HERNANDO COUNTY DEVELOPMENT DEPARTMENT
789 Providence Blvd.
Brooksville, FL 34601-2893

Master Mining Plan Approval (MAMPA) Application

Date 7/10/2019

This application, with all exhibits attached, must be completed and filed with this office and approved as sufficient before advertisement is made for a public hearing.

1. Mining company and address: 11430 Camp Mine Rd Brooksville FL 34601

2. Designated responsible person: James P Morris

   a. Address: 11430 Camp Mine Rd Brooksville FL 34601
   b. Telephone: 352-303-3563

3. Date of Existing Approved Master Mining Plan: _____

4. The following items must be attached:

   a. Legal description, including total acreage
   b. Copy of proof of ownership
   c. Consent of owner/mortgagees
   d. DRI statement
   e. Aerial map
   f. Master Mining Plan with all info listed in Section19-31
   g. Environmental assessment addressing wildlife, water quality and air quality, if required
   h. List/copy of previous permits
   I. List of property owners with Key number within 150'
   j. Signed agreement of access i.e. variances

5. This application will be reviewed for sufficiency within thirty (30) days and written notification will follow. Any insufficient items will result in notification and the application due date will be extended to afford the opportunity to submit sufficient information.

6. This application and all supporting documentation offered for review are true and bona fide copies. All information contained herein is correct to the best of my knowledge.

Signature of Applicant

STATE OF FLORIDA
COUNTY OF HERNANDO

The foregoing instrument was acknowledged before me this 10th day of July, 2019, by James P. Morris.

BECKY SHAY
MY COMMISSION # FF 936345
EXPIRES: November 23, 2019
Bonded Thru Notary Public Underwriters

(Signature of Notary Public)

Becky Shay
(Print, Type, or Stamp Commissioned Name of Notary Public

Personally Known ✓ OR Produced Identification _____
Type of Identification Produced _____

APPLICATION FOR MASTER MINING PLAN APPROVAL (MAMPA)
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA
for
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.

PREPARED BY:

THE COLINAS GROUP, INC.
2031 EAST EDGEWOOD DRIVE
SUITE 5
LAKELAND, FL 33803

AND

FLATWOODS CONSULTING GROUP, INC.
8306 LAUREL FAIR CIRCLE, SUITE 120
TAMPA, FL 33610

July 8, 2019

THE COLINAS GROUP, INC.
ENGINEERING AND ENVIRONMENTAL CONSULTANTS

July 8, 2019

Hernando County Planning Department
20 N. Main Street
Room 162
Brooksville, Florida 34601-2893

Attention: Mr. Chris Linsbeck

Re: MAMPA Application
Bronson Extension - Brooksville Quarry
for CEMEX Construction Materials Florida, LLC.

Dear Mr. Linsbeck;

The Colinas Group, Inc., is pleased to submit the attached MAMPA application and supporting information for the proposed Bronson Extension for the CEMEX Construction Materials Florida, LLC., (CEMEX) Brooksville Quarry. CEMEX requests approval to extend mining on three parcels consisting of a total of +/- 573.47 acres. The Bronson Extension is made up of the following parcels:

1. Parcel No. R24 422 18 0000 0070 0000 Key No. 00345451
2. Parcel No. R19 422 19 0000 0050 0000 Key No. 00352594
3. Parcel No. R24 422 18 0000 0000 000A Key No. 1708806

This MAMPA application is a stand alone application for the three parcels and does not include any modification to existing MAMPA's listed above.

The three subject parcels are contiguous and are located in Sections 19 and 30, Township 22 South, Range 19 East; Section 24 and 25, Township 22 South, Range 18 East in Hernando County, Florida. The properties are located directly south of the existing CEMEX Brooksville Quarry and are separated from the existing quarry by Fort Dade Avenue.

Limestone mining is proposed to an elevation of approximately 40 feet NGVD. After removal and stockpiling of vegetative cover, topsoil and overburden used in the reclamation process, the limestone will be excavated using front end loaders, draglines and/or trackhoes.

Employee entrance to the Bronson Extension will be from Citrus Way. Transport of the limestone to the aggregate processing facilities at the existing Brooksville Quarry from the Bronson Extension will be via an overhead conveyor over Fort Dade Avenue. After transport of the limestone to the existing Brooksville Quarry aggregate processing facilities, the excavated limestone will be crushed and placed on a conveyor belt for stockpiling. The product will then be loaded into trucks for delivery and the trucks are weighed at a scale house prior to departure. All processing and sales will remain at the existing facilities.

The MAMPA footprint proposed is +/- 494.17 acres and the proposed excavation area of +/-314.97 acres. The proposed excavation area is subject to change as shown in Attachment A as Potential Future Reserves. The Bronson Extension proposes to impact 3.78 acres of isolated wetlands. Of the wetlands proposed to be impacted, a total of 1.52 acres are isolated wetlands less than 0.5 acre in size. Mitigation details for the 2.26 acres of impacts to those wetlands greater than 0.5 acre in size will be included in the Environmental Resource Permit for which an application is currently being prepared.

The parcels are adjacent with properties already part of the CEMEX Brooksville Quarry. Extension of the mining operation onto the Bronson Extension has obvious efficiencies in that it can use facilities already existing at the Brooksville Quarry. The proposed MAMPA will not introduce any new demands on public facilities since plant operations will remain at existing levels and will not change in location. While the MAMPA will provide the necessary soft limerock resources to provide material necessary for cement production, it will not increase the operational activity. The amount of hard and soft limerock mined and processed each year is governed by the market demand for the material. Therefore, the daily operation of the mine will be the same as prior to the amendment without any increase in the use of public facilities.

Attached are project drawings and a completed MAMPA Application with required attachments for your review. Thank you for the opportunity to submit the MAMPA application package. We look forward to your review and comments. In the meantime, if you have any questions, please call.

Yours very truly,
THE COLINAS GROUP, INC.
ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Mark R. Stephens, P.G., P.E.
Principal Consultant

Electronically submitted plus two (2) hard copies submitted with attachments

cc: Mr. James P. Morris - CEMEX Construction Materials Florida, LLC.
Mr. Darryl Johnston - Johnston & Sasser, P.A.
Mr. Lee Walton - Flatwoods Consulting Group, Inc.

MASTER MINING PLAN APPROVAL APPLICATION
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA

PROFESSIONAL ENGINEER CERTIFICATION

I, Mark R. Stephens, PE# 36179, certify that I currently hold an active license in the state of Florida and am competent through education or experience to provide engineering services in the civil engineering discipline contained in this plan, print, specification, or report. I further certify that this plan, print, specification, or report were prepared by me or under my responsible charge as defined in Chapter 61G15-18.OO1, F.A.C. Moreover, if offered by a corporation, partnership, or through a fictitious name, I certify that the company offering the engineering services, The Colinas Group, Inc., holds an active Certificate of Authorization (No. 7934) to provide the engineering service.

_____ Date: _____

Mark R. Stephens, P.G., P.E.
Florida P.E. License No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 East Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
Phone (863) 669-9141

APPLICATION FOR MASTER MINING PLAN APPROVAL (MAMPA)

BROOKSVILLE QUARRY - BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

FOR

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.

Each element of Sec. 19-31. Master mining plan approval (MAMPA) is listed below (in bold) followed by a response.

(a) Application. An application for a master mining plan approval (MAMPA) shall comply with the following procedure:

(1) A written application for a master mining plan approval (MAMPA) shall be submitted on an application form approved by the board of county commissioners. The application form shall include the following required information:

a. A legal description of the proposed mining area;

A parcel of land lying and being in Sections 24 and 25, Township 22 South, Range 18 East and Sections 19 and 30, Township 22 South, Range 19 East, Hernando County, Florida. More particularly described as follows:
Commencing at a point marking the Southeast corner of the Northeast 1/4 of Section 25, Township 22 South, Range 18 East, also known as the Southwest corner of the Northwest 1/4 of said Section 30, Township 22 South, Range 19 East; thence departing said point coincident with the East Boundary of said Northeast 1/4, also being the West Boundary of said Northwest 1/4, N 00°19'25" W a distance of 1180.28 feet to the POINT OF BEGINNING; thence departing said East Boundary, S 89°13'39" W a distance of 286.57 feet; thence S 86°28'17" W a distance of 1281.52 feet; thence N 90°00'00" W a distance of 359.45 feet; thence N 00°00'00" E a distance of 1087.27 feet; thence N 26°42'20" E a distance of 1830.00 feet; thence N 90°00'00" E a distance of 805.00 feet; thence N 00°00'00" E a distance of 1471.17 feet to a point coincident with the South Right-of-way Boundary of Fort Dade Avenue (by occupation and maintenance); thence coincident with said South Right-of-way Boundary for the following three (3) courses: 1.) S 88°52'36" E a distance of 542.82 feet; 2.) thence N 05°45'40" E a distance of 11.99 feet; 3.) thence N 87°57'37" E a distance of 3964.49 feet to a point coincident with the West Boundary of the East 1/2 of the Southeast 1/4 of said Section 19; thence departing said South Right-of-way Boundary coincident with said West Boundary, S 00°06'48" E a distance of 2618.44 feet to a point coincident with the South Boundary of the Southeast 1/4 of said Section 19, also being the North Boundary of the Northeast 1/4 of Section 30, Township 22 South, Range 19 East; thence departing said West Boundary coincident with said North Boundary, N 87°46'00" E a distance of 174.32 feet; thence departing said North Boundary, S 02°14'00" E a distance of 100.00 feet; thence N 87°46'00" E a distance of 120.00 feet; thence N 02°14'00" W a distance of 100.00 feet to the aforementioned North Boundary of the Northeast 1/4 of said Section 30; thence coincident with said North

Boundary, N 87°46'00" E a distance of 619.78 feet; thence departing said North Boundary, S 34°52'34" E a distance of 252.86 feet to a point coincident with a line lying 300.00 feet West of and parallel with the East Boundary of the Northeast 1/4 of said Section 30; thence coincident with said parallel line, S 00°05'40" E a distance of 2150.07 feet to a point coincident with the North Right-of-way Boundary of Cortez Boulevard (State Road No. 50) per Florida Department of Transportation (FDOT) Right-of-way Map Section No. 08040-2509, dated June 2, 1993, said point also being coincident with a curve concave northerly, said curve having a radius of 2734.79 feet, a delta angle of 3°24'49" and being subtended by a chord bearing S 66°39'55" W for a distance of 162.91 feet; thence coincident the aforesaid North Right-of-way Boundary of Cortez Boulevard for the following fourteen (14) courses: 1.) thence coincident with the arc of said curve a distance of 162.93 feet; 2.) thence departing said curve, S 21°37'41" E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2744.79 feet, a delta angle of 2°00'00" and being subtended by a chord bearing S 69°22'19" W for a distance of 95.81 feet; 3.) thence coincident with the arc of said curve a distance of 95.81 feet; 4.) thence departing said curve, S 19°37'41" E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2754.79 feet; a delta angle of 4°00'00" and being subtended by a chord bearing S 72°22'19" W for a distance of 192.28 feet; 5.) thence coincident with the arc of said curve a distance of 192.32 feet; 6.) thence departing said curve, S 15°37'41" E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2764.79 feet, a delta angle of 10°00'00" and being subtended by a chord bearing S 79°22'19" W for a distance of 481.93 feet; 7.) thence coincident with the arc of said curve a distance of 482.55 feet; 8.) thence departing said curve, N 05°37'41" W a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2754.79 feet, a delta angle of 4°00'00" and being subtended by a chord bearing S 86°22'19" W for a distance of 192.28 feet; 9.) thence coincident with the arc of said curve a distance of 192.32 feet; 10.) thence departing said curve, N 01°37'41" W a distance of 15.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2739.79 feet, a delta angle of 0°51'58" and being subtended by a chord bearing S 88°48'18" W for a distance of 41.41 feet; 11.) thence coincident with the arc of said curve a distance of 41.41 feet; 12.) thence departing said curve, S 89°14'17" W a distance of 756.70 feet; 13.) thence S 00°45'43" E a distance of 10.00 feet; 14.) thence S 89°14'17" W a distance of 100.00 feet; thence departing the North Right-of-way Boundary of Cortez Boulevard, N 00°00'00" E a distance of 1000.09 feet; thence S 89°14'17" W a distance of 808.06 feet; thence N 00°00'00" E a distance of 650.37 feet; thence N 90°00'00" W a distance of 1570.00 feet; thence S 00°00'00" E a distance of 656.67 feet; thence S 89°13'39" W a distance of 919.42 feet to the POINT OF BEGINNING.

Containing an area of 24980392.95 square feet, 573.471 acres more or less.

A boundary survey prepared by Survtech Solutions, Inc., is in Attachment A.

b. The name, address and phone number of the owner of the land for which application is being made, along with evidence of ownership and written consent of the owner; and all mortgagees to the application for master mining plan approval (MAMPA);

The Bronson Extension is made up of the following parcels:

1. Parcel No. R24 422 18 0000 0070 0000 Key No. 00345451
2. Parcel No. R19 422 19 0000 0050 0000 Key No. 00352594
3. Parcel No. R24 422 18 0000 0000 000A Key No. 1708806

Evidence of ownership, in the form of deed for parcels Parcel No. R24 422 18 0000 0070 0000 Key No. 00345451and Parcel No. R19 422 19 0000 0050 0000 Key No. 00352594 are attached in Attachment B. The names, addresses, and phone numbers of the land owners are:

Old Spring Hill, LLC.
Joseph M. Mason, Jr., Esq. - Registered Agent
101 South Main Street
Brooksville, FL 34601-3336
Phone (352) 796-3383

Thomas E. Bronson - Manager
Post Office Box 68
Brooksville, FL 34605-0068

This MAMPA application proposes approval to extend mining onto three parcels consisting of a total of +/- 573.47 acres. The parcels and the legal descriptions are shown in Attachment A, Boundary Survey prepared by SurvTech Solutions, Inc. The properties are owned by Old Spring Hill, LLC, and is subject to a contractual agreement for mining with CEMEX Construction Materials Florida, LLC. Adjacent to the subject property are lands owned by Thomas E. Bronson, as Trustee of the BMM Land Trust dated July 26, 1991, Joseph M. Mason, Jr., as Trustee of the Spring Hill Land Trust dated December 31, 1990, and Robert A. Buckner and James H. Kimbrough, Jr. as Trustees of the BK Land Trust dated August 26, 1999.

Parcel No. R24 422 18 0000 0000 000A Key No. 1708806 is a county-owned unimproved road running north from S.R. 50 to Fort Dade Avenue known as the Lykes Cutoff. It is anticipated that the Lykes Cutoff will be vacated and that additional right of way needed by the County to align C.R. 491 (Citrus Way) to connect with California Street (instead of Colorado Street) will be provided by the Owners. The Owners and Hernando County staff have discussed and preliminarily agreed upon a property swap which will accomplish the above-stated alignment and inclusion of the Lykes Cutoff property in the map amendment. The goal and intent are to align the road to be consistent with the transportation maps in the County Comprehensive Plan.

All of the above-mentioned properties are contiguous with each other. The properties are located directly south of other mining property owned by CEMEX separated from the CEMEX owned property by Fort Dade Avenue. No local roads will be impacted by the proposed mining extension. All rock processing and sales will remain at the existing location in the Brooksville Quarry.

c. The name, address and phone number of the person, firm or corporation that will be the mine operator and the designated representative;

Mr. James P. Morris - Regional Environmental Manager
CEMEX Construction Materials Florida, LLC.
11430 Camp Mine Road
Brooksville, Florida 34601
(352) 796-3522 Office
(352) 303 -3563 Mobile
jamesp.morris@cemex.com

d. A statement from the applicant regarding the applicability of the development of regional impact (DRI) process;

Mining is exempt from the DRI process.

e. A recent scaled aerial photograph of the property showing the boundary of the proposed area;

A 2017 aerial photograph of the property showing the property boundary is contained in Attachment A.

f. A proposed master mining plan at an appropriate scale (drawing size may not exceed thirty-six (36) inches by forty-eight (48) inches) depicting the following:

1. Existing land use map showing property lines and land owned or controlled, using bearings and distances if available; and the following items 2. through 6.;
2. North arrow, date, plan number by set, and scale;
3. Existing natural and manmade features, including streets, utility lines wetlands, and watercourses;
4. Location of any right-of-way lines, easements and points of egress and ingress from the property;
5. Topographic contours from available mapping;
6. Approximate mapping of existing vegetative communities prepared by a qualified professional, consistent with the Florida Land Use Cover Classification System;
7. Conceptual mining plan using the same scale and size of the existing land use plan showing the following items 8. through 14.;
8. Approximate size, shape and location of proposed mining operation features, including excavation areas, ponds, processing facilities and proposed haul routes for excavated rock;
9. Proposed schedules for excavation (where hardrock and softrock mining are both proposed, separate schedules shall be given);
10. Type of mining (softrock, hardrock, sand, etc.) and estimated depth of excavation in each area;
11. General areas where blasting or use of explosives may be conducted in conjunction with mining operations;
12. The location of existing residential structures within five hundred (500) feet of the proposed mining areas;
13. The existing zoning classification of properties within five hundred (500) feet of the property boundary;
14. A conceptual reclamation plan using the same scale and size of the previously required drawing which includes post mining topography with ten-foot contours and compliance with the intent of section 19-72 of this chapter.

A drawing set containing the information requested above is in Attachment A.

Hard rock mining will occur throughout the property, with soft rock mining occurring as needed immediately following removal of the hard rock which sits atop the soft rock within the geological strata of the site. The soft rock limestone is primarily used for raw feed for the existing Cement Mill at the existing Brooksville Cement Mill South and will be excavated as needed and depending on market conditions both contiguous with hard rock mining and subsequent to hard rock mining.

For this operation, as with the existing Brooksville Quarry, the State of Florida would regulate this activity as Construction Mining Activity. This regulation will require mining using commercial explosives that will be regulated by the State. There are a series of safeguards and requirements that are implemented prior to the permit being issued with all of the items being designed to protect adjacent structures and properties during the use of explosives.

Due to the potential for geologic structure to vary, blasting will be used throughout the Bronson Extension. Blasting operations are conducted using pre-drilled holes to the specific depth required for the excavation. Explosives are three component products designed for safety in transportation and use and are loaded by licensed blasters having complete appropriate US Bureau of Alcohol, Tobacco, and Firearms and Explosives background checks and licensing by the State Fire Marshall. Blasts are designed based upon the proximity of adjacent structures to the site with reductions in explosives completed for close proximity structures.

When blasting is required at the Bronson Extension, a number of safeguards are required. The closest structure not owned by CEMEX will be monitored for ground vibration. An independent seismic firm will install a permanent instrument to be operated independently to provide vibration and air over pressure levels. The limits established by the State of Florida are designed to prevent damage from vibration.

Blasting will be used throughout all areas of the mine plan as needed to allow excavation of the limestone.

g. A preliminary environmental assessment, prepared by a qualified professional, addressing the following:

1. A pedestrian survey of wildlife, including federal, state and locally listed endangered and threatened species and species of special concern;

Several surveys for species considered Endangered, Threatened, or of Special Concern by the U.S. Fish and Wildlife Service (FWS) under 50 CFR 11-12 or the Florida Fish and Wildlife Conservation Commission (FWC) under Chapter 68A-27 F.A.C., were conducted for the property. The Wildlife Assessment Report prepared by Flatwoods Consulting Group, Inc., is in Attachment C. All surveys were performed in accordance with the FWC Florida Wildlife Conservation Guide.

2. A preliminary assessment of water quality relating to impacts of the proposed mining activities on surface and ground water;

The proposed mine is located within the Primary Focus Area (PFA) for Weeki Wachee Spring and River BMPA (Basin Management Action Plan). The mine will comply with all State Requirements for the PFA (373.811 F.S.) to reduce nutrients to the spring(s). 373.811, F.S. prohibits various activities within a priority focus area, such as new domestic wastewater disposal facilities, some new onsite sewage treatment and disposal systems, new facilities for the disposal of hazardous waste, land application of Class A or Class B domestic wastewater biosolids, and new agriculture operations that do not implement best management practices. The proposed mining operations will not include any of these prohibited activities.

Springs and Aquifer Protection Act of 2016 required the development of Basin Management Action Plans for springs in Florida. In June 2018, the Weeki Wachee BMAP was published in response to the 2016 Act. The BMAP also identified a Priority Focus Area for Weeki Wachee Springs. Bronson Extension is within both the BMAP and PFA.

BMAP adapted by Order June 29, 2018 BMAP focuses on reducing nitrogen loading to ground water and identifies sources of nitrogen loading to ground water, with emphasis on On Site Sewage Treatment and Disposal Systems. Mining is not mentioned in BMAP as it is not considered a significant source.

Unattenuated atmospheric deposition of nitrogen is reported to be 8 lbs of nitrogen/acre/year (Weeki Wachee Basin Management Action Plan, June 2018). According to the BMAP, biochemical activity in soil and plant uptake results in a reduction of nitrogen loading to ground water to 7.2 lbs of nitrogen/acre/year. That represents the current condition of the site.

Overburden soil and vegetation will be removed and set it aside as the mining progresses. Atmospheric deposition of nitrogen then goes to 8 lbs/ac/year which is a 0.8 lbs/ac/year increase from the current conditions. During mining, agricultural fertilizer and livestock waste contributions are removed. The BMAP states that these two sources account for 27 percent of nitrogen loading to ground water in the Weeki Wachee Springshed. The result is an overall net reduction in nitrogen loading to ground water during mining.

The direction of ground water flow at the propoerty is determined to be west-northwest, using the potentiometric surface elevation contours developed by the SWFWMD. The hydraulic gradient calculated from the potentiometric surface elevation contours is +/- 0.000385 feet/foot in westerly northwesterly direction. The USGS reports the transmissivity of the upper Floridan aquifer in the vicinity of the Bronson Extension to be on the order of 576,0000 $feet^2$/day with a thickness of on the order of 200 feet (USGS Professional Paper 1737-A). Using an effective porosity of the limestone

within the upper Floridan aquifer on the order of 40 percent (USGS Professional Paper 1737-A), the calcuated average linear velocity of ground water flow within the upper Floridan aquifer in the site area is on the order or 2.8 feet per day. During the 20-year life on mine, a molecule of nitrogen that enters the aquifer through atmospheric deposition will move less than 20,000 feet from the point of entry. Given that Weeki Wachee Spring is +/- 40,000 feet from closest edge of Bronson Extension and not directly downgradient from the extension area, nitrogen from atmospheric deposition will not impact the spring because it will not have migrated that far in the 20-year life of mine.

After mining is complete, approximately eight (8) feet of soil (formerly overburden) will be placed on the quarry floor. The biochemical attenuation and plant uptake activities will resume taking nitrogen loading to ground water from atmospheric deposition from 8 lbs/ac/year to 7.2 lbs/ac/year - the pre-mining condition. Agricultural fertilizer and livestock waste contributions will not continue, thereby resulting in a net overall decrease in nitrogen loading to ground water.

There will be no significant nor measurable impacts to drainage or ground water quality. Current surface drainage is shown in Attachment A. The central and eastern portion of the subject property lies within the Peck's Sink Overflow drainage basin. The western portion of the property is internally drained. During mining, drainage in the mined area will be internal to the mine. No discharge will be allowed from the excavation areas. Drainage outside the mine excavation footprint and overburden storage areas will remain as it is today. Drainage and runoff calculations prepared by the Colinas Group, Inc., are contained in Attachment G.

Surface water management and drainage within the permitted mine area will be governed by conditions within an ERP. Except for three relatively small, isolated areas, the property is located within FEMA Zone X. Zone X is above the 500-year flood elevation. The three small areas are designated as Zone A, within the 100-year flood zone. The flood zones are shown in the drawings in Attachment A.

Water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed. During mining, drainage in the mined area will be internal to the mine and will not have an effect or be discharged to on-site wetlands and other surface waters that will be preserved or will remain undisturbed. The MAMPA footprint proposed is +/- 494.17 acres and the proposed excavation area of +/-314.97 acres. The Bronson Extension proposes to impact 3.78 acres of isolated wetlands. Of the wetlands proposed to be impacted, a total of 1.52 acres are isolated wetlands less than 0.5 acre in size. Mitigation details for the 2.26 acres of impacts to those wetlands greater than 0.5 acre in size will be included in the Environmental Resource Permit for which an application is currently being prepared. An Environmental Narrative prepared by Flatwoods Consulting Group, Inc., is included in Attachment F.

Ground water quality will not be impacted by the mining operations and all mining will be conducted a minimum of eight feet above the potentiometric surface of the upper Floridan aquifer. Between 2006 and 2016, the potentiometric surface underlying the property was typically on the order of +/- 25 feet

NGVD with an historic high of approximately 32 feet NGVD. There is no surficial aquifer in the subject property area. Buffer zones will be a minimum of 50 feet from the mine limit to the adjacent wetlands.

Additionally, the mining at the Bronson Extension will be conducted using conventional excavation methods and is performed above the water table and therefore will not result in ground water drawdown nor impacts the adjacent wetlands. There will be no dewatering of the Bronson Extension.

Ground water quality will not be impacted by the mining operations. All mining will be conducted above the potentiometric surface of the Floridan aquifer. There is no surficial aquifer in the subject property area.

The proposed MAMPA will not introduce any new demands on public facilities since plant operations will remain at existing levels and will not change in location. Impacts on public facilities and services will be minimal. The mining operation will not be increasing its operational level, but only be extending its limerock resources.

Water quality and compliance with State and federal requirements will be maintained during the mining and reclamation phases for the mines. Best management practices for erosion and sedimentation control will be employed throughout the mining and reclamation phases of the project. An Erosion and Sedimentation Plan is in Attachment H.

Special Protection Areas
During previous discussions, County staff indicated there are four different sink hole features on the subject property and that all four are considered Special Protection Areas (SPAs). The staff also stated that the four features warranted further investigation. The Colinas Group, Inc., (TCG) conducted the further investigation of three of the four features. The findings of the investigation are presented in Attachment I.

It is understood that the quarry is considered a SPA. According to Strategy 10.02B(4): Special Protection Areas (SPAs) includes areas with land use approval processes for mining whether or not actual excavation has taken place.

Strategy 10.02B(1) states that Wellhead Protection Areas (WHPAs) shall be designated for all community public water supplies. The quarry is not located within a WHPA.

3. A preliminary assessment of air quality relating to impacts of the proposed mining on air quality, including methods for mitigating negative impacts.

The only potential air quality impact for the Bronson Extension will be the control of dust from heavy equipment use. CEMEX will employ best management practices to minimize dust associated with

mining operations at the Bronson Extension. Water trucks will be used daily or as needed throughout operations to reduce and control the dust generated by heavy equipment use.

In addition, the existing Brooksville Quarry and proposed Bronson Extension will operate under an Air Permit issued by the Florida Department of Environmental Protection (FDEP). This permit authorizes the operation of an air pollution source consisting of a limestone quarrying facility, processing plants, and other associated activities.

h. A list of other permits required for the operation of the mine and a copy of those permits already held by the mining operator;

The Bronson Extension will add limerock reserves and ultimately extend the life of the existing Brooksville Quarry operations. The following permits for the Bronson Extension are currently being pursued.

1. Environmental Resource Permit from the Florida Department of Environmental Protection
2. Master Mining Plan Approval (MAMPA) from Hernando County.
3. Master Operating Plan (MOPA) from Hernando County.
4. Water Use Permit from the Southwest Florida Water Management District.

i. A list of property owners within one hundred fifty (150) feet of the property boundaries, along with their property appraiser key numbers and addresses;

The list of property owners with five hundred (500") of the property boundaries is in Attachment D. The data was obtained from the Hernando County Property Appraiser.

j. The department may specifically request such reasonable additional information as may be necessary to evaluate the impacts of the proposed mining to ensure that the impacts are consistent with this chapter. The Board of County Commissioners shall be informed of such request for additional information at a regularly scheduled meeting. If the applicant desires to dispute the necessity for the information requested, the applicant may do so at that time.

CEMEX agrees that the department may specifically request such reasonable additional information as may be necessary to evaluate the impacts of the proposed mining to ensure that the impacts are consistent with this chapter.

(2) The application may be accompanied by a proposed mining operation plan which covers the first phase of the mining operation. The mining operation plan must meet the requirements of section 19-32 of this chapter.

The conceptual mine plan meeting the requirements of Section 19-32 of this Chapter is contained in Attachment A.

(3) A signed agreement must be submitted that provides the county with the right of ingress and egress to the mining property at any time, provided that reasonable notice is given to the operator, the access is escorted and other proper check-in procedures are followed.

The signed agreement is in Attachment E, providing the County with the right of ingress and egress to the mining property at any time, provided that reasonable notice is given to the operator, the access is escorted and other proper check-in procedures are followed.

(4) Each application shall be accompanied by the required review fee established by the board of county commissioners, in a separate resolution adopted simultaneous with the adoption of this chapter.

A check for the required review fee is included with the application.

HERNANDO COUNTY DEVELOPMENT DEPARTMENT
789 Providence Blvd.
Brooksville, FL 34601-2893

Master Mining Plan Approval (MAMPA) Application

Date July 3, 2019

This application, with all exhibits attached, must be completed and filed with this office and approved as sufficient before advertisement is made for a public hearing.

