PA2022-00012



November 14, 2023

Via e-Permitting

7400 Trail Blvd., Suite 200 Naples, FL 34108 PH: (239) 597-3111 www.ABBINC.com



Lee County Community Development 1500 Monroe Street Fort Myers, FL 33901 COMMUNITY DEVELOPMENT

Re: Small Brothers Corkscrew Commercial Utility CPA Comprehensive Plan Amendments CPA2022-00012 / CPA2022-00013- Submittal 2

Dear Intake:

This letter is in response to the County's comments dated November 18, 2022, to the initial application for the Comprehensive Plan Text and Map Amendments listed above. The applicant is withdrawing the Text amendment CPA2022-00013 and is only pursuing CPA2022-00012 Map 4B Amendment. Since the Applicant is currently unsure of the future development plan, the previous assessments are considered examples of the potential impacts of future development and are not specifically being requested.

Responses to each comment are provided below in *bold* and *blue italic* print. The following items are included in this submittal:

- This Response Letter
- Certified Survey and Legal Description
- Revised Map Amendment Application
- Revised Exhibit M11 Lee Plan Analysis
- Revised Exhibit M19 Justification of Map Amendment
- Revised Water Resource Report dated November 2023

APPLICATION MATERIALS COMMENTS

 Please submit a certified legal description(s) and certified sketch of the description for the property subject to the requested change. A metes and bounds legal description must be submitted specifically describing the entire perimeter boundary of the property with accurate bearings and distances for every line. The sketch must be tied to the state plane coordinate system for the Florida West Zone (North America Datum of 1983/1990 Adjustment) with two coordinates, one coordinate being the point of beginning and the other an opposing corner.

Response: A certified Survey and Legal Description is enclosed.

2. The applicant has indicated that 0 dwelling units would be allowed on the property both currently and after the proposed amendments. Please update this calculation to reflect that 1 dwelling unit is possible both before and after the proposed amendments.

Response: The enclosed revised application has been updated on page 1 of 5 to reflect 1 dwelling unit is possible both before and after the amendments.

3. It has been noted that the proposed language no longer contains the 10,000 SF of commercial development per upland acre maximum. How was worst case scenario determined by the applicant? Based on staff analysis, worst case scenario development should be based on roughly 121,400 SF of commercial usage as the revised language would allow for development on wetlands as well. If the worst case scenario is determined to be 121,400 SF, a new TIS will be required.

Response: This comment refers to the Text amendment which is being withdrawn. Therefore, there are no revisions necessary.

LEE PLAN CONSISTENCY

4. Please address the Lee Plan policies proposed in the Lee Plan Analysis section of the application. It is suggested that prior to revising the analysis, a meeting is scheduled with Planning Staff to review changes to the proposed amendments from what was previously transmitted by the Board of County Commissioners.

Response: The applicant has met with the Planning Staff to review the application documents. It was determined that no additional analyses are required for the revised application. However, a Lee Plan Analysis for the Map Amendment only and revised Justification for the Map Amendment only are provided with this submittal.

5. The proposed amendments would create an inconsistency with Policy 6.1.2. Does the applicant wish to propose a change to Policy 6.1.2?

Response: Policy 6.1.2 would have applied to the text amendment that included commercial development. Since the Text amendment is being withdrawn, the inconsistency is no longer relevant.

6. Please update Lee Plan analysis to be based on the most recent Lee Plan as updated through Ordinance 22-25. As an example, Objective 33.3 in your analysis is now Objective 33.2.

Response: Objective 33.2 relates to the Text amendment that is being withdrawn. Therefore, this correction is no longer necessary.

ENVIRONMENTAL REVIEW

7. Please provide an integrated surface and groundwater model as required per Policies 33.1.7 to assess potential adverse impacts on water resources and natural systems within Southeast Lee County. The integrated surface and groundwater model files were not submitted. Please provide the model files to Lee County Division of Natural Resources.

Response: Model files are being submitted with the revised Water Resources Report dated November 2023.

8. Please expand on the analysis of Lee Plan policy 1.4.5. The policy requires maintaining surface and groundwater levels at their historic levels utilizing hydrologic modeling, the incorporation of increased storage capacity, and inclusion of green infrastructure. The modeling must also show that no adverse impacts will result to properties located upstream, downstream, as well as adjacent to the site.

Page 2 of 5

Response: The evaluation of the proposed project's compliance with Policy 1.4.5 of the Lee Plan demonstrates that it intends to maintain the balance of the Density Reduction/Groundwater Resource area. The policy ensures that any new land use initiative preserves historic surface and groundwater levels, incorporates sustainable practices, and mitigates potential negative impacts on the surrounding environment. The project proposes to abide by the intent of Policy 1.4.5 to maintain groundwater and surface water at their historical levels by relying on a potable water supply from the Lee County Utilities to eliminate the need for domestic self-supply wells, and through the provision of a central sewer system with sewerage services provided by Lee County Utilities to eliminate septic tank discharges.

For the purpose of irrigation, the project proposes the construction of one irrigation well, which will withdraw 20,000 gallons per day (gpd) from the Mid-Hawthorn Aquifer. To determine the impact to any adjacent public supply wells adjacent to the project, the numerical modeling software known as AquiferWin32 developed by Environmental Solutions, Inc. was used in this modeling effort. The analytic model created was used to quantify the potential impact of withdrawing 20,000 gpd from the Mid-Hawthorn aquifer. The modeling scenario has no recharge and a pumping rate of 20,000 gpd.

The AquiferWin32 model simulated a single layer representing the Mid-Hawthorn Aquifer in the vicinity of the proposed site. Model parameters were determined using the Aquifer Performance Test data from Well LM-68111 located 0.2 miles northeast of the project site.

The model results indicate that, in the assumed scenario, there would be no impact on the adjacent public supply wells which withdraw from the Water Table and Sandstone Aquifers with the project well withdrawing from the Mid-Hawthorn Aquifer. Analysis of the model shows a drawdown of 1-foot approximately 200 feet away from the Project boundary in the Mid-Hawthorn. It is important to note that that this drawdown is under conservative conditions (i.e., no recharge); however, drawdown can be anticipated to be much less than 1 foot, as horizontal flow within the aquifer from inland areas would contribute recharge and reduce the extent of the drawdown. As a result, this use is not expected to impact historical surface water or groundwater within the area nor affect any adjacent public supply wells. Using this information, the development the Corkscrew development adheres to Lee Policy 1.4.5.

9. Please provide the groundwater model results including water level contours resulting from a maximum water withdrawal for 90 days with no recharge. Please detail which well and what qualifying dry season water level was used for the model. It is understood the applicant is proposing to utilize stormwater lakes as a primary irrigation source. What water source will be used to resupply the stormwater lakes in the event of a drought? How will the proposed resupply source impact the adjacent public supply wells?

Response: Figure 1 below shows the maximum extent of drawdown resulting from a maximum withdrawal of 20,000 gpd from the Mid-Hawthorn Aquifer. This will be used as the primary source of irrigation for the project and will be permitted in accordance with South Florida Water Management District rules. The adjacent public supply wells, which withdraw from the Water Table and Sandstone Aquifers, are not anticipated to be impacted by the withdrawals of this project in the Mid-Hawthorn Aquifer. Stormwater lakes are no longer proposed for the project.



