appendix G:
PM Distribution Graphics



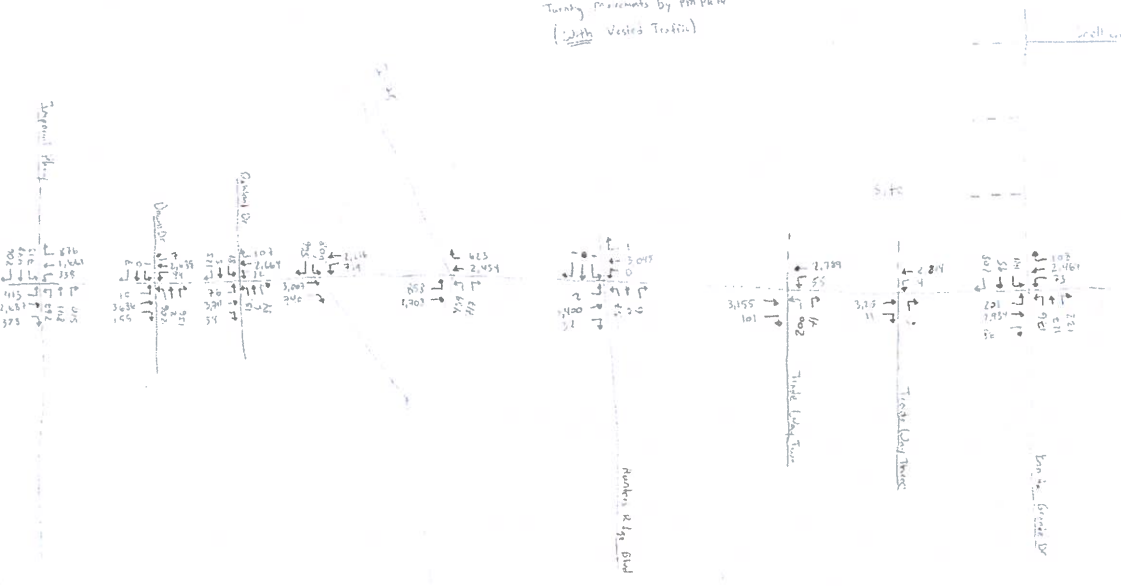




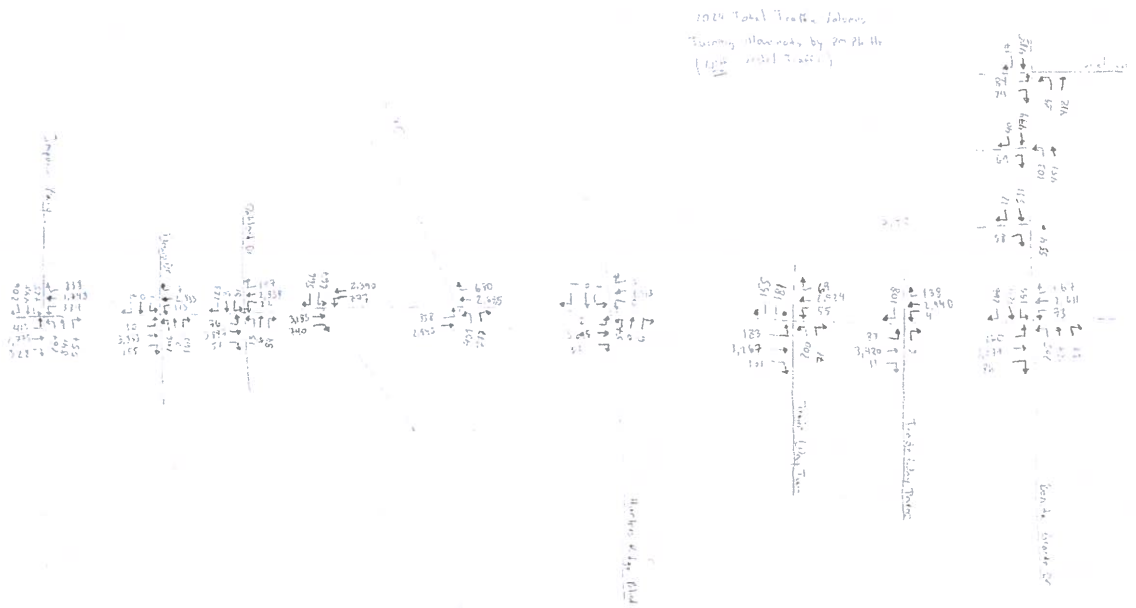
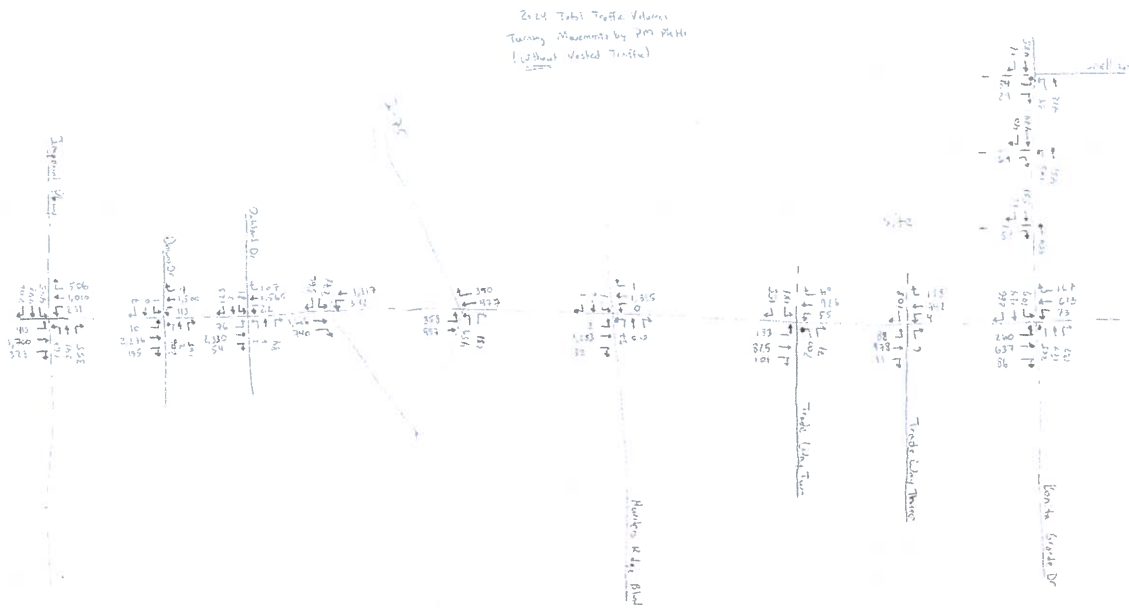
2021 Background Traffic
Turning Moments by PM PHH
(Without Vested Traffic)



2021 Background Traffic
Turning Moments by PM PHH
(With Vested Traffic)



Bonita Grande Drive – MPD Rezone – TIS – March 2020



Appendix H:
Signal Timings

BONITA / I-75 (TRP) - BNITA BCH & BONITA GRANDE VID ASC3

Controller Timing Plan (MM)2-1
Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	EBLT	WB	SB	NB	WBLT	EB										
Min Green	5	15	8	8	5	15	0	0	0	0	0	0	0	0	0	0
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	7	7	0	7	0	0	0	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	27	25	30	0	25	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	5.0	3.0	3.0	2.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	20	40	30	20	15	40	0	0	0	0	0	0	0	0	0	0
Max 2	20	45	35	25	20	45	0	0	0	0	0	0	0	0	0	0
Max 3	30	50	40	30	25	50	0	0	0	0	0	0	0	0	0	0
DYM Max	30	50	40	30	25	50	0	0	0	0	0	0	0	0	0	0
DYM Stp	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.8	4.0	4.0	4.0	4.8	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	2.0	3.0	3.0	3.0	2.0	3.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



5405 - Bonita Beach Rd & I-75 NB ramp - - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	EBLT	WB	NBLT			EB										
Min Green	7	15	7	0	0	15	0	0	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	0	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	15	0	28	0	32	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	5.0	2.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	40	40	30	0	0	40	0	0	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.7	4.7	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clear	2.5	2.0	2.5	2.5	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lee County, FL


5405 - Bonita Beach Rd & I-75 NB ramp -- Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Percent
Cycle	150	Std (COS)	9	Offsets In	Percent
Offset Value	63%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	2		
Actuated Walk	No	Sequence	2		
Rest					
Phase					
Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB	NBLT			EB										
Splits (Split Pat 1)	37	28	34	1	0	65	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	65%	0%	0%

Misc. Data					
Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall	X															
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 11

Split Pattern	11	TS2 (Pat-Off)	3-2	Splits In	Percent
Cycle	200	Std (COS)	0	Offsets In	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB	NBLT			EB										
Splits (Split Pat 11)	8	24	67	1	0	32	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	32%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time			X													
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 12

Split Pattern	12	TS2 (Pat-Off)	3-3	Splits In	Percent
Cycle	150	Std (COS)	81	Offsets In	Percent
Offset Value	56%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	2		
Actuated Walk Rest	No	Sequence	2		
Phase Reservice	No	Action Plan	0		

Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB	NBLT			EB										
Splits (Split Pat 12)	48	25	26	1	0	73	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	73%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall	X															
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Lee County, FL



5404 - Bonita Beach Rd & I-75 SB ramp - - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction		WB	SBLT		WBLT	EB		SBRT								
Min Green	0	20	7	0	7	20	0	7	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	0	7	7	0	0	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	32	0	0	11	13	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	5.0	2.0	0.0	2.0	5.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	40	30	0	20	40	0	30	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.7	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clear	1.0	2.0	2.5	1.0	2.5	2.0	1.0	2.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Lee County, FL

5404 - Bonita Beach Rd & I-75 SB ramp - - Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Percent
Cycle	150	Std (COS)	9	Offsets In	Percent
Offset Value	37%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description		WB	SBLT		WBLT	EB		SBRT								
Splits (Split Pat 1)	0	75	25	0	28	47	0	25	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data			
Veh Perm 1	0	Veh Perm 2	0
Veh Perm 2 Disp	0	Crossing Arterial Pat	0
Split Demand Pat 1	0	Split Demand Pat 2	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 11

Split Pattern 11 TS2 (Pat-Off) 3-2 Splits In Percent
 Cycle 200 Std (COS) 161 Offsets In Percent
 Offset Value 33% Dwell/Add Time 0
 Actuated Coord Yes Timing Plan 0
 Actuated Walk Rest No Sequence 0
 Phase Reservice No Action Plan 0
 Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description		WB	SBLT		WBLT	EB		SBRT								
Splits (Split Pat 11)	0	92	8	0	15	77	0	8	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 12

Split Pattern 12 TS2 (Pat-Off) 3-3 Splits In Percent
 Cycle 150 Std (COS) 81 Offsets In Percent
 Offset Value 37% Dwell/Add Time 0
 Actuated Coord Yes Timing Plan 0
 Actuated Walk Rest No Sequence 0
 Phase Reservice No Action Plan 0

Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description		WB	SBLT		WBLT	EB		SBRT								
Splits (Split Pat 12)	0	76	24	0	27	46	0	24	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	97%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Lee County, FL



5403 - Bonita Bch & Oakland\Crest Exchange -- Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	WBLT	EB		SB	EBLT	WB		NB								
Min Green	5	20	0	8	5	20	0	8	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	17	0	30	0	16	0	32	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	5.0	0.0	2.0	2.0	5.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	55	0	25	15	55	0	25	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.7	4.0	4.0	4.0	4.7	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clear	2.0	2.0	1.0	2.5	2.0	2.0	1.0	2.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lee County, FL


5403 - Bonita Bch & Oakland\Crest Exchange -- Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Percent
Cycle	150	Std (COS)	9	Offsets In	Percent
Offset Value	35%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB		SB	EBLT	WB		NB								
Splits (Split Pat 1)	15	62	0	23	14	63	0	23	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data			
Veh Perm 1	0	Veh Perm 2	0
Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0
		Crossing Arterial	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 11

Split Pattern 11 TS2 (Pat-Off) 3-2 Splits In Percent
 Cycle 200 Std (COS) 165 Offsets In Percent
 Offset Value 46% Dwell/Add Time 0
 Actuated Coord Yes Timing Plan 0
 Actuated Walk No Sequence 0
 Rest
 Phase No Action Plan 0
 Reservice
 Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB		SB	EBLT	WB		NB								
Splits (Split Pat 11)	10	75	0	15	10	75	0	15	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 12

Split Pattern 12 TS2 (Pat-Off) 3-3 Splits In Percent
 Cycle 150 Std (COS) 81 Offsets In Percent
 Offset Value 0% Dwell/Add Time 0
 Actuated Coord Yes Timing Plan 0
 Actuated Walk No Sequence 0
 Rest
 Phase No Action Plan 0
 Reservice

Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	WBLT	EB		SB	EBLT	WB		NB								
Splits (Split Pat 12)	15	62	0	23	14	63	0	23	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																



5402 - Bonita Bch & Downs - - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	EBLT	WB		NB	WBLT	EB	NBLT	SB								
Min Green	5	20	0	7	5	20	7	7	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	20	0	30	0	29	0	33	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	5.0	0.0	2.0	2.0	5.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	8	45	0	25	25	45	25	25	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.7	4.0	4.0	4.0	4.7	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	2.5	2.0	2.0	2.5	2.5	2.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lee County, FL



5402 - Bonita Bch & Downs - - Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Percent
Cycle	150	Std (COS)	9	Offsets In	Percent
Offset Value	68%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reserve	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB		NB	WBLT	EB	NBLT	SB								
Splits (Split Pat 1)	11	56	0	33	15	52	20	13	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data			
Veh Perm 1	0	Veh Perm 2	0
Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0
		Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 11

Split Pattern 11 TS2 (Pat-Off) 3-2 Splits In Percent
 Cycle 200 Std (COS) 165 Offsets In Percent
 Offset Value 45% Dwell/Add Time 0
 Actuated Coord Yes Timing Plan 0
 Actuated Walk No Sequence 0
 Rest
 Phase No Action Plan 0
 Reservice
 Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB		NB	WBLT	EB	NBLT	SB								
Splits (Split Pat 11)	10	71	0	17	10	71	11	8	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	98%	100%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Coordinator Pattern # 12

Split Pattern 12 TS2 (Pat-Off) 3-3 Splits In Percent
 Cycle 150 Std (COS) 81 Offsets In Percent
 Offset Value 73% Dwell/Add Time 0
 Actuated Coord Yes Timing Plan 0
 Actuated Walk No Sequence 0
 Rest
 Phase No Action Plan 0
 Reservice

Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB		NB	WBLT	EB	NBLT	SB								
Splits (Split Pat 12)	11	56	0	33	15	52	20	13	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data
 Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0
 Split Demand Pat 1 0 Split Demand Pat 2 0 Crossing Arterial Pat 0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Lee County, FL



5401 - Bonita Bch & Imperial - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	W-L	E-T	N-L	S-T	E-L	W-T	S-L	N-T	N	N	N	N	N	N	N	N
Min Green	10	20	7	10	7	10	7	10	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	32	0	36	0	30	0	38	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	5.0	2.0	2.0	2.0	5.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	50	45	30	45	30	65	45	40	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.7	4.0	4.3	4.7	4.7	4.0	4.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.5	2.0	2.5	2.5	2.5	2.0	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Coordinator Pattern # 12

Split Pattern	12	TS2 (Pat-Off)	3-3	Splits In	Percent
Cycle	150	Std (COS)	81	Offsets In	Percent
Offset Value	28%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	2		
Actuated Walk		Sequence	5		
Rest	No				
Phase		Action Plan	0		
Reservice	No				
Max Select	None	Force Off	None		

Split Preference Phases

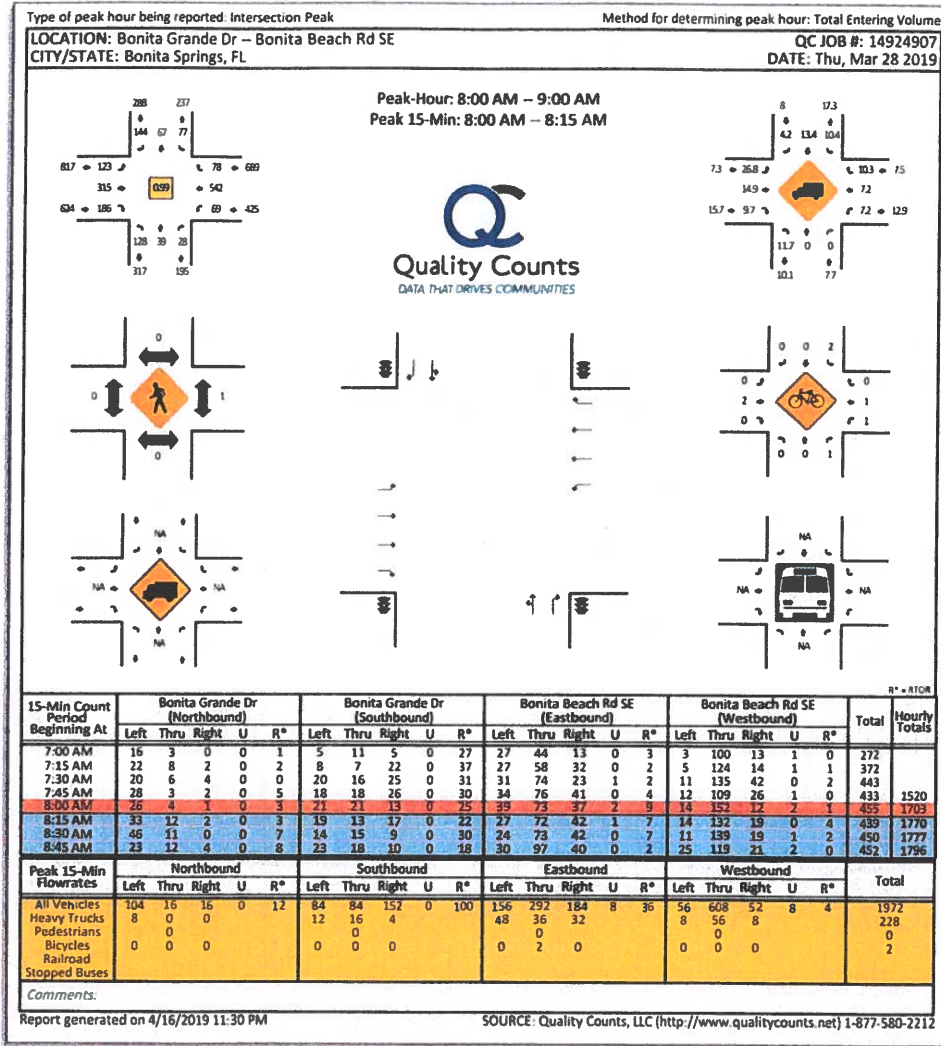
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	W-L	E-T	N-L	S-T	E-L	W-T	S-L	N-T	N	N	N	N	N	N	N	N
Splits (Split Pat 12)	15	40	21	24	16	39	18	27	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4	Misc. Data					
Ring Split Ext	0	0	0	0	Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Ring Displacement	-	0	0	0	Split Demand	0	Split Demand	0	Crossing Arterial	0
Split Sum	100%	100%	0%	0%	Pat 1		Pat 2		Pat	

Split Pattern

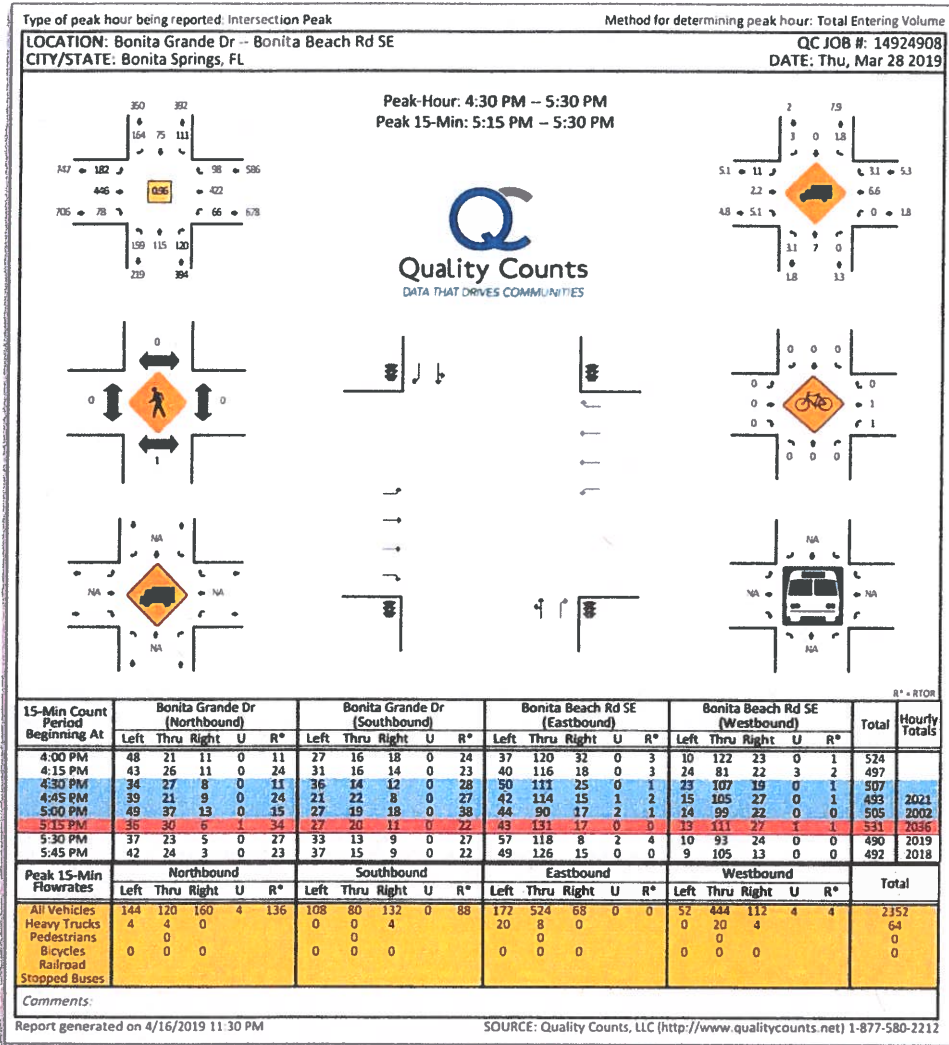
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time		X				X										
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Appendix I:
Traffic Counts



Bonita Grande Drive – MPD Rezone – TIS – March 2020

Bonita Grande Drive – TIS Section 2 – Intersection Analyses – Response to Comments – 2-5-2020



Bonita Beach Rd @ Hunters Ridge Blvd 1-17-2019 (AM)





File Name: Bonita Beach Rd @ Hunters Ridge Blvd 1-17-
Location: Bonita Springs
Site Code: 01/17/2019
Study Date: 01/17/2019





All Vehicles

Hunters Ridge Blvd				
2	0	0	0	0
Right	Thru	Left	U-Turn	
				

Bonita Beach Rd				
41	736	1	0	
Right	Thru	Left	U-Turn	
				

AM Peak Hour Statistics
 AM Peak Hour Begins: 08:00
 AM Peak Hour Volume: 1629
 AM Peak Hour Factor: 0.943

Bonita Beach Rd				
2	786	6	0	
Right	Thru	Left	U-Turn	
				

Hunters Ridge Blvd				
0	50	0	5	
U-Turn	Left	Thru	Right	
				

Bonita Beach Rd @ Hunters Ridge Blvd 1-17-2019 (PM)

File Name: Bonita Beach Rd @ Hunters Ridge Blvd 1-17-2019		Site Code: 01/17/2019																			
Location: Bonita Springs		Study Date: 01/17/2019																			
All Vehicles																					
Time	Hunters Ridge Blvd Southbound			Bonita Beach Rd Westbound			Hunters Ridge Blvd Northbound			Bonita Beach Rd Eastbound											
	Right	Thru	Left	U-Turn	Appr Total	Right	Thru	Left	U-Turn	Appr Total	Right	Thru	Left	U-Turn	Appr Total	Int Total					
16:00	0	0	1	0	1	1	222	1	0	224	1	0	10	0	11	15	208	1	0	224	460
16:15	0	0	0	0	0	0	208	2	0	210	1	0	12	0	13	17	195	0	0	212	435
16:30	1	0	0	0	1	1	272	0	0	273	1	0	19	0	20	6	211	1	0	218	512
16:45	0	0	1	0	1	0	189	0	0	189	0	0	11	0	11	5	204	1	0	210	411
Total	1	0	2	0	3	2	891	3	0	896	3	0	52	0	55	43	818	3	0	864	1818
17:00	0	0	0	0	0	0	239	0	0	239	2	0	12	0	14	10	190	0	0	200	453
17:15	0	0	0	0	0	0	212	0	0	212	2	0	8	0	10	7	230	0	0	237	459
17:30	0	0	0	0	0	0	190	1	0	191	0	0	15	0	15	6	159	0	0	165	371
17:45	0	0	0	0	0	0	177	1	0	178	2	0	5	0	7	14	213	1	0	228	413
Total	0	0	0	0	0	0	818	2	0	820	6	0	40	0	46	37	792	1	0	830	1696
Grand Total	1	0	2	0	3	2	1709	5	0	1716	9	0	92	0	101	80	1610	4	0	1694	3514
Appr %	33.3	00.0	66.7	00.0	00.1	99.6	00.3	00.0	00.0	00.0	08.9	00.0	91.1	00.0	00.0	04.7	95.0	00.2	00.0	00.0	00.0
Total %	00.0	00.0	00.1	00.0	00.1	48.6	00.1	00.0	00.0	00.3	00.0	02.6	00.0	00.0	00.0	02.3	45.8	00.1	00.0	00.0	00.0
% Trucks	00.0	-	00.0	-	00.0	00.0	00.0	00.0	-	00.0	00.0	00.0	00.0	-	00.0	00.0	00.0	00.0	00.0	00.0	00.0
PM Pr Hr	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30	16:30
PM Pk Vol	1	0	1	0	2	1	912	0	0	913	5	0	50	0	55	28	835	2	0	865	1835
PHF	0.250	NaN	0.250	NaN	0.500	0.250	0.838	NaN	NaN	0.836	0.625	NaN	0.658	NaN	0.688	0.700	0.908	0.500	NaN	0.912	0.896