1. **Mining company and address:** CEMEX Construction Materials Florida, LLC.
   11430 Camp Mine Road
   Brooksville, FL 34601

2. **Designated responsible person:** James P. Morris - Regional Environmental Manager
   a. **Address:** 11430 Camp Mine Road, Brooksville, FL 34601
   b. **Telephone:** (352) 303-3563

3. **Date of Existing Approved Master Mining Plan:** January 26, 2010

4. **The following items must be attached:**
   a. **Legal description, including total acreage**
   b. **Copy of proof of ownership**
   c. **Consent of owner/mortgagees**
   d. **DRI statement**
   e. **Aerial map**
   f. **Master Mining Plan with all info listed in Section19-31**
   g. **Environmental assessment addressing wildlife, water quality and air quality, if required**
   h. **List/copy of previous permits**
   I. **List of property owners with Key number within 150'**
   j. **Signed agreement of access i.e. varinnces**

5. **This application will be reviewed for sufficiency within thirty (30) days and written notification will follow. Any insufficient items will result in notification and the application due date will be extended to afford the opportunity to submit sufficient information.**

6. **This application and all supporting documentation offered for review are true and bona fide copies. All information contained herein is correct to the best of my knowledge.**

Signature of Applicant

Ryan E. Mahoney - Vice President of Planning

STATE OF FLORIDA
COUNTY OF HERNANDO

The foregoing instrument was acknowledged before me this 3rd **day of** July, **20**19, **by** Ryan Mahoney.

(Signature of Notary Public)

Karen Walden

(Print, Type, or Stamp Commissioned Name of Notary Public

Personally Known _____ **OR Produced Identification** _____

Type of Identification Produced _____

Karen Walden
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG100244
Expires 5/2/2021

ATTACHMENT A

DRAWINGS

MASTER MINING PLAN APPROVAL
FOR
BROOKSVILLE QUARRY
- BRONSON EXTENSION -

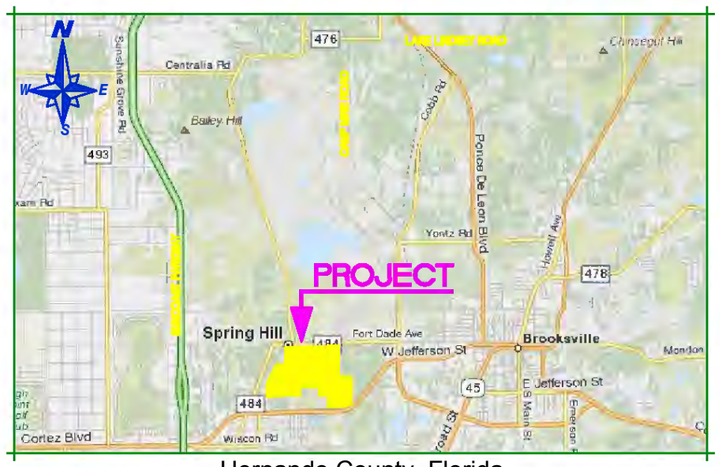
OWNER

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC

11430 CAMP MINE ROAD

BROOKSVILLE, FLORIDA 34601

(352) 796-3522



Hernando County, Florida
Sections 24 & 25, T. 22 S., R18 E.
Sections 19 & 30, T. 22 S., R19 E.

Sunshine State One Call 811 OF FLORIDA, INC. OR CALL 48 HOURS BEFORE YOU DIG It's the Law! 800-432-4770 811 or WWW.CALLSUNSHINE.COM

CALL 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY

CEMEX
Building a better future

NOTES:

1) ALL WORK SHALL BE IN ACCORDANCE WITH THE MOST CURRENT CONSTRUCTION STANDARDS FOR THE STATE OF FLORIDA.

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

INDEX OF DRAWINGS

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36178
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3801
(863) 669-9141

Date:

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 6/20/19

N

GRAPHIC SCALE (FT)

ZONING INFORMATION OBTAINED FROM:
HERNANDO COUNTY
GENERAL ZONING AND SPECIAL USES MAP
DATED JUNE, 2008

REV. No.	DATE	DESCRIPTION	CHK BY:

MINING

EXISTING MINE BOUNDARY

AGRICULTURAL

CITRUS WAY (CR 491)

AGRICULTURAL

FORT DADE AVE (CR 484)

RESIDENTIAL

AGRICULTURAL

AGRICULTURAL

AGRICULTURAL

FORT DADE AVE (CR 484)

AGRICULTURAL

CPDP

AGRICULTURAL

OWNERSHIP GROUP BOUNDARY

OWNERSHIP GROUP BOUNDARY

AGRICULTURAL

RESIDENTIAL

RESIDENTIAL

AGRICULTURAL

AGRICULTURAL

CITY

AR

AGRICULTURAL

CPDP

OWNERSHIP GROUP BOUNDARY

50

CORTEZ BLVD

C2 C1

PDP(OP)WITH C1 USE

CPDP

AGRICULTURAL

RESIDENTIAL

COMMERCIAL

R1A

AGHOSPITAL

PDP(MF)

LEGEND

AGREEMENT BOUNDARY (573.47± ac)

OWNERSHIP GROUP BOUNDARY

EXISTING ACTIVE MINE BOUNDARY

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
www.thecolinasgroup.com

CEMEX

Building a better future

CEMEX CONSTRUCTION
MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: April 6, 2018
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

AERIALS OBTAINED FROM FDOT
https://fdotewp1.dot.state.fl.us/AerialPhotoLookUpSystem/
Dated: January, 2017

REV. No.	DATE	DESCRIPTION	CHK BY:

EXISTING MINE BOUNDARY

FORT DADE AVE (CR 484)

CITRUS WAY (CR 491)

MINING AGREEMENT BOUNDARY

WETLAND A

WETLAND I

WETLAND D

WETLAND H

WETLAND B

WETLAND C

WETLAND G

WETLAND E

WETLAND F

DRAINAGE BASIN

INTERNALLY DRAINED DRAINAGE BASIN

PECKS SINK DRAINAGE BASIN

PECKS SINK OVERFLOW DRAINAGE BASIN

Mineable Area
±494.17 ac.

OWNERSHIP GROUP BOUNDARY

CORTEZ BLVD

WETLAND ACREAGE

1.13 ac	= Wetland A
2.16 ac	= Wetland B
0.30 ac	= Wetland C
0.76 ac	= Wetland D
0.05 ac	= Wetland E
0.51 ac	= Wetland F
0.09 ac	= Wetland G
0.80 ac	= Wetland H
0.41 ac	= Wetland I
6.21 ac	= Total

N

GRAPHIC SCALE (FT)

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- EXISTING ACTIVE MINE BOUNDARY
- OWNERSHIP GROUP BOUNDARY
- 110 EXISTING CONTOUR (FEET NGVD)
- WETLAND
- DRAINAGE BASIN
- SURFACE DRAINAGE DIRECTION

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
Lakeland, FL 33803
Phone: (863) 669-1742 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

cemex
Building a better future

PRE-DEVELOPMENT DRAINAGE PLAN

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: April 6, 2018
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 6/27/19

N

GRAPHIC SCALE (FT)

REV. No.	DATE	DESCRIPTION	CHK BY:

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
Lakeland, FL 33803
Phone: (863) 669-1742 FAX: (863) 669-1742
WWW.THECOLINASGROUP.COM

CEMEX
Building a better future

POST-DEVELOPMENT DRAINAGE PLAN

BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

INTERNALLY DRAINED

DRAINAGE BASIN

FORT DADE AVE (CR 484)

CITRUS WAY (CR 491)

MINING AGREEMENT BOUNDARY

CONCEPTUAL EXCAVATION LIMITS

PECKS SINK

OWNERSHIP GROUP BOUNDARY

PECKS SINK OVERFLOW

CITRUS WAY (CR 491) (EMPLOYEES ENTRANCE)

CORTEZ BLVD

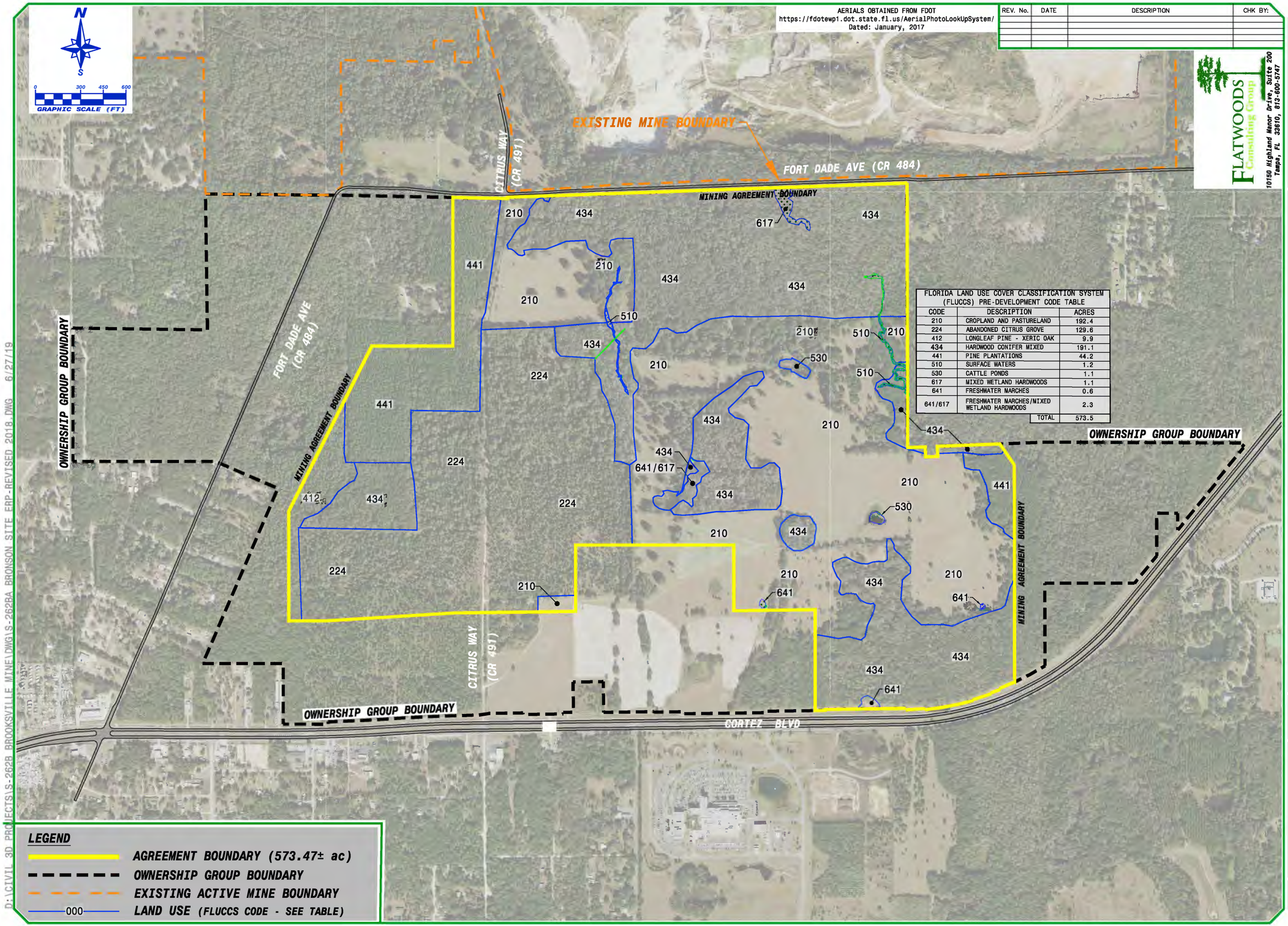
50

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- CONCEPTUAL EXCAVATION LIMITS
- 100 EXISTING CONTOUR (FEET NGVD)
- DRAINAGE BASIN
- DRAINAGE FLOW

JOB #:	S-262BA	DATE:	April 6, 2018
SCALE:	as noted	CALC BY:	MRS
FIELD BY:	n/a	DRAWN BY:	gd
CHECKED BY:	MRS		

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-8141



REV. No.	DATE	DESCRIPTION	CHK BY:

FLATWOODS Consulting Group
10150 Highland Manor Drive, Suite 200
Tampa, FL 33610, 813-600-5747

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

CEMEX
Building a better future

FLORIDA LAND USE COVER CLASSIFICATION SYSTEM (FLUCCS) PRE-DEVELOPMENT CODE TABLE

CODE	DESCRIPTION	ACRES
210	CROPLAND AND PASTURELAND	192.4
224	ABANDONED CITRUS GROVE	129.6
412	LONGLEAF PINE - XERIC OAK	9.9
434	HARDWOOD CONIFER MIXED	191.1
441	PINE PLANTATIONS	44.2
510	SURFACE WATERS	1.2
530	CATTLE PONDS	1.1
617	MIXED WETLAND HARDWOODS	1.1
641	FRESHWATER MARCHES	0.6
641/617	FRESHWATER MARCHES/MIXED WETLAND HARDWOODS	2.3
	TOTAL	573.5

LEGEND
- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- 000 LAND USE (FLUCCS CODE - SEE TABLE)

PRE-DEVELOPMENT FLORIDA LAND USE COVER CLASSIFICATION SYSTEM (FLUCCS) PLAN

BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB #: S-262BA DATE: April 6, 2018
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

P:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWGS\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 6/27/19

REV. No.	DATE	DESCRIPTION	CHK BY:

GROUND SURFACE
EL ±110 FT NGVD

QUARRY FLOOR
EL ±32 FT NGVD
(TYPICAL)

POTENTIOMETRIC WATER
TABLE EL ±25 FT NGVD
(TYPICAL)

TYPICAL CROSS-SECTION OF ACTIVE MINING
not to scale

N

GRAPHIC SCALE (FT)

EXISTING MINE BOUNDARY

PROPOSED ENCLOSED OVERHEAD CONVEYOR

CITRUS WAY (CR 491)

FORT DADE AVE (CR 484)

OWNERSHIP GROUP BOUNDARY

POTENTIAL FUTURE RESERVES

200'

100'

150'

50'

100'

CITRUS WAY (CR 491) (EMPLOYEES ENTRANCE)

400'

CORTEZ BLVD

50

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- MAMPA FOOTPRINT (494.17± ac)

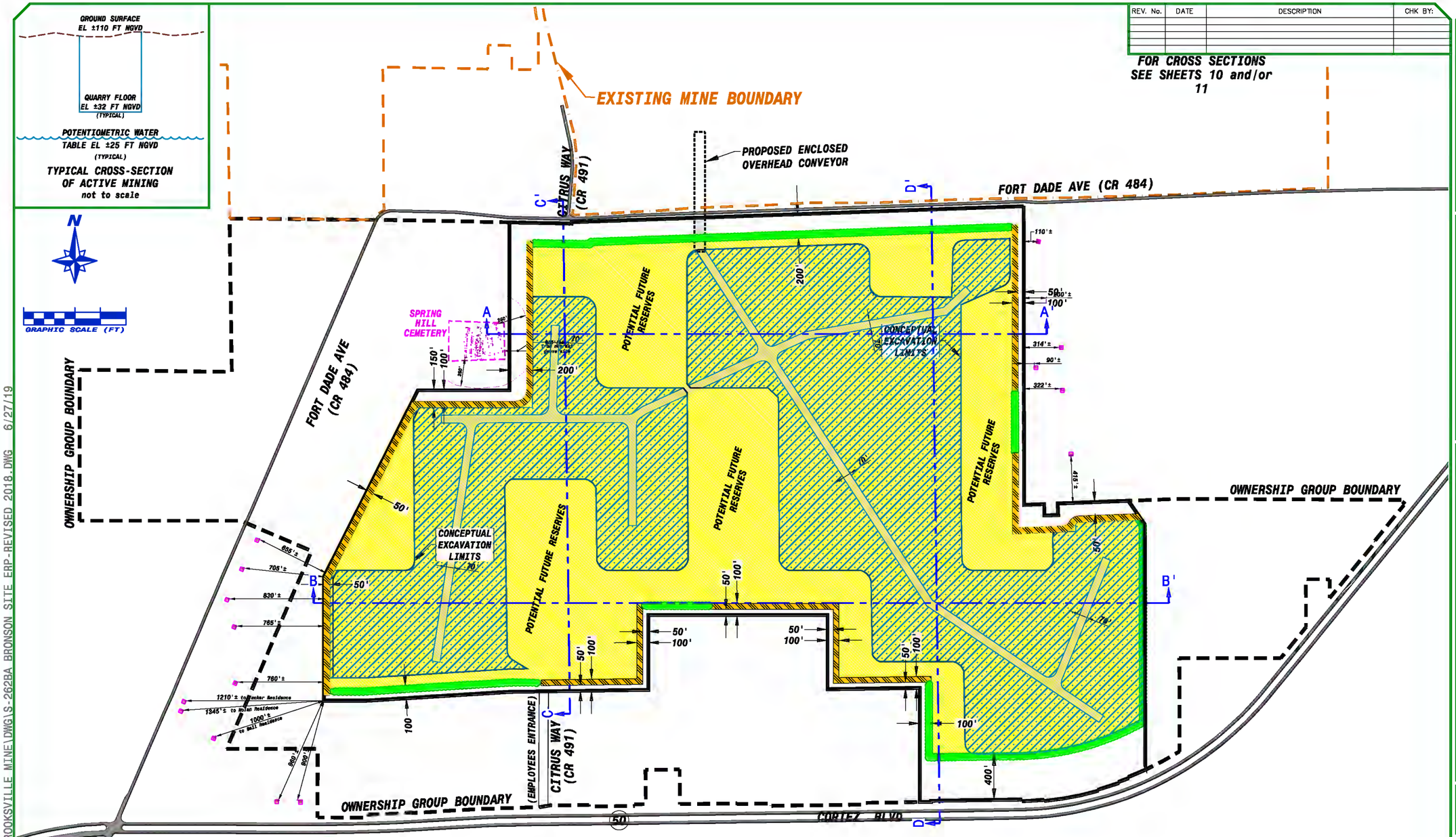
THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
www.thecolinasgroup.com

CEMEX
Building a better future

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-2628A DATE: April 6, 2018
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141



REV. No.	DATE	DESCRIPTION	CHK BY:

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- QUARRY AREA (314.97± ac)
- HAUL ROAD - 70'± WIDE
- RESIDENTIAL STRUCTURE (Approximate Location)
- VISUAL BERM (Approximate 10' High)
- VISUAL BARRIER (Using Existing Trees)
- MAMPA FOOTPRINT (494.17± ac)

Berms:
The following are requirements for berms where utilized to augment vegetative buffers:
(1) The berm will generally run parallel to, and no closer than fifty (50) feet from, the property line. The above two (2) standards may be modified where there are impeding physical features (wetlands, etc.), if necessary.
(2) The berm will be built to the height necessary (not to exceed ten (10) feet above the natural surface of the ground) to shield mining activity located within one thousand five hundred (1,500) feet of the property line (excluding booms, towers, stockpiles or other similar items which extend above the buffer) so that it cannot be viewed through the buffer from adjoining properties when viewed from the property line.
(3) The berm will be stabilized with the planting of vegetation. Sloping requirements for the exterior face of the berm will not exceed 2:1.
(4) Adequate control will be provided to protect the adjacent properties from additional runoff caused by the earthen berm.
(5) The following activities are allowed and may occur within the setbacks and buffer areas:
(a) Within setbacks, the following activities are allowed and may occur: Roads, fences, berms, utility services, buffers, agriculture, silviculture, reclamation, and monitoring.
(b) Within buffers, the following activities are allowed and may occur: Berms (for a buffer), reclamation, monitoring and fences located within the inner or outer five (5) feet of the vegetated screening.
(6) Reduction in requirements. The county may eliminate or reduce the setback, buffer and berm standards set out above if one of the following circumstances exist:
(a) Written authorization has been provided from the adjacent property owner(s) agreeing to the elimination of, or reduction in, setback, buffer and/or berm requirements. This will occur on various portions of this Bronson Extension property.
(b) A variance will obtained in accordance with section 10-6 of this chapter.

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #6
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
www.thecolinasgroup.com

CEMEX
Building a better future

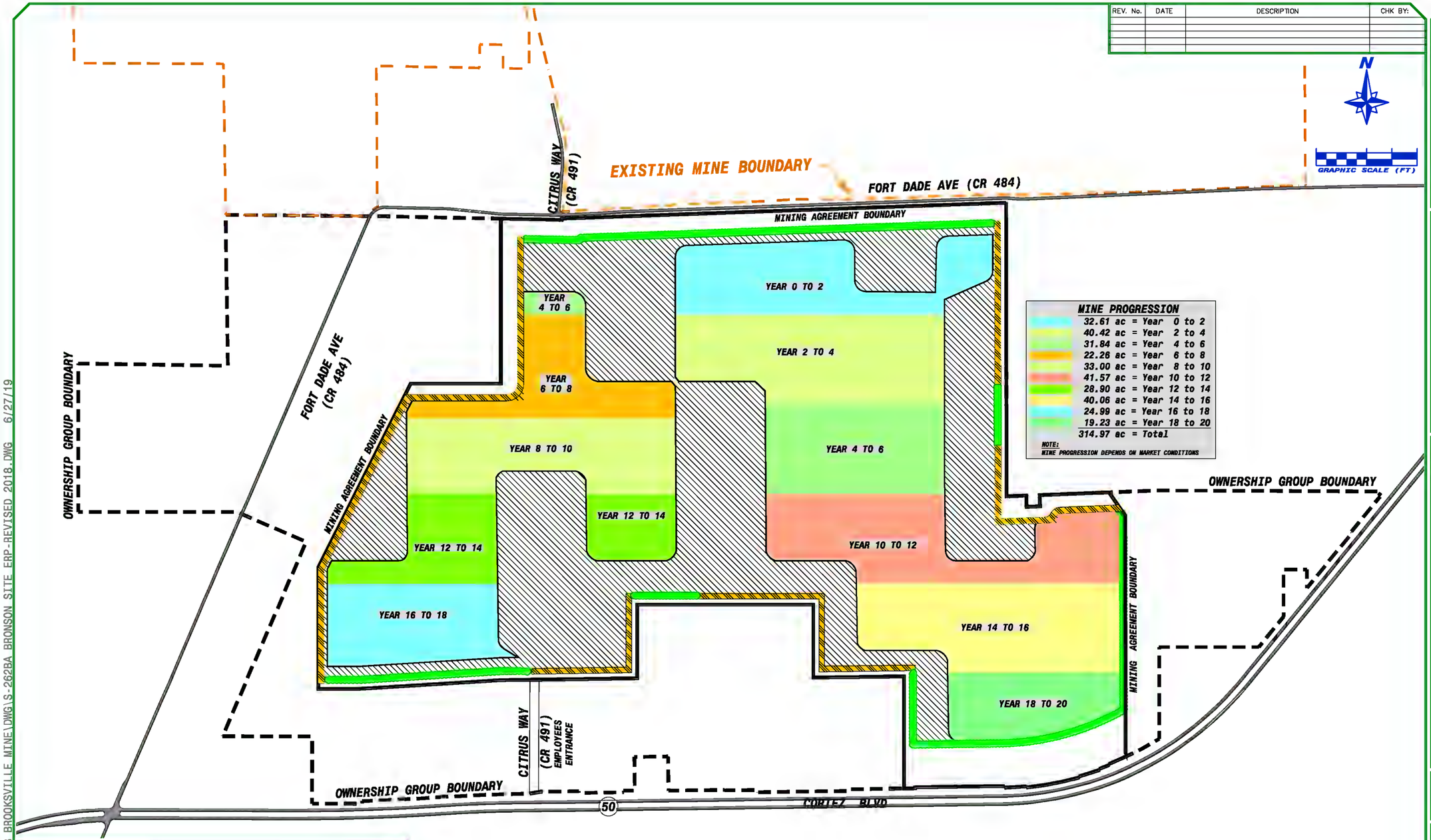
CEMEX CONSTRUCTION
MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: April 6, 2018
SCALE: as noted CALC BY: WRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: WRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 6/27/19

REV. No.	DATE	DESCRIPTION	CHK BY:



MINE PROGRESSION

32.61 ac	= Year 0 to 2
40.42 ac	= Year 2 to 4
31.84 ac	= Year 4 to 6
22.26 ac	= Year 6 to 8
33.00 ac	= Year 8 to 10
41.57 ac	= Year 10 to 12
28.90 ac	= Year 12 to 14
40.06 ac	= Year 14 to 16
24.99 ac	= Year 16 to 18
19.23 ac	= Year 18 to 20
314.97 ac	= Total

NOTE:
MINE PROGRESSION DEPENDS ON MARKET CONDITIONS

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- VISUAL BERM (Approximate 10' High)
- VISUAL BARRIER (Using Existing Trees)
- POTENTIAL FUTURE RESERVES

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
www.thecolinasgroup.com

CEMEX
Building a better future

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: April 6, 2018
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 6/27/19

REV. No.	DATE	DESCRIPTION	CHK BY:

FOR CROSS SECTIONS
SEE SHEETS 10 and/or 11

EXISTING MINE BOUNDARY

CITRUS WAY (CR 491)

FORT DADE AVE (CR 484)

MINING AGREEMENT BOUNDARY

OWNERSHIP GROUP BOUNDARY

CITRUS WAY (CR 491) EMPLOYEES ENTRANCE

CORTEZ BLVD

GRAPHIC SCALE (FT)

Reclamation Notes:

1. Vegetation will occur or be re-established throughout the site, except for approved sheer walls, resulting water bodies, areas to be utilized as settling ponds or areas approved by Hernando county for other land uses.
2. Twenty (20) percent of the area will be retained or re-established native vegetation consistent with that existing on the site prior to the mining activity.
3. Revegetation of reclaimed areas will be designed to provide for natural vegetative associations which will mature to productive wildlife habitat. Revegetation will consist primarily of perennial species native to the area or other species approved by Hernando County and the Florida Department of Environmental Protection (FDEP). The methods of its establishment will be specified and will be consistent with accepted and recommended agronomic practices. Whenever possible, the species of vegetative cover reestablished will closely resemble those found on the active mining area prior to mining operations.
4. All overburden and spoil banks will be left in a configuration which is in accordance with accepted conservation practices and which is consistent with the approved future use of the land or a proposed use for which a rezoning or comp plan amendment has been filed. Whenever practical, said overburden and spoil banks will be used as topsoil to facilitate revegetation of slopes and other surfaces. Overburden will be retained on site in sufficient quantities to support reclamation purposes. Any removal of soil offsite will be approved as part of the mining operation plan approval (MOPA) with Hernando County and the Florida Department of Environmental Protection (FDEP)
5. If nuisance exotic vegetative species have occurred naturally in the area and the effects are determined by the department to be hazardous to reclamation efforts, the Cemex will use acceptable control mechanisms to eliminate the nuisance species.
6. Except for sheer walls, the final slopes after reclamation will not exceed a steepness of three(3) horizontal feet to one vertical foot.
7. The establishment of wetlands on a portion of the reclaimed area, if feasible, will be considered.
8. Provisions for safety to persons, livestock, and to adjoining property has been provided.

   Where a sheer wall occurs above the water line and within one thousand (1,000) feet of mining property boundaries, it will be sloped. Slopes will not exceed two (2) horizontal feet to one vertical foot.
10. The slope will be stabilized, if necessary, with the planting of vegetation compatible with the soil type and approved by Hernando County and the Florida Department of Environmental Protection (FDEP).
11. Where the sheer wall is not within one thousand (1,000) feet of the mining property boundaries or an access area, a transition shelf designed in accordance with the rules of Hernando County and the Florida Department of Environmental Protection (FDEP) will be established.