Figure 1: Drawdown Contours of Proposed Irrigation Well.

10. Please revise the Lee Plan analysis and Water Resource report to provide analysis of Lee Plan goals 125 and 126. The current application provided analysis of goals 115 and 117.

Response: Goals 125 (Water Quality) and 126 (Water Resources) of the Lee Plan address requirements, policies, and objectives for new developments to achieve during Comprehensive Plan Amendments. Specific to water resource management and potential water use associated with the project. Goal 125 requires facilities "to ensure that water quality is maintained or improved for the protection of the environment and people of Lee County." Objective 125.1 requires facilities under Comprehensive Plan Amendment to "maintain high water quality, meeting or exceeding state and federal water quality standards." Goal 126 requires developments to "conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability. (Amended by Ordinance No. 94-30)." Objective 126.1 requires facilities to "Ensure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems."

11. Please provide an analysis of Lee Plan policies 33.1.7, 123.3.3 and 126.1.4.

Response: The Lee Plan contains comprehensive measures for environmental management within Lee County. Policy 33.1.7 requires that a modelling effort be undertaken to evaluate the impact of land development on an area's hydrology and to consider the effects on both surface and groundwater system. Policy 123.3.3 attempts to ensure the protection of local fauna. Concurrently 126.1.4 attempting to either maintain or improve existing water flow conditions. In alignment with these policies, a surface and groundwater model incorporating site-specific data was utilized to simulate the hydrological effects of the proposed project. The model indicates that minimal changes to the hydrological system, with groundwater levels projected to decrease slightly by 0.1 to 0.2 feet beneath a planned driveway and the wetland south of the project during dry periods. Conversely, a slight increase of 0.2 to 0.3 feet is expected in other areas of the project. The results suggest that the project will have a neutral overall effect on water resources and that the water level fluctuations are artifacts of the modelling process aligning with the objectives of the Lee Plan to ensure environmentally responsible development.

12. Previous proposed Lee Plan text amendment language contained more restrictive policies to address the development within the Wellfield Protection Zones. Please detail why these policies have been changed and provide justification for the new language.

Response: The Text Amendment is no longer being pursued; thus, the language in question is no longer applicable.

If you have any questions, you may reach me by telephone or email at Emblidge@abbinc.com.

Sincerely,

AGNOLI, BARBER & BRUNDAGE, INC.

Margaret Emblidge

Margaret Emblidge, AICP Director of Planning

ME/drr



POINT COORDINATE LIST





APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT - MAP

tat	e Review Process: Small-Scale Review State Coordinated Review Expedited State Review				
• • •	NT C.4. 11				
	NT CALL I' Small Brathara LLC				
	Name of Applicant: Small Brothers, LLC				
	Address: 12810 Tamiami Trail N, Suite 200				
	City, State, Zip: <u>Naples, FL 34110</u>				
	Phone Number: (239) 352-5151 E-mail: Bruce Lampitt / blampitt@smallbrothers.com				
	Name of Contact: Agnoli, Barber & Brundage, Inc. / Margaret Emblidge, AICP				
	Address: 7400 Trail Boulevard, Suite 200				
	City, State, Zip: Naples, FL 34108				
	Phone Number: (239) 597-3111 E-mail: emblidge@abbinc.com				
	Owner(s) of Record: Small Brothers, LLC				
	Address: 12810 Tamiami Trail N, Suite 200				
	City, State, Zip: Naples, FL 34110				
	Phone Number: (239) 352-5151 E-mail: Bruce Lampitt blampitt@ameilbrothets.com				
	Property Location:				
	1. Site Address: 15230 Corkscrew Road, Estero FL (Property 1)				
	2. STRAP(s): 22-46-26-00-00001.0010				
	COMMUNITY DEVELOPMENT				
	Property Information:				
	Total Acreage of Property: <u>12.14</u> Total Acreage Included in Request: <u>12.14</u>				
	Total Uplands: 6.69 acres Total Wetlands: 5.45 acres Current Zoning: CC Commercial				
	Current Future Land Use Category(ies): DR/Wetlands				
	Area in Each Future Land Use Category: DR/GR 6.69 acres, Wetlands 5.45 acres				
	Existing Land Use: Vacant				
	Calculation of maximum allowable development under current Lee Plan:				
	Calculation of maximum allowable development under current Lee Plan: Residential Units/Density: 1 Commercial Intensity: N/A Industrial Intensity: N/A				

Public Facilities Impacts

NOTE: The applicant must calculate public facilities impacts based on the maximum development.

- 1. Traffic Circulation Analysis: The analysis is intended to determine the effect of the land use change on the Financially Feasible Highway Plan Map 3A (20-year plus horizon) and on the Capital Improvements Element (5-year horizon). Toward that end, an applicant must submit a Traffic Impact Statement (TIS) consistent with Lee County Administrative Code (AC)13-17.
 - a. Proposals affecting less than 10 acres, where development parameters are contained within the Traffic Analysis Zone (TAZ) or zones planned population and employment, or where there is no change in allowable density/ intensity, may be eligible for a TIS requirement waiver as outlined in the Lee County TIS Guidelines and AC-13-17. Identification of allowable density/intensity in order to determine socio-economic data for affected TAZ(s) must be coordinated with Lee County Planning staff. Otherwise a calculation of trip generation is required consistent with AC-13-17 and the Lee County TIS Guidelines to determine required components of analysis for:
 - i. Total peak hour trip generation less than 50 total trip ends trip generation.
 - ii. Total peak hour trip generation from 50 to 300 total trip ends trip generation, trip distribution and trip assignment (manual or Florida Standard Urban Transportation Modeling Structure (FSUTMS) analysis consistent with AC-13-17 and TIS Guidelines), short-term (5 year) and long-range (to current Lee Plan horizon year) segment LOS analysis of the nearest or abutting arterial and major collector segment(s) identified in the Transportation Inventory based on the trip generation and roadway segment LOS analysis criteria in AC-13-17. A methodology meeting is recommended prior to submittal of the application to discuss use of FSUTMS, any changes to analysis requirements, or a combined CPA and Zoning TIS short term analysis.
 - iii. Total peak hour trip generation is over 300 total trip ends trip generation, mode split, trip distribution and trip assignment (manual or FSUTMS analysis consistent with AC-13-17 and TIS Guidelines), short-term (five-year) and long-range (to current Lee Plan horizon year) segment LOS analysis of arterial and collector segments listed in the Transportation Inventory. LOS analysis will include any portion of roadway segments within an area three miles offset from the boundary of the application legal description metes and bounds survey. LOS analysis will also include any additional segments in the study area based on the roadway segment LOS analysis criteria in AC-13-17. A methodology meeting is required prior to submittal of the application.
 - b. Map amendment greater than 10 acres Allowable density/intensity will be determined by Lee County Planning staff.