Bonita Beach Rd @ Hunters Ridge Blvd 1-17-2019 (PM)

File Name: Bonita Beach Rd @ Hunters Ridge Blvd 1-17-
 Location: Bonita Springs

Site Code:
 Study Date: 01/17/2019

All Vehicles

Hunters Ridge Blvd				
1	0	1	0	
Right	Thru	Left	U-Turn	

Bonita Beach Rd				
0	2	835	28	
Right	Thru	Left	U-Turn	

PM Peak Hour Statistics
 PM Peak Hour Begins: 16:30
 PM Peak Hour Volume: 1835
 PM Peak Hour Factor: 0.896

Bonita Beach Rd				
1	912	0	0	
Right	Thru	Left	U-Turn	

Hunters Ridge Blvd				
0	50	0	5	
U-Turn	Left	Thru	Right	

Study Name T-8 Bonita Beach Rd & I-75 NB Ramps
 Start Date 02-28-2018
 Start Time 7:00
 Site Code 8
 Project Bonita Beach Rd & I-75 NB Ramps
 Tuesday TMC

Type Road
Classification Totals

Start Time	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 NB Ramps Northbound			I-75 NB Ramps Southbound			
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru	Right
7:00	0	74	123	0	135	57	164	0	51	0	0	0	0
7:05	0	152	135	0	156	61	192	0	54	0	0	0	0
7:30	0	165	172	0	165	0	243	0	49	0	0	0	0
7:45	0	89	137	0	128	39	194	0	62	0	0	0	0
8:00	0	120	115	0	178	69	194	0	62	0	0	0	0
8:15	0	116	97	0	204	48	215	1	48	0	0	0	0
8:30	0	115	147	0	206	48	126	0	61	0	0	0	0
8:45	0	95	173	0	160	33	161	0	63	0	0	0	0
16:00	2	164	169	0	197	94	96	0	47	0	0	0	0
16:15	0	182	152	0	184	66	101	1	43	0	0	0	0
16:30	0	232	182	0	149	81	112	0	57	0	0	0	0
16:45	0	205	194	0	153	64	111	0	56	0	0	0	0
17:00	2	192	144	0	175	82	108	0	44	0	0	0	0
17:15	0	184	162	0	159	84	109	0	49	0	0	0	0
17:30	1	219	180	0	159	65	131	0	49	0	0	0	0
17:45	1	223	172	0	129	54	123	0	57	0	0	0	0

HOURLY SUMMARY OF INDIVIDUAL MOVEMENTS

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 NB Ramps Northbound			I-75 NB Ramps Southbound			Intersection Total	
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru		Right
7:00	0	381	460	0	641	227	0	829	0	216	0	0	0	2,724
7:15	0	407	452	0	684	239	0	859	0	220	0	0	0	2,881
7:30	0	441	461	0	732	226	0	862	1	214	0	0	0	2,967
7:45	0	440	496	0	773	204	0	797	1	226	0	0	0	2,937
8:00	0	446	532	0	748	199	0	778	1	227	0	0	0	2,890
16:00	2	783	697	0	693	305	0	420	1	202	0	0	0	3,093
16:15	2	811	672	0	661	293	0	432	1	199	0	0	0	3,071
16:30	2	813	662	0	636	311	0	440	0	206	0	0	0	3,069
16:45	3	799	660	0	646	265	0	459	0	197	0	0	0	3,079
17:00	4	819	659	0	627	285	0	471	0	199	0	0	0	3,098

AM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 NB Ramps Northbound			I-75 NB Ramps Southbound			Intersection Total	
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru		Right
7:30	0	441	461	0	732	226	0	862	1	214	0	0	0	2,927

PM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 NB Ramps Northbound			I-75 NB Ramps Southbound			Intersection Total	
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru		Right
16:00	2	783	697	0	693	305	0	420	1	202	0	0	0	3,093

Study Name T-7 Bonita Beach Rd & I-75 SB Ramps
 Start Date 02-26-2019
 Start Time 7:00
 Site Code 7
 Project Bonita Beach Rd & I-75 SB Ramps
 Tuesday TMC

Type Road

Classification	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 SB Ramps Northbound			I-75 SB Ramps Southbound		
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right
7:00	0	104	150	0	51	245	0	0	0	0	0	180
7:15	0	131	174	0	69	292	0	0	0	0	0	185
7:30	0	177	179	0	74	337	0	0	0	0	0	175
7:45	0	147	163	0	64	357	0	0	0	0	0	202
8:00	0	171	175	0	71	301	0	0	0	0	0	197
8:15	0	173	144	0	68	362	0	0	0	0	0	182
8:30	0	200	161	0	73	282	0	0	0	0	0	193
8:45	0	197	132	0	42	278	0	0	0	0	0	192
16:00	0	303	175	0	62	236	0	0	0	0	0	140
16:15	0	348	171	0	79	213	0	0	0	0	0	116
16:30	1	367	171	0	55	213	0	0	0	0	0	131
16:45	1	308	169	0	64	201	0	0	0	0	0	59
17:00	0	283	190	0	78	222	0	0	0	0	0	132
17:15	0	273	212	0	51	205	0	0	0	0	0	50
17:30	0	322	182	0	56	234	0	0	0	0	0	148
17:45	0	310	173	0	45	204	0	0	0	0	0	140
												131

HOURLY SUMMARY OF INDIVIDUAL MOVEMENTS

HOURLY BEGIN	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 SB Ramps Northbound			I-75 SB Ramps Southbound			INTERSECTION TOTAL
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	
7:00	0	559	675	0	248	1,231	0	0	0	0	0	0	741
7:15	0	620	691	0	268	1,287	0	0	0	0	0	0	768
7:30	0	668	681	0	277	1,357	0	0	0	0	0	0	755
7:45	0	691	643	0	276	1,302	0	0	0	0	0	0	773
8:00	0	741	612	0	254	1,223	0	0	0	0	0	0	764
16:00	1	1,320	677	0	260	863	0	0	0	0	0	0	518
16:15	1	1,306	692	0	276	849	0	0	0	0	0	0	510
16:30	1	1,231	733	0	248	841	0	0	0	0	0	0	542
16:45	1	1,186	744	0	249	862	0	0	0	0	0	0	551
17:00	0	1,188	757	0	230	865	0	0	0	0	0	0	551

AM PEAK HOUR SUMMARY

HOURLY BEGIN	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 SB Ramps Northbound			I-75 SB Ramps Southbound			INTERSECTION TOTAL
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	
7:30	0	668	661	0	277	1,337	0	0	0	0	0	0	755

PM PEAK HOUR SUMMARY

HOURLY BEGIN	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			I-75 SB Ramps Northbound			I-75 SB Ramps Southbound			INTERSECTION TOTAL
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	
16:00	1	1,320	677	0	260	863	0	0	0	0	0	0	518

Study Name T-6 Bonita Beach Rd & Oakland Dr
 Start Date 02-28-2019
 Start Time 7:00
 Site Code 6
 Project
 Bonita Beach Rd & Oakland Dr
 Tuesday TMC

Type Road
 Classification Totals

Start Time	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Oakland Dr Northbound			Oakland Dr Southbound		
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right
7:00	0	15	229	7	8	387	42	0	7	0	12	0
7:05	0	22	276	11	2	424	32	0	5	0	15	0
7:10	0	22	320	6	4	477	30	0	3	0	17	0
7:15	0	19	260	6	2	310	40	0	5	0	23	0
7:20	0	17	306	15	2	467	49	0	1	2	16	0
7:25	0	17	283	17	4	469	32	0	2	1	16	0
7:30	0	20	324	18	2	457	32	0	2	0	15	0
7:35	0	14	285	13	3	462	32	0	3	1	19	0
7:40	0	16	476	13	0	347	22	0	3	1	19	0
7:45	0	18	519	12	1	307	22	0	2	0	19	0
7:50	0	20	497	10	0	303	31	0	4	4	22	0
7:55	0	13	479	14	1	316	23	0	3	0	12	0
8:00	0	19	474	10	0	316	20	0	7	0	34	0
8:05	0	13	479	15	0	340	31	0	9	0	15	0
8:10	0	15	501	9	0	335	34	0	3	1	11	0
8:15	0	23	437	11	0	259	24	0	4	0	21	0

HOURLY SUMMARY OF INDIVIDUAL MOVEMENTS

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Oakland Dr Northbound			Oakland Dr Southbound			Intersection Total	
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right		
7:00	1	69	1,005	36	15	47	146	44	0	20	0	49	0	127
7:05	1	71	1,142	42	14	48	187	131	0	18	2	63	0	128
7:10	1	75	1,149	48	10	45	194	138	0	17	0	62	0	125
7:15	1	73	1,173	59	14	44	196	140	1	17	0	64	0	132
7:20	1	68	1,198	64	15	31	187	132	1	18	0	62	0	132
7:25	3	67	1,971	49	2	18	127	98	0	12	5	77	0	173
7:30	3	70	1,969	46	2	18	124	96	0	16	4	92	0	172
7:35	5	65	1,929	49	1	18	127	105	0	23	4	94	0	99
7:40	4	60	1,833	48	1	22	130	108	0	22	1	83	0	73
7:45	7	70	1,891	45	0	25	129	109	0	23	1	87	0	85

AM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Oakland Dr Northbound			Oakland Dr Southbound			Intersection Total	
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right		
7:45	1	73	1,173	59	14	44	196	140	1	17	0	62	0	132

PM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Oakland Dr Northbound			Oakland Dr Southbound			Intersection Total	
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right		
16:00	3	67	1,971	49	2	18	127	98	0	12	5	77	0	173

Bonita Grande Drive – MPD Rezone – TIS – March 2020

Study Name T-3 Bonita Beach Rd & Downs Dr
 Start Date 02-28-2019
 Start Time 7:00
 Site Code 5
 Project Bonita Beach Rd & Downs Dr
 Tuesday TMC

Type Road
 Classification Totals

Start Time	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Sandstone Ln Northbound			Downs Dr Southbound		
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right
7:00	0	1	248	21	400	1	0	0	15	0	1	0
7:15	0	0	306	16	30	401	1	0	14	0	15	0
7:30	1	1	216	23	22	493	0	0	24	0	18	0
7:45	1	1	216	23	2	30	503	0	0	28	0	16
8:00	0	2	219	40	1	28	452	1	0	23	0	19
8:15	1	0	297	50	1	28	445	0	0	34	0	29
8:30	2	1	323	53	0	28	445	0	0	47	0	31
8:45	0	4	284	54	2	20	468	0	0	51	0	34
9:00	1	1	465	38	2	20	341	1	0	51	0	34
9:15	1	1	508	47	0	19	315	2	0	39	0	34
9:30	2	2	520	29	3	14	311	1	0	54	1	37
9:45	0	1	454	27	0	19	328	2	0	47	0	19
10:00	0	1	478	25	1	14	330	3	0	39	0	25
10:15	4	3	482	24	0	17	335	0	0	31	1	23
10:30	1	0	460	43	0	19	327	0	0	24	0	26
10:45	3	2	455	35	2	14	326	1	0	31	0	24

HOURLY SUMMARY OF INDIVIDUAL MOVEMENTS

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Sandstone Ln Northbound			Downs Dr Southbound			Intersection Total
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	
7:00	2	3	155	2	103	1797	2	0	75	0	64	0	3,308
7:15	2	4	222	23	4	108	1849	2	0	91	0	68	3,479
7:30	4	4	203	157	4	108	1849	1	0	114	0	62	3,619
7:45	4	4	1210	185	3	113	1897	1	0	114	0	91	3,654
8:00	3	7	1,213	201	3	112	1,862	1	0	144	0	91	3,651
8:15	4	5	1,947	141	5	72	1,295	6	0	189	2	124	3,787
8:30	3	5	1,560	128	4	66	1,284	8	0	177	1	115	3,791
8:45	6	7	1,534	105	4	64	1,304	6	0	169	2	104	3,644
9:00	5	5	1,874	119	1	69	1,320	5	0	141	1	93	3,644
9:15	8	6	1,875	127	3	64	1,318	4	0	125	1	98	3,640

AM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Sandstone Ln Northbound			Downs Dr Southbound			Intersection Total
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	
7:45	4	4	1,210	185	3	113	1,897	1	0	134	0	95	3,654

PM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Sandstone Ln Northbound			Downs Dr Southbound			Intersection Total
	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	U-Turn	Left	Right	
16:00	4	5	1,947	141	5	72	1,295	6	0	189	2	124	3,797

Study Name T-3 Bonita Beach Rd & Imperial Pkwy
 Start Date 02-28-2019
 Start Time 7:00
 Site Code 3
 Project
 Bonita Beach Rd & Imperial Pkwy
 Tuesday TMC

Type Road
 Classification Totals

Start Time	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Imperial Pkwy Northbound			Imperial Pkwy Southbound						
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru	Right			
7:00	1	14	163	63	0	47	274	73	0	48	48	33	1	58	144	60
7:10	0	22	170	67	0	46	310	74	1	62	71	36	5	111	199	97
7:20	1	23	155	82	0	72	344	93	0	71	81	40	2	103	186	71
7:30	0	20	203	65	1	59	398	112	0	37	55	43	0	101	192	72
7:45	0	20	203	65	0	76	369	81	3	97	87	47	0	100	194	75
8:15	1	30	221	72	1	91	370	86	0	104	86	30	2	107	190	70
8:30	1	30	222	71	1	91	370	84	0	99	105	52	2	111	143	81
8:45	2	29	210	51	0	57	379	85	0	82	80	57	1	95	135	73
16:00	0	89	382	68	0	45	233	117	0	72	183	67	3	89	80	51
16:15	0	93	391	75	1	50	218	102	0	62	155	78	6	95	88	44
16:30	0	82	391	78	0	29	206	133	0	66	159	69	7	80	100	46
16:45	0	97	396	61	0	44	218	102	0	52	194	66	1	112	111	46
17:00	1	105	387	86	0	46	202	115	0	45	193	56	3	107	124	32
17:15	0	95	371	85	0	43	205	119	4	45	196	63	5	97	142	37
17:30	0	96	350	82	1	51	186	113	2	46	207	60	8	76	100	35
17:45	1	89	342	61	0	40	205	117	2	46	207	60	8	76	100	35

HOURLY SUMMARY OF INDIVIDUAL MOVEMENTS

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Imperial Pkwy Northbound			Imperial Pkwy Southbound			Intersection Total			
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru		Right		
7:00	1	14	163	63	0	47	274	73	0	48	48	33	1	58	144	60
7:10	0	22	170	67	0	46	310	74	1	62	71	36	5	111	199	97
7:20	1	23	155	82	0	72	344	93	0	71	81	40	2	103	186	71
7:30	0	20	203	65	1	59	398	112	0	37	55	43	0	101	192	72
7:45	0	20	203	65	0	76	369	81	3	97	87	47	0	100	194	75
8:00	4	99	883	279	1	268	1,448	345	3	382	345	172	4	419	719	288
8:15	0	381	1,450	282	1	168	877	454	0	243	243	270	17	313	562	299
8:30	1	377	1,475	300	1	169	844	452	0	244	244	282	15	381	411	159
8:45	1	379	1,455	310	0	162	831	460	4	217	160	271	17	394	423	168
16:00	0	383	1,424	314	1	184	811	449	6	211	781	250	16	396	477	161
16:15	2	385	1,440	314	1	180	798	454	8	199	790	247	17	392	483	150

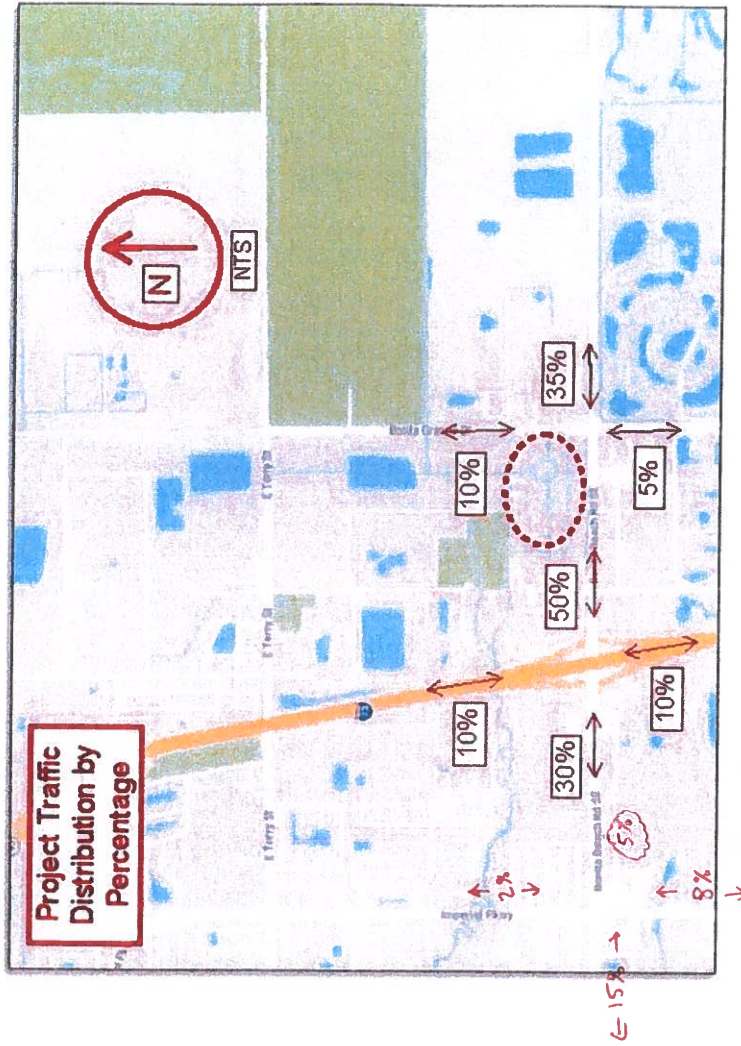
AM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Imperial Pkwy Northbound			Imperial Pkwy Southbound			Intersection Total			
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru		Right		
7:45	2	104	876	302	2	270	1,467	375	3	387	373	172	4	419	719	299

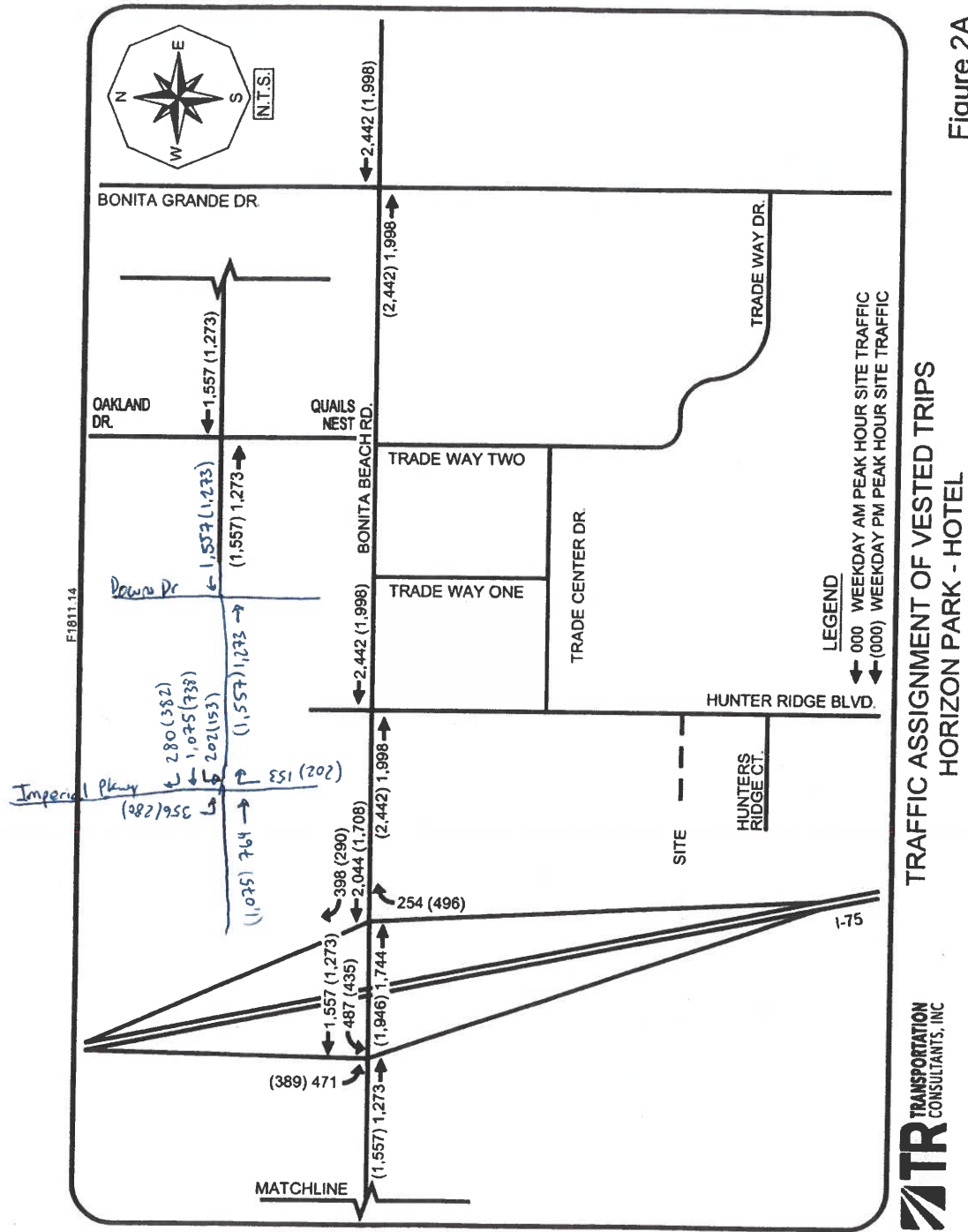
PM PEAK HOUR SUMMARY

Hour Begin	Bonita Beach Rd Eastbound			Bonita Beach Rd Westbound			Imperial Pkwy Northbound			Imperial Pkwy Southbound			Intersection Total			
	U-Turn	Left	Thru	U-Turn	Right	Thru	U-Turn	Left	Thru	U-Turn	Left	Thru		Right		
16:15	1	377	1,475	300	1	169	844	452	0	244	244	282	15	381	411	159

Appendix J:
Trip Distribution Percentages



Appendix K:
Vested Traffic Data



BONITA BEACH ROAD TRAFFIC BY LINK

LINK	AVERAGE SEASONAL* AADT	BACKGROUND	TOTAL
I-75 to East of Bonita Grand	9500	44400	53900
IMPERIAL TO I-75	37500	28300	50330
US 41 TO IMPERIAL	35000	11930	46930
VANDERBILT TO US 41	33585	8350	41935*

As per email (05/29/2018)

K factor = 10%
D factor = 55%

Notes:
Seasonal* is the months of Jan, Feb, Mar.
Seasonal information is used when available.
Background is from approved development orders or agreements.
Link assignment is based on direct access and historic trends.

FDOT Count Station -
sign covers station -
Nevada low adj noted

**EXHIBIT IV-G
SCHEDULE OF USES
BONITA GRANDE MPD**

RECEIVED
CITY OF BONITA SPRINGS
JUN 18 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

Tract C:

Accessory uses and structures

Administrative offices

~~Agricultural services: office/base operations~~

Animals: Clinic, no outdoor cages, pens, runs, or exercise facilities

Control center (including Humane Society)

Assisted living facility

ATM (automatic teller machine)

Auto parts store

Automobile service stations

Auto repair and service (4-408(c)(2)), all groups

Bait and tackle shop

Banks and financial establishments (4-408(c)(3)): Groups I and II

Bar or cocktail lounge, subject to Note (1)

Boat parts store (no outdoor display)

Boat repair and service (within an enclosed building)

Boat sales (no outdoor display)

Building material sales (4-408(c)(4)) no outdoor display

Business services (4-408(c)(5)): Group I

Car wash

Cleaning and maintenance services (4-408(c)(7))

Clothing stores, general (4-408(c)(8))

Clubs: Commercial; fraternal, membership organization; Private

Cold storage, pre-cooling, warehouse and processing plant

Community Gardens

Computer and data processing services

Consumption on premises, subject to Note (1)

Contractors and builders (4-408(c)(9)), Groups I and II

Convenience food and beverage store, limited to 24 self-service fuel pumps

Day care center, child, adult

Department store

Drive-through facility for any permitted use

Drugstore, pharmacy

Essential services

Essential service facilities (4-408(c)(13)): Group I

Excavation: Water retention with off-site removal of fill, limited to 150,000 cubic yards for the
MPD

Fences, walls

Food and beverage service, limited

Food stores (4-408(c)(16)): Group I

Freight and cargo handling establishments (4-408(c)(17)), subject to Note (2)

Furniture and fixtures (4-408(c)(18))

Gift and souvenir shop

Hardware store

Health care facilities (4-408(c)(19)): Groups I-IV, VI

Hobby, toy and game shops (4-408(c)(20))

Hotel/motel, limited to 165 rooms

Household and office furnishings (4-408(c)(21)), all groups

Laundry or dry cleaning (4-408(c)(22)): Groups I and II

Lawn and garden supply stores. outdoor display areas will be enclosed with decorative enclosure

Leather products (4-408(c)(23)): Group I

Library

Manufacturing – indoor only, no open storage, subject to Note (2):

 Lumber and wood products(4-408(c)(24)): Group I

 Measuring, analyzing and controlling instruments (4-408(c)(26)

 Novelties, jewelry, toys and signs (4-408(c)(27)), all groups

 Paper and allied products (4-408(c)(29)): Group I

 Stone, clay, glass and concrete products (4-408(c)(45)): Group I

Micro-breweries

Night clubs

Nonstore retailers (4-408(c)(28)), all groups

Parcel and express services

Package store

Paint, glass and wallpaper

Parks (4-408(c)(30)): Groups I and II

Parking Lot: Accessory; garage, public parking; temporary

Personal services (4-408(c)(31)): Groups I and II

Pet services

Pet shop

Pharmacy

Photofinishing laboratory

Plant nursery

Printing and publishing (4-408(c)(33))

Real estate sales office

Recreation facilities, commercial (4-408(c)(35)): Groups I and IV; Personal; Private—On and off-site
Rental or leasing establishment (4-408(c)(36)): Groups I and II, outdoor display will be limited to bikes during hours of operation
Repair shops (4-408(c)(37)): Groups I and II, indoor only
Research and development laboratories (4-408(c)(38)): All groups
Restaurant, fast food
Restaurants (4-408(c)(40)): Groups I and III, Group IV
Schools, commercial and noncommercial
Self-service fuel pumps, limited to 24
Signs in accordance with chapter 6 or Deviation 10
Social services (4-408(c)(43)): Group I
Specialty retail store (4-408(c)(44)): All groups. Note (3)
Storage: Indoor
Studios (4-408(c)(46))
Temporary uses
Theater, indoor
Used merchandise stores (4-408(c)(51)): Groups I & II
Variety store
Warehouse: Mini, private, public, subject to Note (2)
Wholesale establishment, Group III

Tract C-1:

All uses permitted in Tract C
Community residential home
Continuing care facilities
Dwelling unit: Multiple-family building, townhouse
Entrance gates and gatehouse
Models: Display center and model unit
Residential accessory uses (4-408(c)(39))

Tract P (Preserve and Open Space):

Active and passive recreation areas, such as boardwalks, fishing piers or observation decks, kayak/canoe launches, or pedestrian and nature trails
Excavation: Water retention, as shown on the MCP, with off-site removal of fill, limited to 150,000 cubic yards for the MPD
Signs, informational

Notes:

- (1) If within 500 feet of a religious facility, school (noncommercial), day care center (child), park, or dwelling unit outside of the MPD, outdoor consumption of alcohol must meet the following criteria:
 - a. Live outdoor entertainment is permitted Wednesday-Sunday only, unless a special event permit is obtained.
 - b. Musicians and entertainers shall only be permitted to use the speaker system provided by the establishment.
 - c. Speakers are to be oriented in such a way so as to generally not face residential communities.
 - d. Hours of operation of outdoor seating areas shall be Noon – 10 PM, Sunday through Thursday, and Noon – Midnight, Friday and Saturday.
- (2) Limited to a maximum building area of 100,000 sq. ft. Prohibited from locating along Bonita Beach Road. Additional square footage may be approved through the special exception process.
- (3) Outdoor display associated with a specialty retail store may be approved administratively provided display areas do not face Bonita Beach Road.