CROSS SECTION E-E'
not to scale

CROSS SECTION F-F'
not to scale

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #6
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

CEMEX
Building a better future

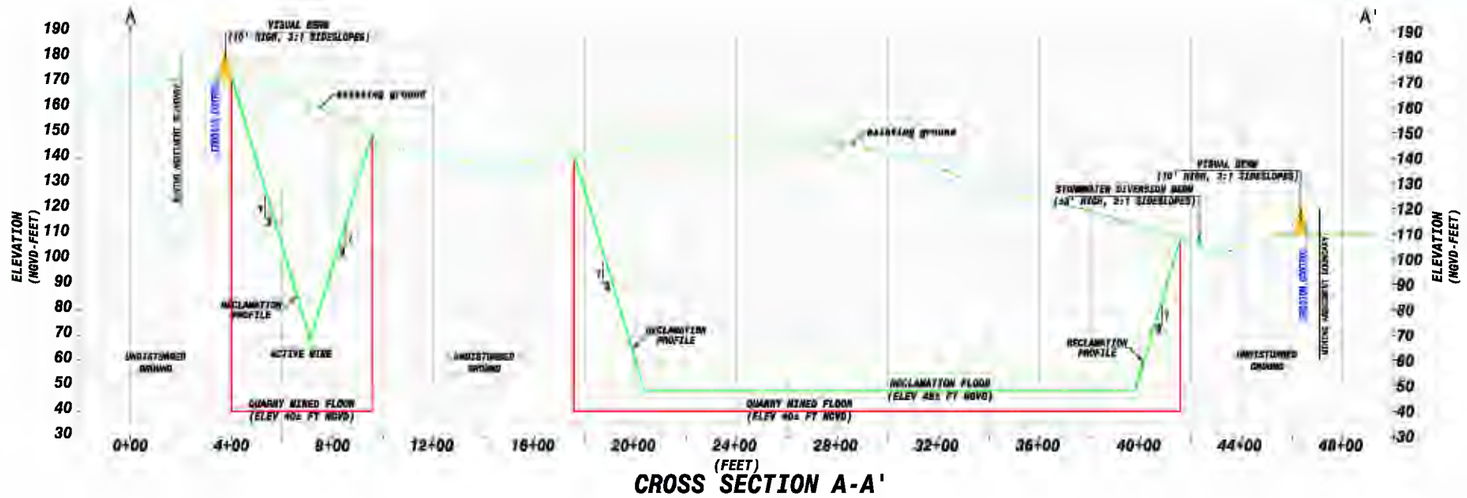
CONCEPTUAL RECLAMATION PLAN

CEMEX CONSTRUCTION
MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

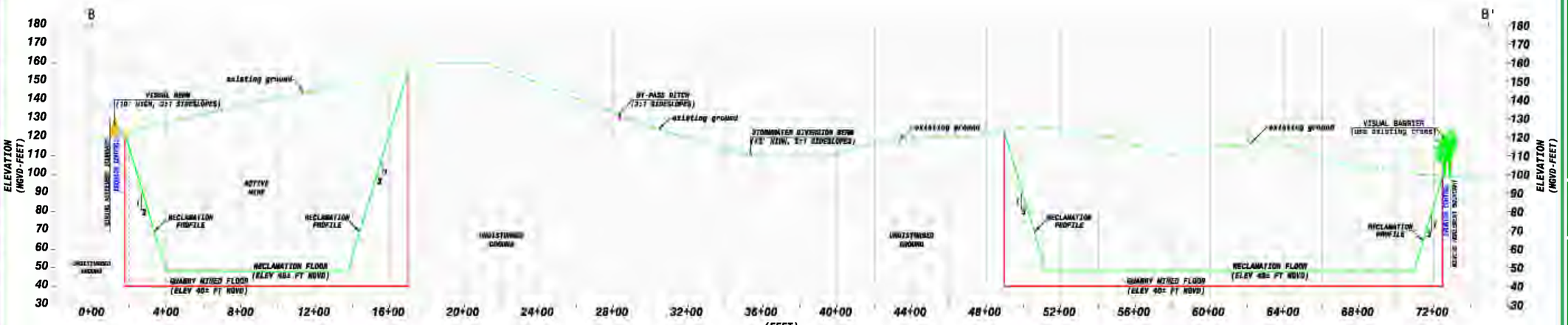
JOB # S-2628A DATE: April 6, 2018
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

REV. No.	DATE	DESCRIPTION	CHK BY:



CROSS SECTION A-A'



CROSS SECTION B-B'

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
www.thecolinasgroup.com

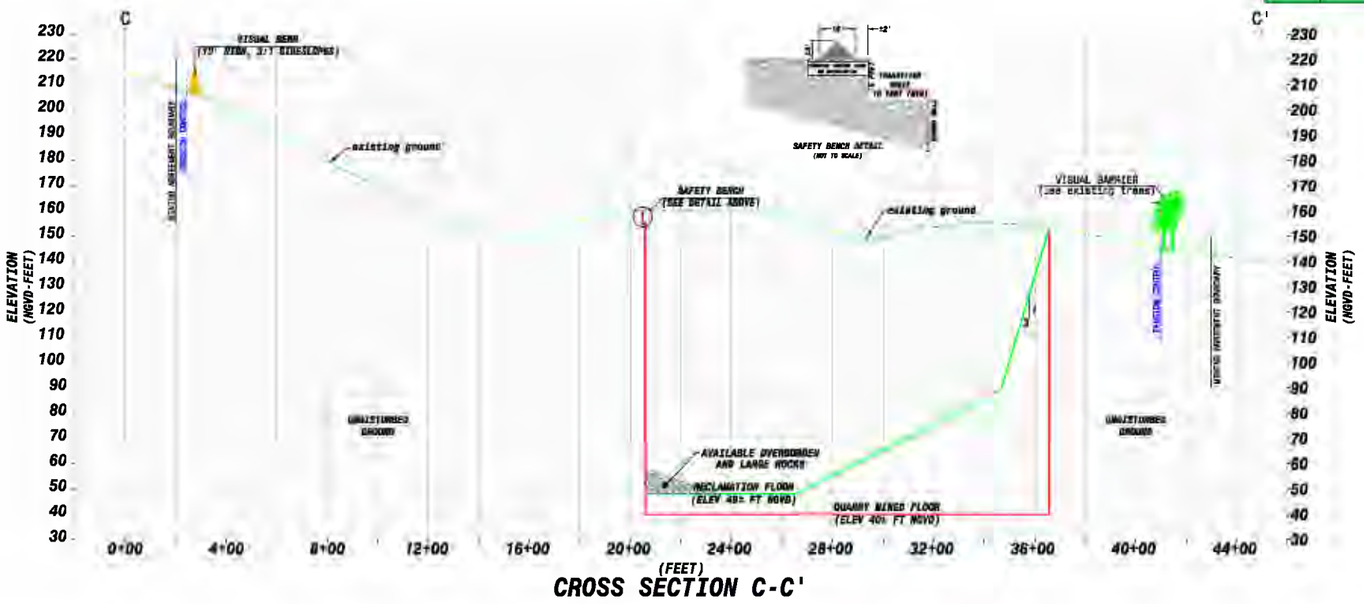
CEMEX
Building a better future

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

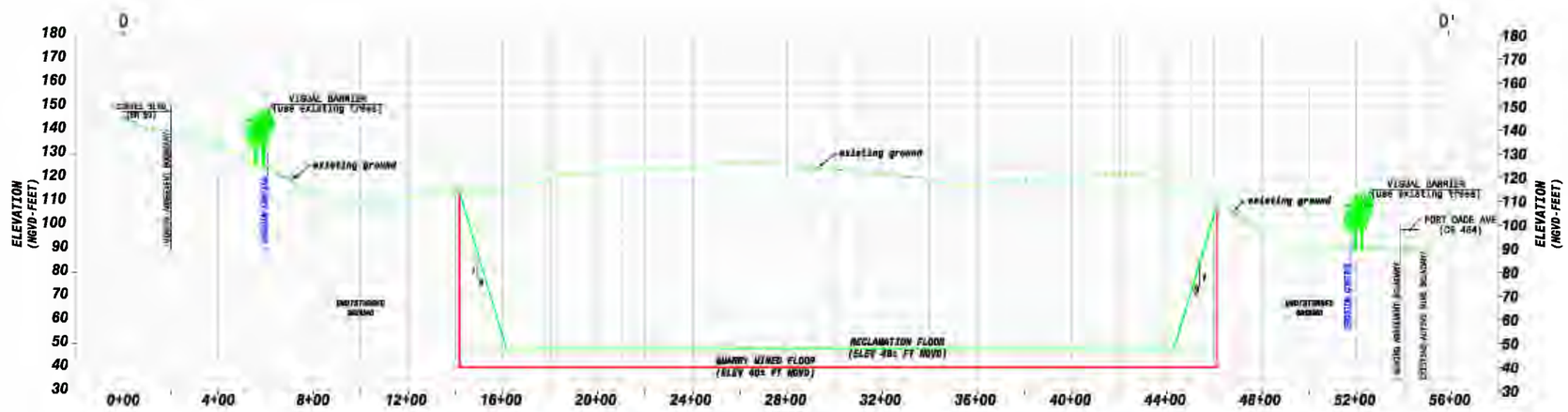
JOB # S-2628A DATE: April 8, 2016
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

REV. No.	DATE	DESCRIPTION	CHK BY:



CROSS SECTION C-C'



CROSS SECTION D-D'

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
www.thecolinasgroup.com

CEMEX
Building a better future

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-2628A DATE: April 8, 2016
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

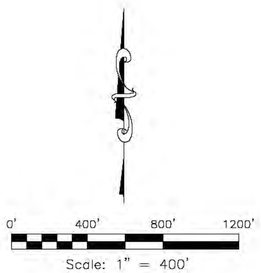
ATTACHMENT B

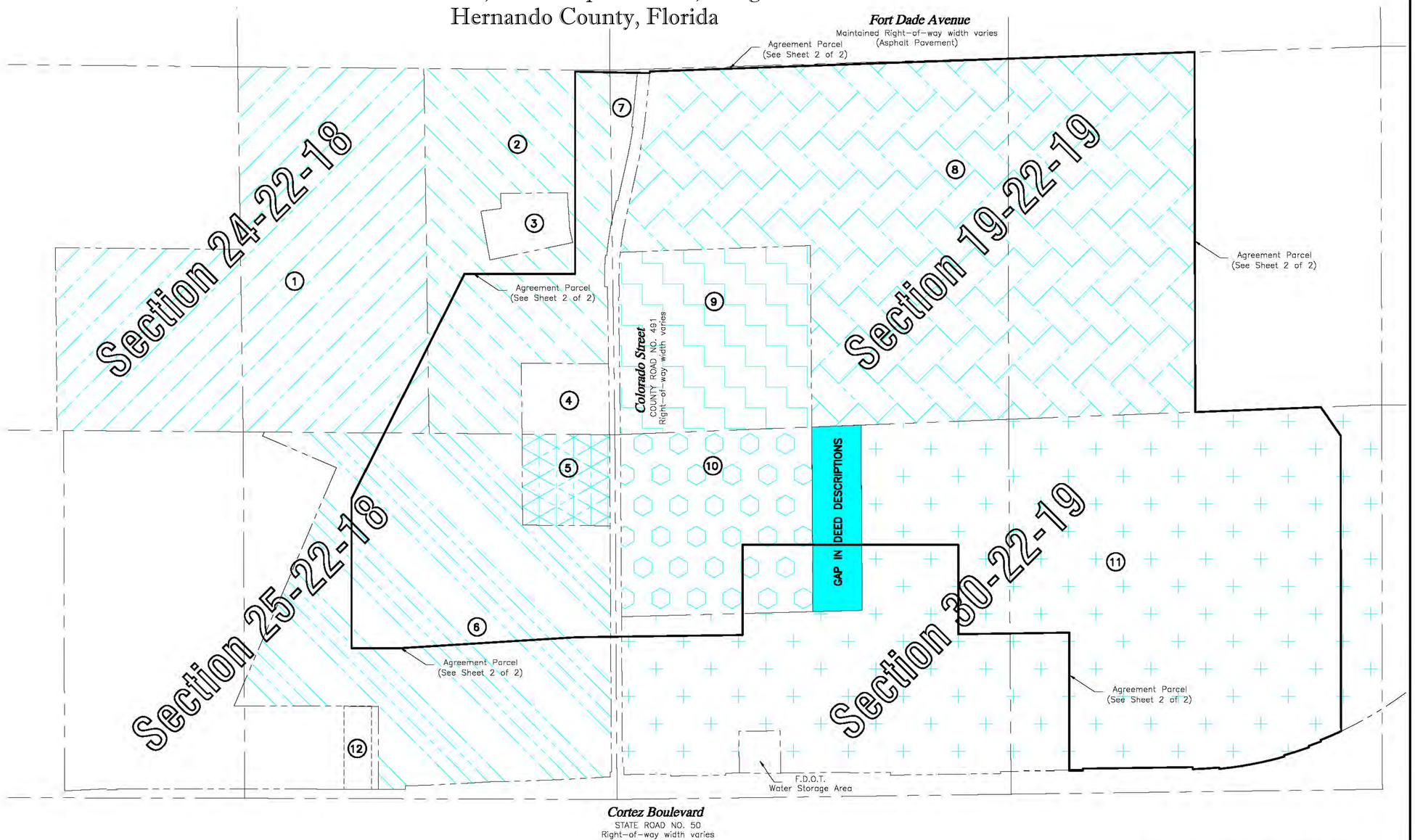
OWNERSHIP INFORMATION

Sketch and Description
CEMEX - Agreement Parcel
Sections 24 & 25, Township 22 South, Range 18 East
Sections 19 & 30, Township 22 South, Range 19 East
Hernando County, Florida

Legend & Abbreviations

P.S.M. Professional Surveyor and Mapper
F.D.O.T. Florida Department of Transportation
Id. Identification





Property Owners

① R24 422 18 0000 0110 0010
Mason Joseph M. Trustee of the Spring Hill Land Trust
O.R. 805, Page 0872
(½ Interest)

R24 422 18 0000 0120 0010
Buckner Robert & James Kimbrough JR Trustees
O.R. 1313, Page 0674
(½ Interest)

② R24 422 18 0000 0080 0000
Bronson Thomas E
TR BMM Land Trust
O.R. 830, Page 0738

③ R24 422 18 0000 0160 0000
Spring Hill Cemetery
c/o Alyce Walker
None Listed

④ R24 422 18 0000 0070 0000
Zenada Partners
O.R. 2217, Page 1875

⑤ R25 422 18 0000 0050 0000
Zenada Partners
O.R. 2117, Page 1875

⑥ R25 422 18 0000 0030 0000
Robert Buckner & James Kimbrough
O.R. 1313, Page 0674
(½ Interest)

R25 422 18 0000 0030 0010
Mason Joseph M. Trustee of Spring Hill Land Trust
O.R. 805, Page 0782
(½ Interest)

⑦ R19 422 19 0000 0050 0010
Bronson Thomas E
TR BMM Land Trust
O.R. 830, Page 0738

⑧ R19 422 19 0000 0050 0000
Bronson Thomas E
TR BMM Land Trust
O.R. 830, Page 0738

⑨ R19 422 19 0000 0120 0000
Zenada Partners Limited Partnership
O.R. 2117, Page 1875

⑩ R30 422 19 0000 0070 0000
Mason Joesph M. Trustee of Spring Hill and Trust
O.R. 805, Page 0872

R30 422 19 0000 0050 0000
Buckner Robert & James Kimbrough Jr.
O.R. 1313, Page 0674

Both Hold a ½ Interest in the Parcel

⑪ R30 422 19 0000 0010 0000
Bronson Thomas E
TR BMM Land Trust
O.R. 830, Page 0738
(Missing the W ½ of the W ½ of the NE ¼ of the N.W¼ per less out!)

⑫ R30 422 19 0000 0010 0000
Mason Joseph M Jr &
James H Kimbrough Jr Trustees
O.R. 1068, Page 1892

Surveyor's Notes

1.) Not valid without the signature and original raised seal of a Florida Licensed Surveyor and Mapper.
2.) The horizontal datum utilized for this project is NAD 1983 Florida West Zone, U.S. Survey Feet.
3.) All utilities depicted hereon are from visible evidence only. Surveyor did not contact subsurface utility locator service.
4.) No underground foundations or footers were excavated or located for this survey.
5.) THIS IS NOT A BOUNDARY SURVEY.

Certifications:
CEMEX, USA

Stacy L. Brown P.S.M. No. 6516
SurvTech Solutions, Inc. L.B. No. 7340

Not Valid Without The Signature And The Original Raised Seal Of A Florida Licensed Surveyor And Mapper

REVISION	DATE	INITIALS
Revised Boundary of Agreement Parcel	3/29/11	S.B.
Removed original C1 from boundary	3/30/11	S.B.
Revised boundary at northwest corner	3/30/11	S.B.

Project Name: CEMEX - Agreement Parcel — PROJECT NO.: 20040010
Address: Cortez Boulevard & Colorado Street — City: Brooksville — State: Florida

SURVEYING TODAY WITH TOMORROWS TECHNOLOGY

Drafted By: S. Brown
Date Drafted: 3/11/11
Approved By: S. Brown
Date Approved: 3/12/11
Field Date: 2/22/11
Phase: 133
Revision Date: 3/30/11
Drawing Name: 20040010
Scale: 1" = 400'
Field Book/Page: 28-24/32

SURVTECH SOLUTIONS, INC.
10220 U.S. Highway 92 East
Tampa, FL 33810
phone: (813)-621-4929
fax: (813)-621-7194
Licensed Business #7340
email: sbrown@survtechsolutions.com
http://www.survtechsolutions.com

Agreement Parcel Detail

Agreement Parcel: Legal Description

A parcel of land lying and being in Sections 24 and 25, Township 22 South, Range 18 East and Sections 19 and 30, Township 22 South, Range 19 East, Hernando County, Florida;

More particularly described as follows:

Commencing at a point marking the Southeast corner of the Northeast ¼ of Section 25, Township 22 South, Range 18 East, also known as the Southwest corner of the Northwest ¼ of said Section 30, Township 22 South, Range 19 East; thence departing said point coincident with the East Boundary of said Northeast 1/4, also being the West Boundary of said Northwest ¼, N 00°19'25" W a distance of 1180.28 feet to the POINT OF BEGINNING; thence departing said East Boundary, S 89°13'39" W a distance of 286.57 feet; thence S 86°28'17" W a distance of 1281.52 feet; thence N 90°00'00" W a distance of 359.45 feet; thence N 00°00'00" E a distance of 1087.27 feet; thence N 26°42'20" E a distance of 1830.00 feet; thence N 90°00'00" E a distance of 805.00 feet; thence N 00°00'00" E a distance of 1471.17 feet to a point coincident with the South Right-of-way Boundary of Fort Dade Avenue (by occupation and maintenance); thence coincident with said South Right-of-way Boundary for the following three (3) courses: 1.) S 88°52'36" E a distance of 542.82 feet; 2.) thence N 05°45'40" E a distance of 11.99 feet; 3.) thence N 87°57'37" E a distance of 3964.49 feet to a point coincident with the West Boundary of the East ½ of the Southeast ¼ of said Section 19; thence departing said South Right-of-way Boundary coincident with said West Boundary, S 00°06'48" E a distance of 2618.44 feet to a point coincident with the South Boundary of the Southeast ¼ of said Section 19, also being the North Boundary of the Northeast ¼ of Section 30, Township 22 South, Range 19 East; thence departing said West Boundary coincident with said South Boundary, N 87°46'00" E a distance of 914.10 feet; thence departing said South Boundary, S 34°52'34" E a distance of 252.86 feet to a point coincident with a line lying 300.00 feet West of and parallel with the East Boundary of the Northeast ¼ of said Section 30; thence coincident with said parallel line, S 00°05'40" E a distance of 2150.07 feet to a point coincident with the North Right-of-way Boundary of Cortez Boulevard (State Road No. 50) per Florida Department of Transportation (FDOT) Right-of-way Map Section No. 08040-2509, dated June 2, 1993, said point also being coincident with a curve concave northerly, said curve having a radius of 2734.79 feet, a delta angle of 3°24'49" and being subtended by a chord bearing S 66°39'55" W for a distance of 162.91 feet; thence coincident the aforesaid North Right-of-way Boundary of Cortez Boulevard for the following fourteen (14) courses: 1.) thence coincident with the arc of said curve a distance of 162.93 feet; 2.) thence departing said curve, S 21°37'41" E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2744.79 feet, a delta angle of 2°00'00" and being subtended by a chord bearing S 69°22'19" W for a distance of 95.81 feet; 3.) thence coincident with the arc of said curve a distance of 95.81 feet; 4.) thence departing said curve, S 19°37'41" E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2754.79 feet, a delta angle of 4°00'00" and being subtended by a chord bearing S 72°22'19" W for a distance of 192.28 feet; 5.) thence coincident with the arc of said curve a distance of 192.32 feet; 6.) thence departing said curve, S 15°37'41" E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2764.79 feet, a delta angle of 10°00'00" and being subtended by a chord bearing S 79°22'19" W for a distance of 481.93 feet; 7.) thence coincident with the arc of said curve a distance of 482.55 feet; 8.) thence departing said curve, N 05°37'41" W a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2754.79 feet, a delta angle of 4°00'00" and being subtended by a chord bearing S 86°22'19" W for a distance of 192.28 feet; 9.) thence coincident with the arc of said curve a distance of 192.32 feet; 10.) thence departing said curve, N 01°37'41" W a distance of 15.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2739.79 feet, a delta angle of 0°51'58" and being subtended by a chord bearing S 88°48'18" W for a distance of 41.41 feet; 11.) thence coincident with the arc of said curve a distance of 41.41 feet; 12.) thence departing said curve, S 89°14'17" W a distance of 756.70 feet; 13.) thence S 00°45'43" E a distance of 10.00 feet; 14.) thence S 89°14'17" W a distance of 100.00 feet; thence departing the North Right-of-way Boundary of Cortez Boulevard, N 00°00'00" E a distance of 1000.09 feet; thence S 89°14'17" W a distance of 808.06 feet; thence N 00°00'00" E a distance of 650.37 feet; thence N 90°00'00" W a distance of 1570.00 feet; thence S 00°00'00" E a distance of 656.67 feet; thence S 89°13'39" W a distance of 919.42 feet to the POINT OF BEGINNING.

Containing an area of 24992393.22 square feet, 573.476 acres more or less.

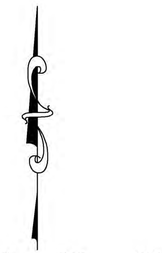
Agreement Parcel Acreage
24992393.22 Square Feet
573.746 Acres

Line Information:

LINE	BEARING	DISTANCE
L1	S 88°52'36" E	542.82'
L2	N 05°45'40" E	11.99'
L3	S 34°52'34" E	252.86'
L4	S 21°37'41" E	10.00'
L5	S 19°37'41" E	10.00'
L6	S 15°37'41" E	10.00'
L7	N 05°37'41" W	10.00'
L8	N 01°37'41" W	15.00'
L9	S 89°14'17" W	756.70'
L10	S 00°45'43" E	10.00'
L11	S 89°14'17" W	100.00'

Curve Information:

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH	DELTA ANGLE	TANGENT
C1	2734.79'	162.93'	S 66°39'55" W	162.91'	03°24'49"	81.49'
C2	2744.79'	95.81'	S 69°22'19" W	95.81'	02°00'00"	47.91'
C3	2754.79'	192.32'	S 72°22'19" W	192.28'	04°00'00"	96.20'
C4	2764.79'	482.55'	S 79°22'19" W	481.93'	10°00'00"	241.89'
C5	2754.79'	192.32'	S 86°22'19" W	192.28'	04°00'00"	96.20'
C6	2739.79'	41.41'	S 88°48'18" W	41.41'	00°51'58"	20.71'



Fort Dade Avenue
Maintained Right-of-way width varies
(Asphalt Pavement)

Colorado Street
COUNTY ROAD NO. 491
Right-of-way width varies

Cortez Boulevard
STATE ROAD NO. 50
Right-of-way width varies

Point of Beginning
Agreement Parcel

Point of Commencement
Southeast Corner of the Northeast ¼ of Section 25-22S-18E

North Boundary of the SW ¼ of Section 19-22S-19E
North Boundary of the SE ¼ of Section 24-22S-18E
South Right-of-way Boundary of Fort Dade Avenue per Field Monumentation
North Boundary of the SE ¼ of Section 19-22S-19E
West Boundary of the East ½ of the SE ¼ of Section 19-22S-19E
East Boundary of the SE ¼ of Section 19-22S-19E
West Boundary of the SE ¼ of Section 24-22S-18E
East Boundary of the SE ¼ of Section 24-22S-18E
West Boundary of the SE ¼ of Section 19-22S-19E
North Boundary of the NE ¼ of Section 25-22S-18E
North Boundary of the NW ¼ of Section 30-22S-19E
North Boundary of the NE ¼ of Section 30-22S-19E
West Boundary of the NE ¼ of Section 30-22S-19E
East Boundary of the NE ¼ of Section 30-22S-19E
West Boundary of the NE ¼ of Section 25-22S-18E
West Boundary of the NW ¼ of Section 30-22S-19E
North Right-of-way Boundary of State Road No. 50 (Cortez Boulevard) per F.D.O.T. Map Section No. 08040-2509
South Boundary of the NE ¼ of Section 30-22S-19E
South Boundary of the NE ¼ of Section 25-22S-18E
South Boundary of the NW ¼ of Section 30-22S-19E

N 87°57'37" E 3964.49'
N 87°46'00" E 914.10'
S 00°06'48" E 2618.44'
S 00°05'40" E 2150.07'
N 00°00'00" E 1471.17'
N 90°00'00" E 805.00'
N 26°42'20" E 1830.00'
N 00°00'00" E 1087.27'
N 90°00'00" W 359.45'
S 86°28'17" W 1281.52'
S 89°13'39" W 286.57'
S 89°13'39" W 919.42'
N 00°19'25" W 1180.28'
N 90°00'00" W 1570.00'
S 00°00'00" E 656.67'
N 00°00'00" E 650.37'
S 89°14'17" W 808.06'
N 00°00'00" E 1000.09'
300.0'
300.0'

SURVTECH SOLUTIONS, INC.
10220 U.S. Highway 92 East
Tampa, FL 33610
Licensed Business #7340
phone: (813)-621-4929
fax: (813)-621-7194
email: sbrown@survtechsolutions.com
http://www.survtechsolutions.com

Sketch & Description
Prepared For:
CEMEX, USA

ATTACHMENT C

WILDLIFE ASSESSMENT

BROOKSVILLE QUARRY
BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA
LISTED SPECIES SURVEY REPORT

Prepared For:

CEMEX
Building the future™

Mr. James Morris
Regional Environmental Manager
11430 Camp Mine Road
Brooksville, FL 34601-8605

Prepared by:

FLATWOODS Consulting Group
8306 Laurel Fair Circle•Suite 120
Tampa, FL 33610•813-600-5747

January 2017

Carrie E. Kelly
Senior Ecologist

Lee M. Walton
Senior Ecologist/Principal

Figures

Appendix

1.0 INTRODUCTION

Flatwoods Consulting Group Inc. (Flatwoods) was retained by CEMEX to assess the status of listed plant and wildlife species on the Bronson Extension Property located in Sections 19 and 30, Township 22 South, Range 19 East and Sections 24 and 25, Township 22 South, Range 18 East in Hernando County, Florida (Quad Map). More specifically, this property is located north of State Road (SR) 50 between Fort Dade Road and Cobb Road (Location Map). The purpose of this survey was to identify the presence and relative abundance of any species considered Endangered, Threatened, or of Special Concern by the U.S. Fish and Wildlife Service (FWS) under Title 50 Code of Federal Regulation (CFR) 11-12 or the Florida Fish and Wildlife Conservation Commission (FWC) under Chapter 68A-27 F.A.C.

1.1 Study Area

The study area (referred to as the Bronson Extension or Agreement Parcel) consists of approximately 573.5 acres which includes several parcels that have been or are currently in agricultural use.

2.0 METHODOLOGY

The following sections describe the methods used by Flatwoods to detect the potential presence and relative abundance of listed wildlife and plants within the property.

2.1 Preliminary Review

Information on the potential presence of listed species was collected through literature and data review. Flatwoods reviewed information from the FWS, the FWC, the Florida Natural Areas Inventory (FNAI), the Southwest Florida Water Management District (SWFWMD), and the Florida Department of Environmental Protection (FDEP) geographic information system (GIS) databases regarding the occurrence of listed species and protected habitats.

To further identify which federally and state listed plant and animal species have the potential to occur within the property, upland and wetland vegetative communities were assessed to determine their plant species composition, approximate boundaries, and general condition and quality. To establish the approximate locations and boundaries of existing upland and wetland communities within the property, available site-specific data were collected and reviewed using the following resources and methods (see References for complete source information):

- Infrared and true color aerial imagery of the project area
- U.S. Department of Agriculture (USDA)/Natural Resource Conservation Service (NRCS) Soil Survey of Hernando County, Florida
- U.S. Geological Survey (USGS) Topographic Quadrangle maps
- FWS Critical Habitat Portal
- FNAI Biodiversity Matrix

- Florida Department of Transportation (FDOT) Florida Land Use, Cover, and Forms Classification System (FLUCFCS)
- SWFWMD FLUCFCS mapping

2.2 Survey Methods

At the request of Hernando County Planning Department (Staff Report CPAM-11-02), Flatwoods conducted an updated listed species survey on January 16, 2017 to identify State (FWC) and Federal (FWS) listed species present on the Agreement Parcel. Comprehensive listed species surveys were previously conducted on the following dates: February 23-24, 2011, March 2, 3, and 11, 2011, May 2, 2014, and July 2, 14, 17, 22, 24, and 29, 2014. The following methods were utilized to document which federally and state listed plant and animal species occur within the Agreement Parcel.

2.2.1 Standard Listed Species Survey

Flatwoods conducted several listed species survey on the property in accordance with the FWC Florida Wildlife Conservation Guide. During these surveys all habitats within the property were canvassed for listed species. Any observations of listed species, as well as physical features that may indicate the presence of these species, such as tracks, scat, nests, burrows, and nest cavities in trees, are mapped on color aerial prints of the site. Direct observations of listed species were recorded using a sub-meter global positioning system (GPS), and their locations are shown on the Listed Species Map.

2.2.2 Gopher Tortoise Survey

Flatwoods conducted an updated comprehensive survey to locate gopher tortoise (*Gopherus polyphemus*) burrows and estimate the density of gopher tortoises for the Bronson property. The tortoise survey was conducted in accordance with the FWC methods as outlined in the Gopher Tortoise Permitting Guidelines April 2008 (revised January 2017). An Authorized Gopher Tortoise Agent supervised the gopher tortoise survey. Burrows that are considered potentially occupied (active or inactive but not abandoned) were recorded using a sub-meter GPS. Their locations are shown on the Listed Species Map.

3.0 RESULTS

The following subsections discuss the existing soil types and land use habitats on site, and results of the standard listed species and species specific surveys performed.

3.1 Soil Descriptions

Based on the USDA/NRCS Soil Survey for Hernando County, thirteen soil types are mapped within the study area (Soils Map). Only two soil types are classified as hydric according to the *Hydric Soils of Florida Handbook*.