2. Provide an existing and future conditions analysis for the following (see Policy 95.1.3):

- a. Sanitary Sewer
- b. Potable Water
- c. Surface Water/Drainage Basins
- d. Parks, Recreation, and Open Space
- e. Public Schools

Analysis for each of the above should include (but is not limited to) the following (see the Lee County Concurrency Management Report):

- a Franchise Area, Basin, or District in which the property is located
- h Current LOS, and LOS standard of facilities serving the site
- c. Projected 2030 LOS under existing designation
- d Projected 2030 LOS under proposed designation
- e Existing infrastructure, if any, in the immediate area with the potential to serve the subject property
- f Improvements/expansions currently programmed in 5 year CIP, 6-10 year CIP, and long range improvements
- g Provide a letter of service availability from the appropriate utility for sanitary sewer and potable water

In addition to the above analysis, provide the following for potable water:

- a. Determine the availability of water supply within the franchise area using the current water use allocation (Consumptive Use Permit) based on the annual average daily withdrawal rate.
- b. Include the current demand and the projected demand under the existing designation, and the projected demand under the proposed designation.
- c. Include the availability of treatment facilities and transmission lines for reclaimed water for irrigation.
- d. Include any other water conservation measures that will be applied to the site (see Goal 54).

3. Provide a letter from the appropriate agency determining the adequacy/provision of existing/proposed support facilities, including:

- a. Fire protection with adequate response times
- b. Emergency medical service (EMS) provisions
- c. Law enforcement
- d. Solid Waste
- e. Mass Transit
- f. Schools

In reference to above, the applicant must supply the responding agency with the information from application items 5, 6, and 7 for their evaluation. This application must include the applicant's correspondence/request to the responding agency.

Environmental Impacts

Provide an overall analysis of the character of the subject property and surrounding properties, and assess the site's suitability for the proposed change based upon the following:

- 1. A map of the Plant Communities as defined by the Florida Land Use Cover and Classification system (FLUCCS).
- 2. A map and description of the soils found on the property (identify the source of the information).
- 3. A topographic map depicting the property boundaries and 100-year flood prone areas indicated (as identified by FEMA).
- 4. A map delineating the property boundaries on the most recent Flood Insurance Rate Map.
- 5. A map delineating wetlands, aquifer recharge areas, and rare & unique uplands.
- 6. A table of plant communities by FLUCCS with the potential to contain species (plant and animal) listed by federal, state or local agencies as endangered, threatened or species of special concern. The table must include the listed species by FLUCCS and the species status (same as FLUCCS map).

Impacts on Historic Resources

List all historic resources (including structure, districts, and/or archaeologically sensitive areas) and provide an analysis of the proposed change's impact on these resources. The following should be included with the analysis:

- 1. A map of any historic districts and/or sites listed on the Florida Master Site File which are located on the subject property or adjacent properties.
- 2 A map showing the subject property location on the archaeological sensitivity map for LeeCounty.

Internal Consistency with the Lee Plan

- 1. Discuss how the proposal affects established Lee County population projections, Lee Plan Table 1(b) and the total population capacity of the Lee Plan Future Land UseMap.
- 2 List all goals and objectives of the Lee Plan that are affected by the proposed amendment or that affect the subject property. This analysis should include an evaluation of all relevant policies under each goal and objective.
- 3. Describe how the proposal affects adjacent local governments and their comprehensive plans.

State Policy Plan and Regional Policy Plan

List State Policy Plan and Regional Policy Plan goals, strategies and actions, and policies which are relevant to this plan amendment.

Justify the proposed amendment based upon sound planning principles

Support all conclusions made in this justification with adequate data and analysis.

Planning Communities/Community Plan Area Requirements

If located within a planning community/community plan area, provide a meeting summary document of the required public informational session [Lee Plan Goal 17].

Lee County Comprehensive Plan Map Amendment Application Form (12/2022)

Sketch and Legal Description

The certified legal description(s) and certified sketch of the description for the property subject to the requested change. A metes and bounds legal description must be submitted specifically describing the entire perimeter boundary of the property with accurate bearings and distances for every line. The sketch must be tied to the state plane coordinate system for the Florida West Zone (North America Datum of 1983/1990 Adjustment) with two coordinates, one coordinate being the point of beginning and the other an opposing corner. If the subject property contains wetlands or the proposed amendment includes more than one land use category a metes and bounds legal description, as described above, must be submitted in addition to the perimeter boundary of the property for each wetland or future land use category.

SUBMITTAL REQUIREMENTS

Clearly label all submittal documents with the exhibit name indicated below.

For each map submitted, the applicant will be required to submit a 24"x36" version and 8.5"x11" reduced map for inclusion in public hearing packets.

MINIMUM SUBMITTAL ITEMS (3 Copies)

Completed Application (Exhibit – M1)
Disclosure of Interest (Exhibit – M2)
Surrounding Property Owners List, Mailing Labels, and Map For All Parcels Within 500 Feet of the Subject Property (Exhibit – M3)
Existing Future Land Use Map (Exhibit – M4)
Map and Description of Existing Land Uses (Not Designations) of the Subject Property and Surrounding Properties (Exhibit – M5)
Map and Description of Existing Zoning of the Subject Property and Surrounding Properties (Exhibit - M6)
Signed/Sealed Legal Description and Sketch of the Description for Each FLUC Proposed (Exhibit - M7)
Copy of the Deed(s) of the Subject Property (Exhibit – M8)
Aerial Map Showing the Subject Property and Surrounding Properties (Exhibit - M9)
Authorization Letter From the Property Owner(s) Authorizing the Applicant to Represent the Owner (Exhibit - M10)
Proposed Amendments (Exhibit – M11)
Lee Plan Analysis (Exhibit – M12)
Environmental Impacts Analysis (Exhibit – M13)
Historic Resources Impact Analysis (Exhibit – M14)
Public Facilities Impacts Analysis (Exhibit – M15)
Traffic Circulation Analysis (Exhibit – M16)
Existing and Future Conditions Analysis - Sanitary Sewer, Potable Water, Surface Water/Drainage Basins, Parks and Rec, Open Space, Public Schools (Exhibit – M17)
Letter of Determination For the Adequacy/Provision of Existing/Proposed Support Facilities - Fire Protection, Emergency Medical Service, Law Enforcement, Solid Waste, Mass Transit, Schools (Exhibit – M18)
State Policy Plan and Regional Policy Plan (Exhibit – M19)
Justification of Proposed Amendment (Exhibit - M20)
Planning Communities/Community Plan Area Requirements (Exhibit – M21)

APPLICANT – PLEASE NOTE:

Changes to Table 1(b) that relate directly to and are adopted simultaneously with a future land use map amendment may be considered as part of this application for a map amendment.

Once staff has determined the application is sufficient for review, 15 complete copies will be required to be submitted to staff. These copies will be used for Local Planning Agency hearings, Board of County Commissioners hearings, and State Reviewing Agencies. Staff will notify the applicant prior to each hearing or mail out to obtain the required copies.

If you have any questions regarding this application, please contact the Planning Section at (239) 533-8585.

Lee County Comprehensive Plan Map Amendment Application Form (12/2022)

AFFIDAVIT

_, certify that I am the owner or authorized representative of the I, Jon Small 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 Lee County Community Development to enter upon the property during normal working hours for the purpose of investigating and evaluating the request made through this application.