**PROPERTY DEVELOPMENT REGULATIONS
BONITA GRANDE MPD**

NOTE: Additional requirements depicted on the Urban Design Overlay Plan.

COMMERCIAL OR MULTI-FAMILY BUILDINGS:

Minimum Lot Area and Dimensions:

Area: 10,000 square feet
Width: 100 feet
Depth: 100 feet

Minimum Setbacks:

Street: 20 feet
Internal Accessways: 5 feet
Side: 15 feet
Rear: 20 feet
Water Body: 25 feet
Preserve: 30 feet
Perimeter boundary: Width of the required landscape buffer or ½ the building height, whichever is greater

**RECEIVED
CITY OF BONITA SPRINGS
MAR 20 2020
COMMUNITY DEVELOPMENT
DEPARTMENT**

Accessory uses and structures must comply with setbacks per LDC Section 4-923 et seq.

Maximum Lot Coverage: 40%

Maximum Building Height: 65 feet, max. 6 stories or 5 stories over parking (hotel/motel, multi-family, assisted living facilities)
55 feet, max. 5 stories (all other buildings)

TOWNHOUSE:

Minimum Lot Area and Dimensions:

Area: 1,440 square feet
Width: 18 feet
Depth: 80 feet

Minimum Setbacks:

Street: 20 feet
Internal Accessways: 5 feet
Side: none
Rear: 15 feet
Water Body: 25 feet

Preserve: 30 feet
Perimeter boundary: Width of the required landscape buffer or ½ the building height,
whichever is greater

Accessory uses and structures must comply with setbacks per LDC Section 4-923 et seq.

Maximum Lot Coverage: 60%

Maximum Building Height: 45 feet, max. 3 stories or 2 stories over parking

**SCHEDULE OF DEVIATIONS
BONITA GRANDE MPD**

RECEIVED
CITY OF BONITA SPRINGS
JUL 23 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

1. Deviation (1) requests relief from LDC Section 3-289(a), *Special access provisions for Bonita Beach Road*, which requires a minimum connection separation of 660 feet for any access to Bonita Beach Road, to allow a minimum connection separation of 597.6 feet.

Justification: This deviation was previously approved via ZO-08-09. The access points to Bonita Beach Road on the proposed MCP have not changed from what was previously approved. Both access points are designed to line up with existing roadways across Bonita Beach Road to the south (Trade Way Two and Trade Way Three), creating an opportunity to provide a signalized intersection to facilitate pedestrian crossings. The proposed access point is approximately 597.6 feet west of Bonita Grande Drive and is centrally located to the MPD. Due to the presence of a full median opening and the central location within the CPD, the connection will allow for improved site circulation and provide a direct route from development to the south. There is sufficient distance from the intersection of Bonita Grande Drive and Bonita Beach Road for cars to decelerate safely in order to access the site.

(1) That the alternative proposed to the standards contained herein is based on sound engineering practices;

The access points have been coordinated with Lee County DOT and are based on sound engineering practices.

(2) That the alternative is no less consistent with the health, safety and welfare of abutting landowners and the general public than the standard from which the deviation is being requested;

The alternative has no negative impacts to the health, safety, and welfare of the traveling public and will not create an unsafe condition.

(3) For division 7 of article III of this chapter, Public Transit, the required facility would unnecessarily duplicate existing facilities; and

Not applicable.

(4) The granting of the deviation is not inconsistent with any specific policy directive of the city council, any other ordinance, or any city comprehensive plan provision.

The granting of the deviation is not inconsistent with any specific policy directive, ordinance, or comp plan provision.

(5) The granting of the deviation is not inconsistent with in the intent of the bicycle and pedestrian master plan, Bonita Beach Road Visioning Study and the complete streets policy.

The granting of the deviation has no effect on the bicycle and pedestrian facilities or complete streets policy.

2. Deviation (2) requests relief from LDC Sec. 3-331(d)(1)a.3., *Setbacks for water retention or detention excavations*, to allow a zero foot setback from the property line where Lakes 1, ~~and 2, and 5~~ are adjacent to the Kehl Canal and a 20-foot setback from the property line for Lake 2 (as shown on the Master Concept Plan).

Justification: The petitioner desires to maintain flexibility in regard to the minimum lake separation criteria in order to directly connect the flood plain compensation lakes with the Kehl canal, and off-site flood plain areas. This requires that the water management lakes be directly adjacent to, and connected to the offsite flood plain, and as a result a zero feet minimum separation is requested. A portion of Lake 2 will be set back the width of the lake maintenance easement, 20 feet.

(1) That the alternative proposed to the standards contained herein is based on sound engineering practices;

The alternative is necessary in order to provide connection to the off-site floodplain in accordance with sound engineering practices.

(2) That the alternative is no less consistent with the health, safety and welfare of abutting landowners and the general public than the standard from which the deviation is being requested;

The alternative will have no detrimental impacts on public health, safety, and welfare, providing floodplain storage in order to minimize the impact of development consistent with Chapter 24 of the LDC.

(3) For division 7 of article III of this chapter, Public Transit, the required facility would unnecessarily duplicate existing facilities; and

Not applicable.

(4) The granting of the deviation is not inconsistent with any specific policy directive of the city council, any other ordinance, or any city comprehensive plan provision.

The granting of the deviation is not inconsistent with any specific policy directive, ordinance, or comp plan provision.

(5) The granting of the deviation is not inconsistent with in the intent of the bicycle and pedestrian master plan, Bonita Beach Road Visioning Study and the complete streets policy.

The granting of the deviation has no effect on the bicycle and pedestrian facilities or complete streets policy.

3. Deviation (3) requests relief from LDC Sec. 3-303, *Typical street design*, to allow the street design as shown on the MCP.

Justification: The main entrance roads into the site will provide an 80' right-of-way and then transition to the smaller 50' wide dimension as these roadways become more local and private. The reduced width of these roadways will aid in slowing traffic, increasing the overall walkability within the project and increasing pedestrian and bicycle safety. Furthermore, the reduced traffic along these roads will allow these multi-use facilities to comfortably accommodate vehicles, pedestrians, and bicyclists. The requested widths can still accommodate all users within the slightly reduced dimensions and meet the intent of Section 3-303, which is to provide a multi-modal street system that encourages pedestrian and bicycle activity. This deviation will not be detrimental to the health, safety, and welfare of abutting landowners and the general public.

The typical section deviations are from LDC Section 3-303(b)(iii), Local roadway elements, specifically:

- (d) Bicycle and pedestrian facilities—A minimum bike lane width of five feet, and a minimum sidewalk width of six feet are required on both sides of the right-of-way. A minimum 11-foot wide multi-use path may be permitted in lieu of the on-street, separated bike lane and sidewalk. A marked on-street shared bike lane may be provided in lieu of an on-street separate bike lane on privately maintained local roadways where travel speeds are posted at 25 mph or less.*
- (e) Planting strips—Planted areas separating the travel lanes from the pedestrian facilities must be a minimum of five feet in width, and demonstrate that the plantings do not conflict with sidewalk and utilities infrastructure. In the Downtown Redevelopment Area, minimum planted area may be reduced to two feet in width.*

Alternative Sections and Justification:

Section A-A: Double 8 ft wide shared use path, travel lane sharrow, a reduced speed limit (25 mph), and raised curb with a 4 ft planted zone is proposed.

Section B-B: 10 ft wide shared use path, travel lane sharrow, a reduced speed limit (25 mph), and raised curb with a 4 ft wide planted zone is proposed.

Section B1-B1: 10 ft shared use path, travel lane sharrow, a reduced speed limit (25 mph), and raised curb with a 4 ft wide planted zone is proposed.

The proposed sections provide reasonable alternative widths to fully meet the intent of LDC Section 3-303(b)(iii). Pedestrian, bicycle and autos are accommodated in a low speed environment. The raised curb allows the sidewalk to be out of the clear zone that the 4 ft. wide planted buffer strip provides. Section A-A provides double shared use pathways, which would exceed the overall minimum criteria. Section B-B is constrained, in order to provide an alignment to the existing drive on the south side of Bonita Beach Rd.

Offsite improvements on Bonita Grande Dr. and Bonita Beach Rd. will tie into adjacent recently constructed improvements (i.e. sidewalks, shoulders/on street bike lanes) and

will be permitted with and through Lee County. Consistency and uniformity with existing facilities will help meet user expectations. Offsite improvements will also tie into the internal bicycle/pedestrian facilities, accommodating these users through the site.

(1) That the alternative proposed to the standards contained herein is based on sound engineering practices;

The alternative is based on sound engineering practices as discussed above.

(2) That the alternative is no less consistent with the health, safety and welfare of abutting landowners and the general public than the standard from which the deviation is being requested;

The reduced width of these roadways will aid in slowing traffic, increasing the overall walkability within the project and increasing pedestrian and bicycle safety. Furthermore, the reduced traffic along these roads will allow these multi-use facilities to comfortably accommodate vehicles, pedestrians, and bicyclists. This deviation will not be detrimental to the health, safety, and welfare of abutting landowners and the general public.

(3) For division 7 of article III of this chapter, Public Transit, the required facility would unnecessarily duplicate existing facilities; and

Not applicable.

(4) The granting of the deviation is not inconsistent with any specific policy directive of the city council, any other ordinance, or any city comprehensive plan provision.

The granting of the deviation is not inconsistent with any specific policy directive, ordinance, or comp plan provision.

(5) The granting of the deviation is not inconsistent with in the intent of the bicycle and pedestrian master plan, Bonita Beach Road Visioning Study and the complete streets policy.

The requested widths can still accommodate all users within the slightly reduced dimensions and meet the intent of Section 3-303, which is to provide a multi-modal street system that encourages pedestrian and bicycle activity. It is not inconsistent with the intent of the bicycle/pedestrian master plan, the visioning study, nor the complete streets policy. Please also see the Bonita Plan consistency analysis.

4. Deviation (4) requests relief from LDC Sec. 3-418(d)(3) *Buffer requirements*, which requires a minimum 10-foot wide Type A buffer between commercial uses, to allow no landscape buffer between uses internal to the property.

Justification: As this is proposed to be a mixed-use project with an emphasis on interconnection for all users, landscape buffers separating commercial elements are not necessary nor are they consistent with a more walkable, urban environment. All other required landscaping (for parking areas, general tree requirements, and building perimeter plantings) will be provided as required by code.

5. Deviation (5) requests relief from LDC Sec. 3-418(d)(3) *Buffer requirements*, which requires a minimum 15-foot-wide Type D buffer along rights-of-way, to allow no landscape buffer along internal rights-of-way adjacent to lakes and a five-foot wide Type A landscape buffer in other locations along internal rights-of-way.

Justification: Landscaping will be provided as part of the complete street cross-section for internal roads and all other required landscaping (for parking areas, general tree requirements, and building perimeter plantings) will be provided as required by code. The lakes provide visual buffering between development and the right-of-way. In other locations, the typical Type D buffer creates a more suburban type feel and increases the separation between sidewalks and internal development areas, inconsistent with the more urban, mixed-use, integrated development proposed for this site. The Type A landscape buffer requires trees, which will provide shade and moderate building elements.

6. Deviation (6) requests relief from LDC Sec. 3-268(a) *Provision of container spaces*, which establishes minimum required square footages for garbage and recyclable collection, to allow for reduced square footages, if compactors are provided and approval from Lee County Solid Waste Division is obtained at time of development order.

Justification: If compactors are utilized, the minimum square footages established in the code overestimate the area needed to accommodate these facilities. The plan for collecting solid waste and recyclables will require approval by the Solid Waste Division to ensure that it is adequate and practical.

7. Deviation (7) requests relief from LDC Sec. 4-899(a), *Property development regulations*, to allow a maximum block size of 601' x 658' with a maximum perimeter of 2,553' as shown on the "Option B" Master Concept Plan.

The Option B MCP allows a slightly larger block size to accommodate a mid-sized commercial user. The Interchange Commercial future land use area represents an ideal location for these types of commercial uses, with easy access to the interstate for suppliers and customers and is "intended for uses that serve the traveling public." Other design considerations, such as location of parking, placement of buildings, and the overall pedestrian and vehicular connectivity of the project, will not be affected if developed under this Option B scenario.

8. Deviation (8) requests relief from LDC Sec. 3-331(d)(4), *Excavations for water retention and detention*, to allow Lake 4 to be configured as shown in Tract C-1 on Option B of the Master Concept Plan.

The requested deviation will apply to one surface water management lake, located in the southern portion of Tract C-1. Due to the compact, urban design of the proposed

development, the retention lake is shaped in a way that best utilizes the available space while still providing the appropriate surface water management area.

9. Deviation (9) requests relief from LDC Sec. 4-899(a), *Property development regulations*, to allow a maximum building height of 65 feet with no more than six stories without the additional setback required by LDC Sec. 4-1874(3)(a).

The Interchange Commercial future land use area is intended for uses that serve the traveling public. The subject property has easy access to Interstate 75 and is adjacent to commercial uses, making it the ideal location for a hotel/motel and higher density residential development. The increased density will support the commercial and retail components of this mixed-use development and will increase pedestrian activity, livability, and economic vitality within the Bonita Beach Road corridor. Compatibility with surrounding uses will be addressed with the design of the site and buildings.

10. Deviation (10) – Project Signage must be developed consistent with LDC Chapter 6, Signs, except as specifically modified by this approval.

Signage design shall be carefully integrated with site and building design to enhance the village theme for the total property without a repetitive and uniform emphasis. Creativity in the design of signs is encouraged in order to emphasize the unique character of the Bonita Grande project. The Bonita Grande MPD shall be permitted to deviate from the LDC, by permitting the following:

a. Project Identification Signs

1. One project directory sign, with a maximum of 250 square feet of sign copy per side and a maximum sign height of 25 feet, shall be permitted at the corner of Bonita Beach Road and Bonita Grande Drive. The project directory sign will feature the project name, insignia or motto of the development and up to ~~six~~ two tenant ~~panels~~ panels.
2. Project identification signs with a maximum of 120 square feet of sign copy per side and a maximum sign height of 15 feet, shall be permitted at each project entry. Project identification signs shall be monument or wall mounted signs and feature only the project name, insignia or motto of the development and up to four tenant ~~panels~~ panels.
3. No minimum setback shall be required, except that no sign shall be located so as to create vehicular line of site obstructions.

b. Freestanding Use Monument Signs

1. Each freestanding use shall be permitted one monument sign per public road or private drive frontage.
2. Maximum permissible sign copy shall be 100 square feet per side for public road frontage and 80 square feet for private road frontage.
3. For public road frontage, the maximum height of the sign copy shall be 10 feet above finished grade. Architectural details of the sign structure may project above the 10-foot height; however, no part of the sign structure shall exceed 12 feet in height above finished grade.
4. For private drive frontage, the maximum height of the sign copy shall be 8 feet above finished grade. Architectural details of the sign structure may project above the 8-foot height; however, no part of the sign or sign structure shall exceed 10 feet in height above finished grade.

c. Permitted Sign Types

1. Wall – A sign affixed directly to or painted directly on an exterior wall or fence. Maximum sign area – Façade width by 2.50 feet. Max. sign width shall not exceed 80 percent of the width of the unit or building.
2. Projecting – Any sign which projects from and is support by a wall of a building with the display of the sign perpendicular to the building wall. Maximum sign area – the façade width by 2.5 feet up to a maximum of 100 square feet. Theatre signage may be a maximum of 200 square feet.
3. Window – A sign painted or applied to or behind a window or windows. The maximum of the aggregate sign area shall be 30 percent of the area of the window(s) where the sign will be placed.
4. Hanging – A sign attached to and located below any eave, arcade, canopy, or awning. Maximum sign area – 20 square feet (two faces of 20 square feet each).
5. Awning – A sign or graphic attached to or printed on an awning. Maximum sign area – ~~30 percent of~~ the area of the awning ~~by 0.30~~.
6. Monument – A sign secured to a base, which is built directly upon the ground. Maximum sign area – 80 square feet, exclusive of the base. ~~Maximum height above grade—15 feet.~~
7. Marquee – A sign usually projecting from the face of a theater or cinema, which contains changeable text to announce events. Sign area shall be compatible with the

design of the theater building. Minimum height above grade – 10 feet. Minimum distance from curb – 4 feet.

8. Sandwich boards – A portable sign comprised of two sign panels hinged together at the top. Maximum sign area – 12 square feet (two faces of 12 square feet each). Sandwich board signs shall be displayed only during hours of operation for the associated business.
9. Banners – Fabric panels projecting from light, flag or banner poles. Maximum sign area – shall be proportional to the height of the pole. Banner poles shall be no more than 16 feet in height and 15 sq. ft. max (two faces of 15 sq. ft. each).
 - ~~16-foot pole—15-square-foot max (two faces of 15-square-foot each)~~
 - ~~20-foot pole—20-square-foot max (two faces of 20-square-foot each)~~
 - ~~25-foot pole—30-square-foot max (two faces of 30-square-foot each)~~
10. Temporary special event signs – a temporary window, hanging, awning, portable or banner sign utilized in conjunction with a special event within the MPD.

d. General Standards

1. Sign area: the area of any sign shall be the area of a rectangle, which encloses all elements of the sign (excluding poles and brackets) including all text and any symbols or logos.
2. Mounting height: no part of a sign which projects from a building or is mounted on a pole or bracket shall be less than 8 feet above grade.
3. Illumination: signs may be illuminated by external spot lighting or internally illuminated. Lighting shall be designed and shielded so as not to cause glare onto adjacent properties or the public right-of-way.
4. Material: signs shall be constructed of durable materials suitable to the sign type. The long-term appearance of the sign shall be a major consideration in the selection of materials.
5. Color: the color of signs shall be compatible with the colors and style of the building to which they are attached or otherwise associated. No more than three complementary colors not including white, which will not be considered a color, permitted per sign.
6. All sign structures may feature architectural treatments which shall be permitted to extend above the maximum height of the sign specified herein.

e. Prohibited Sign Types

1. Portable or mobile signs except sandwich boards;
2. Flashing or animated signs;
3. Cabinet signs;
4. Pole signs; and
5. Billboards.

Justification: The proposed project will become a community destination and requires strong placemaking via strong, consistent urban design. The requested deviation will result in signs that will be architecturally consistent with the overall design of the project, creating a visual connection to Bonita Beach Road and establishing a sense of place between the project and the street. The enhanced signage increases accessibility, attracts people, and visually connects the project to the surrounding area. The proposed signs along the adjacent roadways, while larger than those allowed by the LDC, will allow combining what could be multiple signs in order to reduce visual clutter. The sign at the hard corner will be an attractive identifying feature and is consistent with signage as designed for high-end multi-use complexes such as Mercato and Waterside. The applicant will provide consistent signage for better wayfinding and artistic branding referencing Bonita near the I-75 interchange, helping to establish an identity and presence for the City. The permitted sign types are meant to invoke a more urban streetscape while prohibiting sign types that would detract from the quality of the overall development design. The proposed signage enhances the planned development by preserving the aesthetic quality of the development and protects public health, safety, and welfare by maintaining safe routing through clear signage.

**EXHIBIT IV-I
SURFACE WATER MANAGEMENT PLAN
BONITA GRANDE MPD**

**RECEIVED
CITY OF BONITA SPRINGS
JUN 02 2020
COMMUNITY DEVELOPMENT
DEPARTMENT**

The water management system is designed to provide sufficient stormwater detention storage and water quality treatment to comply with South Florida Water Management District criteria focused on providing flood protection, adequate drainage, water quality treatment, and flood plain compensation as required to mitigate flood plain impacts. The system is designed to not degrade or adversely impact surface and ground water quality. The water management system control elevations are selected to preserve the groundwater resource and emulate the natural seasonal mean and highwater elevations. These elevations have been set and approved in prior zoning and surface water permitting activities associated with the project. Control structures are designed to control discharge within the parameters of the allowable peak discharges within the watershed. Lakes have been designed to provide adequate water quality treatment and volume discharge attenuation. A perimeter isolation berm has been designed to contain stormwater runoff within the site for volumetric attenuation and water quality treatment with the final discharge through the control structure.

The water management system will provide an additional fifty (50) percent of the retention/detention water quality treatment in addition to that required in Section 5.2.1(a) of the South Florida Water Management District Basis of Review for Environmental Resource Permits and Environmental Resource Permit Information Manual. The water management system will incorporate best management practices to include grassed swales planted with native vegetation, detention lakes with enlarged littoral zones, preserved or restored wetlands, and lakes with meandering flow-ways and lake banks.

Flood plain compensation lakes outside of the perimeter isolation berm will be available to compensate for encroachment into the federally designated flood plain. These lakes will also provide a significant water quality treatment public benefit due to their geometric design and in series treatment of hundreds of acres of off-property upstream urban lands. This water quality treatment benefit will depend on the depth of the lakes, and will be very beneficial to the City of Bonita Springs' continued attempt to address water quality impairments within the Imperial River Basin. The lakes are positioned adjacent to the flood plain and the Kehl Canal and will interact with the canal as the water tables and canal flows in and out of the designated flood plain compensation lakes. The water quality treatment benefit to the public will be significant and can be calculated utilizing the federally and state accepted Harvey Harper methodology for water quality treatment.

In summary the water management system will be consistent with the Policy and Objectives of the Bonita Springs Comprehensive Growth Management Plan, South Florida Water Management District design criteria and the local development order regulations pertaining to stormwater management.

Provided below is a narrative of the stormwater management system consistent with the parameters requested in LDC 4-295(b)(1):

a) The property is currently undeveloped and includes wetlands, uplands and transitional areas as well as ditches and other surface waters. The property currently discharges in an uncontrolled manner at approximately 0.25 cfs/acre as generated by the 67.5-acre parcel. The property provides one drainage easement that accommodates off site flows from a ditch running along the property frontage along Bonita Beach Road to the Kehl Canal. The property also contains remnant agricultural ditches that during extreme events also act to conduct off site flows through the property to the ultimate receiving water body, the Kehl Canal and headwaters of the Imperial River. A proposed internal easement and box culvert to physically continue to accommodate the off site flows is proposed in the concept plans.

b) The water management system is designed to reduce the post development peak discharge rates to amounts significantly below the predevelopment discharge rates. The project is designed in accordance with South Florida Water Management District (SFWMD) regulatory requirements and will provide one hundred and fifty percent of the required first inch or two and a half inch of water quality detention treatment, whichever is greater. In addition, the project is designed to accommodate one half inch dry detention pretreatment in a train series for commercial and other land uses that are not residential.

The discharge attenuation and water quality treatment will occur in internal water management lakes will discharge directly into flood plain compensation facilities that are directly connected to the Kehl Canal. The discharge will be through control structures. The site will be isolated from discharging in an uncontrolled manner through the construction of a perimeter berm that will be set at the 100-year peak elevation of the internal water management system lakes.

Flows from the adjacent property will be maintained and transmitted through the property via a planned box culvert that accepts flows from the ditch along the Bonita Beach Road frontage and into the flood plain compensation lakes that are directly connected to the Kehl Canal and headwaters of the Imperial River.

c) The internal lakes and other water management will be owned, operated and maintained within common areas dedicated to a master property owner association.

d) The post development water elevations will emulate and maintain the general characteristics of the pre-development water table in accordance with South Florida Water Management District design guidelines set forth in the current version of the Environmental Resource Permit Information Manual. Impacts to jurisdictional wetland are unavoidable and mitigation for the unavoidable impacts will be through the purchase of offsite wetland mitigation credits. Extensive littoral zones will be designed to enhance the aesthetic qualities of the proposed water management lakes and provide additional nutrient uptake performance of the water management facilities.

e) The property is within a portion of the flood plain for the headwaters of the Imperial River. As a result, the property water management system is designed in accordance with the Environmental Resource Permit Information guidance for floodplain mitigation. Furthermore, the floodplain mitigation provided will be in excess of the minimum required in order to ameliorate concerns regarding the impacts of the development on floodplain storage.

Additional stormwater information per LDC 4-325(b)(1):

a. Describe historic flow of the site.