Listed below are the soil types found on the Bronson property, their corresponding NRCS reference number for soils of Hernando County, Florida, and general descriptions of their characteristics.

(6) Arredondo fine sand, 0-5 percent slopes is a nearly level to gently sloping, well-drained soil on the uplands. Permeability is rapid in the surface and subsurface layers and moderate or moderately rapid in the subsoil. Most of areas of this soil are cleared and planted to pasture grasses or citrus trees.

(11) Blichton loamy fine sand, 0 to 2 percent slopes is a nearly level, poorly drained soil in small areas on the uplands. In most years, under natural conditions, the water table is at a depth of less than 10 inches for cumulative periods of 1 to 4 months. In drier seasons, it recedes to a depth of more than 40 inches. Permeability is rapid in the surface and subsurface layers and moderate to moderately slow in the subsoil. According to the *Hydric Soils of Florida Handbook*, this is a hydric soil.

(12) Blichton loamy fine sand, 2 to 5 percent slopes is a gently sloping, poorly drained soil in small areas on the uplands. In most years, under natural conditions, the water table is at a depth of less than 10 inches for cumulative periods of 1 to 4 months. In drier seasons, it recedes to a depth of more than 40 inches. Permeability is rapid in the surface and subsurface layers and moderate to moderately slow in the subsoil. According to the *Hydric Soils of Florida Handbook*, this is a hydric soil.

(14) Candler fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, excessively drained soil in very large to small areas on the uplands. Permeability is very rapid in the upper 48 inches and rapid below.

(20) Flemington fine sandy loam, 0 to 2 percent slopes is a nearly level, poorly drained soil on the uplands. In most years, under natural conditions, the water table is perched in the A horizon. The upper part of the Bt horizon is saturated for 1 to 4 months during wet seasons. Permeability is rapid in the surface layer and very slow in the subsoil.

(21) Flemington fine sandy loam, 2 to 5 percent slopes is a gently sloping, poorly drained soil on the uplands. This soil has a perched water table above the Bt horizon. The upper part of the Bt horizon is saturated for 1 to 4 months during wet seasons. Permeability is rapid in the surface layer and very slow in the subsoil.

(29) Kendrick fine sand, 0 to 5 percent slopes is a well-drained, nearly level to gently sloping soil in large to small areas on the uplands. In most years, under natural conditions, the water

table is below a depth of 72 inches. Permeability is rapid above the subsoil and moderate in the subsoil.

(33) Micanopy loamy fine sand, 0 to 2 percent slopes is a nearly level, somewhat poorly drained soil on the uplands. In most years, under natural conditions, the water table is at a depth of 20 to 30 inches for 1 to 3 months and below a depth of 60 inches during drier periods. Permeability is rapid above the surface layer and slow in the subsoil.

(34) Micanopy loamy fine sand, 2 to 5 percent slopes is a gently sloping, somewhat poorly drained soil on the uplands. The water table is at a depth of 20 to 30 inches for 1 to 3 months during most years. In drier periods it recedes below a depth of 60 inches. Permeability is rapid above the surface layer and slow in the subsoil.

(36) Nobleton fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, somewhat poorly drained soil on broad areas in the uplands. This soil has a perched water table at a depth of 20 to 40 inches for 1 to 4 months during the summer rainy season in most years. Permeability is rapid in the surface and subsurface layers and moderate to moderately slow in the subsoil.

(47) Sparr fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, somewhat poorly drained soil on seasonally wet, sandy areas on uplands. This soil has a water table perched on the loamy material for 1 to 4 months during most years. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil.

(52) Wauchula fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, poorly drained soil on broad, low areas in the flatwoods and on hillsides in the uplands. In most years, under natural conditions, the water table is at a depth of less than 10 inches for 1 to 4 months each year and at a depth of 10 to 40 inches for the remainder of the year. During very dry periods, it drops below a depth of 40 inches. Permeability is rapid in the sandy surface and subsurface layers and moderate to rapid below.

(55) Williston loamy fine sand, 2 to 5 percent slopes is a gently sloping, well-drained soil in small areas on ridges on the uplands. In most years, under natural conditions, the water table is at a depth of 72 inches. Permeability is rapid above the surface layer and moderately slow in the subsoil.

3.2 Existing Upland and Wetland Communities

The habitats onsite have been classified based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS: Florida Department of Transportation, 1999). The attached Southwest Florida Water Management District (SWFWMD) Land Use Map shows the location of each habitat type and the text below provides a brief description of the vegetation within each habitat.

Upland Land Use Types

Cropland and Pastureland (FLUCFCS 210)

Habitat within this land use consists of cleared areas that have been planted with pasture grasses. Dominant land cover throughout these areas is Bahia grass (*Paspalum notatum*), Bermuda grass (*Cynodon dactylon*) and broomsedge bluestem (*Andropogon virginicus*). Some pastures have scattered live oak (*Quercus virginiana*), Florida slash pine (*Pinus elliottii*) and red cedar trees (*Juniperus virginiana*). The majority of the pastures are disked, fertilized and planted with winter wheat each fall. This habitat onsite does not support listed species.

Abandoned Citrus Grove (FLUCFCS 224)

The western portion of the property was converted to citrus groves starting in 1941. Currently these groves appear fallow but scattered citrus trees remain. Other trees observed in this area include live oak and slash pine. The ground cover is dominated by ruderal weeds and vines. Vegetation includes air potato (*Dioscorea bulbifera*), grape vine (*Vitis* spp.), West Indian lantana (*Lantana camara*), blackberry (*Rubus* sp.), beautyberry (*Callicarpa americana*), dog fennel (*Eupatorium capillifolium*), cogongrass (*Imperata cylindrical*), slender goldenrod (*Euthamia minor*) and goldenrod (*Solidago* sp.). Gopher tortoise burrows were observed in this habitat. No other listed species occur in this habitat.

Longleaf Pine – Xeric Oak (FLUCFCS 412)

This small area has a canopy of sand pine (*Pinus clausa*), longleaf pine (*Pinus palustris*), laurel oak (*Quercus laurifolia*), sand live oak (*Quercus geminata*) and turkey oak (*Quercus laevis*). The understory is mainly sparkleberry (*Vaccinium arboreum*) and saw palmetto (*Serenoa repens*). The understory is sparse due to the dense canopy. No listed species occur in this habitat onsite.

Hardwood – Coniferous Mixed (FLUCFCS 434)

This land use is dominated by a canopy of Florida slash pine and live oak with scattered sweetgum (*Liquidambar styraciflua*), southern magnolia (*Magnolia grandiflora*), laurel oak, red cedar and American hornbeam (*Carpinus caroliniana*). The shrub layer is comprised of wild orange (*Citrus* sp.), hackberry (*Celtis laevigata*) and cabbage palm (*Sabal palmetto*). The understory is sparse due to dense canopy closure. Several areas within these habitats have been taken over by vines such as air potato. No listed species were observed in this habitat. This habitat onsite does not support any listed species.

Coniferous Plantations (FLUCFCS 441)

This land use is dominated by planted Florida slash pine with a saw palmetto and gallberry (*Ilex glabra*) understory. This habitat has become overgrown with vines such as air potato. Gopher tortoise burrows were observed in this habitat. No other listed species occur in this habitat.

Wetland Land Use Types

Surface Waters (FLUCFCS 510)

Two ephemeral surface water conveyance systems occur on the property. Both have little to no vegetation within the channel but contain sweetgum (*Liquidambar styraciflua*) and American hornbeam (*Carpinus caroliniana*) on the banks. These appear to convey water rapidly and do not contain standing water. This habitat onsite does not support listed species.

Cattle Ponds (FLUCFCS 530)

There are two small ponds in this habitat type. Both have open water centers with softrush (*Juncus effusus*), red ludwigia (*Ludwigia repens*) and cointwort (*Hydrocotyle umbellata*) on the edge. These ponds have been excavated to provide a water source for the cattle operation. A little blue heron was observed in this habitat. This habitat type is not suitable for nesting and does not support listed species onsite.

Mixed Wetland Hardwoods (FLUCFCS 617)

Two forested wetlands occur within the site and contain a mix of dense hardwood canopy of sweetgum, American hornbeam, and American elm (*Ulmus americana*) with scattered laurel oak (*Quercus laurifolia*) and hackberry (*Celtis laevigata*). Little understory and groundcover occur within these forested wetlands. This habitat onsite does not support listed species.

Freshwater Marsh (FLUCFCS 641)

One freshwater marsh onsite has a deep center with Carolina willow (*Salix caroliniana*), alligator flag (*Thalia geniculata*) and duck weed (*Lemna minor*) in the center and softrush and red ludwigia on the edge. This marsh has been excavated to provide a water source for the cattle operation. Two small marshes are pasture depressions containing smartweed (*Polygonum* spp.). A marsh occurs on the southern boundary adjacent to SR50 and is predominantly cattail (*Typha* spp.). This habitat type is not suitable for nesting and does not support listed species onsite.

3.3 Survey Results

Flatwoods conducted comprehensive listed species surveys for the Agreement Parcel in January 2017. One listed species, the gopher tortoise, was observed on the site during the surveys (Listed Species Map). The following section discusses listed species that occur in Hernando County, describes the species' habitat preferences, their likelihood of occurrence and their FWS and FWC listing status.

3.3.1 Little Blue Heron

This medium-sized, slate-blue wading bird is listed as Threatened by the FWC and not listed by the FWS. The little blue heron (*Egretta caerulea*) nests in a variety of woody

vegetation types, including cypress, willow, maple, black mangrove, and cabbage palm. Nesting colonies usually occur on islands. No nesting habitat occurs on the site. A single little blue heron was observed foraging in a cattle watering pond onsite (Listed Species Map). The site lacks suitable nesting habitat and does not support a viable population of little blue herons.

3.3.2 Tricolored Heron

This medium-sized, two-toned wading bird is listed as Threatened by the FWC and not listed by the FWS. The tricolored heron (*Egretta tricolor*) nest on mangrove islands or wooded thickets on islands. No tricolored herons were observed despite conducting comprehensive listed species surveys. No nesting habitat occurs on the site. The site lacks suitable nesting habitat and does not support a viable population of tricolored herons.

3.3.3 Southeastern American Kestrel

The southeastern American kestrel (*Falco sparverius paulus*) is listed as Threatened by the FWC and not listed by the FWS. It is a resident subspecies of the American kestrel (*Falco sparverius*). Kestrels observed in Florida during the breeding season (April 1-August 31) are assumed to be resident southeastern American kestrels. They are found in upland habitats, including sandhills, flatwoods, pastures, sand pine scrub, and prairies. As cavity nesters and sit and wait predators, they require suitable cavity trees and perches in their territories as well as open ground cover to see and capture their prey. Typical prey items include insects, lizards, small rodents, and small birds. No nesting cavities were observed onsite. Kestrels do not nest onsite and no suitable nesting habitat occurs.

3.3.4 Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) was removed from listing under the Endangered Species Act in 2007 but is currently protected under the Bald and Golden Eagle Protection Act. The FWC also removed the bald eagle from listing in April 2008, but currently they are protected by a species-specific rule under the FWC Bald Eagle Management Plan approved April 9, 2008. Bald Eagles are dark brown with a white head and tail. Males and females are identical in plumage coloration. The beak, feet, and eyes are bright yellow. The plumage of immature eagles is brown and speckled with white until their fifth year. Bald eagles use forested habitats for nesting and expanses of shallow fresh or salt water for foraging. They obtain food by direct capture, scavenging, and stealing food from other animals, especially osprey. One documented bald eagle nest (HN013) occurs within one mile of the property according to the FWC Eagle Nest Locator, which is current through the 2014-2015 nesting season. No eagle nests were observed on the site despite conducting comprehensive listed species surveys. Open water foraging habitat does not occur on the site. This site does not support a viable population of eagles.

3.3.5 Wood Stork

This large, white wading bird is listed as a Threatened species by the FWS and the FWC. The wood stork (*Mycteria americana*) nests colonially in a variety of inundated forested wetlands, including cypress strands and domes, mixed hardwood swamps, sloughs and mangroves. Wood storks were not observed despite conducting comprehensive listed species surveys. The nearest known nesting colony is 13.8 miles to the east of the site. The site lacks suitable nesting habitat and does not support a viable population of wood storks.

3.3.6 Florida Sandhill Crane

Florida sandhill crane (*Antigone canadensis pratenis*) is listed as Threatened by the FWC and not listed by the FWS. They are long-legged, long-necked, gray, heron-like birds with a patch of bald, red skin on top of their heads. Sandhill cranes nest on a mound of herbaceous plant material in shallow water. No sandhill cranes were seen during the listed species survey and they do not nest on the site.

3.3.7 Florida Burrowing Owl

The Florida burrowing owl (*Athene cunicularia floridana*) is listed as Threatened by the FWC and not listed by the FWS. Burrowing owls typically dwell in burrows excavated in dry, well drained pasturelands, on spoil piles, and grassy open spaces. No burrowing owls were seen during the comprehensive listed surveys. The pasture on the site is routinely disked and planted and is not suitable for burrowing owls. The habitat onsite site does not support burrowing owls.

3.3.8 Eastern Indigo Snake

The eastern indigo snake (*Drymarchon corais couperi*) is listed as Threatened by the FWC and the FWS. The indigo snake is a large, black, non-venomous snake. They are thick-bodied and muscular, with a glossy black body that in the sunlight appears iridescent blue. The chin and throat are reddish or white, and this color may extend down the body ventrally. The belly is cloudy orange to blue-gray. They are found within scrub, sandhill, and scrubby flatwoods habitats where they occur in or near gopher tortoise burrows. Flatwoods personnel did not observe indigo snakes on the site despite conducting comprehensive listed species surveys. The habitat that has gopher tortoise burrows is highly disturbed (abandoned citrus grove). The habitats onsite are unsuitable and the site does not support a viable population of indigo snakes.

3.3.9 Gopher Tortoise

The gopher tortoise is listed as Threatened by the FWC and not listed by the FWS. Gopher tortoises are terrestrial turtles averaging 9 to 11 inches in length. They are typically found in sandhill, pine flatwoods, scrub, dry prairie, coastal dunes, and other

well-drained, open habitats. Gopher tortoises dig half-moon-shaped burrows that average 15 feet long and 7 feet deep. Gopher tortoise burrows were observed in the abandoned citrus habitats onsite (Listed Species Map). A total of 54 burrows were discovered. Prior to site development, CEMEX will obtain a Conservation Permit from the FWC and relocate gopher tortoises out of harm's way. No gopher tortoises will be impacted by site development.

3.3.10 Listed Plants

No federally listed plant species were observed within the Bronson property. Three federally listed plants are known to occur in Hernando County: Brooksville bellflower (*Campanula robinsiae*), Cooley's water-willow (*Justicia cooleyi*), and Britton's beargrass (*Nolina brittoniana*). The habitats onsite do not support these species.

3.4 Protected Habitats

The Bronson Agreement Parcel was evaluated for the potential occurrence of Critical Habitat as defined by the Endangered Species Act of 1973, as amended, and 50 CFR and other publically protected lands. The FWS regulates any adverse modification of the biological or physical constituent elements essential to the conservation of the listed species within the Critical Habitat, if present. No federally designated Critical Habitat exists within or near the Bronson Extension. Additionally, no publically managed or publically owned land exists within the property. No Outstanding Florida Waters (OFW), as defined by 62-302.700, occur within or near the property.

4.0 PHOTOGRAPHIC DOCUMENTATION

Typical photographs of each habitat type and wetland onsite were taken during the listed species surveys performed in 2014. Each habitat type and wetland was visited during the 2017 listed species survey and little to no changes have occurred since the previous survey. These photographs are provided as Photographic Documentation (Appendix A). Details regarding each photograph are provided as a photo caption within Appendix A.

5.0 REFERENCES

Chafin, L. G. 2000. Field Guide to the Rare Plants of Florida. Natural Areas Inventory, Tallahassee, Florida.

Coile, N.C. 1998. Notes on Florida's Regulated Plant Index (Rule 5B-40), Botany Contribution 38, 2nd edition. Florida Department of Agriculture & Consumer Services, Division of Plant Industry, Gainesville, FL.

Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center.

Florida Association of Environmental Soil Scientists. Hydric Soils of Florida Handbook. Fourth Edition. 2007.

Florida Department of Transportation (FDOT) Florida Land Use, Cover, and Forms Classification System (FLUCFCS), January 1999.

Florida Fish and Wildlife Conservation Commission. 2003, January 6. Florida's breeding bird atlas: A collaborative study of Florida's birdlife. http://www.myfwc.com/bba.

Florida Fish and Wildlife Conservation Commission Eagle Nest Locator. Online resource available from http://myfwc.com/eagle/eaglenests/nestlocator.aspx.

Florida Fish and Wildlife Conservation Commission, U.S. Fish and Wildlife Service, Florida Natural Areas Inventory. Florida Wildlife Conservation Guide. Tallahassee; Version August 2010

Florida Natural Areas Inventory (FNAI). Online resources available from http://www.fnai.org/index.cfm

Hipes, D., D .R. Jackson, K. NeSmith, D. Printiss, and K. Brandt. 2000. Field Guide to the Rare Animals of Florida. Natural Areas Inventory, Tallahassee, Florida.

Humphrey, S.R. editor, 1992."Rare and Endangered Biota of Florida, Volume I. Mammals". University Press of Florida.

Kale, H. W., II, B. Pranty, B. M. Stith, and C. W. Biggs. 1992. The atlas of the breeding birds of Florida. Final Report. Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.

Moler, P.E., editor, 1992."Rare and Endangered Biota of Florida, Volume III. Amphibians and Reptiles". University Press of Florida.

Rodgers, J.A., H.W. Kale II and H.T. Smith, editors. 1992. "Rare and Endangered Biota of Florida Volume V. Birds". University Press of Florida.

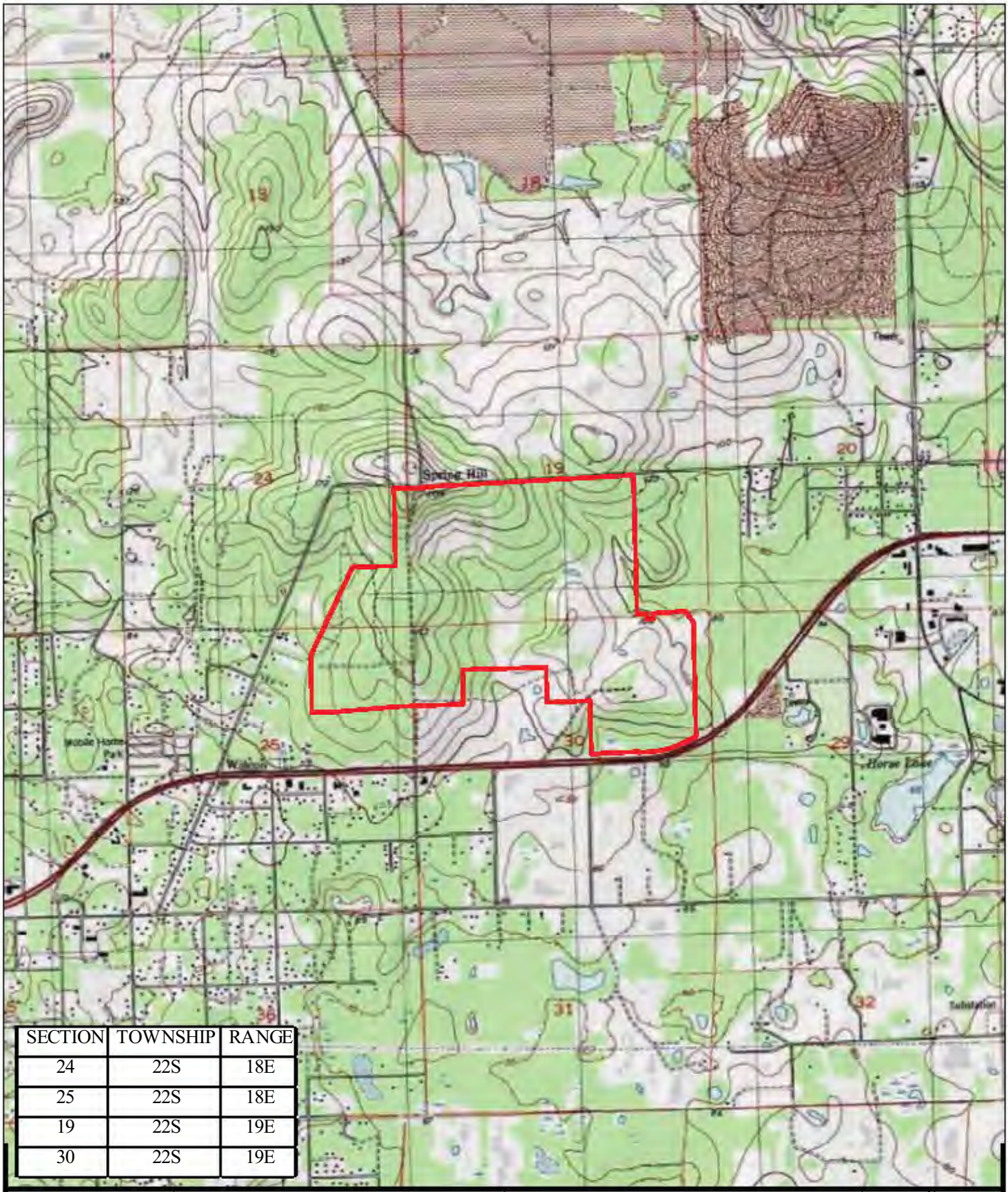
Runde, D.E., J.A. Gore, J.A. Hovis, M.S. Robson and P.D. Southall. 1991. "Florida Atlas of Breeding Sites for Herons and Their Allies: Update 1986-89." Florida Game and Freshwater Fish Commission, Division of Wildlife, Nongame Wildlife Program Technical Report, No. 10.

U.S. Department of Agriculture (USDA)/Natural Resource Conservation Service (NRCS) Soil Survey of Hernando County, Florida.

U.S. Geological Survey (USGS) Topographic Quadrangle Maps. Online resources available from http://topomaps.usgs.gov/.

U.S. Fish and Wildlife Survey (FWS). National Wetland Inventory (NWI). Online resources available from http://www.fws.gov/wetlands/Data/Mapper.html.

U.S. Fish and Wildlife Survey Critical Habitat Designations. Online resources available from http://criticalhabitat.fws.gov/.



SECTION	TOWNSHIP	RANGE
24	22S	18E
25	22S	18E
19	22S	19E
30	22S	19E

Feet
0 2,500
1 in = 2,500 feet

FLATWOODS

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

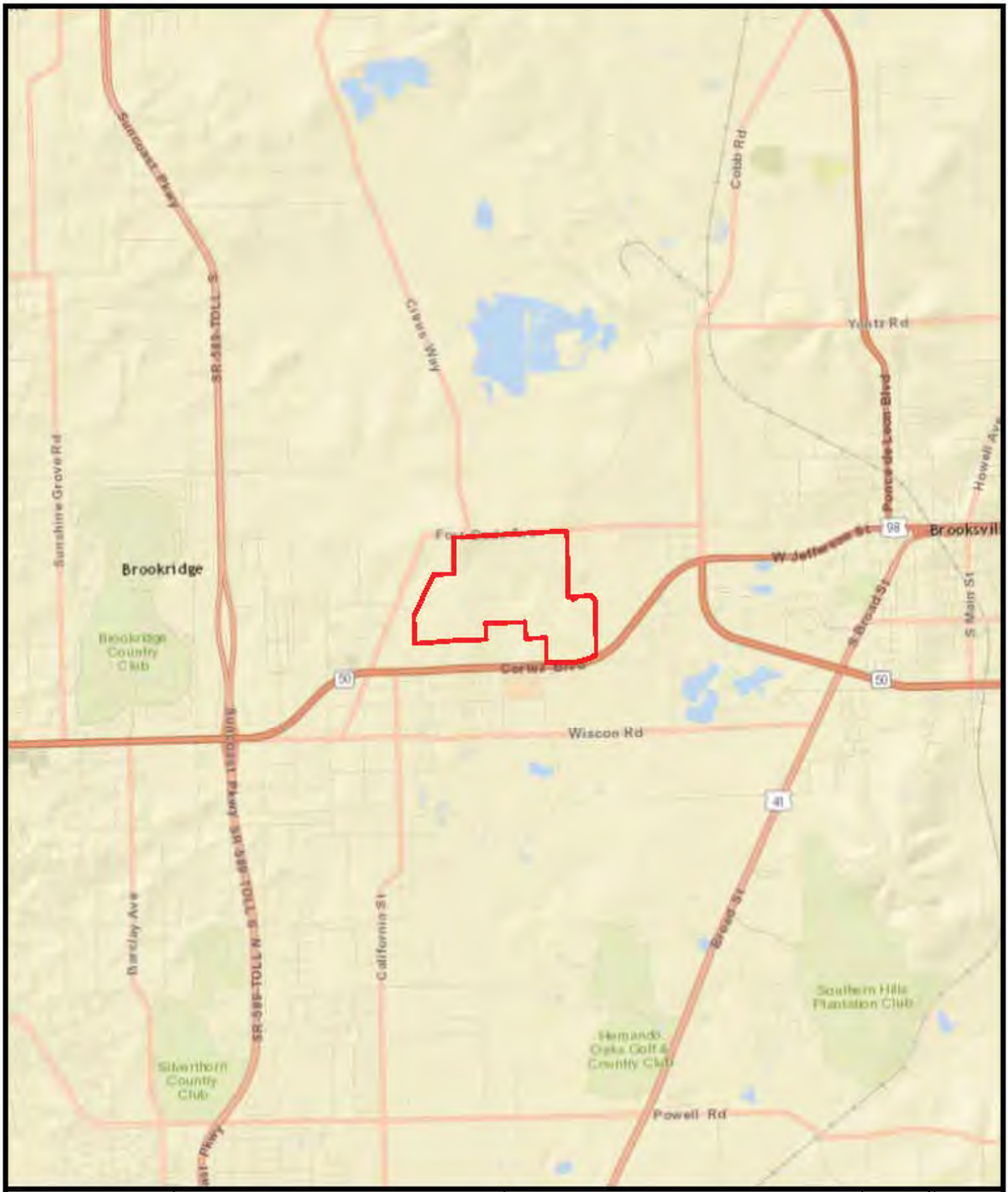
HERNANDO COUNTY, FLORIDA

Agreement Parcel Boundary

N
W E
S

QUAD MAP

P:\0004CMX007-Bronson Mine\GIS\CEMEX_Brooksville_Quad_011917



Miles

0 1

1 in = 1 miles

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

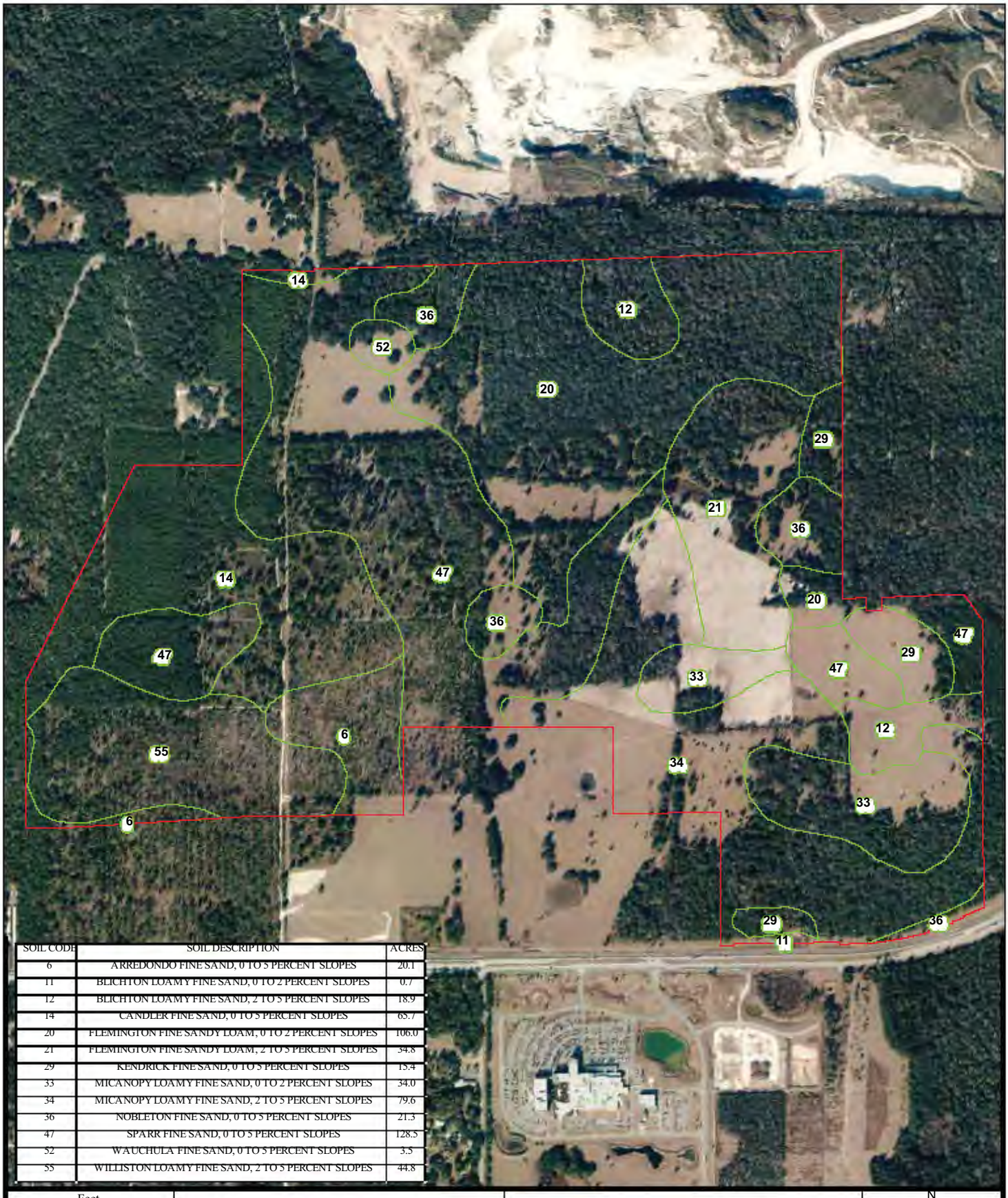
HERNANDO COUNTY, FLORIDA

Agreement Parcel Boundary

N
W E
S

LOCATION MAP

P:\0004CMX\007-Bronson Mine\GIS\CEMEX_Brooksville_Location_011917



SOIL CODE	SOIL DESCRIPTION	ACRES
6	ARREDONDO FINE SAND, 0 TO 5 PERCENT SLOPES	20.1
11	BLICHTON LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	0.7
12	BLICHTON LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	18.9
14	CANDLER FINE SAND, 0 TO 5 PERCENT SLOPES	65.7
20	FLEMINGTON FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	106.0
21	FLEMINGTON FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES	34.8
29	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES	15.4
33	MICANOPY LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	34.0
34	MICANOPY LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	79.6
36	NOBLETON FINE SAND, 0 TO 5 PERCENT SLOPES	21.3
47	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	128.5
52	WAUCHULA FINE SAND, 0 TO 5 PERCENT SLOPES	3.5
55	WILLISTON LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	44.8