10/17/23 Date

Signature of Applicant

Jon Small Printed Name of Applicant

STATE OF FLORIDA COUNTY OF LEE

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of I physical presence or online notarization on 17 (date) by 00 5000

(name of person providing oath or affirmation), who is personally known to me or who has produced (type of identification) as identification. Ersonlli

Signature of Notary blic JESSENIA HERNANDEZ

IY COMMISSION # HH 305150 RES December 25, 2018C

Lee County Comprehensive Plan Map Amendment Application Form (12/2022)



7400 Trail Blvd., Suite 200 Naples, FL 34108 PH: (239) 597-3111 www.ABBINC.com



COMMUNITY DEVELOPMENT

Exhibit M11 (Revised November 2023)

Lee Plan Analysis

Small Brothers, LLC Corkscrew Commercial

LEE PLAN ANALYSIS

Background

The subject property is located along Corkscrew Road directly east of Corkscrew Shores and west of Flint Penn Strand. The Future Utility service area extends to the property contiguous to the west and multiple properties to the east. Both water and sewer lines extend past the subject property with capacity to serve future development. The property is in the Density Reduction/Groundwater Resource land use category in the Southeast Lee County Planning Community.

Although the subject property is within the DR/GR land use category, it is zoned Community Commercial by specific Board action and has carried that designation since 1982. ZAB-82-337 was approved by the Board of County Commissioners designating the subject property as CC (Community Commercial) and MH-1 (Mobile Home). The MH-1 property to the south is currently owned by Lee County. A site plan was incorporated into the zoning resolution by reference showing residential lots to the south of the commercial development along Corkscrew Road, even though it is a standard zoning district.

In 1989 Lee County amended the future land use category on the subject property from Rural to Density Reduction/Groundwater Resources. The land use category was changed as part of a settlement with the State Department of Community Affairs to reduce overall residential Density on the Future Land Use map through the year 2010, the horizon year of the Lee Plan at that time. The County did not undertake any analysis to determine the impact of the change on commercially zoned or previously platted property. After over two decades, the County started moving forward with increased residential development in the DR/GR with the approval of Corkscrew Shores, and utility lines have now been extended to and past this property to serve development to both the west and east.

Compliance with the Lee Plan

The proposed plan amendment is being submitted to add the subject property to Map 4B for future sewer service areas is consistent with Lee Plan **Standards in Policy 4.1.2**. Map A, Future Water Service Area Map was previously amended to include the subject property. The existing Future Water and Sewer Service Area Maps have been amended on a piecemeal basis through privately initiated Lee Plan amendments that have extended the future water and sewer service areas past this property to the east. The subject property represents a gap in the service area with sewer service immediately contiguous to the property to the west, and service provided to properties in close proximity to the east. Existing potable water and sewer lines run along Corkscrew Road in front of the property.

LEE PLAN CONSISTENCY

The proposed Map Amendment will allow for sewer service for the subject property located at the intersection of Corkscrew Road and Alico Road. An analysis of how the proposed map amendment is consistent with the applicable Lee Plan policies follows:

POLICY 1.4.5: The Density Reduction /Groundwater Resource (DR/GR) land use category includes upland areas that provide substantial recharge to aquifers most suitable for future wellfield development. These areas also are the most favorable locations for physical withdrawal of water from those aquifers. Only minimal public facilities exist or are programmed.

- 1. New land uses in these areas that require rezoning or a development order must demonstrate compatibility with maintaining surface and groundwater levels at their historic levels utilizing hydrologic modeling, the incorporation of increased storage capacity, and inclusion of green infrastructure. The modeling must also show that no adverse impacts will result to properties located upstream, downstream, as well as adjacent to the site. Offsite mitigation may be utilized, and may be required, to demonstrate this compatibility. Evidence as to historic levels must be submitted as part of the rezoning application and updated, if necessary, as part of the mining development order application.
- 2. Permitted land uses include agriculture, natural resource extraction and related facilities, conservation uses, public and private recreation facilities, and residential uses at a maximum standard density of one dwelling unit per ten acres (1 du/10 acres). See Objectives 33.2 and 33.3 for potential density adjustments resulting from concentration or transfer of development rights.

Adding this property to the 4B Wastewater Map instead of utilizing septic tanks or onsite Package will ensure that any development on this property will not impact the aquifers. The assessment provided by Water Sciences further analyzes a potential development scenario and the de minimis impacts that may occur.

OJECTIVE 2.1: DEVELOPMENT LOCATION. Contiguous and compact growth patterns will be promoted through the rezoning process to contain urban sprawl, minimize energy costs, conserve land, water, and natural resources, minimize the cost of services, prevent development patterns where large tracts of land are by-passed in favor of development more distant from services and existing communities.

This proposed amendment is in a location where Map 4B has been amended to accommodate largescale mixed use and residential development is occurring or in place directly to the west and in close proximity to the north and east. The proposed map amendment would be consistent with the contiguous and compact growth pattern occurring along Corkscrew Road.

POLICY 2.1.1.: Most residential, commercial, industrial, and public development is expected to occur within the designated Future Urban Areas on the Future Land Use Map through the assignment of very low densities to the non-urban categories.

The subject property is located in an area that is evolving as it is developed under an overlay designation that allows for increased residential densities. The residential development immediately to the west, consisting of small lot residential units around a large lake, extended urban infrastructure and is designated on Maps 4A and 4B for water and sewer service. Other similar developments to the north and east all have extended urban services to the area, including the utilities, EMS services and road infrastructure. That said, urban services are already available or will be available to the subject property through the associated map amendment.

STANDARD 4.1.2: SEWER.

- 1. Any new residential development that exceeds 2.5 dwelling units per gross acre, and any new single commercial or industrial development that generates more than 5,000 gallons of sewage per day, must connect to a sanitary sewer system.
- 2. If the proposed development exceeds the thresholds listed above and lies within the boundaries of a sewer utility's certificated or franchised service area, or Lee County Utilities' future sanitary sewer service area (see Map 4-B), and that utility has sufficient capacity to provide minimum service to the development, then the development must connect to that sewer utility if there is existing infrastructure adequate to accept the effluents of the development within 1/4 mile from any part of the development.
- 3. If there is not sufficient capacity nor adequate infrastructure within l/4 mile of the development, the developer must provide proof in the form of a clearly stated rejection of service.
- 4. If a new development is located in a certificated or franchised service area, or Lee County Utilities' future sanitary sewer service area (see Map 4-B), and the utility cannot provide the service, or cannot provide the service except at a clearly unreasonable cost to the developer, the developer may establish on a temporary basis a self-provided sanitary sewer facility for the development, to be abated when the utility extends service to the site. The developer may also petition the appropriate regulatory agency to contract the service area of the utility in order that another utility may be invited to provide the service.
- 5. If a development lies outside any service area as described above, the developer may:
 - request that the service area of Lee County Utilities or an adjacent sewer utility be expanded to incorporate the property;
 - establish a self-provided sanitary sewer system for the development;
 - develop at an intensity that does not require sanitary sewer service; or
 - *if no more than 5000 gallons of effluent per day per parcel is produced, an individual sewage disposal system per Fla. Admin. Code R. 64E-6 may be utilized, contingent on approval by all relevant authorities.*
- 6. Lee County Utilities may provide sanitary sewer service to properties not located within the future sewer service area when such sanitary sewer service is found to benefit public health, safety, and welfare, including protection of Lee County's natural resources.