The site has one ditch that traverses the midpoint of the site that has historically accepted off site flows and transmitted them to the Kehl Canal in the pre-development condition. Attached to this north south running ditch are internal collection ditches that are remnants of a prior agricultural operation. The project concept design has provided a means to continue the off-site flows in the form of maintaining the existing ditch along the south side of Bonita Beach Road, and through a box culvert that traverses the site, and connects the offsite flows to their final destination, the Kehl Canal.

b. The northern portion of the proposed PD has a dedicated flow way. Please indicate this area on the MCP. In order to build in that area and/or add fill, a revision to the flow way line must be approved by the City of Bonita Springs and FEMA.

The Federal Emergency Management Agency has preliminarily approved a request to alter the flood way limits that will essentially move them water ward (to the north) to eliminate the impact that the development footprint has on the flood plain. Furthermore, the project conceptual design has removed all development from the area north of the flood way line except for flood plain compensation lakes which provide regionally beneficial flood plain mitigation and water quality treatment. Parking lots, buildings, landscape buffers, and other development requiring the placement of fill will be located out of the new flood way limits and we understand that these limits will enable us to provide evidence of no impact on the flood way.

c. Who will be the maintenance entity?

The maintenance entity will be a Master Property Owner Association. A copy of the preliminary Master Property Owner Association documents are provided.

d. What will be the elevations of the proposed developments?

The proposed elevations are generally consistent with the prior permit approvals for a different commercial land use. The current proposal for minimum finished floors, perimeter berm and pavement elevations have been determined utilizing historic approved permit precedence for control elevation and discharge rates along with a supporting ICPR hydrodynamic model simulation and cross checked with an XPSTORM hydrodynamic model simulation. The elevation criteria are as follows. The elevations are subject to minor changes as the site plan proceeds to final design. The criteria for the elevations is presented below.

Minimum Finished floor elevations are proposed to be at the greater of the following elevations:

100 Year-3 Day (Zero Discharge) event or

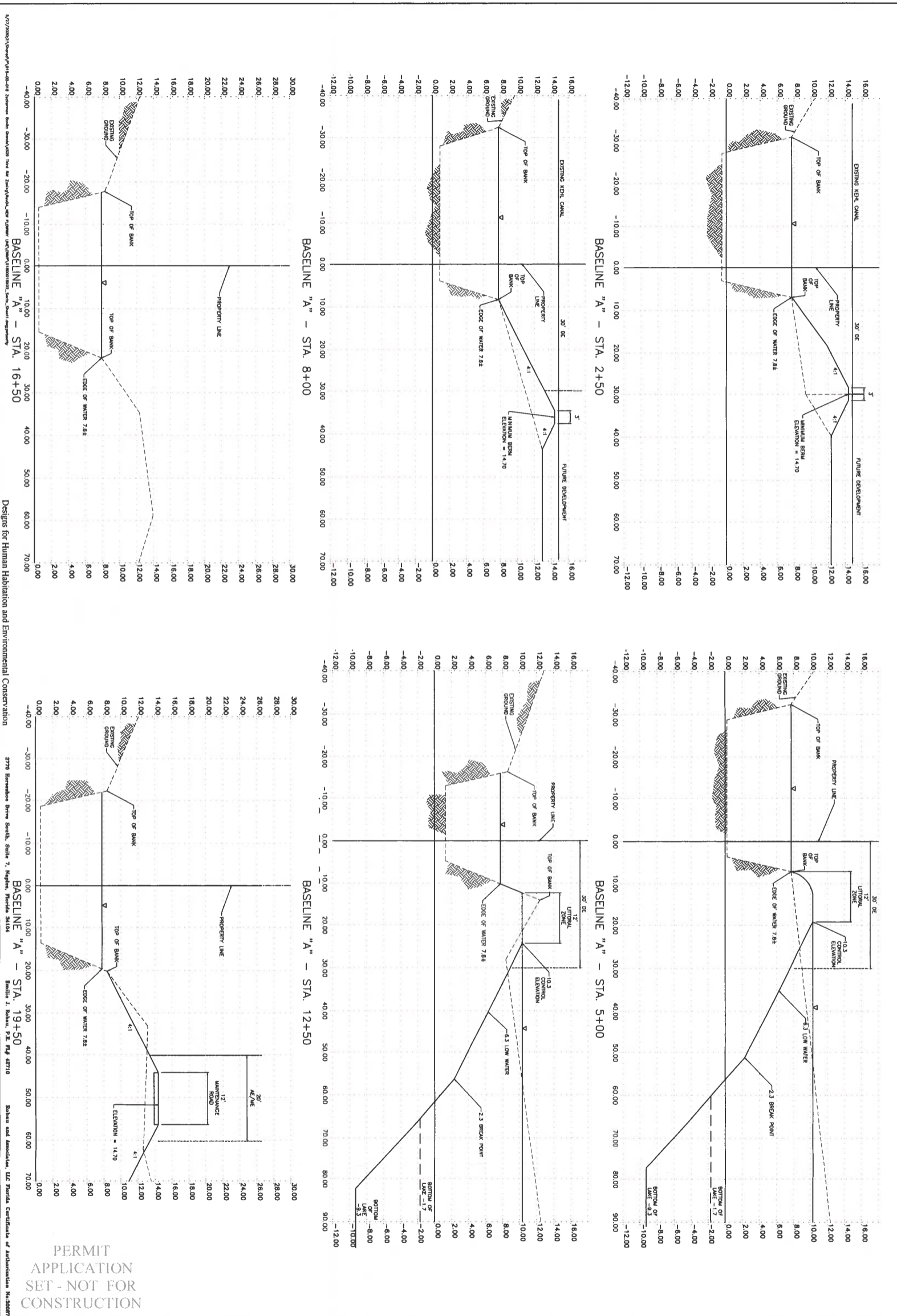
100 Year Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map minimum elevation

The perimeter berm minimum elevation is proposed as follows:

100 Year-3 Day (Zero Discharge) event

The road crown minimum elevation is proposed as follows: 25 Year-3 Day event

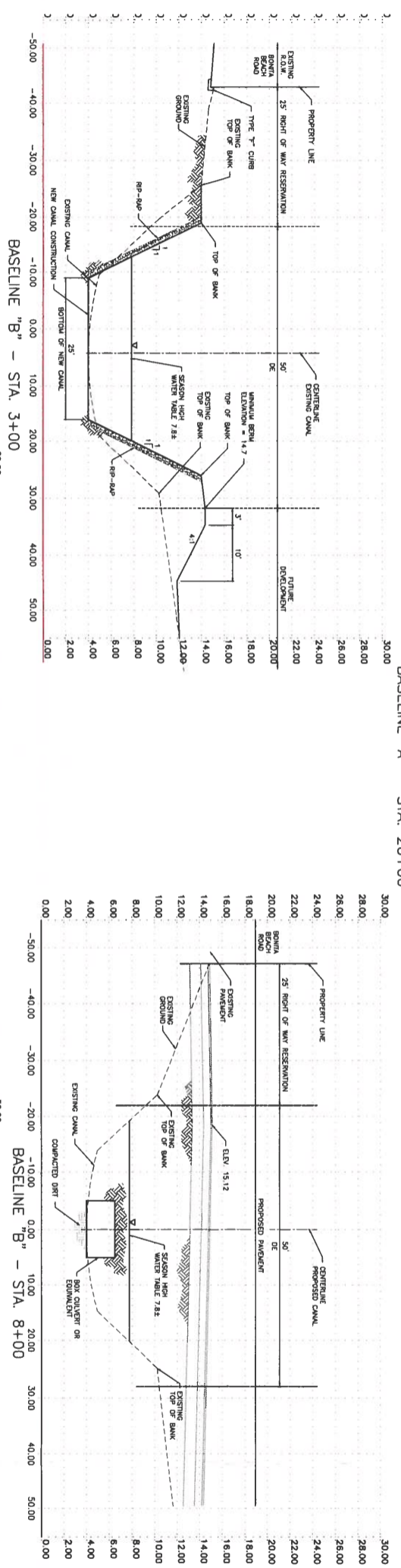
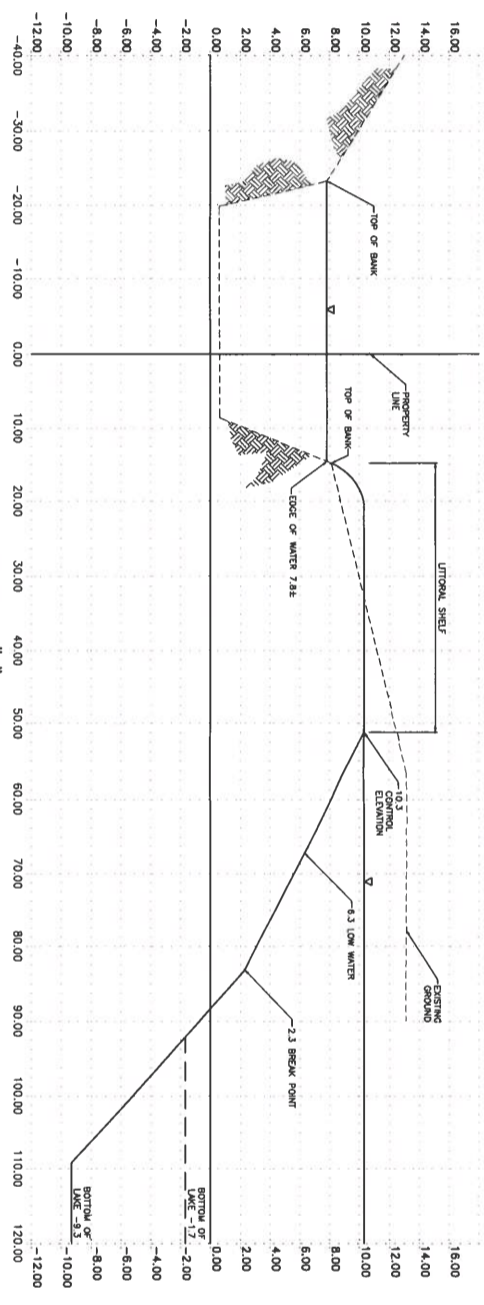
Parking lot minimum perimeter elevation is proposed as follows: 10 Year-1 Day event



PERMIT APPLICATION SET - NOT FOR CONSTRUCTION


<p>ENGINEER'S SEAL ROBAU & ASSOCIATES</p>	<p>REVISIONS: 1. REVISED PER CITY OF BONITA SPRINGS COMMENTS DATE: 5/27/20</p>	<p>PROJECT NAME: MIDTOWN AT BONITA</p> <p>DRAWING TITLE: CROSS-SECTIONS (SHEET 1)</p>	<p>CLIENT NAME: LYNX ZUCKERMAN AT BONITA GRANDE, LLC.</p>
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SHEET 2
OF 4



PERMIT
APPLICATION
SET - NOT FOR
CONSTRUCTION

3/17/2020 10:57 AM C:\Users\jzuckerman\OneDrive - Lynx Zuckerman At Bonita Grande, LLC\Documents\2020\20200317\20200317_20200317_20200317.dwg 3779 Remediation Between South State 7, Naples, Florida 34104 3779 Remediation Between South State 7, Naples, Florida 34104 3779 Remediation Between South State 7, Naples, Florida 34104 3779 Remediation Between South State 7, Naples, Florida 34104

 ROBAU & ASSOCIATES ENGINEER'S SEAL STAMPS	REVISION: ▲ REVISOR: PER CITY OF BONITA SPRINGS COMMENTS DATE: 5/27/20	PROJECT NAME: MIDTOWN AT BONITA	CLIENT NAME: LYNX ZUCKERMAN AT BONITA GRANDE, LLC.
	DRAWING TITLE: CROSS-SECTIONS (SHEET 2)	SHEET 3 OF 4	



Federal Emergency Management Agency
Washington, D.C. 20472

RECEIVED
 CITY OF BONITA SPRINGS
 JUN 02 2020
 COMMUNITY DEVELOPMENT
 DEPARTMENT

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT**

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	Lee County Florida (Unincorporated Areas)	NO PROJECT	FLOODWAY HYDRAULIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 125124		
IDENTIFIER	Imperial River/Kehl Canal LOMR	APPROXIMATE LATITUDE AND LONGITUDE: 26.340, -81.741 SOURCE: Google Earth Pro DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM* NO.: 12071C0676F DATE: August 28, 2008 TYPE: FIRM* NO.: 12071C0678F DATE: August 28, 2008		DATE OF EFFECTIVE FLOOD INSURANCE STUDY: December 7, 2018 PROFILE: 38P FLOODWAY DATA TABLE: 9	

Enclosures reflect changes to flooding sources affected by this revision.
* FIRM - Flood Insurance Rate Map

FLOODING SOURCE AND REVISED REACH

Imperial River - from approximately 360 feet upstream of Orr Road to approximately 300 feet upstream of Bonita Grande Drive

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Imperial River	Floodway	Floodway	NONE	YES
	Zone AE	Zone AE	YES	YES
	BFEs*	BFEs	NONE	YES

* BFEs - Base Flood Elevations

DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbbit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

OTHER COMMUNITIES AFFECTED BY THIS REVISION

CID Number: 120680 **Name:** City of Bonita Springs, Florida

AFFECTED MAP PANELS

TYPE: FIRM* NO.: 12071C0676F DATE: August 28, 2008
TYPE: FIRM* NO.: 12071C0678F DATE: August 28, 2008

AFFECTED PORTIONS OF THE FLOOD INSURANCE STUDY REPORT

DATE OF EFFECTIVE FLOOD INSURANCE STUDY: December 7, 2018
PROFILE: 38P
FLOODWAY DATA TABLE: 9

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

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102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

We provide the floodway designation to your community as a tool to regulate floodplain development. Therefore, the floodway revision we have described in this letter, while acceptable to us, must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations.

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance flood discharges computed in the FIS for your community without considering subsequent changes in watershed characteristics that could increase flood discharges. Future development of projects upstream could cause increased flood discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on flood discharges subsequent to the publication of the FIS report for your community and could, therefore, establish greater flood hazards in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbitt, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Mr. Jesse Munoz
Director, Mitigation Division
Federal Emergency Management Agency, Region IV
Koger Center - Rutgers Building, 3003 Chamblee Tucker Road
Atlanta, GA 30341
(770) 220-5406

STATUS OF THE COMMUNITY NFIP MAPS

We are currently processing a Physical Map Revision (PMR) that will revise the FIRM and FIS report for a portion of Lee County, not including the area impacted by this LOMR. We will not physically revise and republish the FIRM and FIS report for your community to incorporate the modifications made by this LOMR at this time. Preliminary copies of the revised FIRM and FIS report, which have been updated by the PMR, were submitted to your community for review on June 28, 2019. We will either incorporate the modifications made by this LOMR into the preliminary FIRM and FIS report before they become effective or reissue the LOMR on the new FIRM and FIS report.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

A handwritten signature in black ink, appearing to read "Rick F. Sacbibit".

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

PUBLIC NOTIFICATION OF REVISION

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp

LOCAL NEWSPAPER

Name: *Fort Myers News-Press*

Dates: June 5, 2020 and June 12, 2020

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

A handwritten signature in black ink, appearing to read "Rick Sacbbit".

Patrick "Rick" F. Sacbbit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
IMPERIAL RIVER (Continued)								
Q	32,700	1,200 ²	5,407	0.6	11.8	11.8	12.3	0.5
R	33,700	1,000	5,532	0.8	12.1	12.1	12.6	0.5
S	35,000	1,140	6,961	0.8	12.7	12.7	13.4	0.7
T	37,491	1,275	5,870	1.1	13.4	13.4	14.4	1.0
U	37,820	1,500	7,520	1.5	13.7	13.7	14.6	0.9
V	40,312	850	3,707	0.8	14.2	14.2	15.1	0.9
W	43,174	1,544 ⁵	4,554	0.8	14.5	14.5	15.4	0.9
KICKAPOO CREEK								
A	0	314	433	2.9	6.8 ³	2.5 ⁴	3.0	0.5
B	604	334	848	1.3	7.5	7.5	7.9	0.4
C	754	278	1,726	0.6	7.6	7.6	8.2	0.6
D	1,107	247	1,254	0.8	7.6	7.6	8.2	0.6
E	1,217	226	2,068	0.4	7.6	7.6	8.2	0.6
F	2,047	147	1,051	0.7	7.6	7.6	8.2	0.6

¹ Feet above mouth.

² Value is inaccurate, as the floodway has been adjusted in this area to reflect more detailed and up-to-date stream channel configuration

³ Elevation computed without consideration of wave effects

⁴ Elevation computed without consideration of backwater effects from Caloosahatchee River

⁵ The measured top width on the FIRM may differ due to ineffective flow, the exclusion of small pocket areas due to map scale limitations.

REVISED DATA

REVISED BY LOMR
EFFECTIVE: February 23, 2016

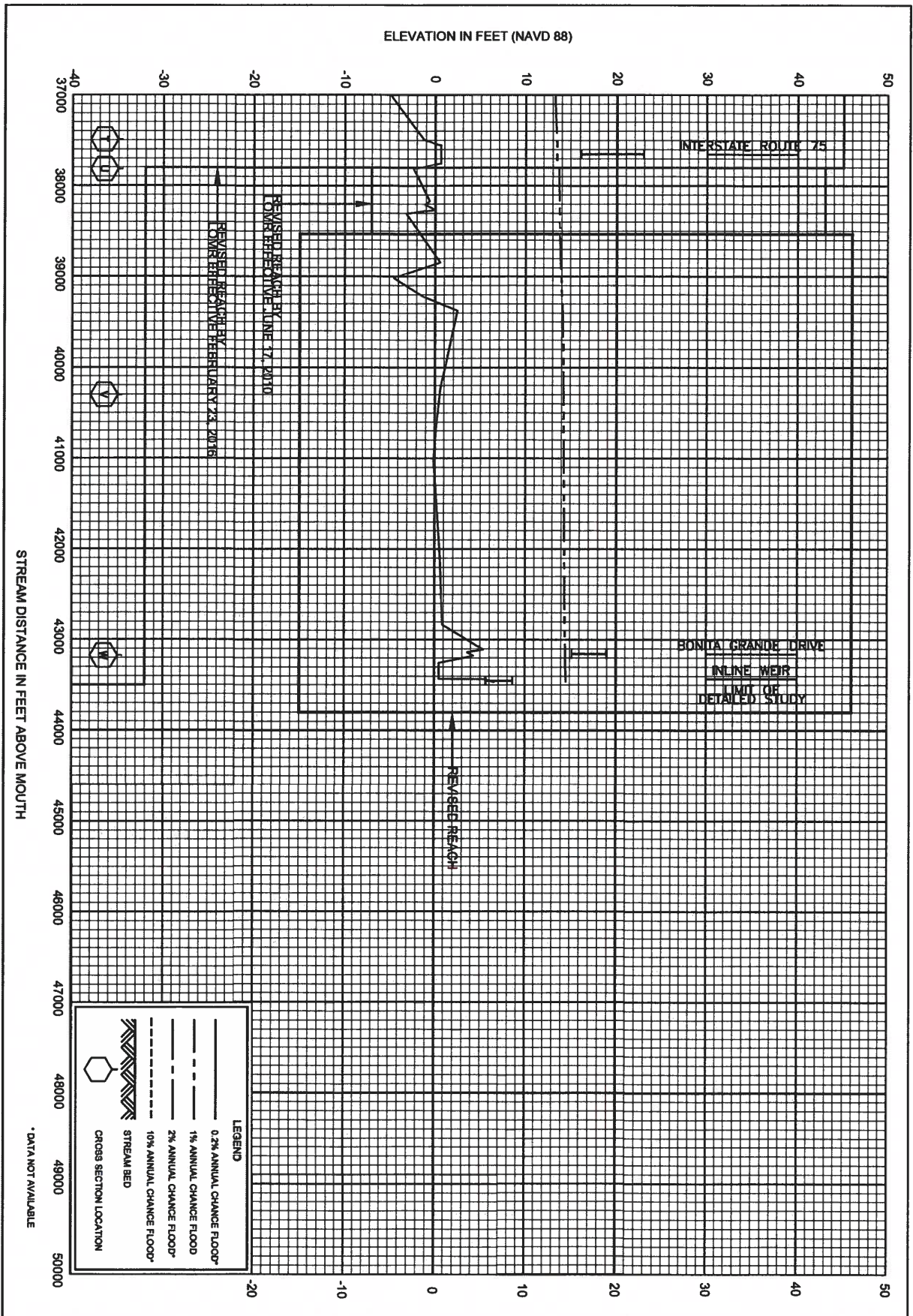
REVISED TO
REFLECT LOMR
EFFECTIVE: October 13, 2020

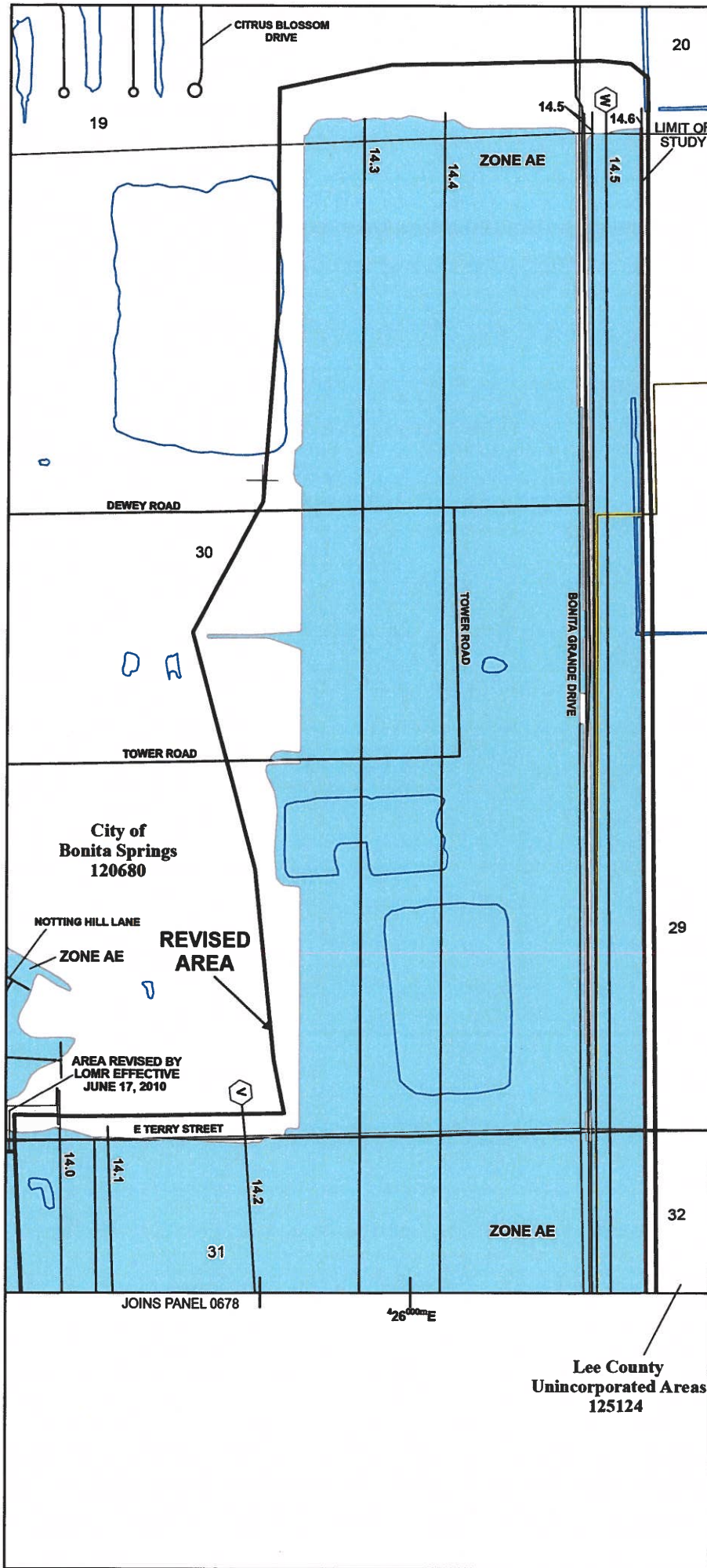
TABLE 9

FEDERAL EMERGENCY MANAGEMENT AGENCY
LEE COUNTY, FL
AND INCORPORATED AREAS

FLOODWAY DATA

IMPERIAL RIVER - KICKAPOO CREEK





SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A.V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AP
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with discharge areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes, Zone X

SCALE

Map Projection: NAD 1983 StatePlane Florida West FIPS 0502 Feet
 Vertical Datum: NAVD 83

1 inch = 500 feet 1:5,000

0 250 500 1,000 Feet

0 75 150 300 Meters

FEDERAL EMERGENCY MANAGEMENT AGENCY

NATIONAL FLOOD INSURANCE PROGRAM
 FLOOD INSURANCE RATE MAP
 LEE COUNTY, FLORIDA
 and Incorporated Areas
 PANEL 676 of 685