Feet
0 1,000
1 in = 1,000 feet

FLATWOODS

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

Agreement Parcel Boundary
Soils

N
W E
S

SOIL MAP

P:\0004CMX007-Bronson Mine\GIS\SOILS

FLUCCS CODE	FLUCCS DESCRIPTION	ACRES
210	CROPLAND AND PASTURELAND	192.4
224	ABANDONED CITRUS GROVE	129.6
412	LONGLEAF PINE - XERIC OAK	9.9
434	HARDWOOD CONIFER MIXED	191.1
441	CONIFEROUS PLANTATIONS	44.2
510	SURFACE WATERS	1.2
530	CATTLE PONDS	1.1
617	MIXED WETLAND HARDWOODS	1.1
641	FRESHWATER MARSHES	0.6
641/617	FRESHWATER MARSHES/MIXED WETLAND HARDWOODS	2.3

Feet
0 1,000
1 in = 1,000 feet

FLATWOODS

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

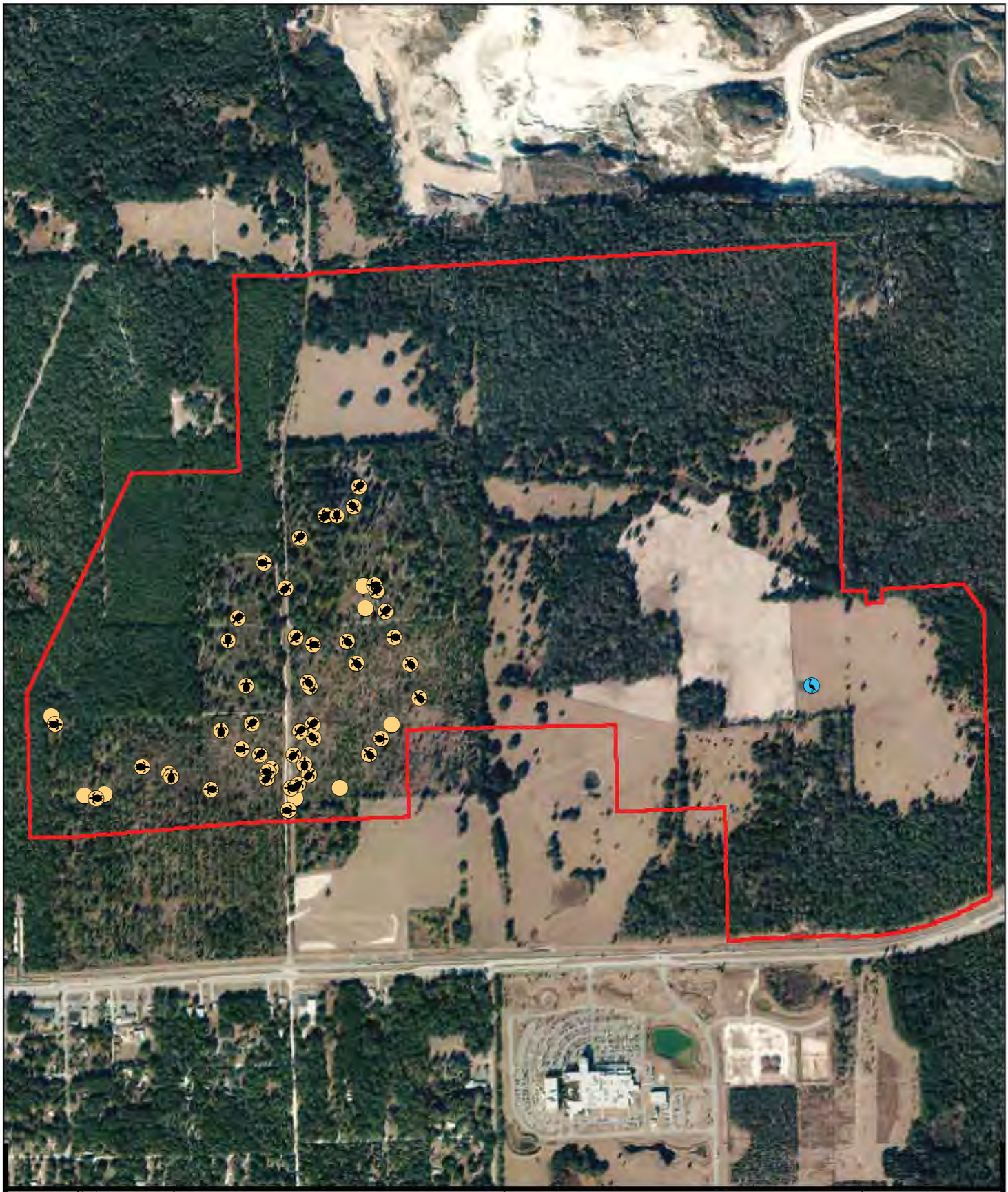
HERNANDO COUNTY, FLORIDA

Agreement Parcel Boundary
Land Use

N
W E
S

LAND USE MAP

P:\0004CMX007-Bronson Mine\GIS\LANDUSE_011917



Feet

0 1,000

1 in = 1,000 feet

FLATWOODS

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

- Agreement Parcel Boundary
- Gopher Tortoise Burrows (54)
- Little Blue Heron (1)

N
W E
S

LISTED SPECIES MAP

P:\0004CMX007-Bronson Mine\GIS\LISTED SPECIES 01202017.mxd

View of the transition of pasture *(FLUCCS 210)* to hardwood conifer mixed forest *(FLUCCS 434)* in the northwestern corner of the property

View of the pasture *(FLUCCS 210)* in the northwest portion of the property

View of the pasture *(FLUCCS 210)* in the center of the site that is planted with feed grass

View of the pasture *(FLUCCS 210)* on the eastern portion of the property

View of the pasture areas with oak and pine trees *(FLUCCS 210)*

View of the abandoned citrus grove *(FLUCCS 224)* that contains a more dense canopy of oak trees

View of the abandoned citrus grove *(FLUCCS 224)* that is overgrown with groundcover

View of the long-leaf pine, xeric oak area *(FLUCCS 412)* with a dominance of sand pine.

View of the hardwood conifer mixed forest *(FLUCCS 434)* in the northeastern portion of the property

View of hardwood conifer mixed forest *(FLUCCS 434)* in the western portion of the property

View of the hardwood conifer mixed forest *(FLUCCS 434)* in the southeastern portion of the property

View of the hardwood conifer mixed forest *(FLUCCS 434)* in the center portion of the property

View of the pine plantation *(FLUCCS 441)* that occurs in the northwest portion of the site

View of the pine plantation *(FLUCCS 441)* with less groundcover

View of Wetland A *(FLUCCS 617)*

View of Wetland B *(FLUCCS 641/617)*

View of Wetland C *(FLUCCS 530)*

View of Wetland D *(FLUCCS 530)*

View of Wetland E *(FLUCCS 641)*

View of Wetland F *(FLUCCS 641)*

View of Wetland G *(FLUCCS 641)*

View of Wetland H *(FLUCCS 510)*

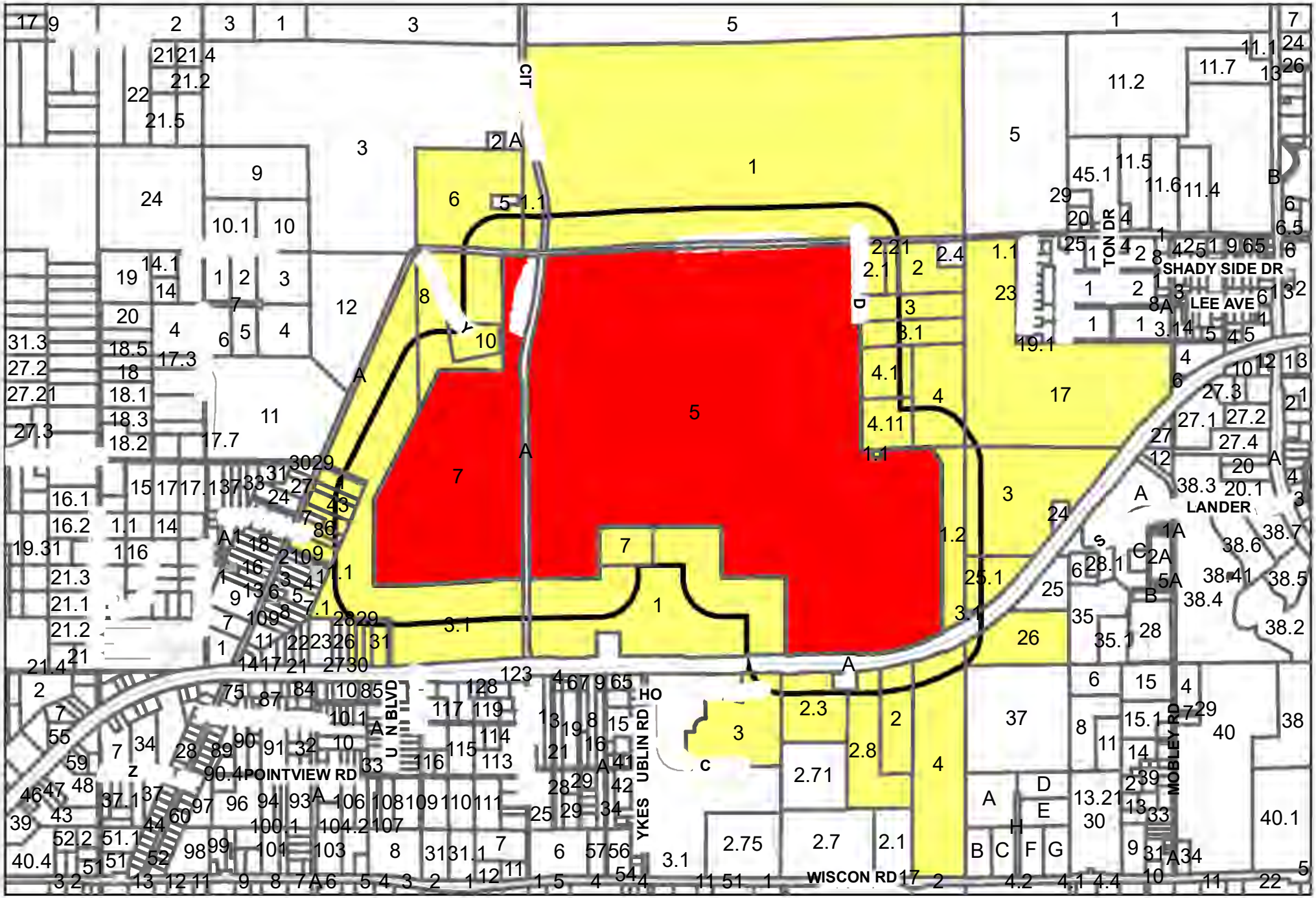
View of Wetland I *(FLUCCS 510)*

ATTACHMENT D

LIST OF PROPERTY OWNERS WITHIN 500 FEET

ADJACENT PROPERTY OWNERS WITHIN 500 FEET OF AGREEMENT BOUNDARY
BRONSON EXTENSION OF BROOKSVILLE QUARRY
FOR
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.

PARCEL_KEY	PARCEL_SHO	PARCEL_NUM	OWNER_NAME	OWNER_NA_1	MAIL_ADDR1	MAIL_ADDR2
116056	9	R25 222 18 2450 00B0 0090	AARON BEVERLY J		8154 FORT DADE AVE	BROOKSVILLE FL 34601-8992
352585	4	R19 422 19 0000 0040 0000	BRACKER HEINRICH W R		8388 EUREKA DR	BROOKSVILLE FL 34601-5676
1354457	3.1	R29 422 19 0000 0030 0010	BRONSON THOMAS E TR	BMM LAND TRUST	PO BOX 68	BROOKSVILLE FL 34605-0068
360013	3	R29 422 19 0000 0030 0000	BRONSON THOMAS E TR	BMM LAND TRUST	PO BOX 68	BROOKSVILLE FL 34605-0068
352843	17	R20 422 19 0000 0170 0000	BRONSON THOMAS E TRUSTEE OF THE	BMM LAND TRUST	PO BOX 68	BROOKSVILLE FL 34605-0068
360479	1	R30 422 19 0000 0010 0000	BRONSON THOMAS E TRUSTEE OF THE	BMM LAND TRUST	PO BOX 68	BROOKSVILLE FL 34605-0068
1744152	1.1	R30 422 19 0000 0010 0010	BRONSON THOMAS E TRUSTEE, BMM LAND TRUST		PO BOX 68	BROOKSVILLE FL 34605-0068
345460	8	R24 422 18 0000 0080 0000	BRONSON THOMAS E TTEE, BMM LAND TRUST		PO BOX 68	BROOKSVILLE FL 34605-0068
1744161	1.2	R30 422 19 0000 0010 0020	BRONSON THOMAS E TTEE, BMM LAND TRUST		PO BOX 68	BROOKSVILLE FL 34605-0068
345549	10	R24 422 18 0000 0160 0000	COLORED CEMETERY OF SPRING HILL	HERNANDO COUNTY INC	729 WOOD DR	BROOKSVILLE FL 34601-3509
360282	26	R29 422 19 0000 0260 0000	CORTEZ WISCON HOLDINGS LLC		5327 COMMERCIAL WAY STE C113	SPRING HILL FL 34606-1420
360503	4	R30 422 19 0000 0040 0000	CORTEZ WISCON HOLDINGS LLC		5327 COMMERCIAL WAY STE C113	SPRING HILL FL 34606-1420
1349749	2.21	R19 422 19 0000 0020 0021	DIETRICH ROBERT G, DIETRICH CYNTHIA G		18010 FORT DADE AVE	BROOKSVILLE FL 34601
116243	30	R25 222 18 2450 00C0 0300	EASY ON US LLC		1000 E PERUVIAN PASTURES LN	BROOKSVILLE FL 34601-6102
352558	1	R19 422 19 0000 0010 0000	FLORIDA CRUSHED STONE CO	ATTN: PBR TAX DEPT	1501 BELVEDERE RD	WEST PALM BEACH FL 33406-1501
116038	6	R25 222 18 2450 00B0 0060	FRANKLIN DINA A TTEE, BATES DAWN K TTEE		PO BOX 126	ANNA MARIA FL 34216-0126
360488	2	R30 422 19 0000 0020 0000	GOODE DIANNE		7717 PROSPECTOR PL	RALEIGH NC 27615-6036
116010	3	R25 222 18 2450 00B0 0030	HEIMALL BARRY, HEIMALL BARBARA		3353 CARMEN AVE	SPRING HILL FL 34609-3114
360497	3	R30 422 19 0000 0030 0000	HERNANDO COUNTY (BAYFRONT BROOKSVILLE)		310 25TH AVE N STE 305	NASHVILLE TN 37203-6528
116234	29	R25 222 18 2450 00C0 0290	LONGO THOMAS C, LONGO TANYA		14072 SANDY DR	BROOKSVILLE FL 34613-3816
116225	28	R25 222 18 2450 00C0 0280	LONGO THOMAS C, LONGO TANYA L		14072 SANDY DR	BROOKSVILLE FL 34613-3816
345442	6	R24 422 18 0000 0060 0000	LYKES SPRINGHILL FOUNDATION	INC	PO BOX 1690	TAMPA FL 33601-1690
1215526	1.1	R19 422 19 0000 0010 0010	LYKES SPRINGHILL FOUNDATION	INC	PO BOX 1690	TAMPA FL 33601-1690
116047	8	R25 222 18 2450 00B0 0080	MASON JOSEPH M JR TTEE, KIMBROUGH	JAMES H JR TTEE	PO BOX 1900	BROOKSVILLE FL 34605-1900
1373855	10	R25 222 18 2450 00B0 0100	MASON JOSEPH M JR TTEE, KIMBROUGH	JAMES H JR TTEE	PO BOX 1900	BROOKSVILLE FL 34605-1900
1498775	31	R25 222 18 2450 00C0 0310	MASON JOSEPH M JR TTEE, KIMBROUGH	JAMES H JR TTEE	PO BOX 1900	BROOKSVILLE FL 34605-1900
360530	7	R30 422 19 0000 0070 0000	MASON JOSEPH M TTEE, BUCKNER ROBERT A	TTEE, KIMBROUGH JAMES H JR TTEE	PO BOX 1900	BROOKSVILLE FL 34605-1900
345692	3.1	R25 422 18 0000 0030 0010	MASON JOSEPH M TTEE, BUCKNER ROBERT TTEE	KIMBROUGH JAMES JR TTEE	PO BOX 1900	BROOKSVILLE FL 34605-1900
116029	4	R25 222 18 2450 00B0 0040	MAZZUCHELLI RICHARD J, MAZZUCHELLI	ANITA D	8200 FORT DADE AVE	BROOKSVILLE FL 34601
837697	3.1	R19 422 19 0000 0030 0010	MONEYHAN GLEN E		8454 EUREKA DR	BROOKSVILLE FL 34601-8713
1212440	2.8	R30 422 19 0000 0020 0080	NANCY GOODE LLC		PO BOX 1566	APOPKA FL 32704-1566
1354466	25.1	R29 422 19 0000 0250 0010	PRICE SUSAN A, LOWMAN DOROTHY, KOOP	DEBRA	81 TEE RD	ORELAND PA 19075-1118
352567	2	R19 422 19 0000 0020 0000	RICKLE TODD, RICKLE ASHLEY		18028 FORT DADE AVE	BROOKSVILLE FL 34601-8714
973922	2.3	R30 422 19 0000 0020 0030	SASTRY VATSALA, RAO RAVISHANKAR		15435 CORTEZ BLVD	BROOKSVILLE FL 34613-6113
705767	2.1	R19 422 19 0000 0020 0010	STANESCKI JEFFREY		129 PINEYWOODS AVE	SPRINGFIELD MA 01108-2517
1429859	4.11	R19 422 19 0000 0040 0011	STANLEY JOHN R		PO BOX 10002	BROOKSVILLE FL 34603-0002
116001	1	R25 222 18 2450 00B0 0010	URBAN DANIEL L		8240 FORT DADE AVE	BROOKSVILLE FL 34601-8942
1050953	4.1	R19 422 19 0000 0040 0010	WHITMAN LARRY B, WHITMAN GLENDA L		704 W JEFFERSON ST	BROOKSVILLE FL 34601-2530
352576	3	R19 422 19 0000 0030 0000	WISENBAKER ROBERT S, WISENBAKER LINDA M		8528 EUREKA DR	BROOKSVILLE FL 34601-8713



Not to Scale

OLD SPRING HILL LLC APO

Legend

- Subject Parcels
- 500 ft Buffer
- Parcels within 500 ft

This map was prepared by this office to be used as an aid in land parcel location and identification only. All land locations, right-of-way widths, acreages, and utility locations are subject to field survey or other appropriate verification. Map reflects parcels and boundries as they existed on 05/14/2019

ATTACHMENT E

ACCESS/EGRESS AGREEMENT

MAMPA Application
May 2019
Bronson Extension of Brooksville Quarry

AGREEMENT OF ACCESS

CEMEX Construction Materials Florida, LLC., hereby grants access to the Bronson Extension of the Brooksville Quarry located at 11430 Camp Mine Road, Brooksville, to Hernando County for the duration of the Bronson Extension Master Mining Plan Approval (MAMPA) or until mining clears on the property (if sooner). Access is granted under the following conditions:

1. The Hernando County Official must telephone in advance to coordinate the visits.
2. The Hernando County Official must sign in and meet with an authorized employee of the mine immediately upon entering the property and prior to conducting any on-site business.
3. The Hernando County Official must be accompanied by an authorized employee of the mine at all times during a visit.
4. The Hernando County Official must wear proper safety attire and equipment.
5. The visit will occur during normal mine operation hours unless there is an immediate threat to public safety.
6. Approved access under this agreement is restricted to conducting business as provided for in the Hernando County Mining Ordinance.

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.

Ryan E. Mahoney
Vice President of Planning

7/3/19
Date

ATTACHMENT F

ENVIRONMENTAL NARRATIVE

BROOKSVILLE QUARRY

BRONSON EXTENSION (±573.5 ACRES)

HERNANDO COUNTY, FLORIDA

ENVIRONMENTAL NARRATIVE

Prepared For:

CEMEX

Building the future™

Mr. James Morris
Regional Environmental Manager
11430 Camp Mine Road
Brooksville, FL 34601-8605

Prepared by:

FLATWOODS Consulting Group

8306 Laurel Fair Circle, Suite 120
Tampa, FL 33610•813-600-5747

Carrie E. Kelly
Senior Ecologist

Lee M. Walton
Senior Ecologist/Principal

Tables

Figures

Appendices

1.0 PROJECT DESCRIPTION

CEMEX proposes to extend the existing Brooksville Quarry by constructing a limerock mine on several parcels collectively referred to as the Bronson Extension (573.5 acres ±) located in Sections 19 and 30, Township 22 South, Range 19 East and Sections 24 and 25, Township 22 South, Range 18 East in Hernando County, Florida (Quad Map). More specifically, this property is located in Brooksville, north of State Road (SR) 50 between Fort Dade Road and Cobb Road (Location Map).

2.0 SITE DESCRIPTION

The project site consists of ±573.5 acres that have been or are currently in agricultural use, including citrus, planted pine and/or cattle pasture.

2.1. Soil Descriptions

According to the Natural Resources Conservation Service (NRCS) there are 13 soil types mapped within the site (Soil Map). Only two soil types are classified as hydric according to the *Hydric Soils of Florida Handbook*. Listed below are the soil types found on the Bronson property, their corresponding NRCS reference number for soils of Hernando County, Florida, and general descriptions of their characteristics.

(6) Arredondo fine sand, 0-5 percent slopes is a nearly level to gently sloping, well-drained soil on the uplands. Permeability is rapid in the surface and subsurface layers and moderate or moderately rapid in the subsoil. Most of areas of this soil are cleared and planted to pasture grasses or citrus trees.

(11) Blichton loamy fine sand, 0 to 2 percent slopes is a nearly level, poorly drained soil in small areas on the uplands. In most years, under natural conditions, the water table is at a depth of less than 10 inches for cumulative periods of 1 to 4 months. In drier seasons, it recedes to a depth of more than 40 inches. Permeability is rapid in the surface and subsurface layers and moderate to moderately slow in the subsoil. According to the *Hydric Soils of Florida Handbook,* this is a hydric soil.

(12) Blichton loamy fine sand, 2 to 5 percent slopes is a gently sloping, poorly drained soil in small areas on the uplands. In most years, under natural conditions, the water table is at a depth of less than 10 inches for cumulative periods of 1 to 4 months. In drier seasons, it recedes to a depth of more than 40 inches. Permeability is rapid in the surface and subsurface layers and moderate to moderately slow in the subsoil. According to the *Hydric Soils of Florida Handbook,* this is a hydric soil.

(14) Candler fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, excessively drained soil in very large to small areas on the uplands. Permeability is very rapid in the upper 48 inches and rapid below.

(20) Flemington fine sandy loam, 0 to 2 percent slopes is a nearly level, poorly drained soil on the uplands. In most years, under natural conditions, the water table is perched in the A horizon. The upper part of the Bt horizon is saturated for 1 to 4 months during wet seasons. Permeability is rapid in the surface layer and very slow in the subsoil.

(21) Flemington fine sandy loam, 2 to 5 percent slopes is a gently sloping, poorly drained soil on the uplands. This soil has a perched water table above the Bt horizon. The upper part of the Bt horizon is saturated for 1 to 4 months during wet seasons. Permeability is rapid in the surface layer and very slow in the subsoil.

(29) Kendrick fine sand, 0 to 5 percent slopes is a well-drained, nearly level to gently sloping soil in large to small areas on the uplands. In most years, under natural conditions, the water table is below a depth of 72 inches. Permeability is rapid above the subsoil and moderate in the subsoil.

(33) Micanopy loamy fine sand, 0 to 2 percent slopes is a nearly level, somewhat poorly drained soil on the uplands. In most years, under natural conditions, the water table is at a depth of 20 to 30 inches for 1 to 3 months and below a depth of 60 inches during drier periods. Permeability is rapid above the surface layer and slow in the subsoil.

(34) Micanopy loamy fine sand, 2 to 5 percent slopes is a gently sloping, somewhat poorly drained soil on the uplands. The water table is at a depth of 20 to 30 inches for 1 to 3 months during most years. In drier periods it recedes below a depth of 60 inches. Permeability is rapid above the surface layer and slow in the subsoil.

(36) Nobleton fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, somewhat poorly drained soil on broad areas in the uplands. This soil has a perched water table at a depth of 20 to 40 inches for 1 to 4 months during the summer rainy season in most years. Permeability is rapid in the surface and subsurface layers and moderate to moderately slow in the subsoil.

(47) Sparr fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, somewhat poorly drained soil on seasonally wet, sandy areas on uplands. This soil has a water table perched on the loamy material for 1 to 4 months during most years. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil.

(52) Wauchula fine sand, 0 to 5 percent slopes is a nearly level to gently sloping, poorly drained soil on broad, low areas in the flatwoods and on hillsides in the uplands. In most years, under natural conditions, the water table is at a depth of less than 10 inches for 1 to 4 months each year and at a depth of 10 to 40 inches for the remainder of the year. During very dry periods, it drops below a depth of 40 inches. Permeability is rapid in the sandy surface and subsurface layers and moderate to rapid below.

(55) Williston loamy fine sand, 2 to 5 percent slopes is a gently sloping, well-drained soil in small areas on ridges on the uplands. In most years, under natural conditions, the water table is at a depth of 72 inches. Permeability is rapid above the surface layer and moderately slow in the subsoil.

2.2. Existing Upland Communities

The upland habitats onsite have been classified based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS: Florida Department of Transportation, 1999). The attached Southwest Florida Water Management District (SWFWMD) Land Use Map shows the location of each upland habitat type and the text below provides a brief description of the vegetation within each habitat. Wetland communities occur onsite and are described in Section 3.0 below.

Cropland and Pastureland (FLUCFCS 210)

Habitat within this land use consists of cleared areas that have been planted with pasture grasses. Dominant land cover throughout these areas is Bahia grass (*Paspalum notatum*), Bermuda grass (*Cynodon dactylon*) and broomsedge bluestem (*Andropogon virginicus*). Some pastures have scattered live oak (*Quercus virginiana*), Florida slash pine (*Pinus elliottii*) and red cedar trees (*Juniperus virginiana*).

Abandoned Citrus Grove (FLUCFCS 224)

The western portion of the property was converted to citrus groves starting in 1941. Currently these groves appear fallow but scattered citrus trees remain. Other trees observed in this area include live oak and slash pine. The ground cover is weedy and contains West Indian lantana (*Lantana camara*), blackberry (*Rubus* sp.), beautyberry (*Callicarpa americana*), dog fennel (*Eupatorium capillifolium*), cogongrass (*Imperata cylindrical*), slender goldenrod (*Euthamia minor*) and goldenrod (*Solidago* sp.)

Longleaf Pine – Xeric Oak (FLUCFCS 412)

This habitat has a canopy of sand pine (*Pinus clausa*), longleaf pine (*Pinus palustris*), laurel oak (*Quercus laurifolia*), sand live oak (*Quercus geminata*) and turkey oak (*Quercus laevis*). The understory is mainly sparkleberry (*Vaccinium arboreum*) and saw palmetto (*Serenoa repens*). The understory is sparse due to the dense canopy.

Hardwood – Coniferous Mixed (FLUCFCS 434)

This land use is dominated by a dense Florida slash pine and live oak canopy with scattered sweetgum (*Liquidambar styraciflua*), southern magnolia (*Magnolia grandiflora*), laurel oak, red cedar and American hornbeam (*Carpinus caroliniana*). The shrub layer is comprised of wild orange (*Citrus* sp.), hackberry (*Celtis laevigata*) and cabbage palm (*Sabal palmetto*). The understory is sparse due to dense canopy closure.