The property owner is requesting this map amendment to ensure any development will benefit public health, safety, and welfare, including protection of Lee County's natural resources. In addition, the property is immediately adjacent to the service area as Shown on Map 4B meeting criteria #2. And criteria #5 supports this request to incorporate the property into the service area. Based on the above criteria there are sufficient directives in Standard 4.1.2 to approve this requested Amendment to Map 4B for the subject property.

GOAL 33: SOUTHEAST LEE COUNTY. Protect Southeast Lee County's natural resources through public and private acquisition and restoration efforts. Development incentives will be utilized as a mechanism to preserve, enhance, and protect natural resources, such as regional flow-

ways and natural habitat corridors in the development of privately owned land. Allowable land uses will include conservation, agriculture, public facilities, low density or clustered residential, natural resource extraction operations, and private recreation facilities; allowable land uses must be compatible with protecting Southeast Lee County's environment.

The proposed amendment fits within Goal 33. This map amendment would allow for wastewater services from Lee County Utilities which will protect the environment by avoiding the use of septic systems or wastewater package plants.

OBJECTIVE 33.2: WATER, HABITAT, AND OTHER NATURAL RESOURCES. Designate on a Future Land Use Map overlay the land in Southeast Lee County that is most critical toward restoring historic surface and groundwater levels and for improving the protection of other natural resources such as wetlands and wildlife habitat.

The subject property is not designated in any Tier for Priority Restoration. In accordance with Lee Plan Map 1, Page 4, the subject property is not a priority. However, this map amendment would further to intent of Objective 33.2.

GOALS 125 (Water Quality) and 126 (Water Resources) are addressed in the Water Resources Report by Water Sciences Associates revised date November 2023 (See Attachment M21). This report concluded the following:

Goals 125 (Water Quality) and 126 (Water Resources) of the Lee Plan address requirements, policies, and objectives for new developments to achieve during Comprehensive Plan Amendments. Specific to water resource management and potential water use associated with the project. Goal 125 requires facilities "To ensure that water quality is maintained or improved for the protection of the environment and people of Lee County." Objective 125.1 requires facilities under Comprehensive Plan Amendment to "Maintain high water quality, meeting or exceeding state and federal water quality standards." Goal 126 requires developments to "conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability. (Amended by Ordinance No. 94-30)." Objective 126.1 requires facilities to "Ensure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems."



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COMMUNITY DEVELOPMENT

Exhibit M19 Revised November 2023

(Revised November 2023)

Justification of Proposed Map Amendment

Small Brothers, LLC Corkscrew Commercial

Page 1 of 3

Justification of the Proposed Map Amendment

The following data and analysis are for the amendment to Comprehensive Plan Map 4B to add the subject property to the Lee County Utilities Future Sewer Service Areas Map. To accommodate future development to occur on the property, the existing water and sewer lines that run directly past the property would fulfill an important land planning goal. Connecting to available service rather than accommodating a package facility or large septic system is preferable both environmentally and from a cost efficiency of service.

Lee County Utilities Assessment

The applicant provided a potential development scenario for assessment to the Lee County Utilities Department to determine availability of potable water and wastewater. Lee County Utilities Department provided a Potable Water and Wastewater Availability comment letter dated August 29, 2022, which supports the appropriateness of approving the proposed Map 4B Amendment. The applicant agrees with the requirements stated. The following is a verbatim quote of that letter Dated August 29, 2022.

"The subject property is located within Lee County Utilities Future Service Area as depicted on Map 4A, but not Map 4B, of the Lee County Comprehensive Land Use Plan. Potable Water and sanitary Sewer lines are in operation adjacent to the property mentioned above. However, in order to provide service to the subject parcel, developer funded Comprehensive Plan Amendment and system enhancements such as line extensions will be required.

Your firm has indicated that this project will consist of 4 commercial units with an estimated flow demand of approximately 10,800 gallons per day. Lee County Utilities presently has sufficient capacity to provide potable water and sanitary sewer service as estimated above.

Availability of potable water and sanitary sewer service is contingent upon final acceptance of the infrastructure to be constructed by the developer. Upon completion and final acceptance of this project, potable water service will be provided through our Pinewood Water Treatment Plant.

Sanitary sewer service will be provided by Three Oaks Water Reclamation Facility. The Lee County Utilities' Design Manual requires the project engineer to perform hydraulic computations to determine what impact this project will have on our existing system.

There are no reuse mains in the vicinity of this parcel.

Prior to beginning design work on this project, please meet with LCU Staff to determine the best point of connection and discuss requirements for construction.

This letter should not be construed as a commitment to serve, but only as to the availability of service. Lee County Utilities will commit to serve only upon receipt of all appropriate connection fees, a signed request for service and/or an executed service agreement, and the approval of all State and local regulatory agencies.

Further, this letter of availability of potable water and sanitary sewer service is to be utilized for Comprehensive Plan Amendment only. Individual letters of availability will be required for the purpose of obtaining building permits."

Location and Surrounding Development

The subject property is located at the southwest corner of Corkscrew and Alico Roads. The surrounding development includes Corkscrew Shores on the west, Southwest Florida Rock IPD, an active mining operation, to the north. To the south and east of the subject property is land owned and managed by the Lee County. Lee County Wastewater and Water Plant is to the northeast, and the FFD mixed use project is less than a mile east of the subject property. To the south is a planned stormwater system for the widening of Corkscrew Road. The surrounding development is depicted on the enclosed Regional Map.

Subject Property History

The subject property was rezoned to Community Commercial (CC) in 1982 and received a variance (Zoning Resolution ZAB-82-337) to allow a private sewer treatment plant on the western side of the property in association with the proposed development of a mobile home park on the property to the south (SP-82-337). The mobile home community was never constructed and is now owned by Lee County and is partially planned for a stormwater area for the widening of Corkscrew Road.

In 1989, Lee County amended the future land use category on the subject property from Rural to Density Reduction/Groundwater Resources. The land use category was changed as part of a settlement with the State Department of Community Affairs to reduce overall residential Density on the Future Land Use map through the year 2010, the horizon year of the Lee Plan at that time. The County did not undertake any analysis to determine the impact of the change on commercially zoned or previously platted property. After over two decades, the County started moving forward with increased residential and commercial development in the DR/GR. Corkscrew Shores had a previously approved plat that permitted residential development, and it is located adjacent to the property on the west. Corkscrew Shores obtained approval of an amendment to the comprehensive plan and zoning that recognized the pre-existing approvals and allowed the reconfiguration of the existing residential density. The commercially zoned properties were not accounted for when the County made these changes, negatively impacting their development rights.

As stated, there have been large scale mixed-use developments that have been developed or are planned along Corkscrew Road. Some of these are WildBlue, Bella Terra, Verdana Village, The Place, Old Corkscrew Golf Club, and FFD Land Co. The Lee County Utilities Service Area maps depict these projects on map 4B already. It would only seem logical to add the subject property.