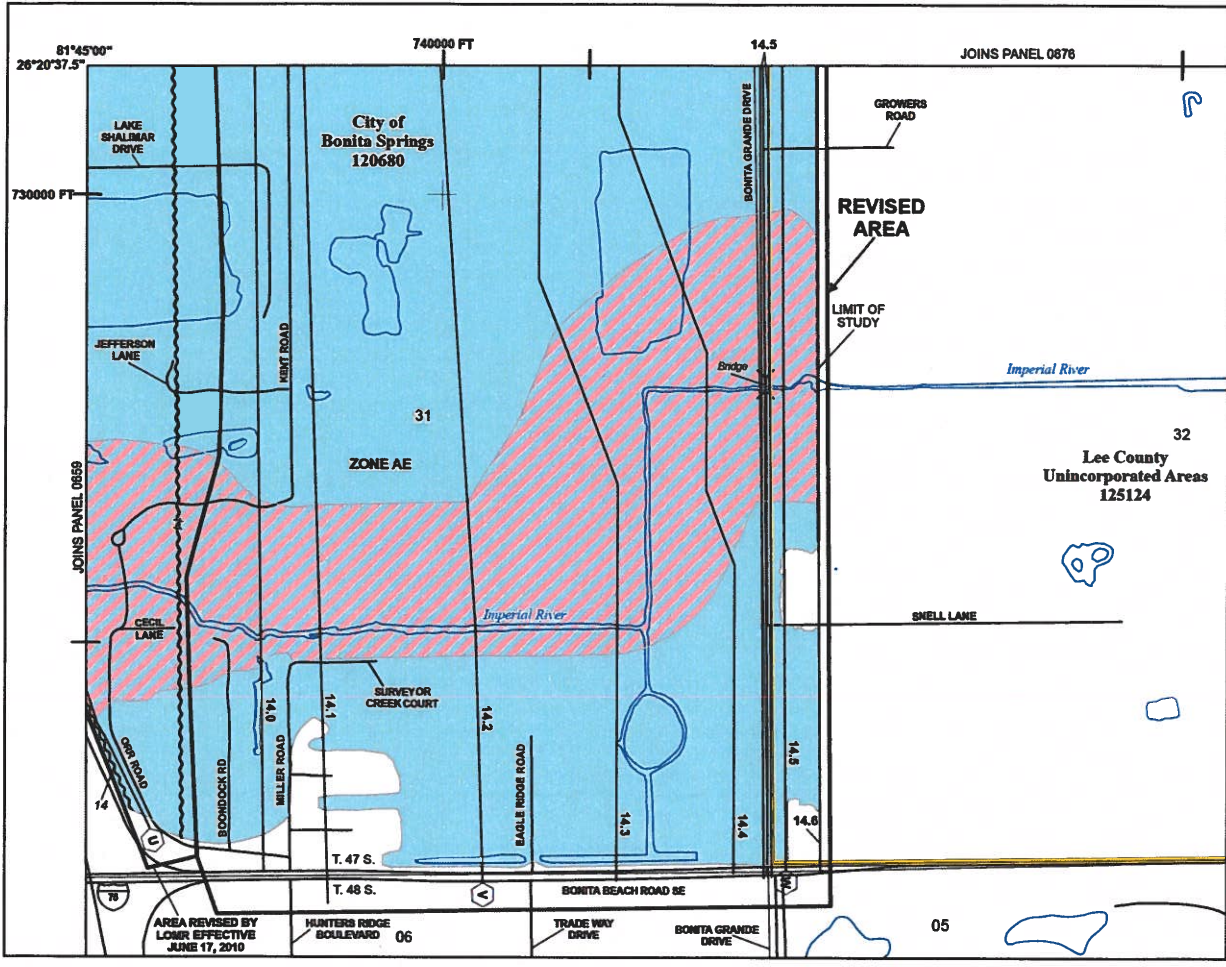
Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
BONITA SPRINGS, CITY OF	120680	0676	F
LEE COUNTY	125124	0676	F

REVISED TO REFLECT LOMR EFFECTIVE: October 13, 2020

VERSION NUMBER: 2.1.3.0
 MAP NUMBER: 12071C0676F
 EFFECTIVE DATE: AUGUST 28, 2008

Lee County
 Unincorporated Areas
 125124



SPECIAL FLOOD INSURED AREAS

- Without Base Flood Elevation (BFE) Zone AE, AO, AH, A9, V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11, V12, V13, V14, V15, V16, V17, V18, V19, V20, V21, V22, V23, V24, V25, V26, V27, V28, V29, V30, V31, V32, V33, V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50, V51, V52, V53, V54, V55, V56, V57, V58, V59, V60, V61, V62, V63, V64, V65, V66, V67, V68, V69, V70, V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100
- Regulatory Floodway
- 0.25 Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with discharge areas of less than one acre up to Zone X
- 1% Annual Chance Flood Hazard, Areas with Sublethal Flood Risk due to Large Dam Failure, Zone X

OTHER AREAS OF FLOOD INTEREST

SCALE

Horizontal and Vertical Scale: 1 inch = 500 feet

1:50,000

0 250 500 1,000 Feet

0 75 150 300 Feet

FEMA National Flood Insurance Program

FLOOD INSURANCE RATE MAP

LEE COUNTY, FLORIDA
and Incorporated Areas

Panel 678 or 685

Panel Contents

COMMUNITY	NUMBER	PANEL	SUFFIX
00001 SPANISH CITY OF LEE COUNTY	120800	0876	P
	123124	0876	P

REVISED TO REFLECT LOMR EFFECTIVE: October 13, 2020

VERSION NUMBER: 2.1.3.0

MAP NUMBER: 1207100678F

EFFECTIVE DATE: AUGUST 28, 2008



Federal Emergency Management Agency

Washington, D.C. 20472

May 22, 2020

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

The Honorable Peter Simmons
Mayor, City of Bonita Springs
9101 Bonita Beach Road
Bonita Springs, FL 34135

IN REPLY REFER TO:

Case No.: 19-04-5595P
Community Name: City of Bonita Springs, FL
Community No.: 120680
Effective Date of
This Revision: October 13, 2020

Dear Mayor Simmons:

The Flood Insurance Study (FIS) report and Flood Insurance Rate Map (FIRM) for your community have been revised by this Letter of Map Revision (LOMR). Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals issued in your community.

Additional documents are enclosed that provide information regarding this LOMR. Please see the List of Enclosures below to determine which documents are included. Other enclosures specific to this request may be included as referenced in the Determination Document. If you have any questions regarding floodplain management regulations for your community or the National Flood Insurance Program (NFIP) in general, please contact the Consultation Coordination Officer for your community. If you have any technical questions regarding this LOMR, please contact the Director, Mitigation Division of the Department of Homeland Security's Federal Emergency Management Agency (FEMA) in Atlanta, Georgia, at (770) 220-5406, or the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP). Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Sincerely,

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

List of Enclosures:

Letter of Map Revision Determination Document
Annotated Flood Insurance Rate Map
Annotated Flood Insurance Study Report

cc: Mr. Roger Desjarlais
Manager, Lee County

Mrs. Elizabeth A. Fountain, P.E., CFM
Vice President
J.R. Evans Engineering, P.A.

Ms. Ayita Williams, CFM
Floodplain Manager
City of Bonita Springs

Mr. Shawn McNulty, CFM
Building Official
Lee County



Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	City of Bonita Springs Lee County Florida	NO PROJECT	FLOODWAY HYDRAULIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 120680		
IDENTIFIER	Imperial River/Kehl Canal LOMR	APPROXIMATE LATITUDE AND LONGITUDE: 26.340, -81.741 SOURCE: Google Earth Pro DATUM: NAD 83	
ANNOTATED MAPPING ENCLOSURES		ANNOTATED STUDY ENCLOSURES	
TYPE: FIRM*	NO.: 12071C0676F DATE: August 28, 2008	DATE OF EFFECTIVE FLOOD INSURANCE STUDY: December 7, 2018	
TYPE: FIRM*	NO.: 12071C0678F DATE: August 28, 2008	PROFILE: 38P FLOODWAY DATA TABLE: 9	

Enclosures reflect changes to flooding sources affected by this revision.

* FIRM - Flood Insurance Rate Map

FLOODING SOURCE AND REVISED REACH

Imperial River - from approximately 360 feet upstream of Orr Road to approximately 300 feet upstream of Bonita Grande Drive

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Imperial River	Floodway	Floodway	NONE	YES
	Zone AE	Zone AE	YES	YES
	BFEs*	BFEs	NONE	YES

* BFEs - Base Flood Elevations

DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbbit, P.E., Branch Chief
 Engineering Services Branch
 Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

OTHER COMMUNITIES AFFECTED BY THIS REVISION

CID Number: 125124 **Name:** Lee County, Florida

AFFECTED MAP PANELS			AFFECTED PORTIONS OF THE FLOOD INSURANCE STUDY REPORT
TYPE: FIRM*	NO.: 12071C0676F	DATE: August 28, 2008	DATE OF EFFECTIVE FLOOD INSURANCE STUDY: December 7, 2018 PROFILE: 38P FLOODWAY DATA TABLE: 9
TYPE: FIRM*	NO.: 12071C0678F	DATE: August 28, 2008	

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbbit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

We provide the floodway designation to your community as a tool to regulate floodplain development. Therefore, the floodway revision we have described in this letter, while acceptable to us, must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations.

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance flood discharges computed in the FIS for your community without considering subsequent changes in watershed characteristics that could increase flood discharges. Future development of projects upstream could cause increased flood discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on flood discharges subsequent to the publication of the FIS report for your community and could, therefore, establish greater flood hazards in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbitt, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Mr. Jesse Munoz
Director, Mitigation Division
Federal Emergency Management Agency, Region IV
Koger Center - Rutgers Building, 3003 Chamblee Tucker Road
Atlanta, GA 30341
(770) 220-5406

STATUS OF THE COMMUNITY NFIP MAPS

We are currently processing a Physical Map Revision (PMR) that will revise the FIRM and FIS report for a portion of Lee County, not including the area impacted by this LOMR. We will not physically revise and republish the FIRM and FIS report for your community to incorporate the modifications made by this LOMR at this time. Preliminary copies of the revised FIRM and FIS report, which have been updated by the PMR, were submitted to your community for review on June 28, 2019. We will either incorporate the modifications made by this LOMR into the preliminary FIRM and FIS report before they become effective or reissue the LOMR on the new FIRM and FIS report.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbbit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C



Federal Emergency Management Agency
Washington, D.C. 20472

**LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)**

PUBLIC NOTIFICATION OF REVISION

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp

LOCAL NEWSPAPER

Name: *Fort Myers News-Press*

Dates: June 5, 2020 and June 12, 2020

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

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Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

19-04-5595P

102-I-A-C

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
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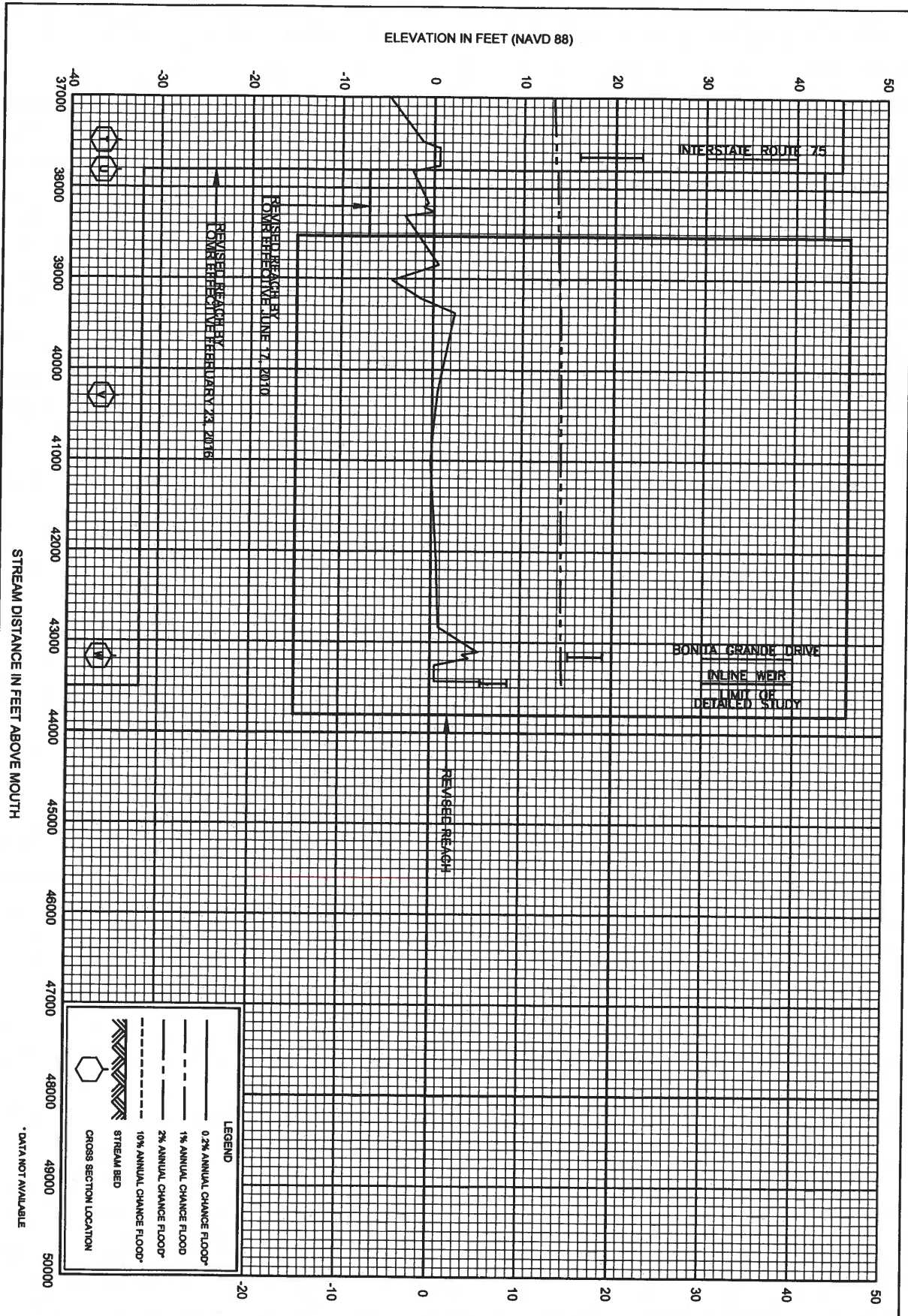
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REVISED DATA

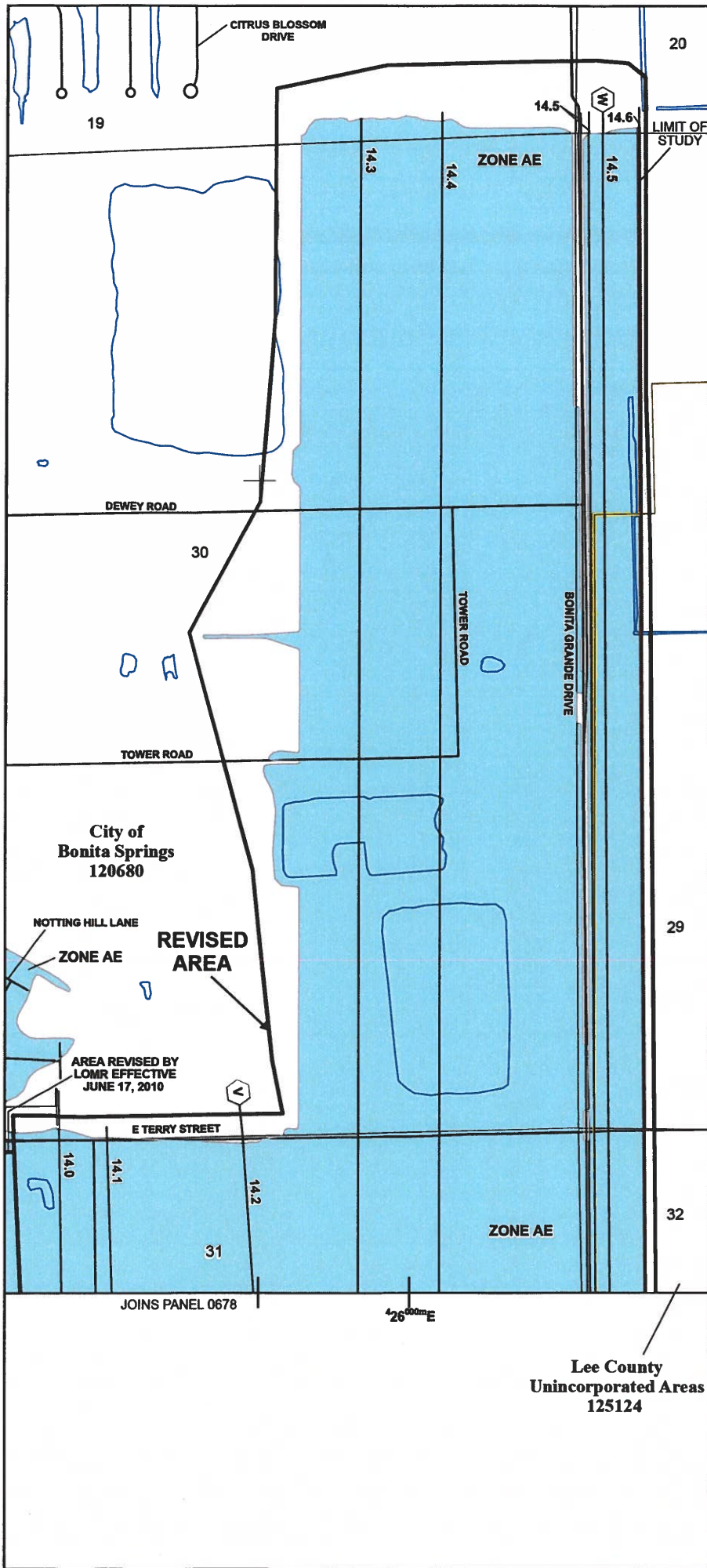
REVISED BY LOMR
EFFECTIVE: February 23, 2016

REVISED TO
REFLECT LOMR
EFFECTIVE: October 13, 2020

TABLE 9	FEDERAL EMERGENCY MANAGEMENT AGENCY LEE COUNTY, FL AND INCORPORATED AREAS	FLOODWAY DATA
		IMPERIAL RIVER - KICKAPOO CREEK



38P	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOOD PROFILES	REVISED TO REFLECT LOMR EFFECTIVE: October 13, 2020
	LEE COUNTY, FL AND INCORPORATED AREAS	IMPERIAL RIVER	



City of
Bonita Springs
120680

NOTTING HILL LANE
ZONE AE
REVISED AREA

AREA REVISED BY
LOMR EFFECTIVE
JUNE 17, 2010

JOINS PANEL 0678

426,000m E

Lee County
Unincorporated Areas
125124

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, X, A99
- With BFE or Depth Zone AE, AO, AH, VE, AP
- Regulatory Floodway
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Areas with Reduced Flood Risk due to Levee See Notes, Zone X

OTHER AREAS OF FLOOD HAZARD

SCALE

Also Projected:
NAD 1983 StatePlane Florida West FIPS 0902 Feet;
Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet
0 75 150 300 Meters

FEMA
National Flood Insurance Program

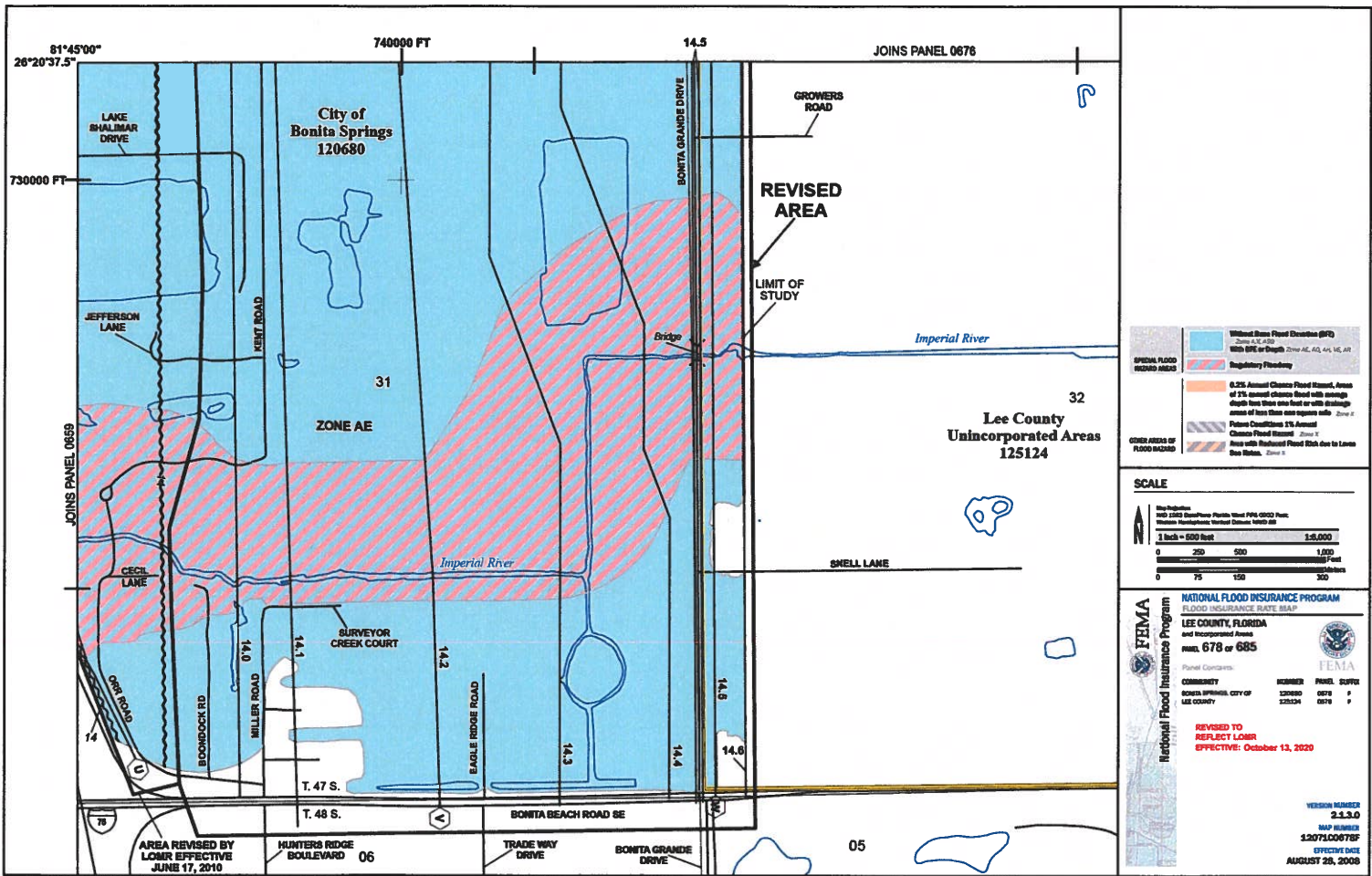
**NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
LEE COUNTY, FLORIDA
and Incorporated Areas
PANEL 676 of 685**

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
BONITA SPRINGS, CITY OF	120680	0676	F
LEE COUNTY	125124	0676	F

REVISED TO REFLECT LOMR EFFECTIVE: October 13, 2020

VERSION NUMBER
2.1.3.0
MAP NUMBER
12071C0676F
EFFECTIVE DATE
AUGUST 28, 2008



SPECIAL FLOOD HAZARD AREAS

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- 0.2% Annual Chance Flood Hazard, Areas of 1% Annual Chance Flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee One Return Zone X

OTHER AREAS OF FLOOD HAZARD

SCALE

Horizontal: 1 inch = 500 feet

Vertical: 1 inch = 10 feet

Graphic scale bars for 0-1000 feet and 0-300 feet.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

LEE COUNTY, FLORIDA
and Incorporated Areas
Map 678 or 685

Panel Contents:

COMMUNITY	NUMBER	PANEL	SUFFIX
BONITA SPRINGS, CITY OF	120680	0678	F
LEE COUNTY	125124	0678	F

REVISOR TO REFLECT LOMR
EFFECTIVE: October 13, 2020

VERSION NUMBER
2.3.3.0

MAP NUMBER
1207100678F

EFFECTIVE DATE
AUGUST 26, 2009



Federal Emergency Management Agency

Washington, D.C. 20472

May 22, 2020

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Roger Desjarlais
Manager, Lee County
2120 Main Street
Fort Myers, FL 33901

IN REPLY REFER TO:

Case No.: 19-04-5595P
Community Name: Lee County, FL
Community No.: 125124
Effective Date of
This Revision: October 13, 2020

Dear Mr. Desjarlais:

The Flood Insurance Study (FIS) report and Flood Insurance Rate Map (FIRM) for your community have been revised by this Letter of Map Revision (LOMR). Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals issued in your community.

Additional documents are enclosed that provide information regarding this LOMR. Please see the List of Enclosures below to determine which documents are included. Other enclosures specific to this request may be included as referenced in the Determination Document. If you have any questions regarding floodplain management regulations for your community or the National Flood Insurance Program (NFIP) in general, please contact the Consultation Coordination Officer for your community. If you have any technical questions regarding this LOMR, please contact the Director, Mitigation Division of the Department of Homeland Security's Federal Emergency Management Agency (FEMA) in Atlanta, Georgia, at (770)-220-5406, or the FEMA Mapping and Insurance eXchange toll free at 1-877-336-2627 (1-877-FEMA MAP). Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Sincerely,

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

List of Enclosures:

Letter of Map Revision Determination Document
Annotated Flood Insurance Rate Map
Annotated Flood Insurance Study Report

cc: The Honorable Peter Simmons
Mayor, City of Bonita Springs

Mrs. Elizabeth A. Fountain, P.E., CFM
Vice President
J.R. Evans Engineering, P.A.

Mr. Shawn McNulty, CFM
Building Official
Lee County

Ms. Ayita Williams, CFM
Floodplain Manager
City of Bonita Springs



**BONITA GRANDE MPD - DRAFT
NUTRIENT LOADING ANALYSIS**

Land Use Summary

There are two sub-basins considered for nutrient loadings - Kehl Canal West (West) and Kehl Canal South (South)

Land Use Category	Area	Conditions
North - Undeveloped/Woods-Grass	22,950 ac	Poor
North - Agricultural	5,199 ac	Good
South - Residential	1,612 ac	Fair

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Curve Number - Technical Release (TR)-55

Cover	Curve Number (CN) ¹	Percent Coverage	Product (CN x % Coverage)
Woods-Grass Combination (Poor)	86	100%	86
Agriculture	89	100%	89
Residential 1 acre (avg)	84	100%	84

(1) **Technical Release (TR)-55:** Conservation Engineering Division, 1986, *Urban Hydrology for Small Watersheds TR-55*, Natural Resources Conservation Service, United States Department of Agriculture.