Coniferous Plantations (FLUCFCS 441)

This land use is dominated by a Florida slash pine canopy with a saw palmetto and gallberry (*Ilex glabra*) understory.

3.0 WETLAND AND SURFACE WATERS

Flatwoods staff conducted an extensive review of the wetland/upland ecotones to evaluate the jurisdictional status of each wetland. This review included topographical maps, historic aerial photography and field verification using sub-meter Global Positioning System (GPS) units and traditional survey. The limits of jurisdictional wetlands were delineated in the field pursuant to the Chapter 62-340, F.A.C and reviewed for consistency with the 2008 Atlantic and Gulf Coast Regional Supplement to the U.S. Army Corps of Engineers (USACE) 1987 Delineation Manual.

Approximately 6.31 acres of wetlands and surface waters occur on the site and consist of forested systems, freshwater marsh systems, upland cut ponds, and ephemeral surface water conveyance systems (Wetland Map). A general description of each wetland type and a qualitative description of each wetland are included in Table 1 below. Additionally, a photographic representation of each wetland is included within Appendix A – Photographic Documentation.

F	641	No	0.51	0.51	0.00	This marsh wetland contains cattail (*Thypa* sp.), Carolina willow, saltbush (*Baccharis halimifolia*), bushy bluestem (*Andropogon glomeratus*) with softrush, sweetgum and laurel oak on the edges.

			0.80	0.80	0.00	This wetland is an ephemeral surface water conveyance system containing steep banks and minimal vegetation. Vegetation on the banks includes sweetbay, American hornbeam, American elm, laurel oak, hackberry and Atlantic white cedar (*Chamaecyparis thyoides*).
I	510	No	0.41	0.00	0.41	This wetland is an ephemeral surface water conveyance system containing steep banks and minimal vegetation. Vegetation on the banks includes sweetbay, American hornbeam, American elm, laurel oak, hackberry and Atlantic white cedar.
---	---	---	**6.31**	**2.53**	**3.78**	---

Note: FLUCFCS Code: 510-Waterway; 530-Reservoir; 617- Mixed Wetland Hardwood; 641-Freshwater Marsh

3.1. Wetland Descriptions

The wetlands and surface waters onsite are isolated with no onsite connections. Wetland A is connected to an offsite roadside ditch via culvert. This roadside ditch appears to discharge to the south into Wetland A.

Waterway (FLUCFCS 510)

Two ephemeral surface water conveyance systems occur on the property (Wetland H and I). Both have little to no vegetation within the channel but contain sweetgum (Liquidambar styraciflua) and American hornbeam (Carpinus caroliniana) on the banks. These appear to convey water rapidly and do not contain standing water.

Reservoirs (FLUCFCS 530)

There are two small surface water ponds in this habitat type (Wetland C and D) that have been excavated in uplands. Both consist of open water with softrush (*Juncus effusus*), red ludwigia (*Ludwigia repens*) and coinwort (*Hydrocotyle umbellata*) on the edge. As an example, shown in the Historic Aerials Map, Wetland D does not occur in the 1973 aerial but can be seen being excavated in the 1982 aerial. These ponds have been excavated to provide a water source for the cattle operation.

Mixed Wetland Hardwood (FLUCFCS 617)

Wetland A is dominated by a dense canopy of sweetgum, American hornbeam, and American elm (*Ulmus americana*) with scattered laurel oak (*Quercus laurifolia*) and hackberry (*Celtis laevigata*). The shrub layer is comprised of box elder (*Acer negundo*) and cabbage palm. The understory is sparse and consists of Virginia chainfern (*Woodwardia virginica*), greenbriar (*Smilax* spp.), and poison ivy (*Toxicodendron radicans*). Wetland B also contains a portion that can be categorized as mixed hardwood and consists of similar vegetation.

Freshwater Marshes (FLUCFCS 641)

The isolated freshwater marshes (Wetland B, E, F, and G) predominantly occur within the cattle pastures. A portion of Wetland B has a deep center with Carolina willow (*Salix caroliniana*), alligator flag (*Thalia geniculata*) and duck weed (*Lemna minor*) in the center and softrush and red ludwigia on the edge. This marsh has been excavated to provide a water source for the cattle operation. Wetland E and G are small depressional areas in the cattle pasture with limited vegetation consisting of red ludwigia and soft rush. Wetland F contains Carolina willow, cattail (*Typha* sp.), saltbush (*Baccharis halimifolia*) and bushy bluestem (*Andropogon glomeratus*).

3.2. Onsite Reduction and Elimination of Impacts

The applicant has designed the proposed mine footprint to avoid wetlands where applicable. Wetlands A, F, G and H will be avoided. The remaining wetland impacts are necessary for the success of the mining operation.

According to the Mine and Minerals Regulation (Mandatory Non-phosphate), the Florida Department Protection (FDEP) has adopted the appropriate water management rules for use in the Environmental Resource Permit (ERP) application process. The proposed project is located within the SWFWMD and FDEP has adopted the Basis of Review (BOR) for ERP Applications. Section 3.2.2.1 of the BOR states the following: "*compliance with subsections 3.2.2 through 3.2.3.7 and 3.2.5 through 3.3.8 will not be required for regulated activities in isolated wetlands less than one half acre in size"*.

Additionally, Section 3.2.2.2 of the BOR states "*Alterations to wholly owned ponds that were constructed entirely in uplands and which are less than one acre in area and alterations to drainage ditches that were constructed in uplands will not be required to comply with the provisions of subsections 3.2.2 through 3.2.2.3, 3.2.3 through 3.2.3.7 and 3.2.5 through 3.3.8*"

Within the project limits, Wetlands C, D, E, G, H, and I meet the above threshold and therefore, reduction and elimination of impacts are not required. However, despite the lack of a regulatory requirement for the majority of wetlands within the project limits, a concerted effort to eliminate and reduce wetland impacts has been made. The majority of unavoidable impacts are proposed for Wetland B.

3.3. Wetland Impacts

Wetlands A, F, G and H will not be impacted by the project. The remaining wetlands onsite will be impacted in their entirety. Only Wetland B is greater than 0.5-acres and no surface waters are greater than 1.0 acres. Wetlands and surface waters proposed for impact by the construction project are listed in the Table 2 below and depicted on the Wetland Impact Map.

Table 2 Wetland Impacts

Wetland ID	Impacts (Ac)	Wetland > 0.5-acres	Surface Water > 1.0 acres
B	2.26	Yes	--
C	0.30	--	No
D	0.76	--	No
E	0.05	No	--
I	0.41	--	No
Total	**3.78**	**--**	**--**

4.0 WETLAND MITIGATION

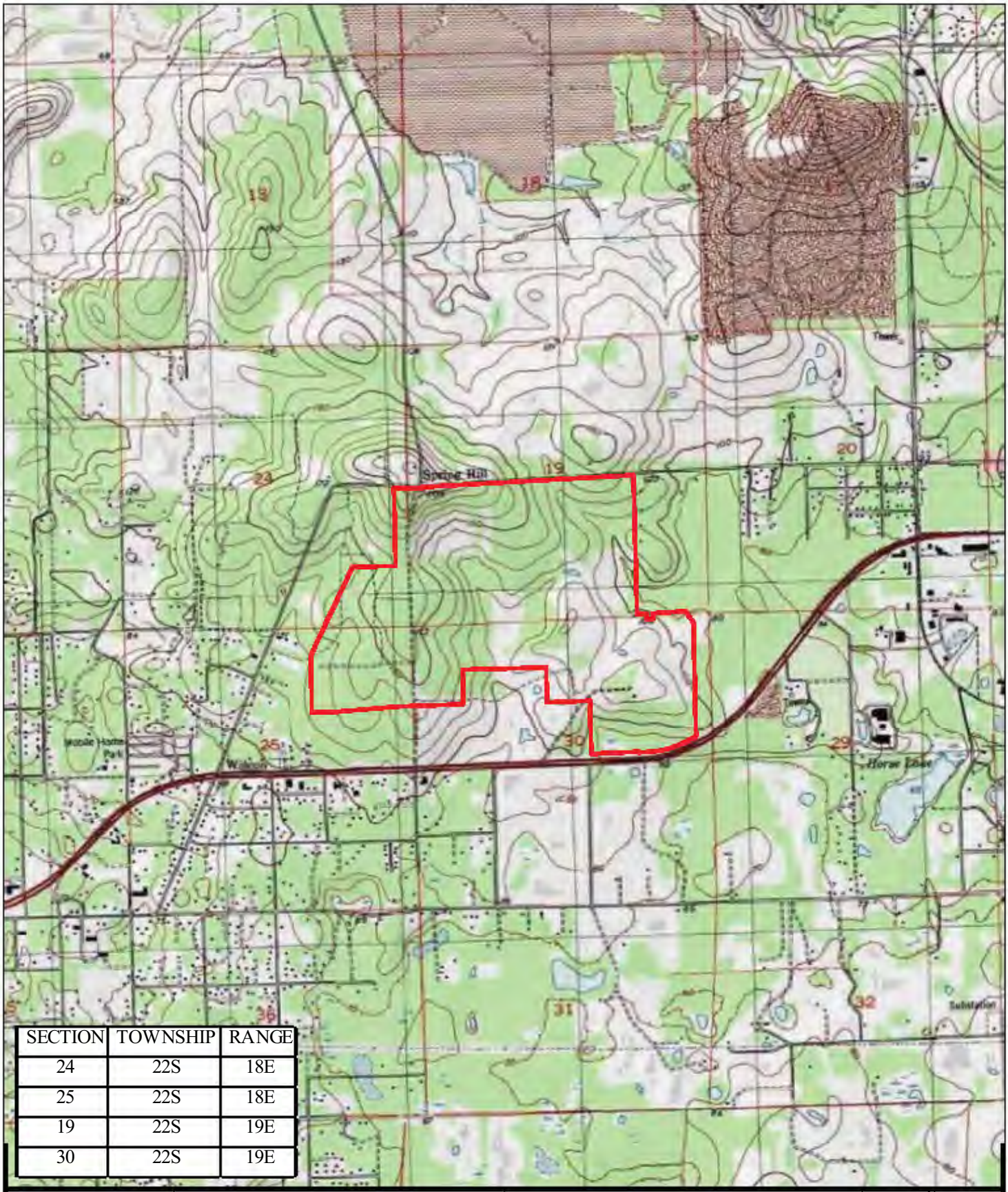
In accordance with the BOR, only Wetland B will require mitigation for proposed impacts. We conducted an assessment in accordance with the Unified Mitigation Assessment Method (UMAM) on Wetland B and the proposed mitigation areas. The UMAM assessment scores were based on the previously approved impact and mitigation from the Cobb Road Mine, Environmental Resource Permit #229890-001. Proposed mitigation is offsite (Mitigation Location Map) and consists of the preservation of 4.81 acres of uplands and 1.94 acres of wetlands (Mitigation Map). The mitigation area is proposed to be placed under conservation easement. Based on the UMAM assessments, the total relative functional loss is -1.205 for impacts to Wetland B and the relative functional gain is 0.49 (1.54 for upland preservation + 0.16 for wetland preservation) (Appendix B – UMAM Sheets).

5.0 WILDLIFE AND LISTED SPECIES

Surveys for wildlife listed as Endangered, Threatened or of Special Concern by the Florida Fish and Wildlife Conservation Commission (FWC) under Chapter 68A-27.003-005 F.A.C., and the US Fish and Wildlife Service (FWS) under 50 CFR 17.11-12 were performed January 2017. During the survey, a kestrel, little blue heron, and gopher tortoise (Gopherus polyphemus) were observed within the project limits. Please see the Listed Species Report submitted under separate cover for more detail regarding listed species. A permit for the relocation of gopher tortoise will be obtained prior to mining impacts in the occupied gopher tortoise habitat.

6.0 HISTORICAL PROPERTIES

A cultural resource assessment was conducted on the site in 2011. No other archeological work or historic research was recommended as a result of the assessment. The State Historical Preservation Officer (SHPO) was provided a copy of the report and a concurrence letter has been requested. We will provide the SHPO concurrence letter.



SECTION	TOWNSHIP	RANGE
24	22S	18E
25	22S	18E
19	22S	19E
30	22S	19E

Feet
0 2,500
1 in = 2,500 feet

FLATWOODS

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

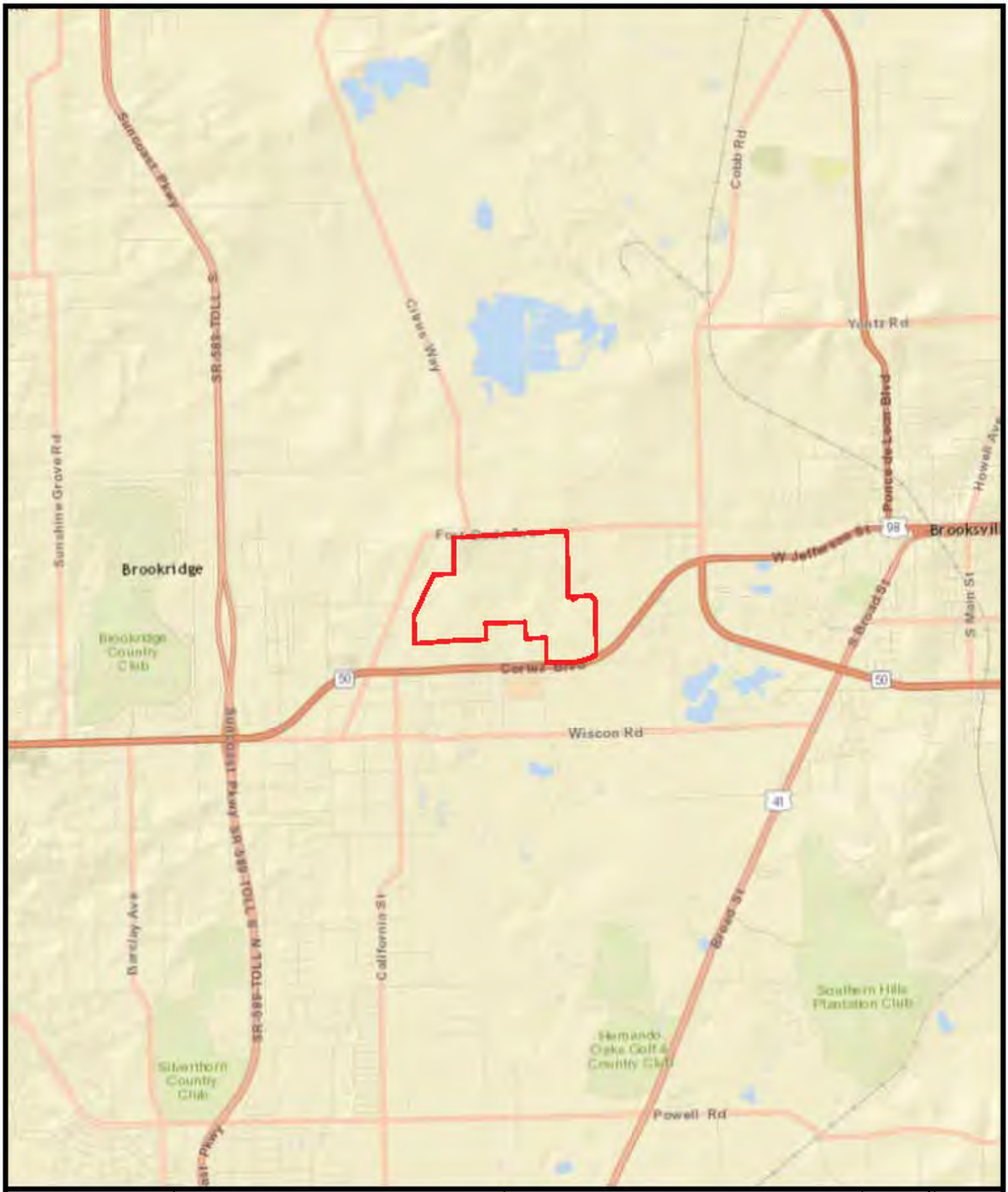
HERNANDO COUNTY, FLORIDA

Agreement Parcel Boundary

N
W E
S

QUAD MAP

P:\0004CMX007-Bronson Mine\GIS\CEMEX_Brooksville_Quad_011917



Miles

0 1

1 in = 1 miles

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

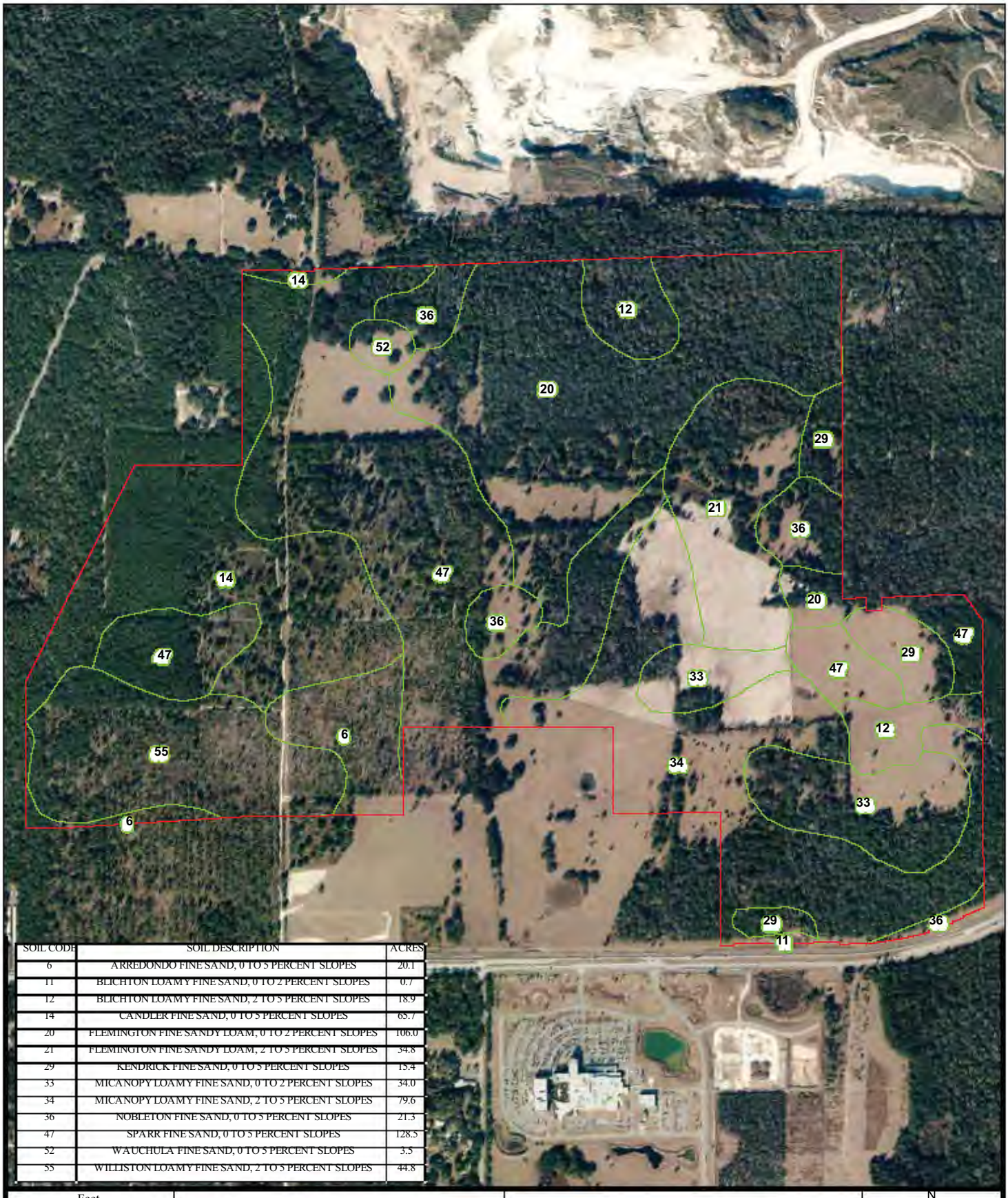
HERNANDO COUNTY, FLORIDA

Agreement Parcel Boundary

N
W E
S

LOCATION MAP

P:\0004CMX\007-Bronson Mine\GIS\CEMEX_Brooksville_Location_011917



SOIL CODE	SOIL DESCRIPTION	ACRES
6	ARREDONDO FINE SAND, 0 TO 5 PERCENT SLOPES	20.1
11	BLICHTON LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	0.7
12	BLICHTON LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	18.9
14	CANDLER FINE SAND, 0 TO 5 PERCENT SLOPES	65.7
20	FLEMINGTON FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	106.0
21	FLEMINGTON FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES	34.8
29	KENDRICK FINE SAND, 0 TO 5 PERCENT SLOPES	15.4
33	MICANOPY LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES	34.0
34	MICANOPY LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	79.6
36	NOBLETON FINE SAND, 0 TO 5 PERCENT SLOPES	21.3
47	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	128.5
52	WAUCHULA FINE SAND, 0 TO 5 PERCENT SLOPES	3.5
55	WILLISTON LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES	44.8

Feet
0 1,000
1 in = 1,000 feet

FLATWOODS

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

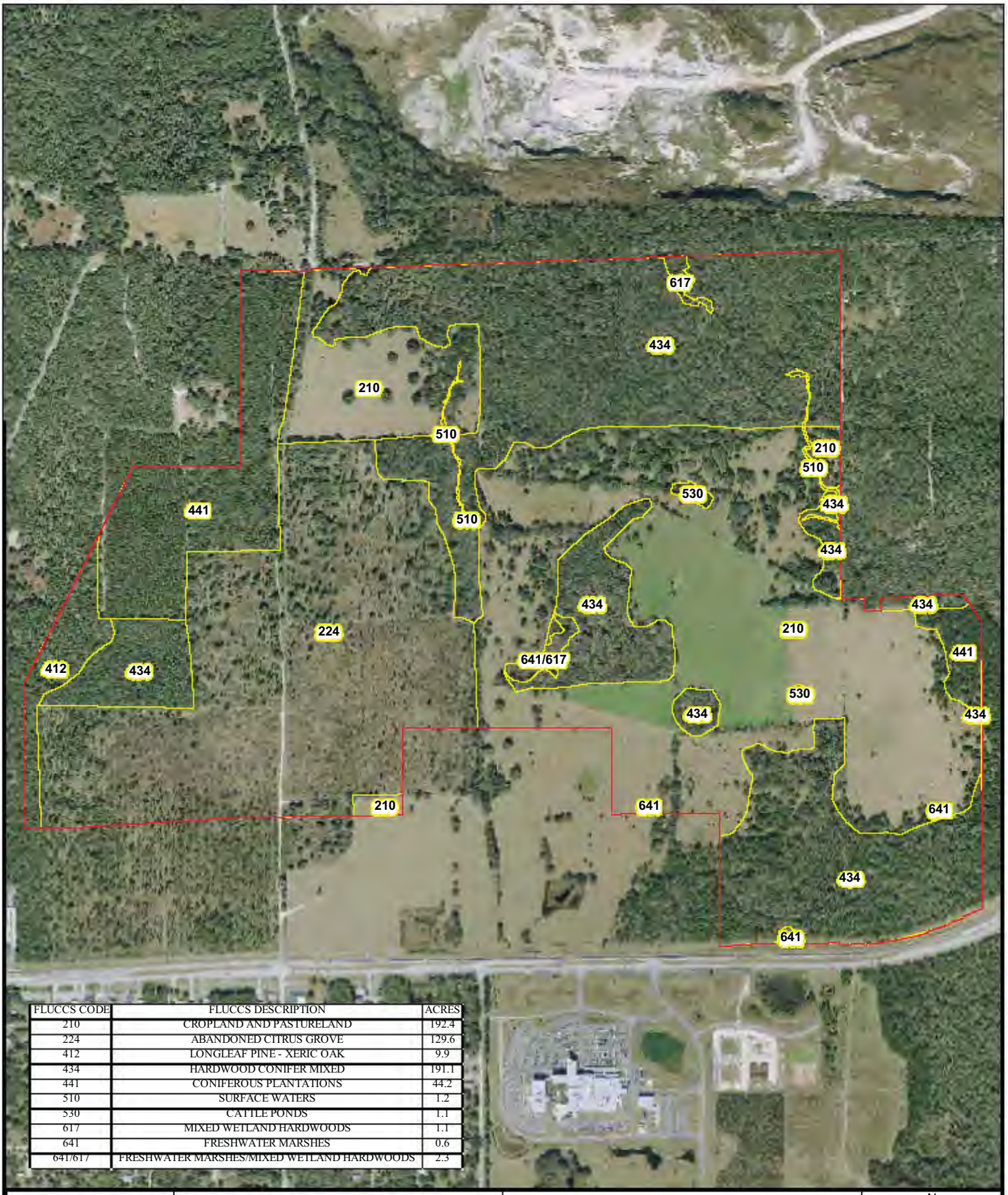
HERNANDO COUNTY, FLORIDA

Agreement Parcel Boundary
Soils

N
W E
S

SOIL MAP

P:\0004CMX007-Bronson Mine\GIS\SOILS



FLUCCS CODE	FLUCCS DESCRIPTION	ACRES
210	CROPLAND AND PASTURELAND	192.4
224	ABANDONED CITRUS GROVE	129.6
412	LONGLEAF PINE - XERIC OAK	9.9
434	HARDWOOD CONIFER MIXED	191.1
441	CONIFEROUS PLANTATIONS	44.2
510	SURFACE WATERS	1.2
530	CATTLE PONDS	1.1
617	MIXED WETLAND HARDWOODS	1.1
641	FRESHWATER MARSHES	0.6
641/617	FRESHWATER MARSHES/MIXED WETLAND HARDWOODS	2.3