COMMUNITY DEVELOPMENT

Water Resources Report 15230 Corkscrew Commercial Project Lee County, Florida

Cleveland Construction 8620 Tyler Boulevard Mentor, OH 44060

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REVISED NOVEMBER 2023

Water Resources Report 15230 Corkscrew Commercial Project Lee County, Florida

Cleveland Construction 8620 Tyler Boulevard Mentor, OH 44060



REVISED NOVEMBER 2023



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Michael C. Alfieri, P.G., P.Hg Senior Managing Hydrogeologist

Saashen Sealy Senior Hydrogeologist

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SECTION A INTRODUCTION

Project Overview

The Corkscrew Commercial development (Project) is located at 15230 Corkscrew Road, southwest of the intersection of Alico Road and Corkscrew Road, within Section 22, Township 46 South, Range 26 East in Lee County, Florida. The project is an approximately 12-acre proposed commercial development which will include community retail centers totaling approximately 80,000 square feet at build-out. The site is zoned as "Community Commercial" and located in the Lee County's Density Reduction Groundwater Recharge (DRGR) zone. Refer to Figure 1 for a regional location map of the project and Figure 2 for a conceptual site plan.



Figure 1. Location of the project site

The project site is bordered to the north by the Youngquist Brothers Rock quarry, and a nursery. The project is bordered to the west by the Corkscrew Shores residential community. The project is bordered to the east and south by undeveloped land owned by Lee County and SFWMD respectively. The Lee County Utilities Corkscrew Wellfield is near the property and a portion of the project falls within wellfield protection zones of that wellfield, established by Lee County Ordinance #07-35. A review of the SFWMD GIS database indicates that the project did not have an active water use or environmental resource permit prior to the current owner purchasing the property. The previous owner of the site, Estero Bay Baptist Church,



applied for water use permit for land use irrigation in 2009. However, the application was incomplete and was later withdrawn.

Figure 2. Conceptual Site Plan

Considering the project lies within the DRGR zone, the project will be required to satisfy the following policies and goals set forth by the County.

Policy 1.4.5 of the Lee Plan requires new land uses in the DRGR: "to demonstrate compatibility with maintaining surface and groundwater levels at their historic levels (except as provided in Policies 33.1.3 and 33.3.4) utilizing hydrologic modeling, the incorporation of increased storage capacity, and inclusion of green infrastructure. The modeling must also show that no adverse impacts will result to properties located upstream, downstream, as well as adjacent to the site. Offsite mitigation may be utilized, and may be required, to demonstrate this compatibility. Evidence as to historic levels may be submitted during the rezoning or development review processes."

Policy 2.4.3 requires in part, that applicants for land use changes within the DRGR: "1. analyze the proposed allowable land uses to determine the availability of irrigation and domestic water sources; and, 2. identify potential irrigation and domestic water sources, consistent with the Regional Water Supply Plan ...; and, 3. present data and analysis that the proposed land uses will not cause any significant harm to present and future public water resources;"

In addition to the above Policies, Goals 125 (Water Quality) and 126 (Water Resources) of the Lee Plan address requirements, policies, and objectives for new developments to achieve during Comprehensive Plan Amendments. Specific to water resource management and potential water use associated with the project, Goal 125 requires facilities "*To ensure that water quality is maintained or improved for the protection of the environment and people of Lee County.*" Objective 125.1 requires facilities under Comprehensive Plan Amendment to "*Maintain high water quality, meeting or exceeding state and federal water quality standards.*" Page 3

Goal 126 requires developments to "conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability. (Amended by Ordinance No. 94-30)." Objective 126.1 requires facilities to "Insure water supplies of sufficient quantity and quality to meet the present and projected demands of all consumers and the environment, based on the capacity of the natural systems."

The above goals, policies and objectives are relevant to this project as they require a developer to consider water resources, water use, water supply, and water quality issues that the development must address for approval. The applicant has carefully considered these requirements in their project design resulting in a project that meets the criteria of the Lee Plan for water supply, water management, water levels, and water quality. The sections below provide the analysis and assessment to address Lee Plan Goals, Policies, and Objectives.

SECTION B GROUNDWATER RESOURCES

Introduction

The hydrostratigraphy underlying the Corkscrew Commercial project is typical for southern Lee County with a series of aquifers and confining beds occupying the Surficial, Intermediate, and Floridan Aquifer Systems. Figure 3 provides a schematic showing the groundwater sources in Lee County. In general, freshwater sources are the Water Table and the Lower Tamiami Aquifers of the Surficial Aquifer System. The underlying Sandstone and Mid-Hawthorn Aquifers of the Intermediate Aquifer System are fresh to moderately brackish. Highly brackish and saline water sources include the Lower Hawthorn Aquifer and underlying zones of the Upper Floridan Aquifer.

There are four primary aquifers of significance beneath the project site and are described below in order of increasing depth. These are the Water Table, the Sandstone, the Mid-Hawthorn, and the Lower Hawthorn Aquifers. The Lower Tamiami aquifer is unconfined at this location and therefore considered a part of the Water Table aquifer. The primary sources of information used to characterize the groundwater resources include information from Lee County, South Florida Water Management District, the U. S. Geological Society, and onsite borings.



Figure 3. Aquifer System Underlying Lee County (Lee County Integrated Water Masterplan)

Water Table Aquifer

The Water Table Aquifer is an unconfined aquifer that covers all of Lee County. The aquifer is defined as occurring at or near land surface downward to the top of the first regional confining bed. Beneath the project site, the aquifer is anticipated to occur within an upper section of unconsolidated sand and shells and an underlying lower section of highly permeable limestone.

The upper unconsolidated portion of the Water Table Aquifer consists of a layer of fine sand with an average thickness of about 20 feet. The sand is described as fine silica sand with variable amounts of silt ranging from brown to gray in color. The sand unit is identified as being part of the Pleistocene age Fort Thompson Formation. The top of the underlying limestone occurs at an average depth of about 20 feet bls. The depth to the base of the limestone ranges from between 60 to over 100 feet bls near the project site and the unit has an average thickness of about 60 feet. The limestone has been described as ranging from white to brown to gray in color, very hard to soft, sandy and fossiliferous, with occasional beds of coralline limestone and frequent zones of high permeability where loss of drilling fluids commonly occurs. The limestone present within the lower portion of the Water Table Aquifer includes the Pinecrest and Ochopee Members of the Pliocene age Tamiami Formation. The Water Table Aquifer is underlain by low permeability marls and clays with an estimated thickness of about 70 feet at this site. The confining unit below the Water Table Aquifer consists of the Buckingham Marl Member of the Tamiami Formation underlain by the Cape Coral Clay Member of the Peace River Formation.

The limestone portion of the Water Table Aquifer typically has a moderate to high permeability making the aquifer suitable for medium to large capacity water production wells. The aquifer is used for municipal supply, domestic self-supply and irrigation of agricultural and landscaping foliage. Use of the aquifer is typically limited by the potential for impacts to natural wetland areas from drawdown in the aquifer water level. The aquifer is recharged directly by rainfall with discharges occurring by way of natural or man-made surface drainage features, evaporation and transpiration, and by withdrawal from wells. Groundwater flow and levels in the aquifer fluctuate seasonally in response to climatic conditions but are also impacted by local and regional drainage features. Water quality in the aquifer is generally very good and is sufficient for both potable water and irrigation water needs; however, high concentrations of naturally occurring iron and organic material are sometimes reported.