Impervious Area/ Percent DCIA

Land Use Category	Impervious %	DCIA %	Non DCIA CN	Rational "C" Value - Appendix C Zone 4
North - Undeveloped/Woods-Grass	0%	0%	86	0.199
North - Agricultural	0%	0%	89	0.249
South - Residential	60%	45%	84	0.464

Annual Runoff Volumes

Annual Runoff Vol. = Annual Rainfall (in/yr) * Area (ac) * C value * (1ft/12in)

Land Use Category	Annual Rainfall	Area	C Value	Runoff
North - Undeveloped/Woods-Grass	53 in/yr	22,950 ac	0.199	20,171 ac-ft/yr
North - Agricultural	53 in/yr	5,199 ac	0.249	5,718 ac-ft/yr
South - Residential	53 in/yr	1,612 ac	0.464	3,304 ac-ft/yr



Runoff Characteristics - Table 4-17

Land Use Category	Total Nitrogen (TN)	Total Phosphorus (TP)
	mg/l	mg/l
North - Undeveloped/Woods-Grass	1.15	0.055
North - Agricultural	2.79	0.431
South - Residential	2.07	0.327

Pre-development Loadings of TN & TP

$$\text{TN load (kg/yr)} = \text{Runoff (ac-ft/yr)} * 43,560 \text{ ft}^2/\text{ac} * 7.48 \text{ gal/ft}^3 * 3.785 \text{ liter/gal} * \text{TN (mg/l)} * 10^{-6} \text{ (kg/mg)}$$

$$\text{TP load (kg/yr)} = \text{Runoff (ac-ft/yr)} * 43,560 \text{ ft}^2/\text{ac} * 7.48 \text{ gal/ft}^3 * 3.785 \text{ liter/gal} * \text{TP (mg/l)} * 10^{-6} \text{ (kg/mg)}$$

Land Use Category	Total Load		Runoff ac-ft/yr
	kg/yr		
	TN	TP	
North - Undeveloped/Woods-Grass	28,607.7	1,368.2	20,171.1
North - Agricultural	19,673.1	3,039.1	5,717.6
North - TOTAL	48,280.9	4,407.3	25,888.7
South - Residential	8,433.4	1,332.2	3,303.5
Bonita Grande (BG) MPD Discharge	35.6	1.3	71.0



**BONITA GRANDE MPD - DRAFT
WET DETENTION ANALYSIS & TREATMENT COMPARISON**

Nutrient Loadings

Land Use Category	Total Load		Annual Runoff
	TN	TP	
Kehl North	48,280.87 kg/yr	4,407.31 kg/yr	25,889 ac-ft/yr
Kehl South	8,433.41 kg/yr	1,332.23 kg/yr	3,304 ac-ft/yr
BG MPD	35.60 kg/yr	1.30 kg/yr	71 ac-ft/yr

Annual Runoff to Each Lake

Assume:

Lake 1 receives 100% load from the Kehl Canal/Kehl North

Lake 2 receives 100% load from the Kehl South Basin + 100% BG MPD + 30% Kehl North (Post Treatment)

Lake	Total Load		Annual Runoff
	TN	TP	
Lake 1	48,280.87 kg/yr	4,407.31 kg/yr	25,889 ac-ft/yr
Lake 2	22,388.39 kg/yr	2,194.28 kg/yr	11,141 ac-ft/yr

12 ft Floodplain Lake Depth Treatment Analysis

Characteristics of Wet Detention Treatment Lakes

Lake	Surface Area	Mean Depth	Volume	Maximum Depth
Lake 1	3.78 ac	8.00 ft	30.24 ac-ft	12.00 ft
Lake 2	6.80 ac	8.00 ft	54.40 ac-ft	12.00 ft

Lake Detention Treatment Calculations

Lake Detention Time (day) = Volume (acre-ft) / Annual Runoff (acre-ft/yr) *365 day/yr

TN Removal = [43.75 x (Lake Detention Time)] / [4.38 + (Lake Detention Time)]

TP Removal = [0.213 x ln(Lake Detention Time)] + [6.372 x ln(Lake Detention Time)] + 40.13

LAKE 1 Treatment

Lake Detention Time (day) = 0.43 days

Inputs	Parameter	Inputs	Removal %	Discharge	Removed
	TN	48,280.9 kg/yr	3.9	46,397.9 kg/yr	1,883.0 kg/yr
	TP	4,407.3 kg/yr	34.9	2,869.2 kg/yr	1,538.1 kg/yr
	Volume	25,889 ac-ft/yr		25,889 ac-ft/yr	



LAKE 2 Treatment

Lake Detention Time (day) =		1.78 days			
Inputs	Parameter	Inputs	Removal	Discharge	Removed
			%		
	TN	22,388.4 kg/yr	12.7	19,545.1 kg/yr	2,843.3 kg/yr
	TP	2,194.3 kg/yr	43.9	1,231.0 kg/yr	963.3 kg/yr
	Volume	11,141 ac-ft/yr		11,141 ac-ft/yr	

Total Nutrient Removal for 12 ft Lake Depth

Nutrient	Total Load Removal
TN	4,726.3 kg/yr
TP	2,501.4 kg/yr

20 ft Floodplain Lake Depth Treatment Analysis

Characteristics of Wet Detention Treatment Lakes

Lake	Surface Area	Mean Depth	Volume	Maximum Depth
Lake 1	3.78 ac	13.33 ft	50.40 ac-ft	20.00 ft
Lake 2	6.80 ac	13.33 ft	90.67 ac-ft	20.00 ft

Lake Detention Treatment Calculations

Lake Detention Time (day) = Volume (acre-ft) / Annual Runoff (acre-ft/yr) *365 day/yr

TN Removal = [43.75 x (Lake Detention Time)] / [4.38 + (Lake Detention Time)]

TP Removal = [0.213 x ln(Lake Detention Time)²] + [6.372 x ln(Lake Detention Time)] + 40.13

LAKE 1 Treatment

Lake Detention Time (day) =		0.71 days			
Inputs	Parameter	Inputs	Removal	Discharge	Removed
			%		
	TN	48,280.9 kg/yr	6.1	45,335.7 kg/yr	2,945.1 kg/yr
	TP	4,407.3 kg/yr	38.0	2,732.5 kg/yr	1,674.8 kg/yr
	Volume	25,889 ac-ft/yr		25,889 ac-ft/yr	



LAKE 2 Treatment

Lake Detention Time (day) = 2.97 days

Inputs	Parameter	Inputs	Removal %	Discharge	Removed
	TN	22,388.4 kg/yr	17.7	18,425.6 kg/yr	3,962.7 kg/yr
	TP	2,194.3 kg/yr	47.3	1,156.4 kg/yr	1,037.9 kg/yr
	Volume	11,141 ac-ft/yr		11,141 ac-ft/yr	

Total Nutrient Removal for 20 ft Lake Depth

Nutrient	Total Load Removal
TN	6,907.9 kg/yr
TP	2,712.7 kg/yr

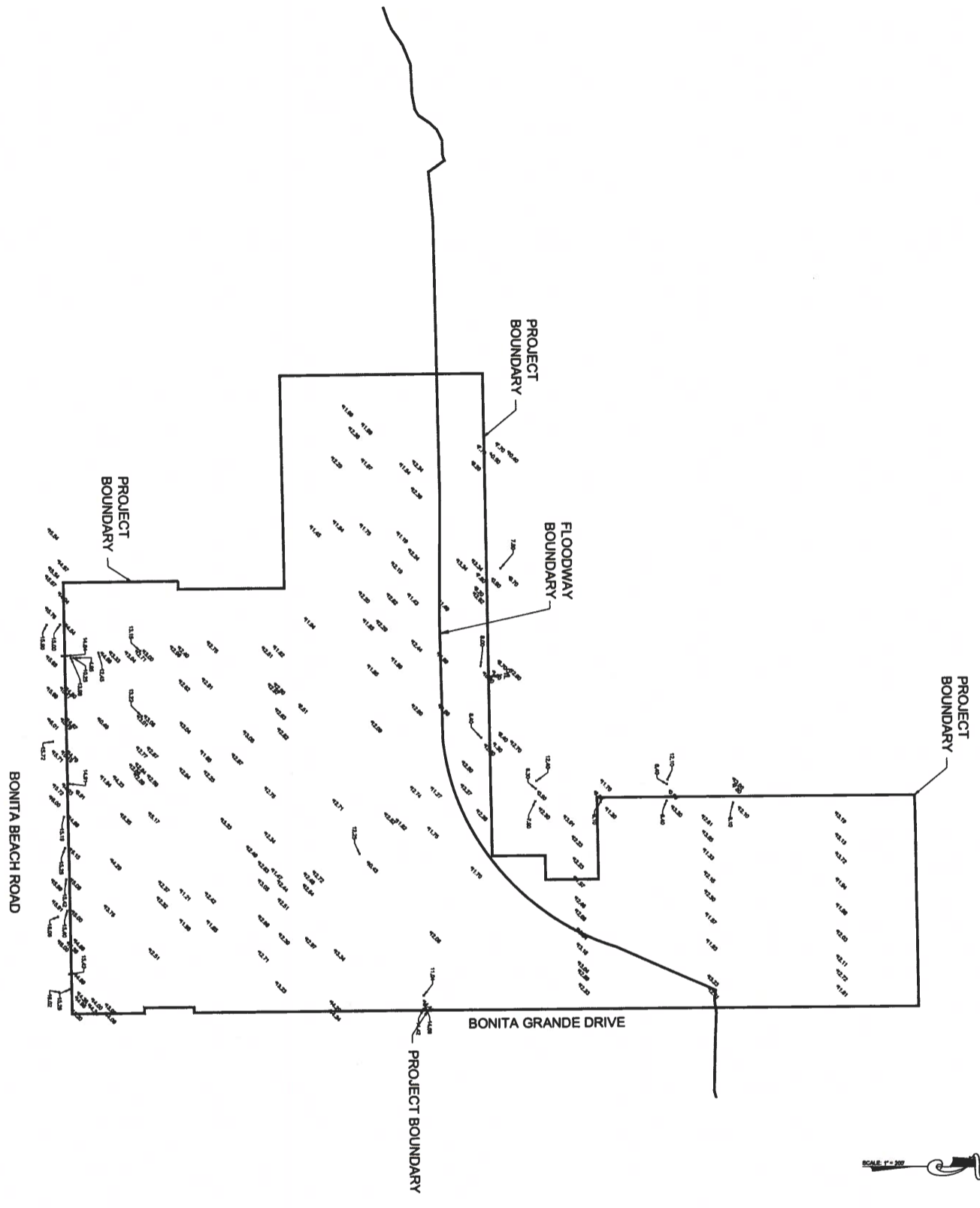
Compare 12 ft Lake Depth Versus 20 ft Lake Depth Total Nutrient Removal

Nutrient	Total Load Removal		Difference	Percent Increase
	12 ft Lakes	20 ft Lakes		
TN	4,726.3 kg/yr	6,907.9 kg/yr	2,181.6 kg/yr	46.2%
TP	2,501.4 kg/yr	2,712.7 kg/yr	211.2 kg/yr	8.4%

Nutrient	Total Load Removal (lbs)		Difference
	12 ft Lakes	20 ft Lakes	
TN	10,419.7 lbs/yr	15,229.3 lbs/yr	4,809.6 lbs/yr
TP	5,514.7 lbs/yr	5,980.4 lbs/yr	465.7 lbs/yr

Discharge Summary

Nutrient	Imperial River/Kehl Canal Study Basin Removal				
	Discharge Before Improvements	Discharge After Improvements		Percent Removed	
		12 ft Lakes	20 ft Lakes	12 ft Lakes	20 ft Lakes
TN	56,749.9 kg/yr	52,023.6 kg/yr	49,842.0 kg/yr	8.3%	12.2%
TP	5,740.8 kg/yr	3,239.4 kg/yr	3,028.2 kg/yr	43.6%	47.3%



SHEET NUMBER	SHEET DESCRIPTION
1	EXISTING TOPOGRAPHY (NAVD)
2	EARTHWORK 12' LAKES
3	EARTHWORK 20' LAKES

SHEET INDEX

DRAFT

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CITY OF BONITA SPRINGS
JUN 02 2020
COMMUNITY DEVELOPMENT
DEPARTMENT



REVISION:	DATE:

PROJECT NAME: MIDTOWN AT BONITA #18-01-18 DRAWING TITLE: EXISTING TOPOGRAPHY (NAVD)

CLIENT NAME: LYNX ZUCKERMAN AT BONITA GRANDE, LLC.
--

NIM Summary
Bonita Grande MPD
July 23, 2019, 5:30 p.m.
Bonita Springs Fire Control & Rescue District, Station 4, Conference Room
27701 Bonita Grande Drive, Bonita Springs, FL 34135

Attendees:

Applicants:

Andrew Zuckerman, Lynx Zuckerman at Bonita Grande, LLC
Ryan Zuckerman, Lynx Zuckerman at Bonita Grande, LLC

On Behalf of the Applicant:

Robert J. Mulhere, FAICP, Hole Montes, Inc.
Paula McMichael, AICP, Hole Montes, Inc.
Emilio Robau, P.E., Robau Designs
Norman Trebilcock, AICP, P.E., Trebilcock Consulting Solutions, PA

Approximately 47 members of the public attended.

Mr. Mulhere started the presentation by introducing the applicants and consultants. Mr. Mulhere then provided an overview of the project, explained the process for approval of the MPD rezoning request, and provided an overview of the project.

Following the presentation, there was approximately one hour, ten minutes of questions from the public in attendance. The members of the public who identified themselves were primarily residents of Worthington Country Club to the south. Please see below for a summary of public comments.

Summary of Public Comments

Stormwater Management

Most of the questions were related to stormwater management for the site and how it will affect adjacent properties, particularly Worthington. The proposed lakes will be approximately 12 – 20 feet deep. The site will be designed to retain onsite water, as well as some offsite water. The lakes will also be designed to assist with floodplain management and support the Kehl Canal. The City of Bonita Springs has hired a consultant to analyze stormwater management in the surrounding area, unrelated to the requested rezoning. The applicant is working with the consultant on possible improvements that can be made to help alleviate flooding issues unrelated to the proposed development. Mr. Mulhere agreed to meet with representatives of Worthington Country Club during the application process to further discuss stormwater issues.

Traffic Concerns

The trip cap from the existing zoning of the property (ZO-08-09) will be retained, so there will be no increase to the previously approved level of traffic. The MCP proposes two access points via Bonita Beach Road and three via Bonita Grande Drive. There is a 50-foot right-of-way reservation along the eastern perimeter boundary for future improvements to Bonita Grande Drive, and a 25-foot right-of-way reservation to the south for future improvements to Bonita Beach Road.

General/Misc.

Lighting will be Dark Skies compliant and will mitigate light trespass where applicable. There will be a 15-foot, Type B landscape buffer along the upper portion of the western perimeter adjacent to the developed, AG zoned parcels.

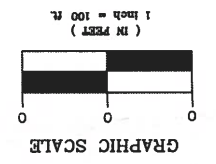
Two members of the public who spoke supported the request.

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BONITA GRANDE MIXED-USE COMMUNITY

- Retail
- Restaurant
- Commercial
- Office
- Hotel
- Multi-family
- ALF

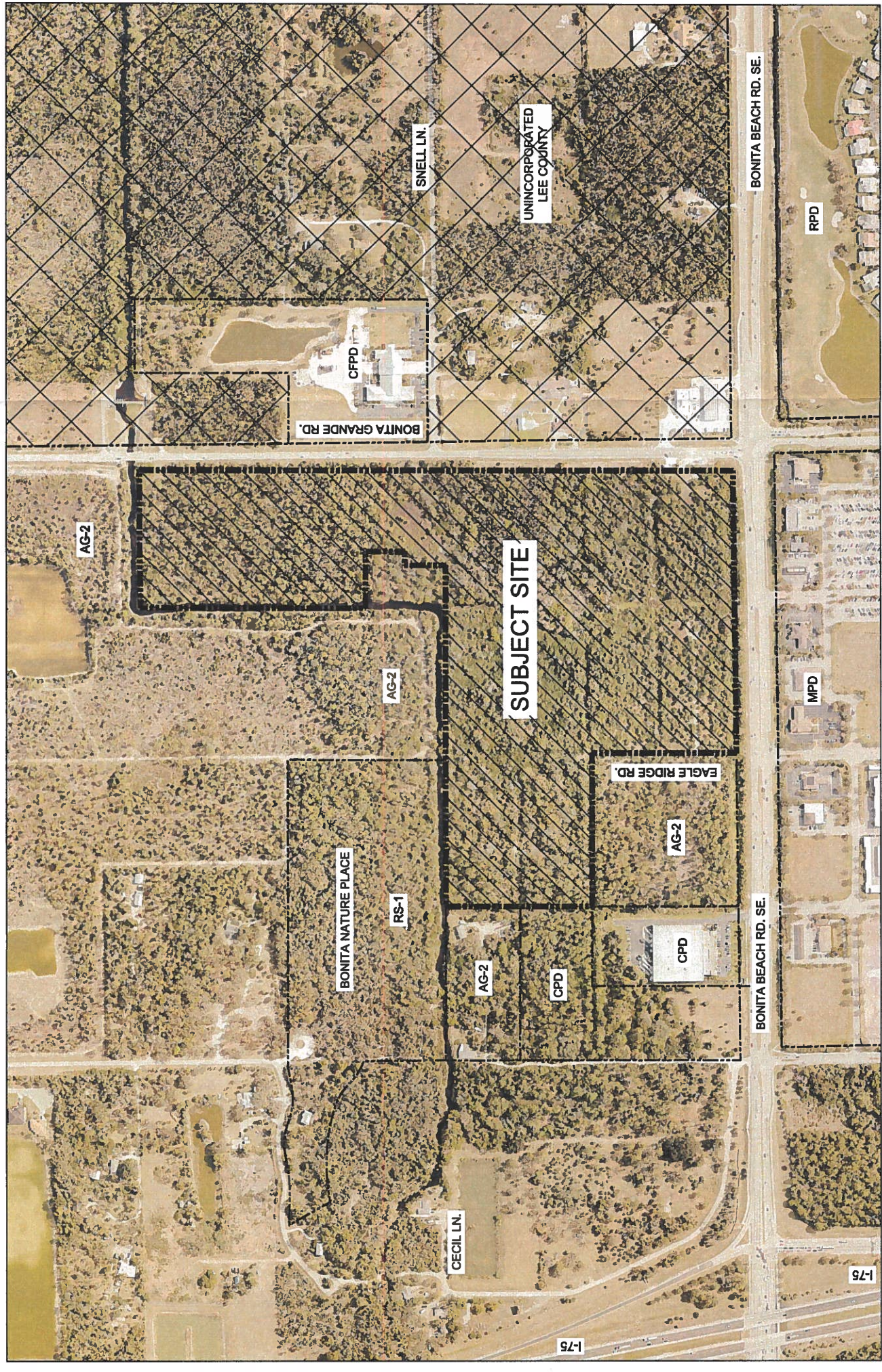
LEGEND





LOCATION MAP

SECTION 31 TOWNSHIP 47 SOUTH, RANGE 26 EAST



ADJACENT PROPERTY LAND USE/ ZONING		LAND USE
ZONING		
NORTH	AG-2, RS-1	BONITA NATURE PLACE
SOUTH	MPD	BONITA BEACH RD. BERNWOOD PARK OF COMMERCE (COMMERCIAL)
EAST	CPD	BONITA GRANDE DR., RACE TRAC. AGRICULTURAL, BONITA SPRINGS FIRE DEPT. STATION 24
WEST	AG-2, CPD	CITY MATTRESS, SINGLE FAMILY RESIDENTIAL, BONITA NATURE PLACE

REFERENCE NO.	19013	DRAWING NO.	-
PROJECT NO.	2019013	SHEET NO.	1

**EXISTING ZONING
& CURRENT LAND USE
EXH. 11-F-3**

H M
HOLE MONTES, INC.
 6200 WHISKEY CREEK DRIVE
 FORT MYERS, FL. 33919
 ENGINEERS - PLANNERS - SURVEYORS
 CERTIFICATE OF AUTHORIZATION NO.1772

DESIGNED BY:	KLP	DATE:	06/21/2019
DRAWN BY:	KLP	DATE:	06/21/2019
CHECKED BY:	JC	DATE:	06/21/2019
VERTICAL SCALE:		HORIZONTAL SCALE:	1" = 250'

BONITA GRANDE MPD

NUMBER	REVISIONS	DATE

MAXIMUM COMMERCIAL FLOOR AREA: 350,000 SQUARE FEET
 THE TOTAL COMMERCIAL SQUARE FOOTAGE OF THE SITE IS 350,000 SQUARE FEET; THIS INCLUDES BOTH OFFICE AND RETAIL. THE MAXIMUM RETAIL SQUARE FOOTAGE IS 350,000 SQUARE FEET; THE MAXIMUM OFFICE SQUARE FOOTAGE IS 350,000 SQUARE FEET IF WHICH A MAXIMUM OF 22,500 SQUARE FEET CAN BE MEDICAL OFFICE.

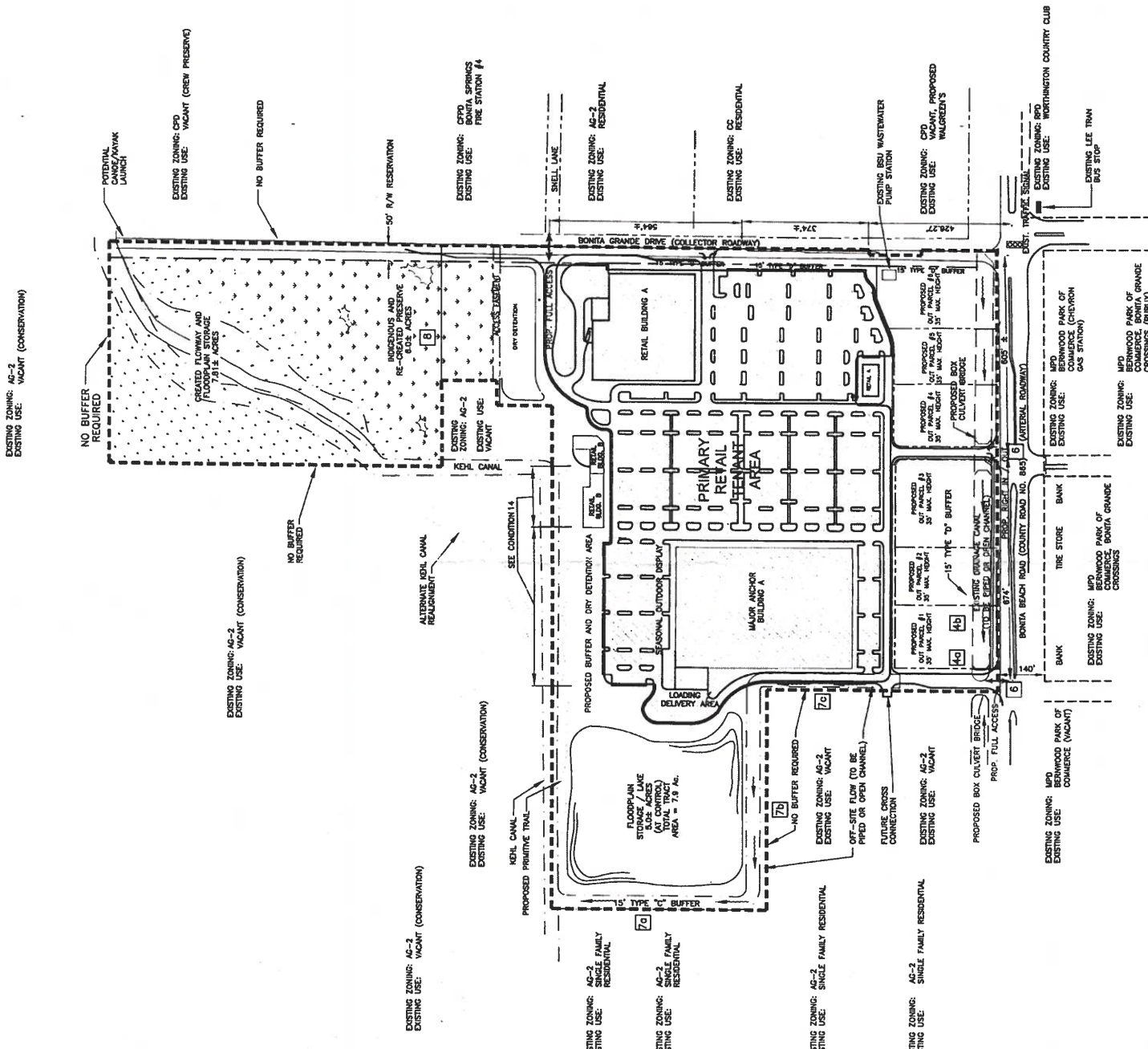
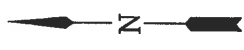
SITE SUMMARY

GROSS PROPERTY AREA	=	67.53± ACRES
R/W RESERVATION	=	2.92± ACRES
COMMERCIAL	=	42.18± ACRES
LAKE TRACT	=	8.00± ACRES
OPENSOURCE REQUIRED	=	13± ACRES
OPENSOURCE PROVIDED	=	18.7± ACRES
INDIGENOUS	=	6.5± ACRES
INDIGENOUS (SEE NOTE 1)	=	5.7± ACRES
RECREATED	=	1.4± ACRES
RECREATED PROVIDED	=	6.5± ACRES

TOTAL ACREAGE 67.53± ACRES

NOTE:

- 150% CREDIT FOR EACH 3 CONTIGUOUS PRESERVE ACRES (3.58 ACRES X 150% = 5.07± ACRES).
- NO KNOWN ARCHEOLOGICAL SITES ON THE PROPERTY ACCORDING TO HISTORICAL AND ARCHEOLOGICAL REPORT FOR LEE COUNTY.
- LEE TRAN ROUTE 150 HAS A DEDICATED STOP LOCATED AT THE PUBLIC SHOPPING CENTER AT BONITA GRANDE AND BONITA BEACH ROAD. THE DEVELOPER WILL COORDINATE WITH LEE TRAN IN THE EVENT A TRANSIT STOP IS DESIRED TO SERVE THIS CPD.
- OFFSITE FLOWS CONVEYED THROUGH THE PROJECT WILL NOT BE MIXED WITH THE INTERNAL SITE STORMWATER MANAGEMENT SYSTEM.
- SEASONAL PRODUCT SALES MAY NOT OCCUPY REQUIRED PARKING SPACES.
- LOADING / DELIVERY AREAS ARE GENERALLY LOCATED TO THE REAR OR SIDE OF EACH OUTPARCEL BUILDING.