Feet
0 1,000
1 in = 1,000 feet

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

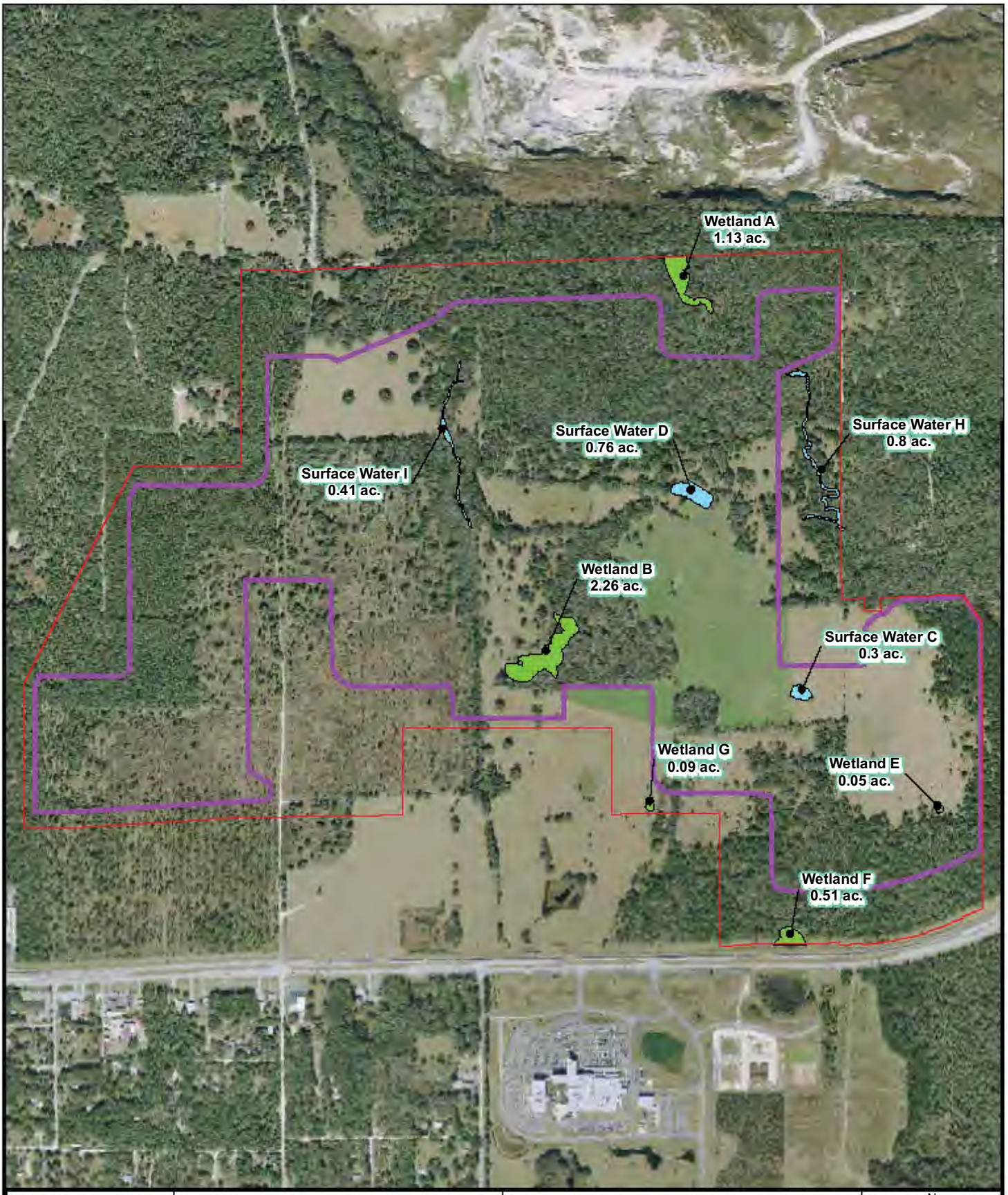
Agreement Parcel
Land Use

Source: SWFWMD 2010 AERIALS, FNAI LAND USE

N
W E
S

LAND USE MAP 1/2017

P:\0004CMX\007-Bronson Mine\GIS\LANDUSE 2017.mxd



Feet
0 1,000
1 in = 1,000 feet

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

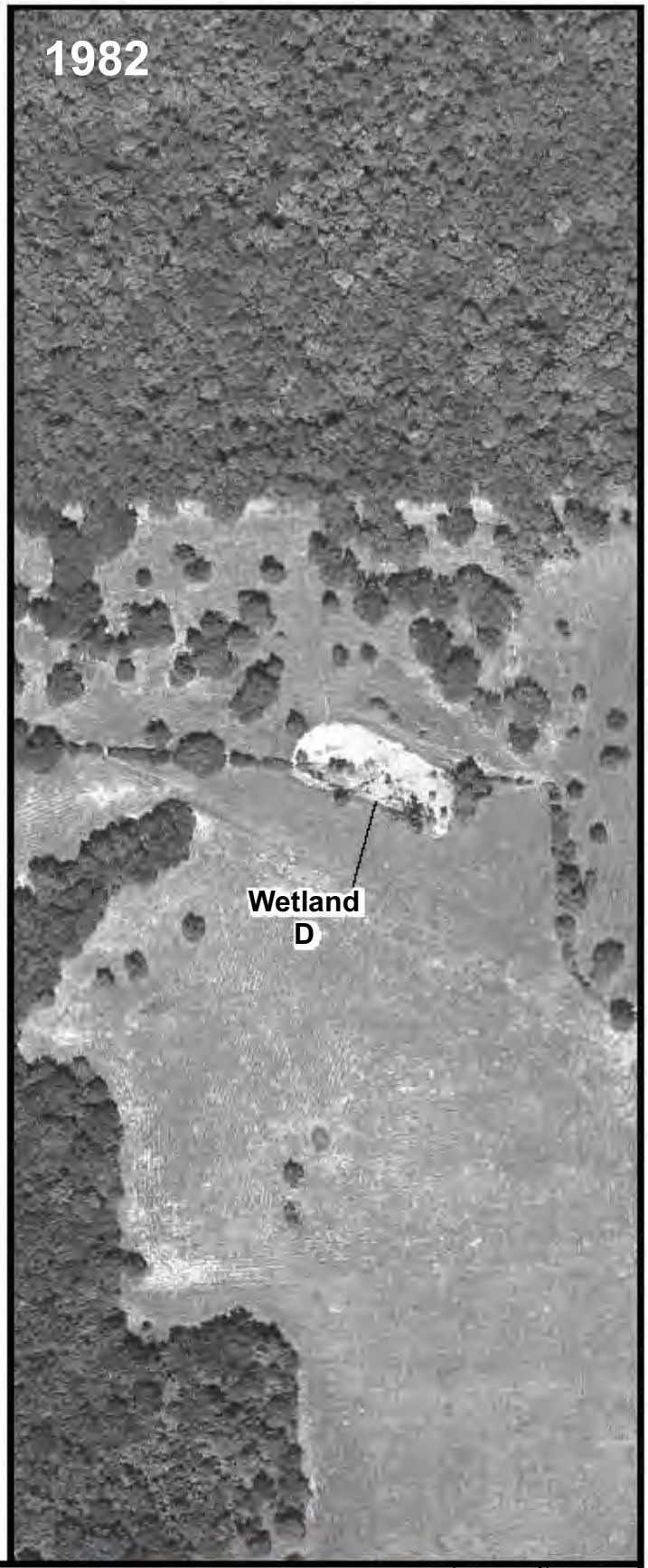
HERNANDO COUNTY, FLORIDA

- Agreement Parcel
- Disturbed Area
- Wetland
- Surface Water

N
W E
S

WETLAND MAP

P:\0004CMX\007-Bronson Mine\GIS\WETLAND DISTURBED.mxd

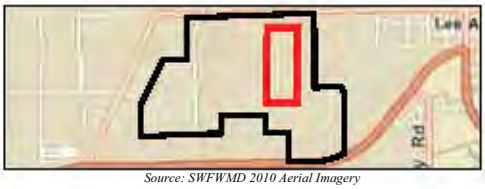


Feet
0
300
1 in = 300 feet

FLATWOODS

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

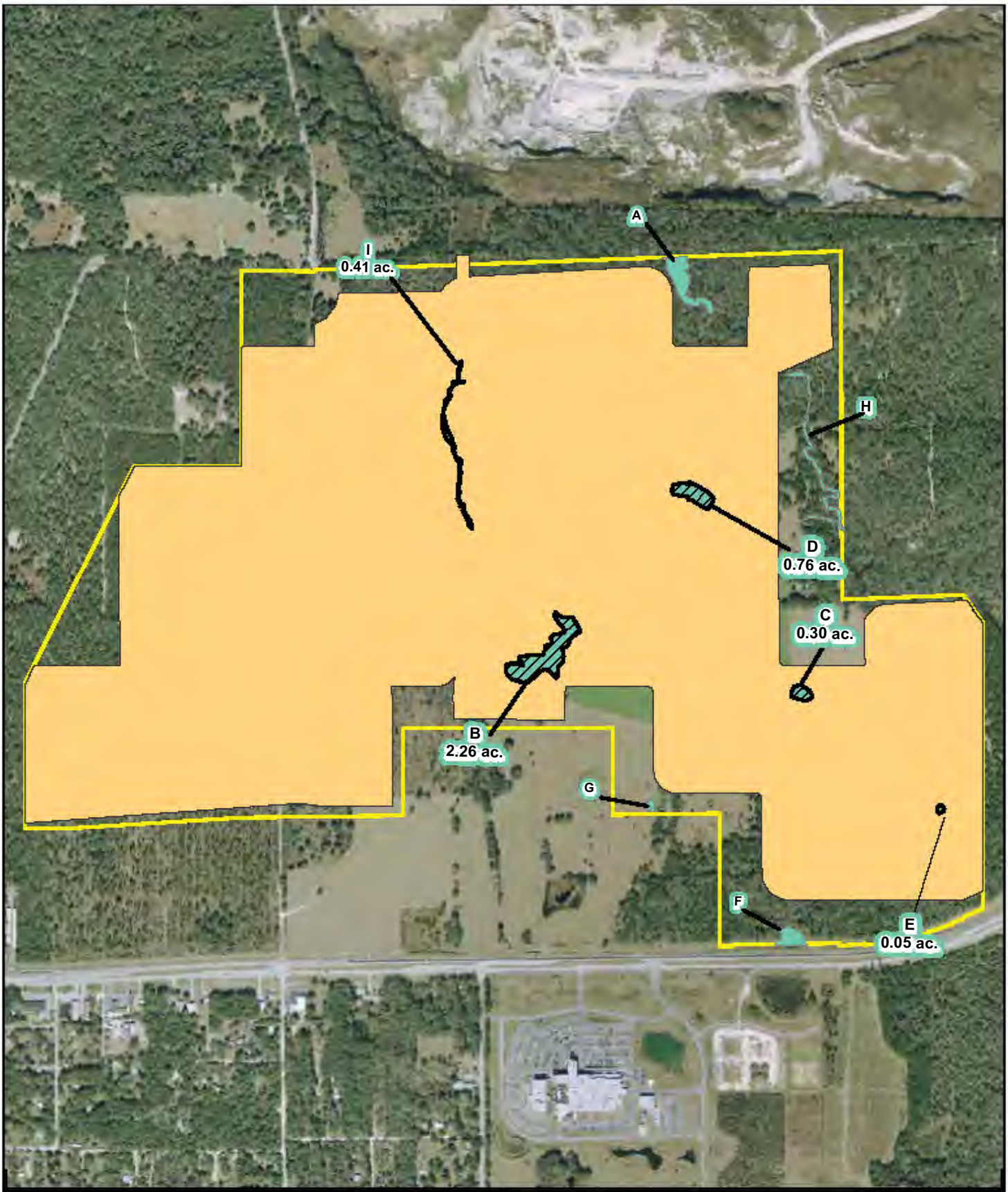


Source: SWFWMD 2010 Aerial Imagery

N
W E
S

HISTORIC
AERIALS
MAP

P:\0004CMX\007-Bronson Mine\GIS\ERT Historic_wetland_D



Feet

0 1,000

1 in = 1,000 feet

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

LEGEND

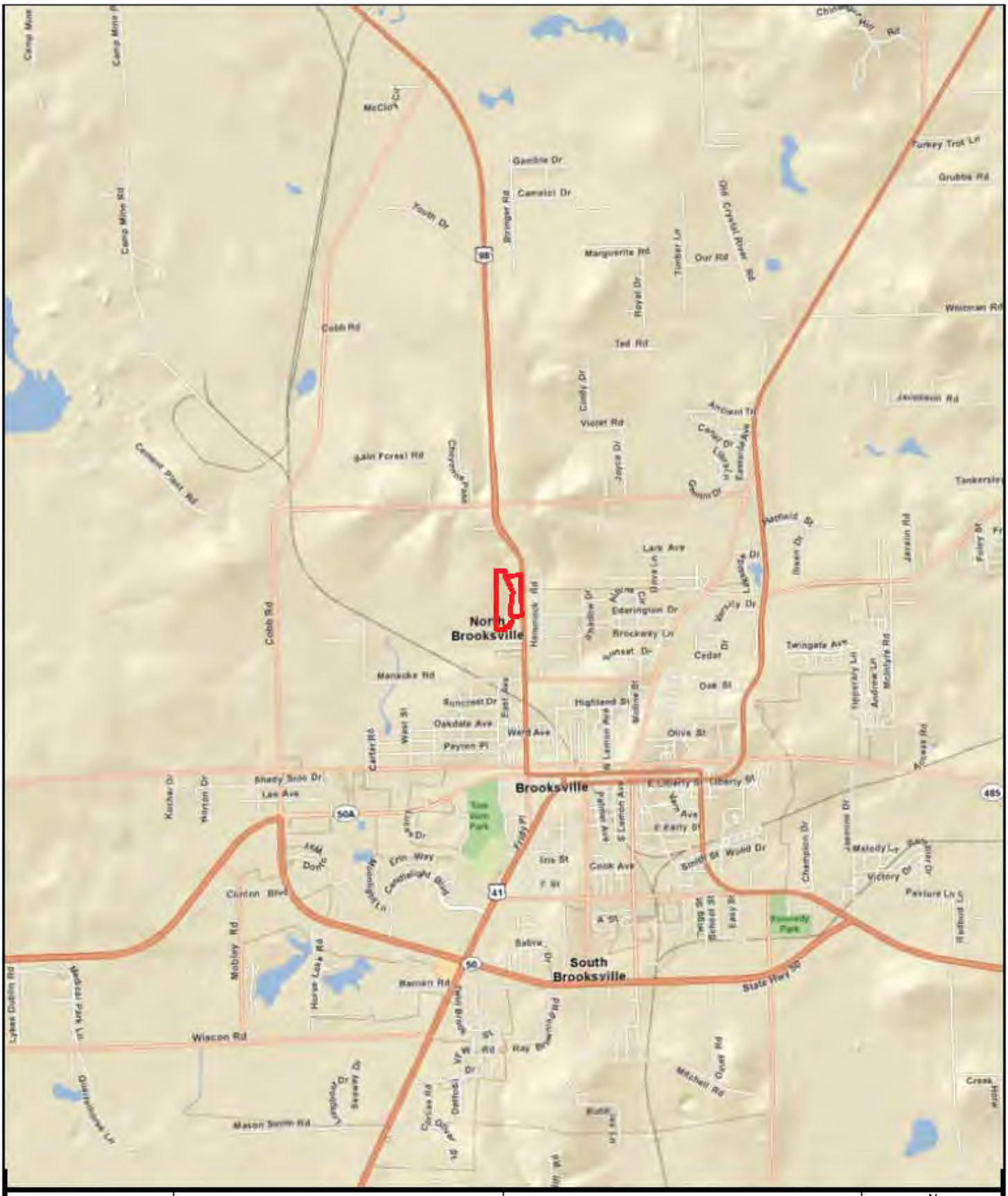
- Agreement Parcel
- Disturbed Area
- Wetland Boundary
- Wetland Impacts

Source: SWFWMD 2010 Aerial Imagery

N
W E
S

WETLAND IMPACT MAP

P:\0004CMX\007-Bronson Mine\GIS\ERP\CEMEX Brooksville Proposed Wetland Impacts



Feet
0 4,000
1 in = 4,000 feet

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

LEGEND

Parcel Boundary

Source: ESRI WORLD IMAGERY, 2009

N
W E
S

MITIGATION LOCATION MAP

P:\0004CMX\007-Bronson Mine\GIS\ERP\CEMEX Brooksville ERP_Mitigation_Location

Feet

0 250

1 in = 250 feet

CEMEX BROOKSVILLE QUARRY
BRONSON EXTENSION

HERNANDO COUNTY, FLORIDA

LEGEND

- **Parcel Boundary**
- **Wetland Preservation**
- **Upland Preservation**

Source: ESRI WORLD IMAGERY, 2009

N
W E
S

MITIGATION MAP

P:\0004CMX\007-Bronson Mine\GIS\CEMEX Brooksville ERP_Mitigation

the property

Photo 2: Photo of the pasture in the northwest portion of the propert r

ı the north ˈest portion of the site

Photo 4: ˙ypical vie ˈ of the pine plantation ʋith less groundcover

e.

Photo 6: Typical vie of upland ardwood c nifer mixed forest in the western portion of th property

Photo 8: Typical view of the abandoned citrus grove that is overgrown with groundcover

Photo 10: Typical view of the upland hardwood conifer mixed forest in the center portion of the property

planted with feed gra ses

Photo 12: View of W etland C

ture on the ɛastern portion of the prɔperty

Photo 14: View of W ɛtland E

ty

Photo 16: View of W etland F which extends off the prop erty on the southern oundary of the propert r into the ro ad right-of- vay

ɛtland G

Photo 18: Typical vi ɔw of Wetla ɑd H

ith a dense oak and pin e canopy

Photo 20: View of W etland D

e crossing

Photo 22: Typical view of Wetla d A, a mixed hardwood wetland

ıixed forest in the northeast ːrn portion ɔf the property

UMAM Functional Gain vs. Functional Loss Summary

Project Summary for: Bronson Mine

Application Number:

	Acres	Functional Loss	Functional Gain
Impact			
	2.26	-1.21	
Mitigation			
Upland Preservation	4.81		1.54
Wetland Preservation	1.94		0.16
Total Phase Functional Lift		**0.49**	

P:\0004CMX\007-Bronson Mine\EP\Bronson UMAM.mdb

PART I - Qualitative Description
(See Section 62-345.400, F.A.C.

Site/Project Name:	Application Number:	Assessment Area Name or Number:
Bronson Mine		Wetland B

FLUCCs Code:	Further Classification:	Impact or Mitigation Site?	Assessment Area Size (ac):
641/617	Freshwater Marsh/Hardwood Wetland	Impact	2.26

Basin/Watershed Name/Number:	Affected Waterbody (Class):	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Springs Coast	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

None

Assessment Area Description:

Wetland B contains both a freshwater marsh portion and a mixed hardwood forested portion

Significant Nearby Features:	Uniqueness (considering the relative rarity in relation to the regional landscape.)
None	None

Functions:	Mitigation for previous permit/other historic use:
Wetland B appears to receive surface runoff from the northern site based on the topography of the site	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area):
Wading bird foraging, amphibian breeding, large mammal refuge, fish habitat	Potential for listed wading bird foraging within the marsh portion

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.)

Fish, frogs

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
Flatwoods Consulting Group	19-Apr-2011

PART II - Quantification of Assessment Area (Impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Bronson Mine		Wetland B

Impact or Mitigation	Assessment conducted by:	Assessment Date:
Impact	Flatwoods Consulting Group	19-Apr-2011

Scoring Guidance	Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type if wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(7)(a) Location and Landscape Support	Active cattle influence Cover of invasive/exotic spp. is minimal, minimal adverse effect on functions of AA. Area Land Uses have significant adverse impacts on wildlife. Habitat availability outside AA is fair, fails to provide support some species of wildlife or provides minimal support fro many species in Pt. I.	5	0
.500(7)(b) Water Environment (n/a for uplands)	Active cattle influence Soil deviated from appropriate, erosion/deposition patterns atypical/indicate alterations. Presence/evidence of use by animal species w/specific hydrologic requirements is much less than expected/more generalized requirements. Water level indicators not distinct or consistent w/expected hydrologic conditions for TOS.	5	0
.500(7)(c) Community Structure	Active cattle influence Much lower/higher quantity of good structure habitat (see rule for details) Land Management Practices resulted in partial removal/alteration of natural structures, add some artificial features. Majority of plant covers is desirable plant species in all strata .	6	0

Score = sum of above scores/30 (if uplands, divide by 20)	
0.5333	0.0000

Delta = [with-current]:
-0.5333

If preservation as mitigation,	
Preservation adjustment factor =	N/A
Adjusted mitigation delta =	N/A

If mitigation,	
Time lag (t-factor) =	N/A
Risk factor =	N/A

For impact assessment areas	
Area Size (ac) =	2.26
FL= delta x acres =	-1.21 *

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	N/A

** FL is rounded to 2 decimal places. Intermediate calculations are not rounded, but are displayed to 4 decimal places.*

PART I - Qualitative Description
(See Section 62-345.400, F.A.C.

Site/Project Name:	Application Number:	Assessment Area Name or Number:
Bronson Mine		Upland Preservation

FLUCCs Code:	Further Classification:	Impact or Mitigation Site?	Assessment Area Size (ac):
		Mitigation	4.81

Basin/Watershed Name/Number:	Affected Waterbody (Class):	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

None

Assessment Area Description:

Forested area adjacent to a wetland

Significant Nearby Features:	Uniqueness (considering the relative rarity in relation to the regional landscape.)
None	None

Functions:	Mitigation for previous permit/other historic use:
Possible mammal refuge and passerine bird usage	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area):
Possible mammal refuge and passerine bird usage	None currently due to cattle use

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.)

None observed

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
Flatwoods Consulting Group	06-Apr-2011

PART II - Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Bronson Mine		Upland Preservation

Impact or Mitigation	Assessment conducted by:	Assessment Date:
Mitigation	Flatwoods Consulting Group	19-Apr-2011

Scoring Guidance	Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type if wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(7)(a) Location and Landscape Support	Without mitigation: Active cattle use. Agricultural lands impede wildlife movement. With mitigation: No cattle use will be permitted. With mitigation, the area will be placed under a conservation easement. Area Land Uses have no adverse impacts on wildlife.	0	8
.500(7)(b) Water Environment (n/a for uplands)	Without mitigation: With mitigation:	0	0
.500(7)(c) Community Structure	Without mitigation: Active cattle use. Agricultural lands impede wildlife movement. With mitigation: No cattle use will be permitted. With mitigation, the area will be placed under a conservation easement. Land Management Practices Optimal.	0	8

Score = sum of above scores/30 (if uplands, divide by 20)	
0.0000	0.8000

Delta = [with-current]:
0.8000

If preservation as mitigation,	
Preservation adjustment factor =	0.4000
Adjusted mitigation delta =	0.3200

If mitigation,	
Time lag (t-factor) =	1
Risk factor =	1

For impact assessment areas	
Area Size (ac) =	4.81
FL= delta x acres =	N/A

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.3200
FG = RFG x acres =	1.54 *

* FG is rounded to 2 decimal places. Intermediate calculations are not rounded, but are displayed to 4 decimal places.

PART I - Qualitative Description
(See Section 62-345.400, F.A.C.

Site/Project Name:	Application Number:	Assessment Area Name or Number:	
Bronson Mine		Wetland Preservation	
FLUCCs Code:	**Further Classification:**	**Impact or Mitigation Site?**	**Assessment Area Size (ac):**
		Mitigation	1.94
Basin/Watershed Name/Number:	**Affected Waterbody (Class):**	**Special Classification** (i.e. OFW, AP, other local/state/federal designation of importance)	
Springs Coast	Class III		

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Wetland appears to flow offsite to the south

Assessment Area Description:

The wetlands consist of a mix of wetland hardwood and an ephemeral flowway

Significant Nearby Features:	Uniqueness (considering the relative rarity in relation to the regional landscape.)
None	None
Functions:	**Mitigation for previous permit/other historic use:**
Wading bird foraging, amphibian breeding, possible fish habitat	No
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area):**
Wading bird foraging, amphibian breeding, possible fish habitat	Potential for listed wading bird foraging

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.)

None observed

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
Flatwoods Consulting Group	06-Apr-2011

PART II - Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Bronson Mine		Wetland Preservation

Impact or Mitigation	Assessment conducted by:	Assessment Date:
Mitigation		

Scoring Guidance	Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type if wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(7)(a) Location and Landscape Support	Without mitigation: Active cattle use. Area Land Uses have significant adverse impacts on wildlife. With mitigation: No cattle use will be permitted. With mitigation, the area will be placed under a conservation easement.	6	8
.500(7)(b) Water Environment (n/a for uplands)	Without mitigation: Active cattle use. Presence/evidence of use by animal species w/specific hydrologic requirements is much less than expected/more generalized requirements. With mitigation: No cattle use will be permitted. With mitigation, the area will be placed under a conservation easement.	5	7
.500(7)(c) Community Structure	Without mitigation: Active cattle use. UMAA - plant community provide moderate level of habitat and life history support for fish & wildlife. Land Management Practices resulted in partial removal/alteration of natural structures, add some artificial features. With mitigation: No cattle use will be permitted. With mitigation, the area will be placed under a conservation easement.	5	7

Score = sum of above scores/30 (if uplands, divide by 20)	
0.5333	0.7333

Delta = [with-current]:
0.2000

If preservation as mitigation,	
Preservation adjustment factor =	0.4000
Adjusted mitigation delta =	0.0800

If mitigation,	
Time lag (t-factor) =	1
Risk factor =	1

For impact assessment areas	
Area Size (ac) =	1.94
FL= delta x acres =	N/A

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	0.0800
FG = RFG x acres =	0.16 *

* FG is rounded to 2 decimal places. Intermediate calculations are not rounded, but are displayed to 4 decimal places.

ATTACHMENT G

DRAINAGE AND RUNOFF CALCULATIONS

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA
RUNOFF CALCULATIONS - 100-YEAR, 24-HOUR RAINFALL

Rainfall Data
(Source: Technical Publication Southwest Florida Water Management District Part D - Project Design Aids, Figure D-11, Environmental Resource Permitting Manual, July 1996)
• 100-year flood, 24-hour rainfall = 12 inches

Property and Bronson Extension mine data:
- Property acreage (watershed) = +/- 573.47 acres
- Proposed quarry acreage = +/- 494.17 acres
- Proposed quarry floor elevation = +/-40 feet NGVD (typical)
- Lowest elevation of the quarry top of bank = +/- 100 feet NGVD
- Available depth for water storage below grade = +/– 60 feet (typical)

Runoff Calculations
One hundred percent (100%) of runoff from the quarry, undeveloped land, haul roads, access road, overburden storage areas and berms (watershed) will be directed to the quarry.
- Total runoff volume from 100-year, 24-hour rainfall from the quarry, undeveloped land, haul roads, access road, overburden storage areas and berms (watershed) = 573.47 acres x 43,560 square feet/acre x 12 inches x 1 foot/12 inches = 24,980,353 cubic feet of runoff.

Retention Area Information
One hundred percent (100%) of runoff from the quarry, undeveloped land, haul roads, access road, overburden storage areas and berms (watershed) will be directed to the quarry.
- Available storage volume = 494.17 acres x 43,560 square feet/acre x 60 feet (quarry depth used for calculation with quarry floor at 40 feet NGVD; top of quarry shear wall elevation used for calculation 100 feet NGVD) = 1,291,562,712 cubic feet of impoundment capacity.
- Available impoundment capacity immediately following 100-year, 24-hour rainfall (assuming zero recharge) = 1,291,562,712 cubic feet (available storage) - 24,980,353 cubic feet (runoff volume from 100-year, 24-hour storm) = **1,266,582,359 cubic feet of remaining impoundment capacity**.

Conclusion

The proposed mine extension is situated on a high ridge of limestone (the Brooksville Ridge physiographic region) of Oligocene Suwannee Limestone and Eocene Ocala Limestone. Between 2006 and 2010, the potentiometric surface of the upper Floridan aquifer underlying the property was typically +/- 32 feet NGVD. Mining depth will be to a maximum of eight feet above the potentiometic surface (approximately 40 feet NGVD). The quarry will have sufficient volume to store all runoff from the 100-year, 24-hour storm event.

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA
RUNOFF CALCULATIONS
100-YEAR, 24-HOUR RAINFALL

PROFESSIONAL ENGINEER CERTIFICATION

I, Mark R. Stephens, PE# 36179, certify that I currently hold an active license in the state of Florida and am competent through education or experience to provide engineering services in the civil engineering discipline contained in this plan, print, specification, or report. I further certify that this plan, print, specification, or report were prepared by me or under my responsible charge as defined in Chapter 61G15-18.OO1, F.A.C. Moreover, if offered by a corporation, partnership, or through a fictitious name, I certify that the company offering the engineering services, The Colinas Group, Inc., holds an active Certificate of Authorization (No. 7934) to provide the engineering service.

_____ Date: _____

Mark R. Stephens, P.G., P.E.
Florida P.E. License No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 East Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
Phone (863) 669-9141

ATTACHMENT H

EROSION AND SEDIMENTATION PLAN

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA

EROSION AND SEDIMENTATION CONTROL PLAN

Project Description

CEMEX Construction Materials Florida, LLC., requests approval to extend mining to three parcels consisting of a total of +/- 573.47 acres. The subject properties are contiguous and are located in Sections 19 and 30, Township 22 South, Range 19 East; Section 24 and 25, Township 22 South, Range 18 East in Hernando County, Florida. The properties are located directly south of the existing CEMEX Construction Materials Florida, LLC., Brooksville Quarry and are divided by Ft. Dade Avenue. Limestone mining is proposed to a depth of approximately 40 feet NGVD. After removal and stockpiling of vegetative cover, topsoil and overburden used in the reclamation process, the limestone will be excavated using front end loaders, draglines and/or backhoes. It is anticipated that ingress/egress, including transport of the limestone to the aggregate processing facilities at the existing Brooksville Quarry from the Bronson Extension will be by creation of a tunnel or conveyor system under or a bridge over Fort Dade Avenue. After transport of the limestone to the existing Brooksville Quarry aggregate processing facilities, the excavated limestone will be crushed and placed on a conveyor belt for stockpiling. The product will then loaded into trucks for delivery and the trucks are weighed at a scale house prior to departure.

Silt Fencing

A temporary sediment barrier consisting of silt fence will be installed around the outside limits of the property to intercept and detain small amounts of sediment from disturbed areas during construction operations in order to prevent sediment from leaving the site and to decrease the velocity of sheet flows.

Temporary Division Berm

A temporary ridge of compacted soil will be placed along site boundaries where surface runoff could occur in an off site direction. The purpose of the temporary diversion berm is to divert storm runoff from higher drainage areas away from unprotected slopes to a stabilized outlet. Generally, the berm will be one to two feet high with side slopes of approximately 3:1. The top width will be a minimum of 2 feet with a minimum base width of 4.5 feet. The berm will be built before construction begins

on the project. Temporary seeding and mulch will be applied to the dike within 30 days of construction. The berm will be inspected after every storm and repairs made, as appropriate.

Temporary Construction Road Stabilization

Temporary construction access roadways will be stabilized with limerock immediately after grading. The stabilization is to reduce the erosion of temporary roadbeds by construction traffic during wet weather and reduce the erosion and therefore regrading of permanent roadbeds between the time of initial grading and final stabilization.

Sodding and/or Hydro-Seeding

Fine-graded disturbed areas will be stabilized by sodding and/or hydro-seeding, where necessary, with the appropriate grass species to prevent erosion and damage from sediment and runoff by stabilizing the soil surface, to reduce the production of dust and mud associated with bare soil surfaces, and to stabilize drainageways where concentrated overland flow will occur.

Prior to soil preparation, areas that need to be sodded and/or hydro-seeded will be brought to final grade. These operations should leave as much topsoil as possible or replace the topsoil to a depth of four inches (except in the retention pond areas). Prior to laying sod and/or hydro-seeding, the soil surface will be clear of trash, debris, roots, branches, stones and clods in excess of 2 inches in length or diameter. Sod and/or hydro-seed will not be applied to gravel or other non-soil surfaces. Any irregularities in the soil surface resulting from topsoil or other operations will be filled or leveled in order to prevent the formation of depressions or water pockets. Sod and or hydro-seed should be free of weeds and undesirable coarse weedy grasses.

The first row of sod and/or hydro-seed will be laid in a straight line with subsequent rows placed parallel to and butting tightly against each other. Lateral joints will be staggered to promote more uniform growth and strength. Care will be exercised to insure that sod and/or hydro-seed is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause drying of the roots. As sodding and/or hydro-seeding of clearly defined areas is completed, sod and or hydro-seed will be rolled or tamped to provide firm contact between roots and soil. The first mowing will not be attempted until the sod and/or hydro-seed is firmly rooted, usually after 2-3 weeks. Not more than 1/3 of the grass leaf should be removed at any one cutting.