The Water Table Aquifer is used in the area of the project site for public water supply by Lee County Utilities, for agricultural irrigation, for livestock, and by private residences for domestic self-supply. The project site is located near a portion of the Lee County Corkscrew wellfield which includes several public water supply wells that tap into the limestone portion of the Surficial Aquifer System and the Sandstone Aquifer.

Sandstone Aquifer

The Sandstone Aquifer is the uppermost aquifer in the Intermediate Aquifer System and consists of unconsolidated sands and poorly consolidated sandstones within the Lehigh Acres Sandstone Member of the Peace River Formation. Based on the total depths of public water supply wells near the project site, the top of the Sandstone Aquifer occurs at about 150 feet bls and extends to a depth of about 200 feet bls. The Sandstone Aquifer is considered a

freshwater source although there are large areas, especially in the southwestern portions of Lee County and areas near and parallel to the Caloosahatchee River where there are elevated salinity levels which may limit the usefulness of the aquifer for public supply. Salinities, however, are generally low enough for general irrigation supply. Productivity of the aquifer is moderate to low, but it does provide large quantities of water for public water supply by Lee County Utilities, for domestic self-supply in eastern Lee County and for agricultural irrigation in eastern Lee and western Hendry Counties. The aquifer is recharged where overlying confining beds are thin or absent in Hendry and Glades County or where there is large use of the aquifer that induces increased recharge directly from the Water Table Aquifer through the overlying confining beds. Discharge from the aquifer generally occurs as pumpage from wells. Large fluctuations in seasonal water levels are common due to the heavy use of the aquifer with wet season levels near their historic highs but dry season water levels often at depths of 50 feet or more. For this reason, the aquifer is considered a source of limited availability although opportunities for seasonal use and storage may be considered.

Mid Hawthorn Aquifer

The Mid Hawthorn Aquifer is the lowermost aquifer in the Intermediate Aquifer System in Lee County. Where present, the aquifer consists of moderately permeable limestones of the Arcadia Formation and is separated from the overlying Sandstone Aquifer and underlying Lower Hawthorn Aquifer by thick clay confining beds of the Peace River Formation. Based upon reports by the USGS and Florida Geological Survey, there is little viable yield from the limestones of the upper part of the Arcadia Formation in this part of Lee County. However, Lee County Utilities uses a portion of the Mid Hawthorn Aquifer for seasonal storage of treated water along Alico Road north of the project site.

Where present, the Mid Hawthorn Aquifer is a generally a lower yield, discontinuous water bearing unit that has utility as a limited supply resource or for seasonal storage in an ASR system. The aquifer is recharged north of Lee County where the aquifer is much closer to land surface and upper confining layers are thin or absent. Much of the Mid-Hawthorn Aquifer is fresh in northwestern and central Lee County but salinities increase southward with chloride concentrations in excess of 1000 mg/l in southwest areas of the County. The unit is mostly absent in the easternmost portion of Lee County.

Lower Hawthorn Aquifer

The Lower Hawthorn Aquifer is the uppermost water bearing unit in the Upper Floridan Aquifer System. The aquifer has good yield potential but contains brackish water that is only useful for irrigation if blended with other freshwater resources and is only useful for public water supply using reverse osmosis or other desalination technologies. Dissolved chlorides in the Lower Hawthorn at the project site are estimated to be between 1000 and 1500 milligrams per liter. The top of this aquifer is anticipated to be encountered at depths between 500 and 600 feet below grade at the site. The aquifer is separated from the overlying Mid Hawthorn Aquifer by the Lower Hawthorn Confining Zone which consists of marine silts and clays of low permeability. The aquifer is recharged in the central Florida highlands area between Tampa and Orlando. In general, the South Florida Water Management District supports increased use of the Lower Hawthorn/Upper Floridan aquifer especially for public water supply use.

WATER DEMANDS

Projected water demands for the project will consist of inside potable water and outside irrigation uses. It is anticipated that Lee County Utilities will provide potable water and sanitary sewer service for the project. Irrigation demands will be met with onsite sources including harvesting stormwater from the onsite water management lake system. The lake withdrawals will provide an efficient and low impact method for tapping the Water Table Aquifer underlying the project site and effectively harvest available stormwater supplies. Lake volume storage will minimize potential impacts to surface and groundwater levels.

Potable Water and Wastewater

Lee County Utilities is expected provide potable water and wastewater services to the project. This will eliminate the need for a commercial self-supply well system and individual onsite sewage treatment and disposal systems (septic tanks) which are common for many rural areas of Lee County. Provision of central public utilities to the project will provide a number of desirable environmental and hydrological advantages. Supplying potable water to the project from the nearby Lee County Utilities Corkscrew Water Treatment Plant will remove a potentially competing water use from the freshwater aquifers and allow for improved control of area water resources in compliance with policies 125.1.2 and 125.1.5. Similarly, provision of a central sewer system will eliminate septic tank discharges in the area providing a higher level of protection to the existing Lee County Utilities wellfields. The Lee County Utilities will be contacted for availability and provision of potable water supply and wastewater service.

Irrigation Water

The project has a total of 12 acres. Based on preliminary site plan, the project will consist of approximately 8 acres of developed land and approximately 4 acres of natural preserves. Of the 8 acres proposed for development, approximately 5 acres will be allotted to buildings and parking lots and approximately 0.65 acres will be designated for a stormwater pond. The remaining open area that may need irrigation is estimated to be approximately 4 acres.

Projected irrigation water demands were calculated using the modified Blaney-Criddle method, which is consistent with SFWMD permitting criteria. Assuming 3.65 acres of irrigation demand, resultant allocations from the modified Blaney-Criddle calculation are:

- 4.76 million gallons on an annual average basis (or 13,041 gallons per day)
- 0.6 million gallons on a maximum monthly basis (or 20,000 gallons per day)

The project will include the construction of one Mid-Hawthorn Aquifer well, which will be the primary source of irrigation for the project. stormwater management lake that will intersect the upper portion of the Water Table Aquifer. It is anticipated that there will be no effects to adjacent public supply wells as their source of withdrawal are the Water Table and Sandstone Aquifers.

SECTION D IMPACT ASSESSMENT

Groundwater Modeling

Summary

The proposed Corkscrew Commercial development (Project) is located at 15230 Corkscrew Road, southwest of the intersection of Alico Road and Corkscrew Road, in Lee County, Florida. The project is an approximately 12-acre proposed commercial development, which will include community retail centers totaling approximately 80,000 square feet at build-out. The site is zoned as "Community Commercial".

The numerical modeling software known as AquiferWin32 developed by Environmental Solutions Inc was used in this modeling effort. The software's purpose is to construct an analytic model to quantify the impact of withdrawing 20,000 gallons per day (gpd) from the Mid-hawthorn aquifer. The modeling scenario assumes that there is no recharge, and a pumping rate of 20,000 gpd. The AquiferWin32 model comprises of a single layer that represents both the Water Table Aquifer and the Mid-Hawthorn Aquifer in the vicinity of the proposed site. Model parameters were determined using the Aquifer Performance test from LM-68111 located 0.2 miles North-East (NE) of the project site.