APPROVED
 Master Concept Plan
 Site Plan # ZD-08-003 Page A of 2
 Subject to conditions in Ordinance ZD-08-003
 Case # DC12003-00023
 CITY OF BONITA SPRINGS



COMMUNITY DEVELOPMENT

GRADY MINOR AND ASSOCIATES, P.A.
 CIVIL ENGINEERS & LAND SURVEYORS & PLANNERS
 3800 VIA DEL REY
 BONITA SPRINGS, FLORIDA 34134
 PHONE: (239) 847-1144 FAX: (239) 847-0976
 PROFESSIONAL CERTIFICATE OF AUTHORIZATION NO. 000181
 DISTRICT OF AUTHORIZATION IS 000001

DESIGNED BY: S/JU
 DRAWN BY: S/JU
 APPROVED: DWA
 JOB CODE: RCPDPM
 SCALE: 1" = 200'

Revision	Date	Description
6	1/3/08	REVISE SITE PLAN PER COUNCIL HEARING
5	12/7/07	REVISE NEW SITE PLAN
4	11/8/07	NEW SITE PLAN
3	9/29/07	COUNTY COMMENTS
2	8/30/05	COUNTY COMMENTS
1	3/17/05	COUNTY COMMENTS

OWNER
 THE ROBERTS GROUP, INC.
 3180 MATHIESON DRIVE NE
 SUITE 902
 ATLANTA, GA 30305

LEGEND

- [Symbol] = INDIGENOUS PRESERVE AREA
- [Symbol] = FLOWWAY AND FLOOD PLAN STORAGE
- [Symbol] = OFFSITE FLOWS TO BE CONVEYED THROUGH THE PROJECT

ROBERT'S GROUP CPD
 EXHIBIT IV-E / IV-F
 MASTER CONCEPT PLAN "B"
 DATE: AUGUST 2004
 FILE NAME: RCPD MCR(1-1-08)
 DRAWING NUMBER: 4 of 6



950 Encore Way • Naples, Florida 33919 • Phone 239.254-2000 • Fax: 239.254-2099

July 1, 2020

Jacqueline Genson, Planning and Zoning Manager
City of Bonita Springs – Dept. of Community Development
9101 Bonita Beach Road
Bonita Springs, FL 34135

RECEIVED
CITY OF BONITA SPRINGS
JUL 01 2020
COMMUNITY DEVELOPMENT
DEPARTMENT

**Re: Bonita Grande Drive Mixed Use Planned Development (MPD)
PD19-62429-BOS
HM File No. 2019.013**

Dear Ms. Genson:

Attached please find our Summary of the Neighborhood Information Meeting held on June 29, 2020 along with a copy of the PowerPoint presentation.

If you have any questions, please don't hesitate to contact us.

Very truly yours,

HOLE MONTES, INC.

Robert J. Mulhere, FAICP
President
RJM/sek

Enclosures as noted.

**NIM Summary
Bonita Grande MPD
June 29, 2020, 5:30 p.m.
Bonita Springs Fire Control & Rescue District, Station 4, Conference Room
27701 Bonita Grande Drive, Bonita Springs, FL 34135**

Attendees:

Applicants:

Andrew Zuckerman, Zuckerman Homes
Ryan Zuckerman, Zuckerman Homes
Steven Zuckerman, Zuckerman Homes

On Behalf of the Applicant:

Robert J. Mulhere, FAICP, Hole Montes, Inc.
Paula McMichael, AICP, Hole Montes, Inc.
Emilio Robau, P.E., Robau & Associates
Matthew DeFrancesco, P.E., Robau & Associates
Norman Trebilcock, AICP, P.E., Trebilcock Consulting Solutions, PA
Francesca Passidomo, Esq., Coleman Yovanovich Koester

Approximately 25 members of the public and Councilman Fred Forbes attended.

Mr. Mulhere started the presentation by introducing the applicants and consultants. Mr. Mulhere then provided an overview of the project and explained the process for approval of the MPD rezoning request. Mr. Robau provided an overview of the design of the stormwater management system. Mr. Robau then went into detail about the benefits that the stormwater management will have on water quality treatment and floodplain management. Mr. Trebilcock explained how traffic impacts are calculated, provided the trip generation for the project, and provided an overview of the proposed access points for the project.

Following the presentation there was approximately thirty minutes of questions from the public in attendance. Please see below for a summary of public comments.

Summary of Public Comments

Stormwater Management

Questions were asked regarding the stormwater management system, as the site and surrounding area has had issues with flooding in the past. The site will be designed to retain onsite water, as well as some offsite flows from the northwest corner of Bonita Beach Road and Bonita Grande Road. The lakes will also be designed to assist with flood plain management and support the Kehl Canal and the Imperial River via increased water quality treatment. The project is currently under review by the South Florida Water Management District. The project will also meet all applicable FEMA requirements.

Traffic Concerns

Questions were asked regarding the projects trip generation, access points, and potential improvements to Bonita Grande Drive. The trip cap from the existing zoning of the property (ZO-08-09) will be retained, so there will be no increase to the previously approved level of traffic. The MCP proposes two access points via Bonita Beach Road and three via Bonita Grande Drive. There is a 50-foot right-of-way reservation along the eastern perimeter boundary for future improvements to Bonita Grande Drive. The applicant will be

responsible for turn lanes needed to access the project. Lee County will be responsible for the widening of Bonita Grande Drive, when necessary.

General/Misc.

Questions were asked about the pricing of the units, and if the units would be rentals or condominiums. It is too early to know the type and cost of the proposed residential units.



Bonita Grande MPD

PD19-62429-BOS

Mixed Use Planned Development

June 29, 2020

Bonita Grande MPD Project Team

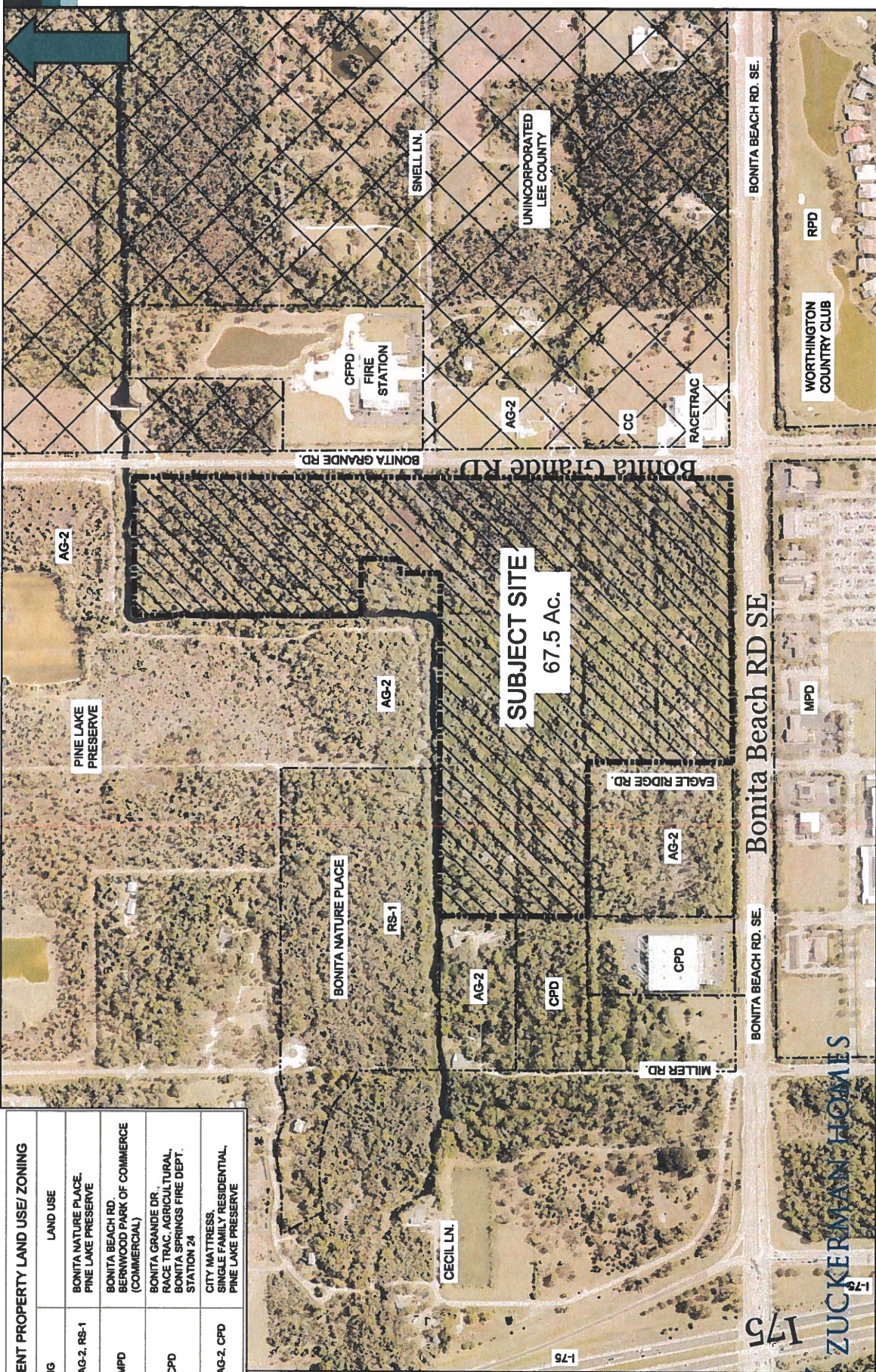
DEVELOPER	ZUCKERMAN HOMES	
PLANNING	ROBERT MULHERE, FAICP Hole Montes, Inc.	PAULA MCMICHAEL, AICP Hole Montes, Inc.
LAND USE COUNSEL	RICHARD YOVANOVICH Coleman Yovanovich Koester	FRANCESCA PASSIDOMO Coleman Yovanovich Koester
ENGINEERING	EMILIO ROBAU, PE Robau & Associates	MATTHEW DEFRANCESCO, PE Robau & Associates
TRANSPORTATION	NORM TREBILCOCK, AICP, PE Trebilcock & Associates	
ECOLOGY	ANDREW WOODRUFF Passarella & Associates	

CONSULTANT TEAM



Planning Considerations

- Bob Mulhere, FAICP



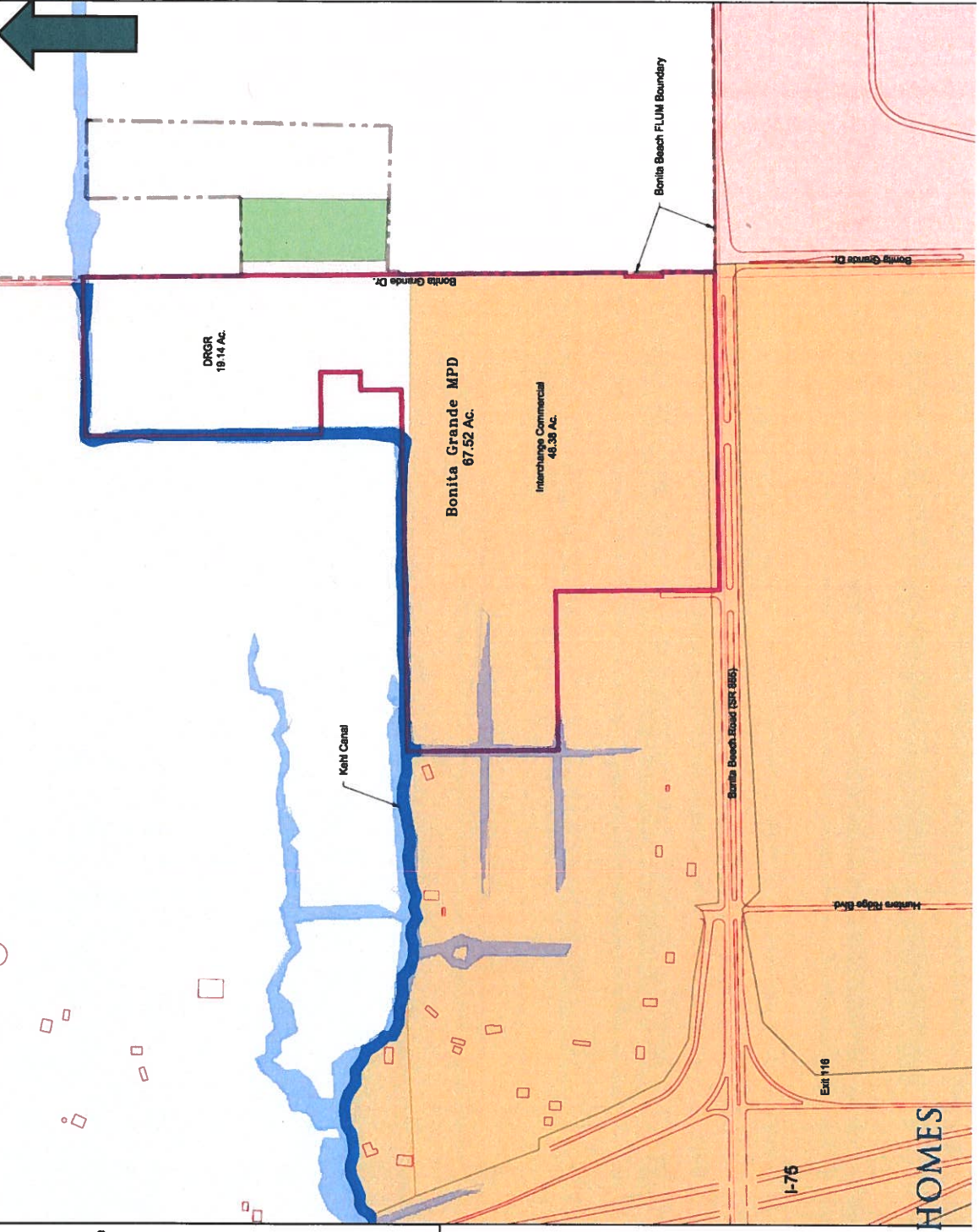
ADJACENT PROPERTY LAND USE/ ZONING	
ZONING	LAND USE
NORTH AG-2, RS-1	BONITA NATURE PLACE, PINE LAKE PRESERVE
SOUTH MPD	BONITA BEACH RD BERNWOOD PARK OF COMMERCE (COMMERCIAL)
EAST CPD	BONITA GRANDE DR, RACE TRAC, AGRICULTURAL, BONITA SPRINGS FIRE DEPT. STATION 24
WEST AG-2, CPD	CITY MATTRESS, SINGLE FAMILY RESIDENTIAL, PINE LAKE PRESERVE



Existing Zoning

- The property is currently zoned Commercial Planned Development (CPD - Eagle Trust or Roberts Group; ZO-08-09).
- Approved for 350,000 square feet of commercial floor area, of which up to 45,000 square feet may be office development.
- Originally anticipated a Walmart and outparcels.
- All subject to a trip cap of 1,260 PM peak hour trips.

Future Land Use Map



LEGEND

- Project Boundary
- Bonita Springs FLUM Boundary Line
- DRGR
- Interchange Commercial
- Kehti Canal
- Resource Protection
- Mod. Density MU / PD
- CHAA - Coastal FLUE

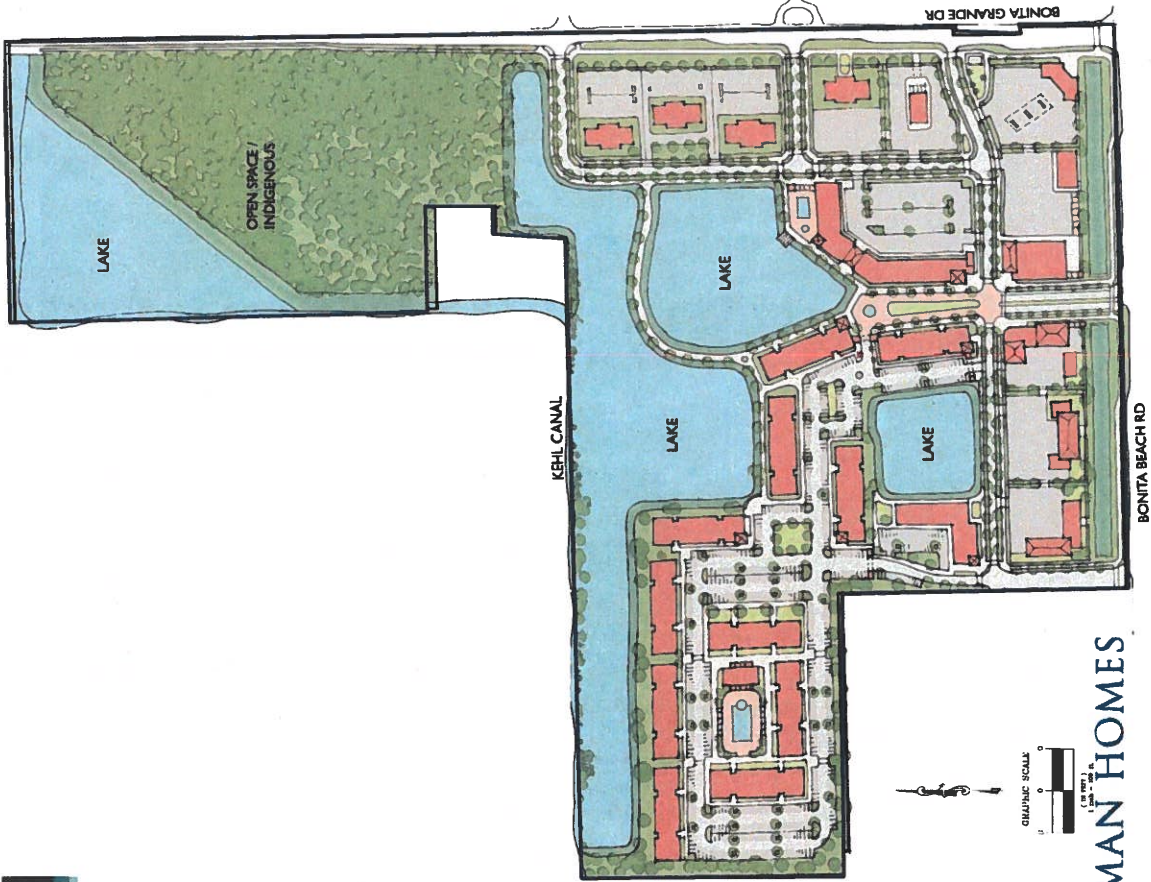


Request

- Converts single-use commercial zoning to allow for a mix of uses more consistent with the vision for the Bonita Beach Road Overlay.
- Creates a walkable, bikeable, vibrant, and aesthetically-pleasing streetscape.
- Provides significant water quality benefits to the Imperial River basin.
- Connects to future development to the west to reduce traffic on Bonita Beach Road between Bonita Grande and I-75.

Request

- A request to rezone 67.5 +/- acres from Commercial Planned Development (CPD) to a Mixed-use Planned Development (MPD) to allow for:
 - a maximum of 482 multi-family dwelling units (inclusive of an Assisted Living Facility) and a 165-room hotel at a maximum building height of 65 feet/6 habitable floors; and
 - up to 315,000 square feet of commercial/retail at a maximum building height of 55 feet/5 habitable floors.
- All subject to a trip cap of 1,165 PM peak hour trips (95 fewer trips than current approval).



LEGEND

- MIXED-USE
- Retail
- Restaurant
- Commercial
- Office
- Hotel
- Multi-family
- ALF
- Townhomes

JULY 17, 2019
 REVISED NOV 4, 2019
 REV.#3 MAY 26, 2020

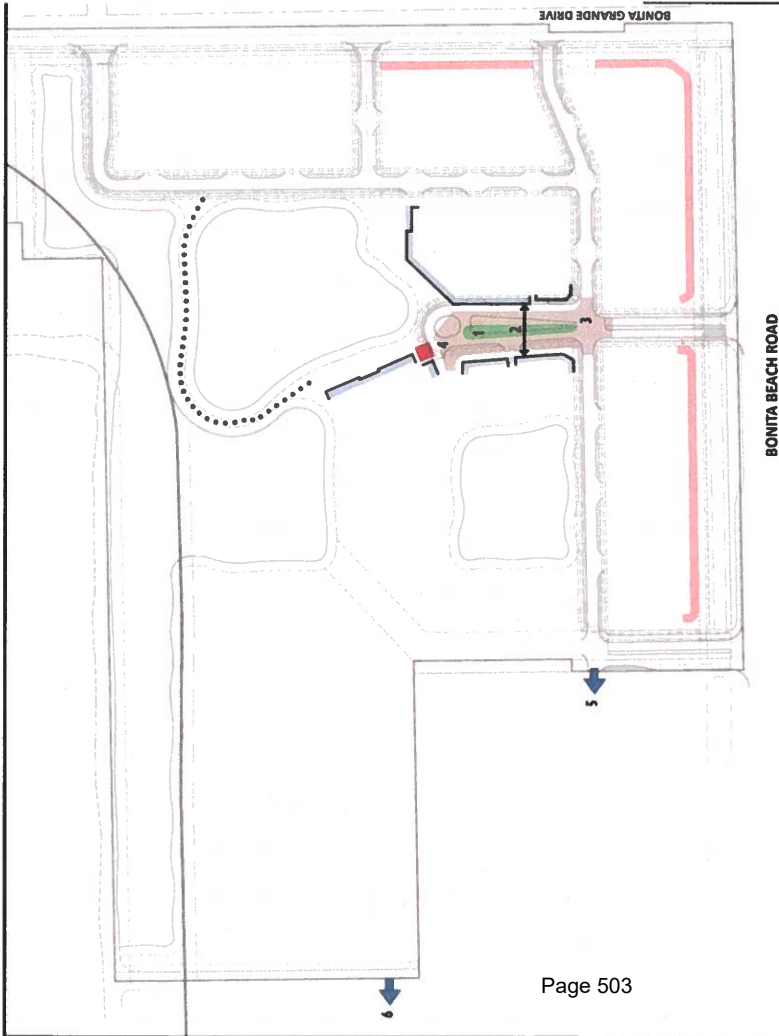
MIDTOWN AT BONITA MIXED-USE COMMUNITY

PRELIMINARY ILLUSTRATIVE MASTER PLAN



ANNOTATIONS (refer to #'s on Plan Diagram)

1. A **linear green** runs north/south from the first intersection to the lake. The open space is defined by buildings on both sides with parking behind the buildings. The central green-space should be simply designed as a flat plane, with grass and/or ground cover, and pavers. Trees and excessive landscaping should be avoided as they inhibit its use of the open space and obstruct views of the water (trees occur on the sidewalk side of the street). The space may be used as a quiet passive space, or be programmed at certain times to accommodate markets, music, etc.
2. To maintain a sense of enclosure in the linear green, the **building-to-building dimension** should not exceed **130ft** (2 times the allowable building height).
3. **Traffic calming** achieved by using an alternative paving material for the public space to signify its importance and signal cars to slow down. The sidewalk can be raised or flush with the street and separated by planters and bollards.
4. A vertical "tower" element to terminate the street view and frame the view of the lake. The vertical element may be free-standing or incorporated into the corner of the building.
5. Future street connection to western parcels.
6. Gated egress only



LEGEND

- A-FRONTAGE
- BONITA BEACH ROAD (BBR) FRONTAGE
- GREEN
- PLAZA
- FEATURED ARCHITECTURAL ELEMENT
- FUTURE STREET CONNECTION

NOTE: REFER TO MCP PLAN FOR SIDEWALKS

ZUCKERMAN HOMES

FRONTAGES

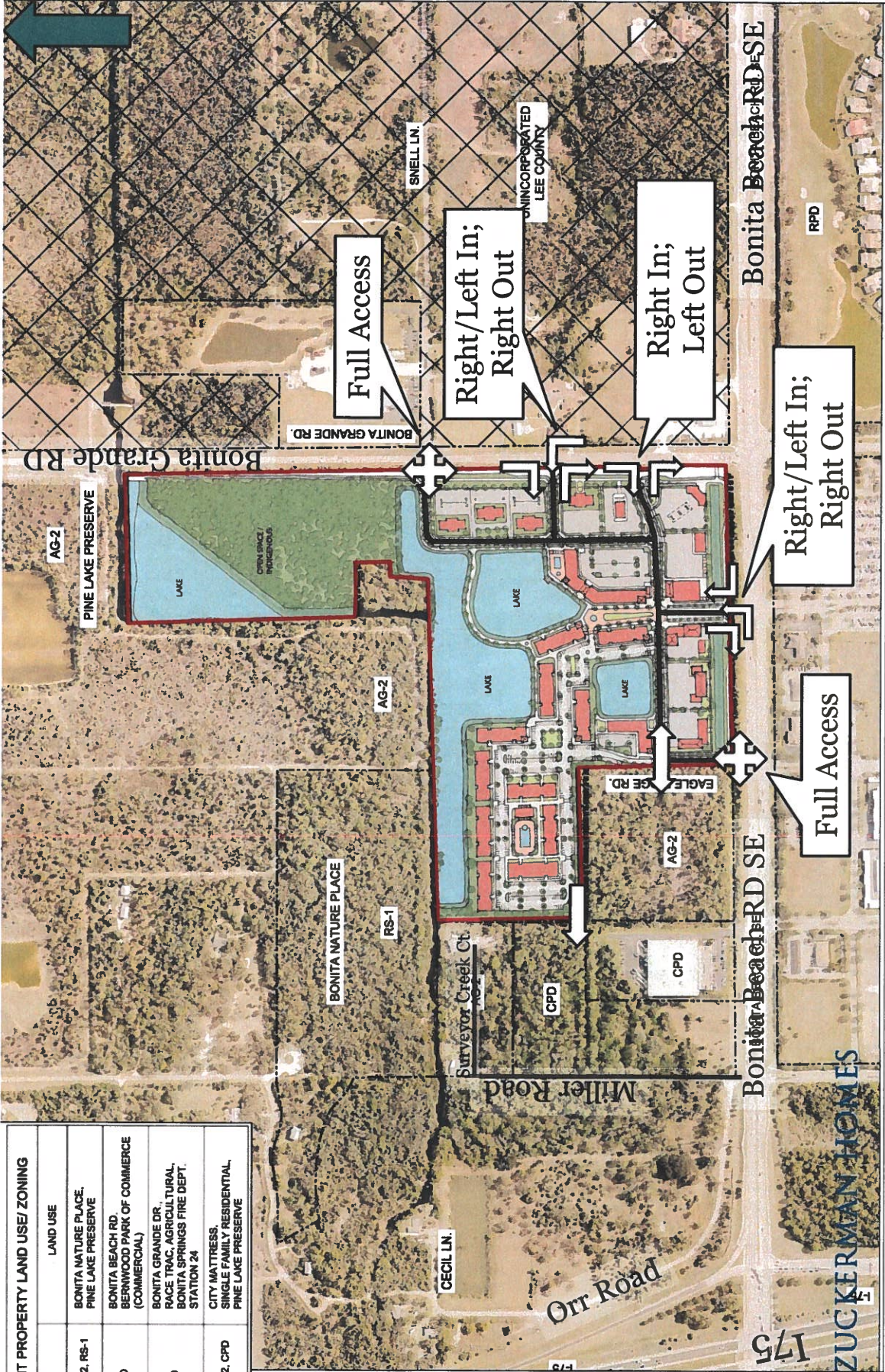
A-FRONTAGE:

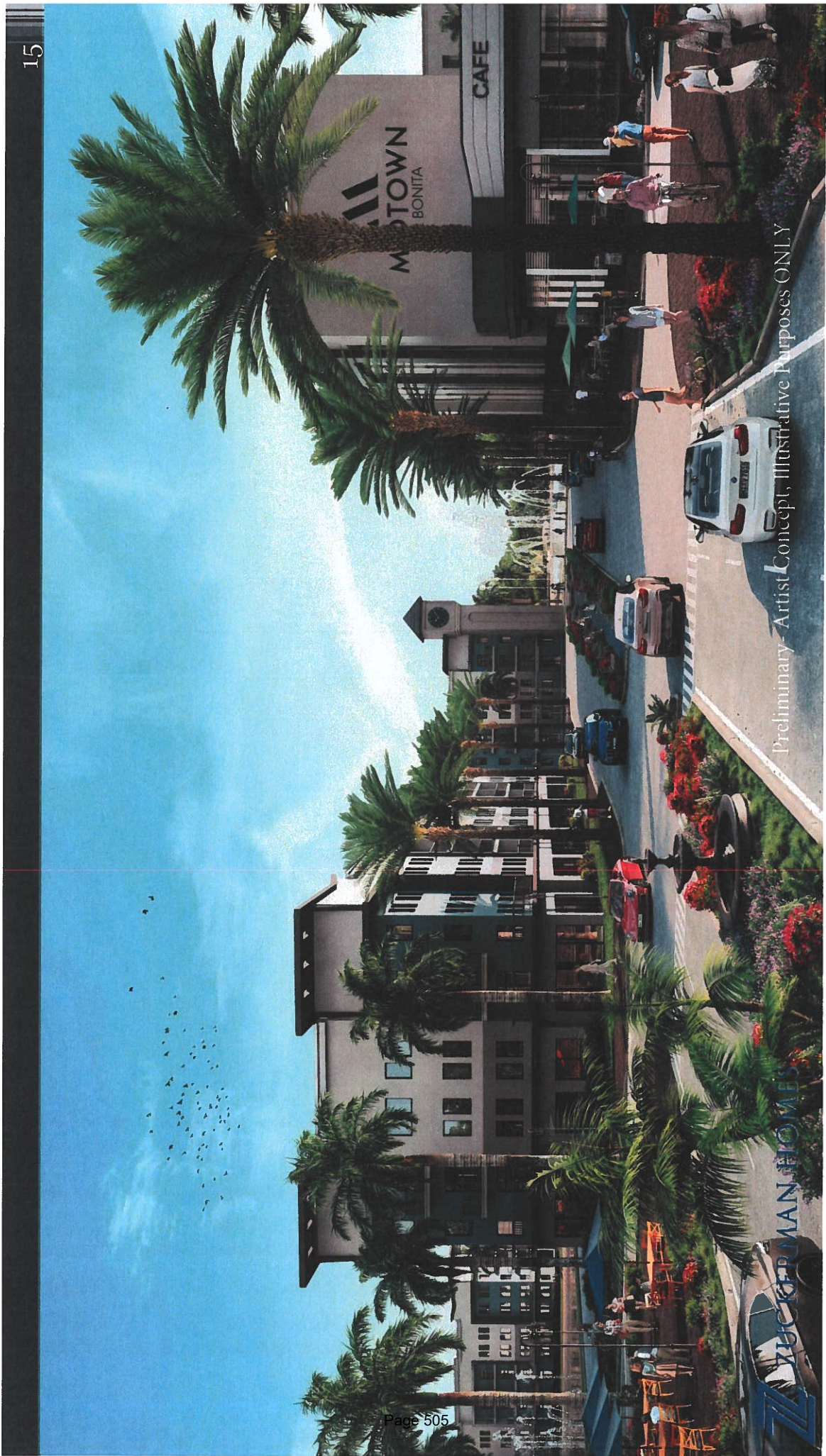
The A Frontage is the most critical frontage that combines an A-grade facade design with an attractive streetscape including generous sidewalks, shade trees, seating, and thoughtful landscaping. Parking along this frontage is limited to on-street parking, ideally in the form of parallel parking. Off-street surface parking lots are to be located behind the buildings. Buildings are generally located close to the sidewalk, except where notched to accommodate entries and outdoor dining. The frontage may be composed of multiple buildings with gaps between buildings not to exceed 20% of the frontage. The sidewalk extends to the building storefronts where there is retail/commercial use. Residential uses on this frontage may have a shallow landscape area between the sidewalk and the building, which should not exceed ten feet in depth.

BONITA BEACH ROAD FRONTAGE:

The Bonita Beach Road (BBR) Frontage is intended to provide an attractive frontage along the major arterial with the understanding that the context favors automobile dependent uses. Buildings should be located as close as possible to the street. Parking is to be located along the sides and behind the buildings. Parking spaces are not permitted between the building and BBR (or Bonita Grande Drive where applicable), but drive lanes are permitted. Outdoor dining areas are encouraged on the front and sides of the building.

ADJACENT PROPERTY LAND USE/ ZONING	
ZONING	LAND USE
NORTH	AG-2, RS-1 BONITA NATURE PLACE, PINE LAKE PRESERVE
SOUTH	MPD BONITA BEACH RD. BERNWOOD PARK OF COMMERCE (COMMERCIAL)
EAST	CPD BONITA GRANDE DR. FACE TRAC, AGRICULTURAL, BONITA SPRINGS FIRE DEPT. STATION 24
WEST	AG-2, CPD CITY MATTRESS, SINGLE FAMILY RESIDENTIAL, PINE LAKE PRESERVE





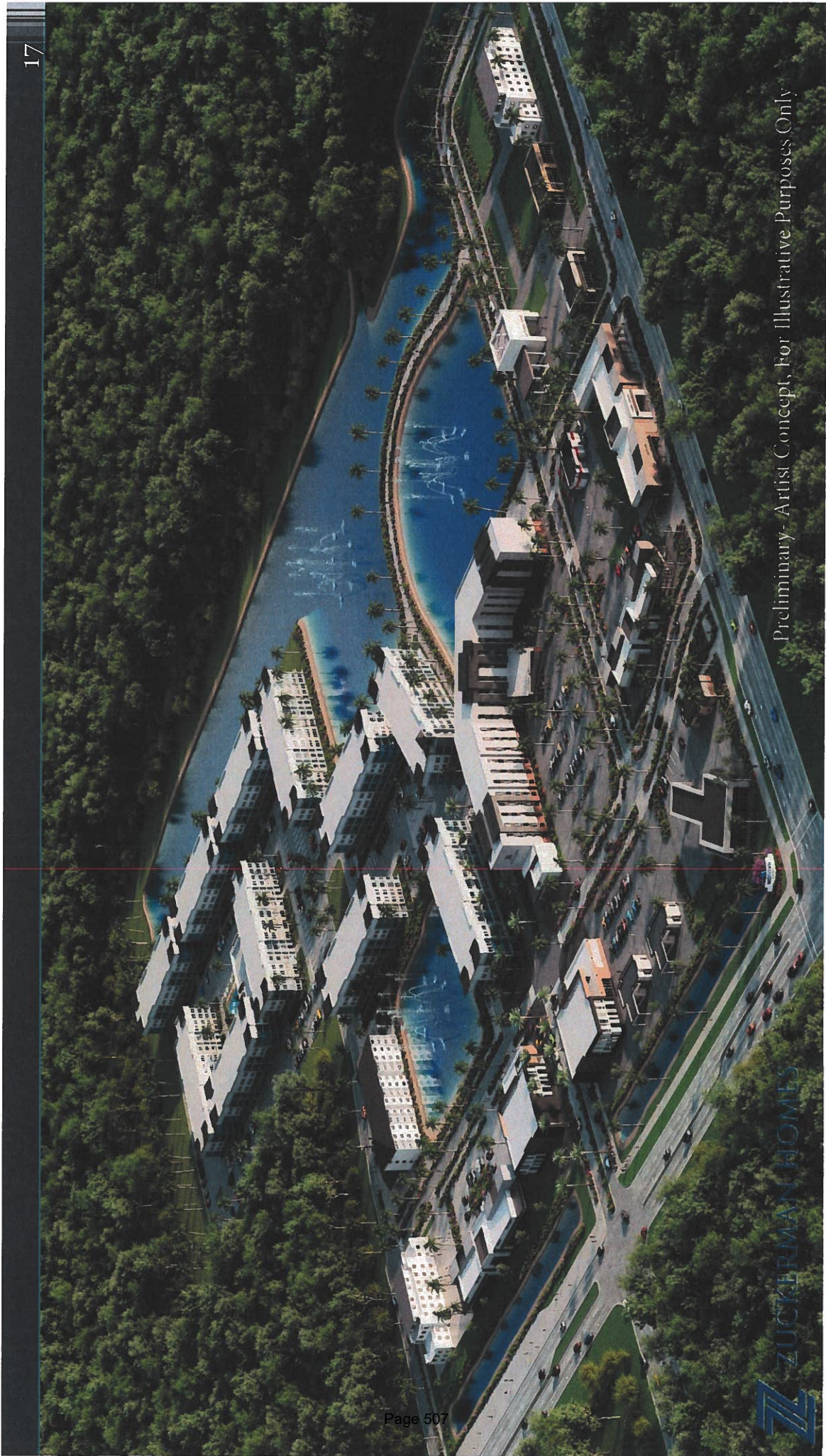
Preliminary - Artist Concept, Illustrative Purposes ONLY

TRUCKERMAN HOMES



Preliminary- Artist Concept, Illustrative Purposes ONLY

 ZUCKERMAN HOMES



Preliminary - Artist Concept, For Illustrative Purposes Only

Stormwater & Floodplain Management

- Emilio Robau, PE
- Matthew Defrancesco, PE

Stormwater & Floodplain Management Public Benefits Integrated Into Development Design

- Only 37.15 acres of the 67.5 acre site is developed as mixed use land uses. The balance is used to provide native vegetation retention, mitigation for water resource impacts, and public benefit design elements as follows.
- Development of site limits discharge to off site lands from 4,200 gallons per minute (a third of a standard 15ft x 30ft pool's volume per minute) to 1,500 gallons per minute. A reduction of 64% is achieved through internal on site storage and site development.
- Site design provides for excess, above minimum standard flood plain compensation with no adverse impacts to the flood plain. The excess compensation provided is approximately four million gallons, or approximately nine acre-feet in engineering terms.
- Excess water quality treatment is integrated into the site design and specifically focused on providing water quality treatment for off site lands discharging into the Imperial River and the Kehl Canal.
- From 4,725 to 6,905 kg/year, or 5.2 to 7.6 tons/year, year after year, of total nitrogen removed utilizing flood plain compensation and water quality treatment lakes placed strategically to treat off site storm water flows.
- From 2,500 to 2,710 kg/year, or 2.8 to 3 tons/year, year after year, of total phosphorus removed utilizing flood plain compensation and water quality treatment lakes placed strategically to treat off site stormwater flows.
- The Kehl Canal will be reshaped in general accordance with conceptual projects outlined in the South Lee County Study, which are currently unfunded. This development will reshape the Kehl Canal banks and as a result reduce the cost of the future project construction.
- Off site flows from the northwest corner of Bonita Beach Road and Bonita Grande Road will be accepted through the project and transmitted to the Kehl Canal, and as a result will maintain drainage continuity for developments south of Bonita Beach Road and east of Bonita Grande Road without introducing additional backflow to those communities from the Kehl Canal.




ZUCKERMAN HOMES



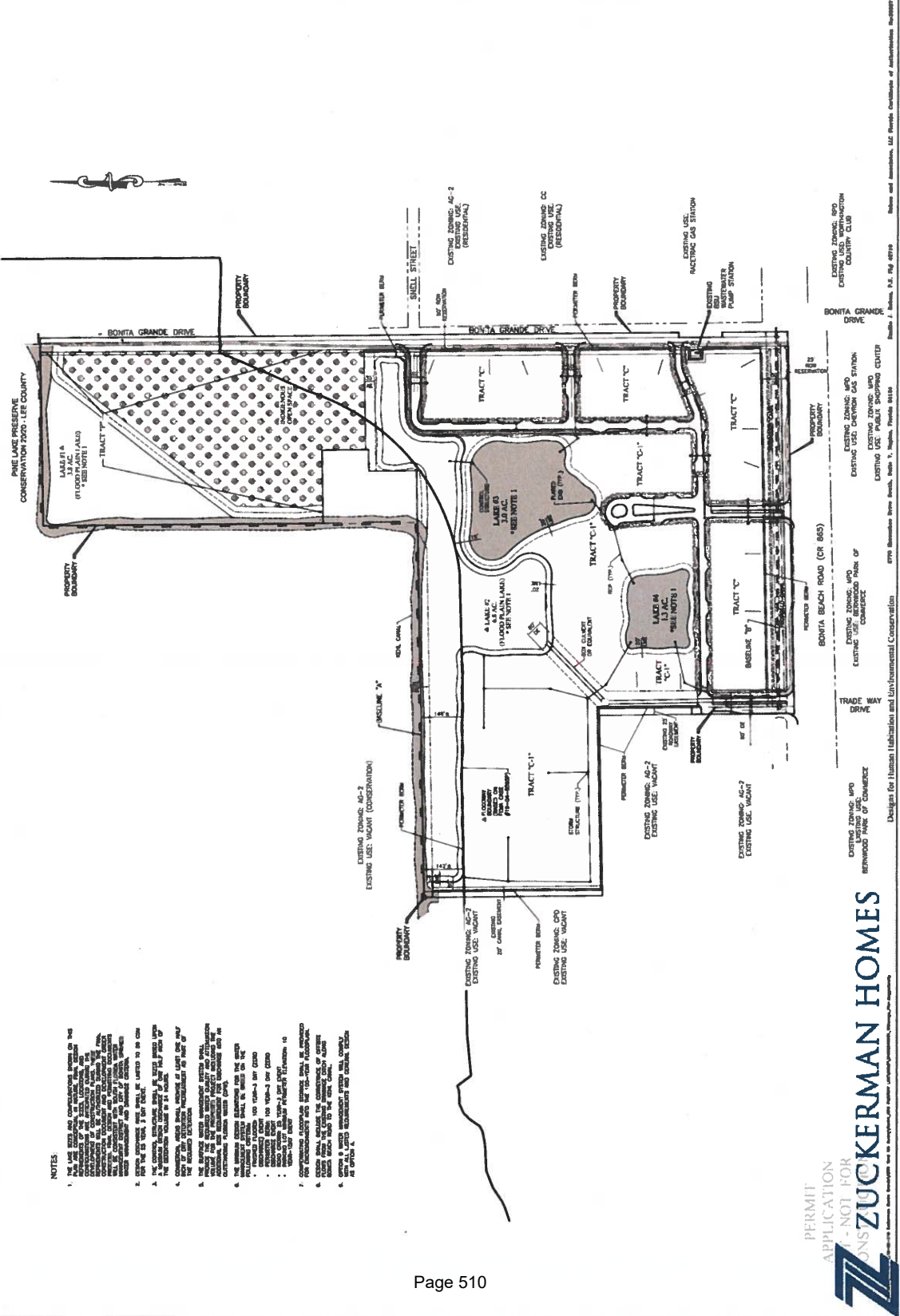
ROBAU & ASSOCIATES

Surface Water Management Plan

ROBAU & ASSOCIATES

 REGISTERED PROFESSIONAL ENGINEERS
 10000 W. BROADWAY, SUITE 100, DENVER, CO 80231
 TEL: 303.751.1100 FAX: 303.751.1101
 WWW.ROBAU.COM

LYNX ZUCKERMAN
 BONITA GRANDE, LLC
 MDTOWN AT BONITA
 CONCEPTUAL WATER
 MANAGEMENT PLAN

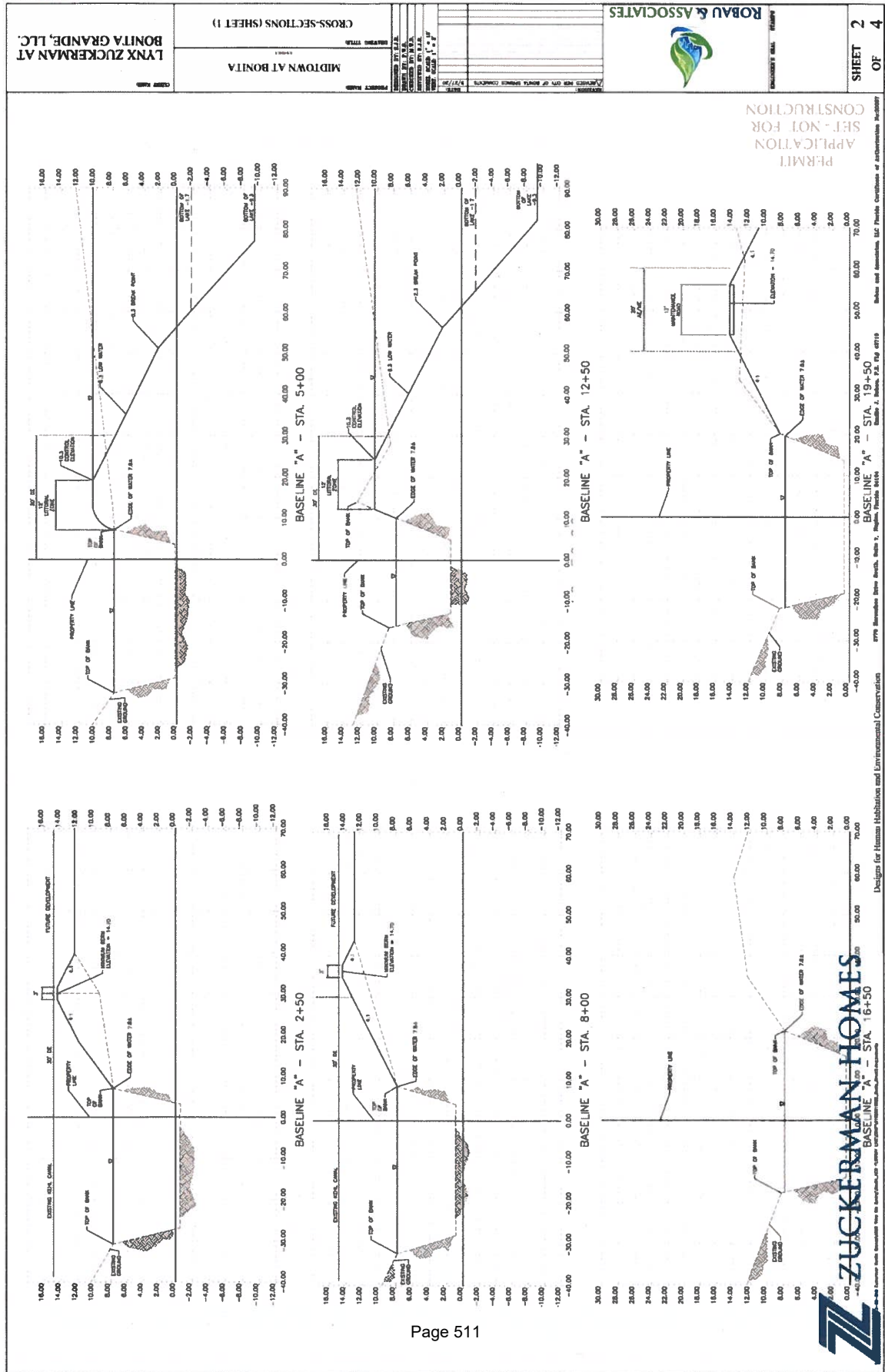
SHEET 1
OF 4



PERMIT
 APPLICATION
 FOR
LYNX ZUCKERMAN HOMES

DESIGNER FOR HUMAN HABITATION AND ENVIRONMENTAL CONSERVATION
 6750 Bonita Beach Drive South, Suite 100, Naples, Florida 34108
 813.973.8888
 6750 Bonita Beach Drive South, Suite 100, Naples, Florida 34108
 813.973.8888

Surface Water Management Plan



Transportation Analysis

- Norm Trebilcock, AICP, PE

Traffic Study

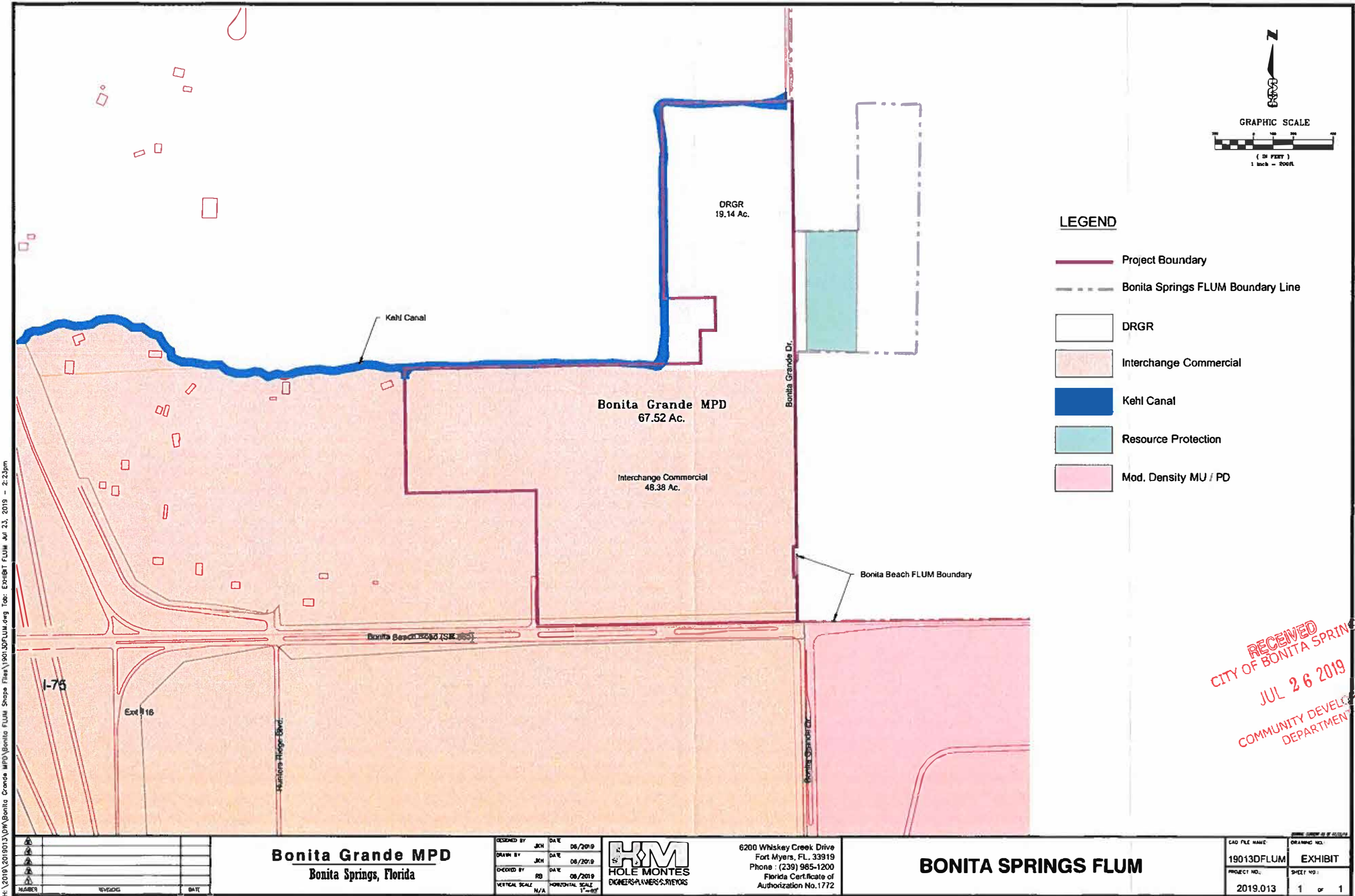
- There is adequate and sufficient roadway capacity on all analyzed roadway links to accommodate the proposed development at 2024 build-out conditions.
- The maximum total daily trip generation for the proposed MPD development shall not exceed 1,165 two-way PM peak hour net external trips based on the land use codes in the ITE Trip Generation Manual in effect at the time of future development order applications.

Trip Generation

- Trip generation for this project is based on the following uses and intensities:
 - 482 multi-family dwelling units
 - 165 occupied hotel rooms
 - 315,000 square feet shopping center
- The project's site trip generation is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition.
- Reductions in the trip generation were applied to account for internal trip capture consistent with methods contained in the *ITE Trip Generation Report*.

Questions?





RECEIVED
CITY OF BONITA SPRINGS
JUL 26 2019
COMMUNITY DEVELOPMENT
DEPARTMENT

Bonita Grande MPD
Bonita Springs, Florida

DESIGNED BY	JHM	DATE	06/20/19
DRAWN BY	JHM	DATE	06/20/19
CHECKED BY	RB	DATE	06/20/19
VERTICAL SCALE	N/A	HORIZONTAL SCALE	1"=80'



6200 Whiskey Creek Drive
Fort Myers, FL 33919
Phone: (239) 985-1200
Florida Certificate of
Authorization No. 1772

BONITA SPRINGS FLUM

CAD FILE NAME	19013DFLUM	DRAWING NO.	EXHIBIT
PROJECT NO.	2019.013	SHEET NO.	1 of 1