Analysis of the modelling effort indicates that in the assumed scenario, there would be no impact on the adjacent public supply wells with withdrawals causing a drawdown of 1-foot approximately 200 feet away from the Project boundary. It is important to note that that this drawdown is under conservative conditions (i.e. no recharge), however in reality drawdown can be anticipated to be much less than 1 foot as horizontal flow from inland would contribute a level of recharge and reducing the extent of the drawdown. As a result, is not expected to historical surface water or groundwater within the area nor affect any adjacent public supply wells. Using this information, the development the Corkscrew development adheres to Lee Policy 1.4.5.

Model Parameters

Table 1: Aquifer Performance Test Location

Well ID	x	Y	Distance from Project Site (miles)	Direction from Project
LM- 6811	425778.787	771900.7171	0.2	NE

Using Table 1 the following parameters were assigned to the model scenario:

Transmissivity: 13,360 gpd/ft Storage Coefficient: 7.20E-05 Leakance: 1.20e-4 GPD/FT3 Specific Storage: 9.48E-05 1/ft Well Withdrawal: 20,000 (determined by SFWMD Modified Blaney Criddle 0.6 MGD maximum monthly)

Model Output

The following discusses the model output generated from the AquiferWin32 scenario for the Corkscrew Development. The spatial extent of the model domain that was used for constructing the model is shown in **Figure 5**.



Figure 5: Drawdown Contours of Proposed Irrigation Well.

It is important to note that the dimensions for the model domain were deliberately chosen to be larger than the actual size of the development, to ensure that withdrawal is not influenced by boundary conditions.

After the conceptualization of the model and assignment of parameters as noted in **Section 4**, the model scenario was run for a simulated period of 90 days with the assumption that there was no recharge, and a pumping rate of 200,000 gallons per day (gpd).

Model output shows that drawdown remains isolated near to the Project and does not affect any of the adjacent public supply wells. Additionally, it is also important to note that owing to the isolation near the property development boundary, historical groundwater and surface water levels have not been affected and remain in compliance with Lee Policy 1.4.5.

Water Levels

Water Science Associates reviewed a hydrograph of a nearby monitoring well, Well 49-GW6, which is located about 1.5 miles south of the project site and maintained by Lee County Division of Natural Resources (LCDNR). Long term water level data (1990 to present) for this well and precipitation from a nearby weather station (Station ID: CRKSWPS_R) are presented on Figure 4. It is noted that groundwater elevations in Well 49-GW6 range from a dry season low of about 11 feet NAVD to a wet season high of about 18 feet NAVD. Wet season high water levels average about 18 feet NAVD and dry season low water levels average between 12 and 13 feet NAVD. Wet season groundwater elevations in this well show a consistent rising trend from 2004 to 2018.



Figure 6. Hydrograph of LCDNR Well 49-GW6.

Water Resources

Goal 126 of the Lee Plan emphasizes the conservation, management, and protection of the natural hydrologic systems to ensure the sustainability of water resources within the County. The groundwater model simulation of the proposed project shows that withdrawals under drought conditions, the effects on water levels have a negligible impact on the water levels of the project area, and by extent the adjacent public supply wells. The model also shows that based on the extent of influence of drawdown under drought conditions. This is important since it shows adherence to Goal 126 of the Lee Plan which endeavors to maintain water supply of ample quantity and quality to meet both present and future demand within the natural capacity of the County.

SECTION E WELLHEAD PROTECTION

The Corkscrew Commercial project site falls within the Wellfield Protection Area (WPA) of the Lee County Utilities Corkscrew Wellfield. The presence of Lee County Utility public supply wells places portions of the project site within Zones 1 through 3 of the established protection zones of the Lee County Wellfield Protection Ordinance (Ordinance No. 07-35). Refer to Figure 5 for the locations of the wellfield protection zones relative to the project site. The developed portion of the project falls within WPA Zones 2 and 3 with the majority of the proposed development area in WPA Zone 3.

Wellfield protection zones are commonly created with the use of groundwater flow modeling to assess the time it may take for a potential contaminant to arrive at a public supply wellfield. The "protection zones" correspond to the modeled location were a potential contaminant could travel to a well location within the given "travel time." The closer a facility is to the wellfield (shorter travel distance) the more restrictions are typically applied to potential land uses. The protection zones defined by various lengths of travel time are as follows:



Figure 5. Lee County Wellhead Protection Zones in Relation to Project Site

- Zone 1: Between the well and the 6-month travel timeline
- Zone 2: Between the 6-month and 1-year travel timelines
- Zone 3: Between the 1-year and 5-year travel timelines
- Zone 4: Between the 5-year and 10-year travel timelines.

Prohibitions within the Wellfield Protection Area include the following:

ZONES 1 to 4

The use, handling, production, or storage of regulated substances associated with land uses or activities in quantities greater than those set forth in section 14-208, which is 110 gallons if substances are liquids and 1,110 pounds if substances are solids.

ZONES 1 to 3

Liquid waste and wastewater effluent disposal, except for public access reuse of reclaimed water and land application under the conditions set forth and as defined in F.A.C. chapter 62-610, part III. Where public access reuse is permitted, the chloride content must be no greater than 500 milligrams per liter.

ZONES 1 and 2

Solid waste disposal.

ZONE 1

Earth mining within a 500-foot radius of an existing wellhead.

The Corkscrew Commercial project will fully comply with the strictest protective measures for each of the wellfield protection zones, in alignment with the objectives and policies of the Lee Plan (amended January 2023). To mitigate against environmental risks, the commercial development will not include shops that are known to use regulated substances such as a gas station or dry cleaners. If regulated substances are present, it will meet applicable standards set forth in Section 14-214, consistent with Policy 125.1.1 under Goal 125 of the Lee Plan.

In keeping with Policy 125.1.2 of the Lee Plan, the project will not discharge wastewater, liquid waste or solid waste. Irrigation water will maintain a chloride concentration below allowable limits. The stormwater management system will be designed to exceed the water quality requirements of the SFWMD, storm stormwater being discharged to wetlands south of the project, where it would be subject to continuous monitoring by the SFWMD through well FP02-GW1. Any detected contamination will prompt remedial action in accordance with local, state, and federal rules, statues, and laws this will adhere to Policy 125.1.6 of the Lee Plan.

No earth mining is proposed within 500 feet of any Lee County Utilities wellheads and the development will not utilize septic tanks nor domestic supply wells.

SECTION F CONCLUSIONS

Analysis and review of the proposed site development, surface water and groundwater resources, water supply and demand needs, and potential impact assessments to water levels and natural resources suggest that the proposed development will have negligible impacts to natural resources and/or existing nearby users. Ground and surface water levels will be maintained or enhanced and water quality leaving the site will meet all applicable standards with a properly designed stormwater management system. It is relevant to note that the proposed commercial development is one of the better options for the project site with regards to minimizing impacts to water resources in the DRGR considering the other options of land use such as farming / agricultural or residential uses will have a higher water demand. Impact assessments provided in this study indicate that the drawdown in shallow groundwater at the project boundary due to the proposed project footprint will be negligible (1 foot or less isolated near to the project boundary).