Seeding

Seeding will be used in areas that are relatively flat and not subject to high surface runoff velocities. Certified seed should be used for all permanent seeding whenever possible. Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydroseeder on a firm, friable seedbed. Maximum seeding depth should be 1/4 inch.

Lime and Fertilizer

The following soil amendments will be applied to seeded areas before seeding.
Lime: 2 tons/acre finely ground agricultural or dolomitic limestone
Fertilizer: 1000 pounds per acre of 5-20-10 and 300 pounds per acre of 38-0-0 in spring
Soil Amendment Incorporation: Lime and fertilizer shall be incorporated into the top 4 - 6 inches

of the soil by discing or other means. When applying lime and fertilizer with a hydroseeder, apply to a rough, loose surface.

Mulching

All permanent seeding will be mulched immediately upon completion of seed application if necessary.

Maintenance of New Seedlings

Irrigation: Water will be supplied as needed and seeded areas will be inspected for failure and necessary repairs and re-seedings within the same season will be carried out, if possible/necessary.

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA

EROSION AND SEDIMENTATION CONTROL PLAN

PROFESSIONAL ENGINEER CERTIFICATION

I, Mark R. Stephens, PE# 36179, certify that I currently hold an active license in the state of Florida and am competent through education or experience to provide engineering services in the civil engineering discipline contained in this plan, print, specification, or report. I further certify that this plan, print, specification, or report were prepared by me or under my responsible charge as defined in Chapter 61G15-18.OO1, F.A.C. Moreover, if offered by a corporation, partnership, or through a fictitious name, I certify that the company offering the engineering services, The Colinas Group, Inc., holds an active Certificate of Authorization (No. 7934) to provide the engineering service.

_____ Date: _____

Mark R. Stephens, P.G., P.E.
Florida P.E. License No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 East Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
Phone (863) 669-9141

ATTACHMENT I

SPECIAL PROTECTION AREAS

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA

SPECIAL PROTECTION AREAS

During previous discussions, County staff indicated there are four different sink hole features on the subject property and that all four are considered Special Protection Areas (SPAs). The staff also stated that the four features warranted further investigation. The Colinas Group, Inc., (TCG) conducted the further investigation of three of the four features. The findings of the investigation are presented below.

The suspected locations of the four karst features are shown on Figure 1. The southernmost feature depicted on County maps as a concentric ring of six circles was not part of this investigation. The investigation focused on the three features along the northern portion of the Bronson Extension. The features are labeled as features 1, 2, and 3 on Figure 1.

The investigation consisted of;

1) obtaining data from the Florida Department of Environmental Protection, Office of the Florida Geological Survey; and,
2) conducting a site inspection of the suspected features locations.

The Florida Geological Survey GIS shape files are apparently the source used by the County in mapping the three features. When TCG independently plotted the three features using the Florida Geological Survey coordinates, the features plotted at the locations shown on the County maps. Further investigation of the features using the GIS metadata files and the Florida Geological Survey Subsidence Incidents Reports shows that the written descriptions of the feature locations do not coincide with the coordinates provided. The written descriptions of the feature locations are provided below.

Feature 1 - *Total of 4 Sinks Appeared, They Seem to Be Connected. They Appeared During Heavy Rain. #1 Sink 25x25 3 Feet Deep. #2 Sink 4 X 4 2 Feet Deep (Parking Lot). #3 Sink 25x20 30 Feet Deep. #4 Sink 2 X 2 15 Feet Deep. Spring Hill. East of Mariner Blvd.& N of Spring Hill Dr.*

Feature 2 - *Covered Subsidence. Evaluated by Jammal & Associates. It Cost Insurance Co. 13000 $ to Fix Sullivans House. Drysdale St. in Southeast Spring Hill.*

Feature 3 - *Killian Street. East of Spring Hill*

Mariner Boulevard, Spring Hill Drive, Drysdale Street, and Killian Street are all west of the Suncoast Parkway, all more than four miles from the Bronson Extension property. It is reasonable to assume that the written descriptions of the feature locations take precedence over the coordinates.

To further investigate the three features, a site inspection was conducted on June 22, 2011. Using

the Florida Geological Survey coordinates, the suspected locations of Features 1 and 2 were identified in the field. Sinkholes were not present at either location, as show by the photographic evidence contained in Attachment A. Feature 3 was not accessible due to the dense nature of the forested area identified by the Florida Geological Survey coordinates.

Based on the further investigation of the three suspected sinkhole features, it is my professional opinion that sinkholes are not present at Features 1 and 2. Extrapolating the findings to Feature 3, it is my professional opinion that Feature 3 is not a sinkhole. The three features are mis-located on the Florida Geological Survey database and should not be considered Special Protection Areas.

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION
HERNANDO COUNTY, FLORIDA

SPECIAL PROTECTION AREAS

PROFESSIONAL ENGINEER CERTIFICATION

I, Mark R. Stephens, PE# 36179, certify that I currently hold an active license in the state of Florida and am competent through education or experience to provide engineering services in the civil engineering discipline contained in this report. I further certify that this report were prepared by me or under my responsible charge as defined in Chapter 61G15-18.OO1, F.A.C. Moreover, if offered by a corporation, partnership, or through a fictitious name, I certify that the company offering the engineering services, The Colinas Group, Inc., holds an active Certificate of Authorization (No. 7934) to provide the engineering service.

_____ Date: _____

Mark R. Stephens, P.G., P.E.
Florida P.E. License No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 East Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
Phone (863) 669-9141

FIGURE 1

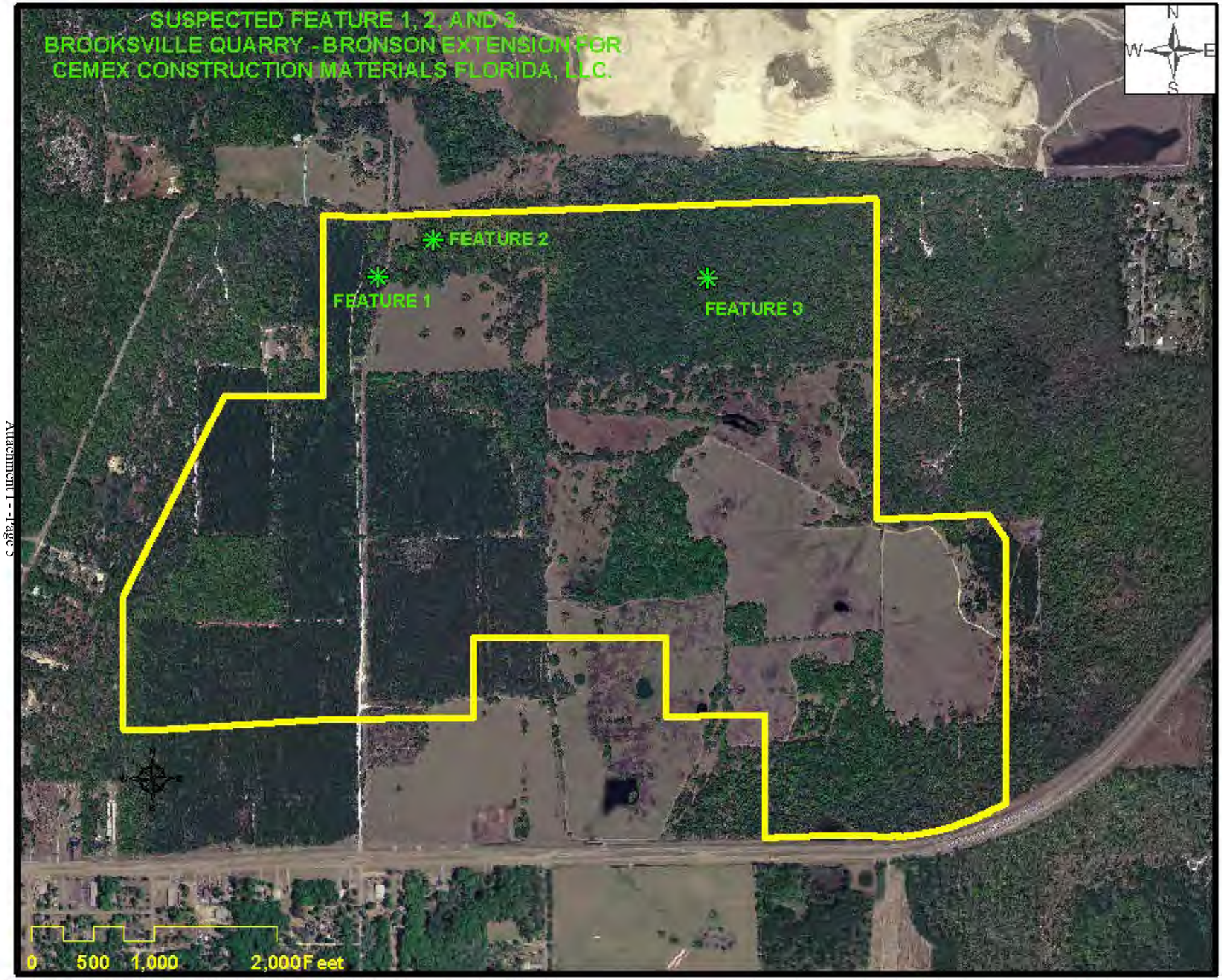

SUSPECTED FEATURE 1, 2, AND 3
BROOKSVILLE QUARRY - BRONSON EXTENSION FOR
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
N
W
E
S
FEATURE 2
FEATURE 1
FEATURE 3
0 500 1,000 2,000 Feet

FIGURE 1

ATTACHMENT A

PANORAMIC PHOTOGRAPHS

Feature 1

West East

Feature 2

East West

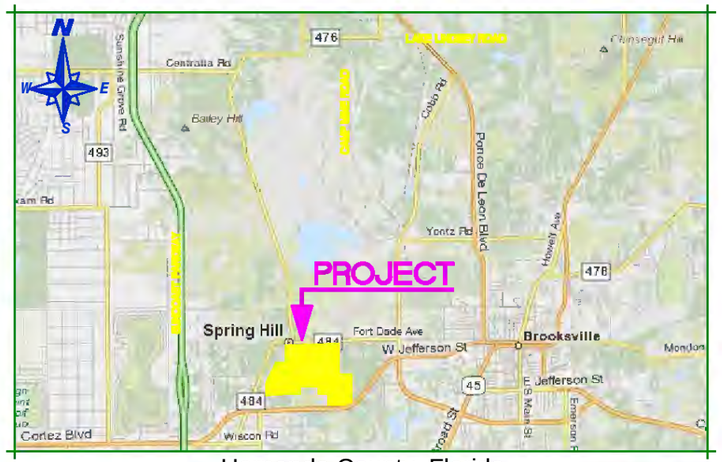
Panoramic photographs taken June 22, 2011

MASTER MINING PLAN APPROVAL
FOR
BROOKSVILLE QUARRY
- BRONSON EXTENSION -

OWNER

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA 34601
(352) 796-3522

CEMEX
Building a better future



Hernando County, Florida
Sections 24 & 25, T. 22 S., R18 E.
Sections 19 & 30, T. 22 S., R19 E.

Sunshine State One Call of Florida, Inc. OR CALL 48 HOURS BEFORE YOU DIG It's the Law! 800-432-4770 811 or WWW.CALLSUNSHINE.COM

CALL 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY

NOTES:

1) ALL WORK SHALL BE IN ACCORDANCE WITH THE MOST CURRENT CONSTRUCTION STANDARDS FOR THE STATE OF FLORIDA.

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

INDEX OF DRAWINGS

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3801
(863) 669-9141

Date:

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 9/6/19

N

GRAPHIC SCALE (FT)

ZONING INFORMATION OBTAINED FROM:
HERNANDO COUNTY
GENERAL ZONING AND SPECIAL USES MAP
DATED JUNE, 2009

REV. No.	DATE	DESCRIPTION	CHK BY:

AGRICULTURAL

CITRUS WAY (CR 491)

MINING

EXISTING MINE BOUNDARY

AGRICULTURAL

FORT DADE AVE (CR 484)

±410'

±390'

RESIDENTIAL

AGRICULTURAL

AGRICULTURAL

MINING

MINING

±2010'

CPDP

OWNERSHIP GROUP BOUNDARY

AGRICULTURAL

FORT DADE AVE (CR 484)

OWNERSHIP GROUP BOUNDARY

±1780'

MINING

AGRICULTURAL

±100'

RESIDENTIAL

RESIDENTIAL

MINING

CITY

±1770'

±420'

±1630'

AR

±930'

±540'

±490'

±430'

AGRICULTURAL

±1220

±1220'

CITRUS WAY (CR 491)

±1200'

±1200'

±1200'

AGRICULTURAL

±1190'

±190'

±210'

CPDP

OWNERSHIP GROUP BOUNDARY

50

CORTEZ BLVD

C2 C1

±205'

±200'

PDP(OP)WITH C1 USE

CPDP

AGRICULTURAL

RESIDENTIAL

COMMERCIAL

R1A

AGHOSPITAL

PDP(MF)

R1ACHURCH

LEGEND

AGREEMENT BOUNDARY (573.47± ac)

OWNERSHIP GROUP BOUNDARY

EXISTING ACTIVE MINE BOUNDARY

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-1742 Fax: (863) 669-1742
www.THECOLINASGROUP.com

Cemex
Building a better future

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB #	S-282BA	DATE:	August 9, 2019
SCALE:	as noted	CALC BY:	MRS
FIELD BY:	n/a	DRAWN BY:	gd
CHECKED BY:	MRS		

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

AERIALS OBTAINED FROM FDOT
https://fdotewp1.dot.state.fl.us/AerialPhotoLookUpSystem/
Dated: January, 2017

REV. No.	DATE	DESCRIPTION	CHK BY:

N

GRAPHIC SCALE (FT)

EXISTING MINE BOUNDARY

MINING AGREEMENT BOUNDARY

FORT DADE AVE (CR 484)

CITRUS WAY (CR 491)

WETLAND A

WETLAND I

WETLAND D

WETLAND H

WETLAND B

WETLAND C

WETLAND G

WETLAND E

WETLAND F

DRAINAGE BASIN

INTERNALLY DRAINED DRAINAGE BASIN

PECKS SINK DRAINAGE BASIN

PECKS SINK OVERFLOW DRAINAGE BASIN

Mineable Area
±492.92 ac.
(2019-08-14)

WETLAND ACREAGE
1.13 ac = Wetland A
2.16 ac = Wetland B
0.30 ac = Wetland C
0.76 ac = Wetland D
0.05 ac = Wetland E
0.51 ac = Wetland F
0.09 ac = Wetland G
0.80 ac = Wetland H
0.41 ac = Wetland I
6.21 ac = Total

OWNERSHIP GROUP BOUNDARY

CITRUS WAY (CR 491)

EMPLOYEES/CONTRACTOR ENTRANCE

CORTEZ BLVD

50

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- EXISTING ACTIVE MINE BOUNDARY
- OWNERSHIP GROUP BOUNDARY
- 110 EXISTING CONTOUR (FEET NGVD)
- WETLAND
- DRAINAGE BASIN
- SURFACE DRAINAGE DIRECTION

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWGS\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 9/6/19

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
Lakeland, FL 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

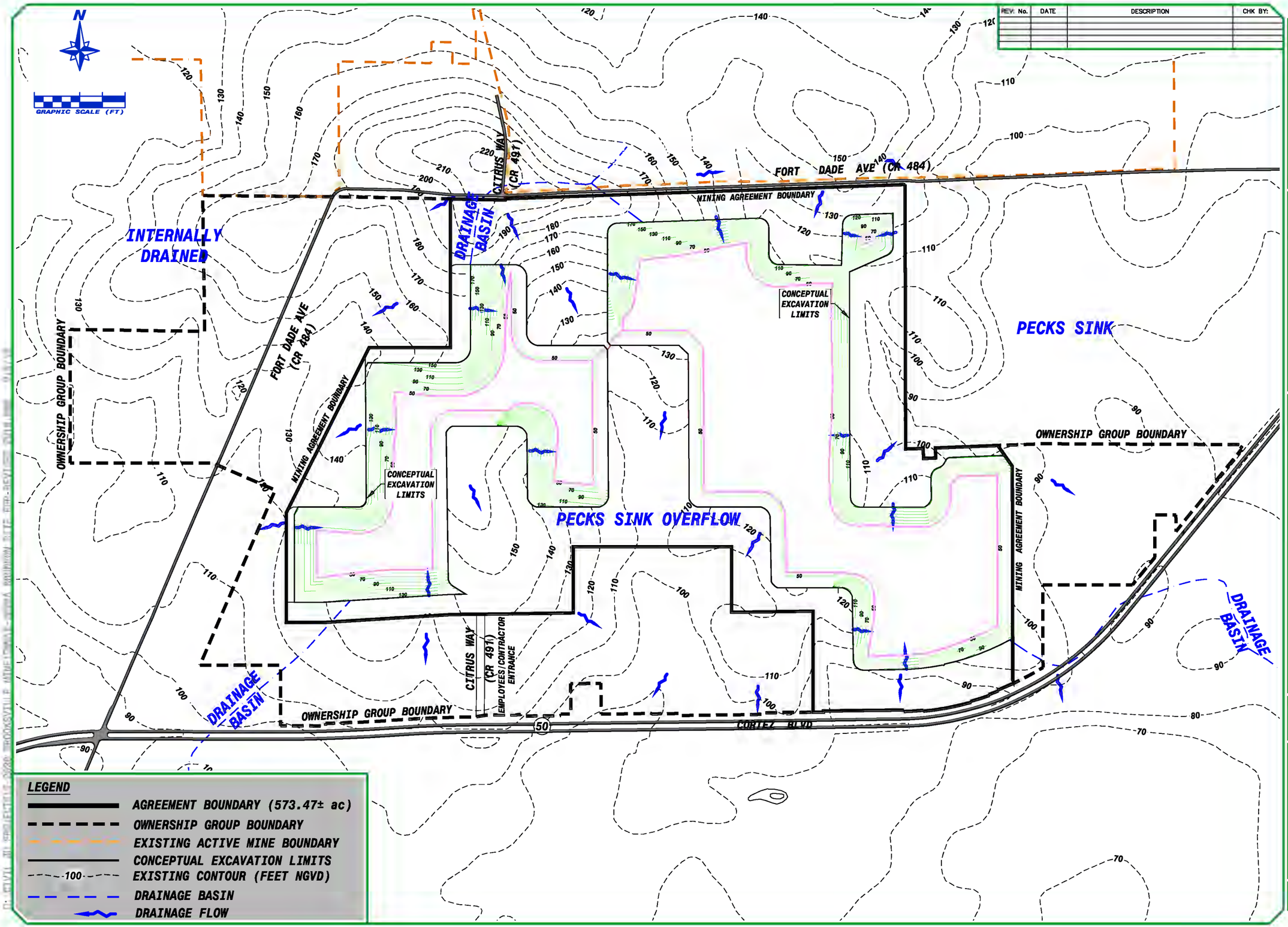
CEMEX
Building a better future

PRE-DEVELOPMENT DRAINAGE PLAN

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB #: S-262BA DATE: June 27, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141



REV. No.	DATE	DESCRIPTION	CHK BY:

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
Lakeland, Florida 33803
Phone: (863) 869-9141 Fax: (863) 869-1742
www.THECOLINASGROUP.COM

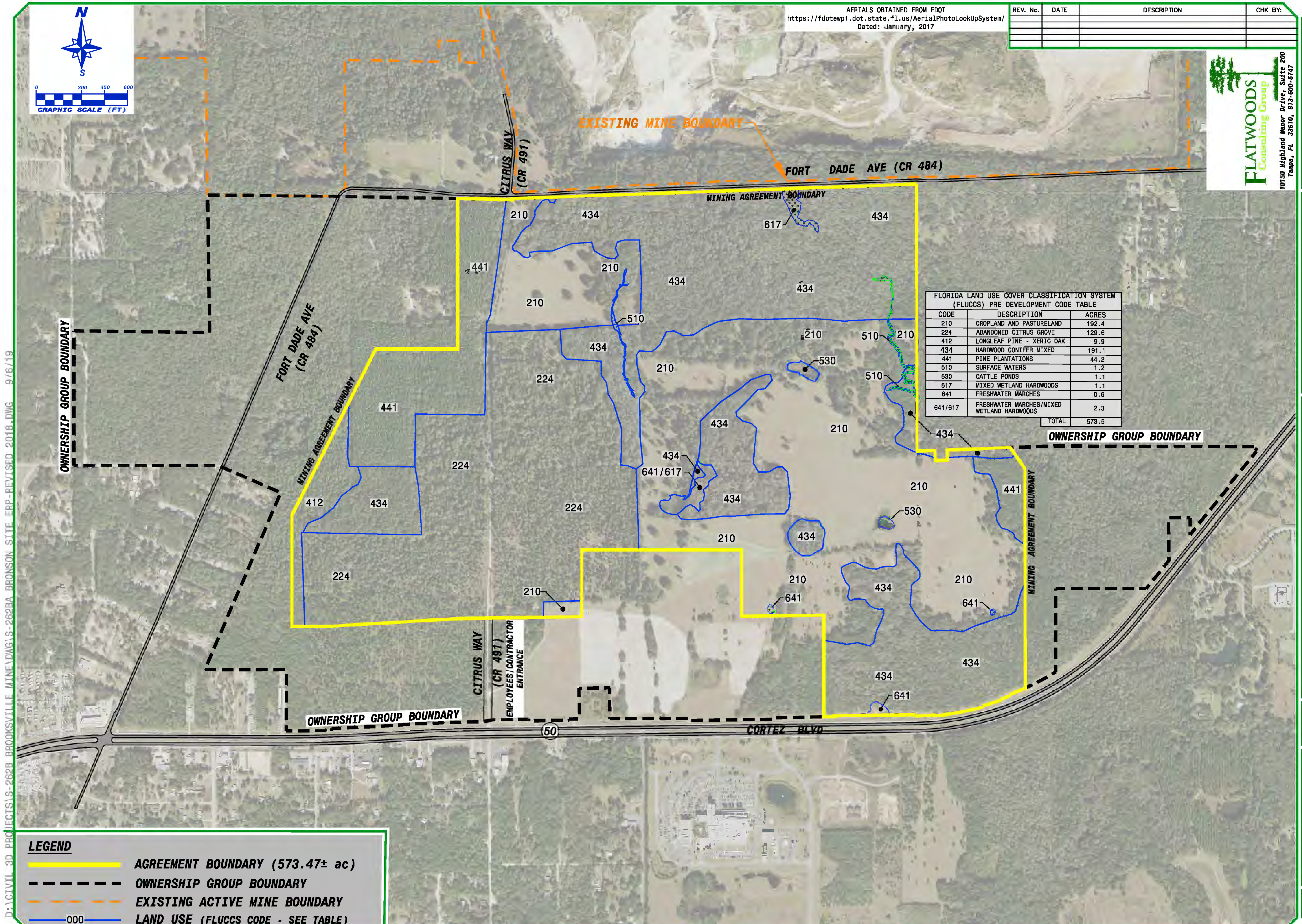
CEMEX
Building a better future

POST-DEVELOPMENT DRAINAGE PLAN

BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-2628A DATE: June 27, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 38179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 869-9141



FLORIDA LAND USE COVER CLASSIFICATION SYSTEM (FLUCCS) PRE-DEVELOPMENT CODE TABLE

CODE	DESCRIPTION	ACRES
210	CROPLAND AND PASTURELAND	192.4
224	ABANDONED CITRUS GROVE	129.6
412	LONGLEAF PINE - XERIC OAK	9.9
434	HARDWOOD CONIFER MIXED	191.1
441	PINE PLANTATIONS	44.2
510	SURFACE WATERS	1.2
530	CATTLE PONDS	1.1
617	MIXED WETLAND HARDWOODS	1.1
641	FRESHWATER MARCHES	0.6
641/617	FRESHWATER MARCHES/MIXED WETLAND HARDWOODS	2.3
	TOTAL	573.5

REV. No.	DATE	DESCRIPTION	CHK BY:

FLATWOODS Consulting Group
10150 Highland Manor Drive, Suite 200
Tampa, FL 33610, 813-600-5747

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
Lakeland, FL 33803
Phone: (863) 669-9141 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

CEMEX Building a better future

PRE-DEVELOPMENT FLORIDA LAND USE COVER CLASSIFICATION SYSTEM (FLUCCS) PLAN

BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB #: S-262BA DATE: June 27, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33603-3601
(663) 669-9141

REV. No.	DATE	DESCRIPTION	CHK BY:

N
W E
S

0 300 450 600
GRAPHIC SCALE (FT)

EXISTING MINE BOUNDARY

PROPOSED ENCLOSED OVERHEAD CONVEYOR

CITRUS WAY (CR 491)

FORT DADE AVE (CR 484)

FORT DADE AVE (CR 484)

OWNERSHIP GROUP BOUNDARY

OWNERSHIP GROUP BOUNDARY

OWNERSHIP GROUP BOUNDARY

POTENTIAL FUTURE RESERVES

POTENTIAL FUTURE RESERVES

POTENTIAL FUTURE RESERVES

POTENTIAL FUTURE RESERVES

OVERHEAD POWER LINES

200' SETBACK

200' SETBACK

100' SETBACK

150' SETBACK

50' BUFFER

50' BUFFER

100' SETBACK

100' SETBACK

100' SETBACK

100' SETBACK

100' SETBACK

100' SETBACK

100' SETBACK

100' SETBACK

CITRUS WAY (CR 491)

EMPLOYEES/CONTRACTOR ENTRANCE

CORTEZ BLVD

50

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- MAMPA FOOTPRINT (494.17± ac)

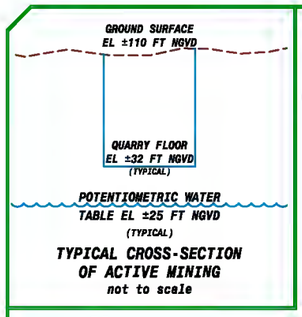
THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
(863) 644-1741 Fax: (863) 669-1742
Phone: (863) 669-9141
www.THECOLINASGROUP.com

cemex
Building a better future

MAMPA BOUNDARY
BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: August 9, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141



TYPICAL CROSS-SECTION OF ACTIVE MINING
not to scale

REV. No.	DATE	DESCRIPTION	CHK BY:

FOR CROSS SECTIONS
SEE SHEETS 11 and/or 12

EXISTING MINE BOUNDARY

PROPOSED ENCLOSED OVERHEAD CONVEYOR

TREE CANOPY AREA

FORT DADE AVE (CR 484)

CITRUS WAY (CR 491)

SPRING HILL CEMETERY

100' BUFFER

200' SETBACK

POTENTIAL FUTURE RESERVES

CONCEPTUAL EXCAVATION LIMITS

70'

100' SETBACK

50' BUFFER

150' SETBACK

OWNERSHIP GROUP BOUNDARY

655'±
705'±
830'±
765'±
780'±
1210'± to Tucker Residence
1345'± to Nolan Residence
1000'± to Bell Residence
800'±
800'±

110'±
200'±
314'±
90'±
322'±
415'±

EMPLOYEES/CONTRACTOR ENTRANCE

400' SETBACK

CORTEZ BLVD

(50)

N
W E
S

0 300 450 600
GRAPHIC SCALE (FT)

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- QUARRY AREA (313.38± ac)
- HAUL ROAD - 70'± WIDE
- RESIDENTIAL STRUCTURE (Approximate Location)
- VISUAL BERM (Approximate 10' High)
- VISUAL BARRIER/BUFFER (Using Existing Trees)
- TREE CANOPY AREA, UNDISTURBED VISUAL BARRIER/BUFFER (Using Existing Trees)
- MAMPA FOOTPRINT (494.17± ac)
- OVERHEAD POWER LINE (digitized from aerial)

Berms:

The following are requirements for berms where utilized to augment vegetative buffers:

(1) The berm will generally run parallel to, and no closer than fifty (50) feet from, the property line. The above two (2) standards may be modified where there are impeding physical features (wetlands, etc.), if necessary.

(2) The berm will be built to the height necessary (not to exceed ten (10) feet above the natural surface of the ground) to shield mining activity located within one thousand five hundred (1,500) feet of the property line (excluding booms, towers, stockpiles or other similar items which extend above the buffer) so that it cannot be viewed through the buffer from adjoining properties when viewed from the property line.

(3) The berm will be stabilized with the planting of vegetation. Sloping requirements for the exterior face of the berm will not exceed 2:1.

(4) Adequate control will be provided to protect the adjacent properties from additional runoff caused by the earthen berm.

(5) The following activities are allowed and may occur within the setbacks and buffer areas:

(a) Within setbacks, the following activities are allowed and may occur: Roads, fences, berms, utility services, buffers, agriculture, silviculture, reclamation, and monitoring.

(b) Within buffers, the following activities are allowed and may occur: Berms (for a buffer), reclamation, monitoring and fences located within the inner or outer five (5) feet of the vegetated screening.

(6) Reduction in requirements. The county may eliminate or reduce the setback, buffer and berm standards set out above if one of the following circumstances exist:

(a) Written authorization has been provided from the adjacent property owner(s) agreeing to the elimination of, or reduction in, setback, buffer and/or berm requirements. This will occur on various portions of this Bronson Extension property.

ANTICIPATED SCHEDULE

Note:

In accordance with the Gopher Tortoise Permitting Guidelines April 2008 (revised January 2017), the required 100% survey for gopher tortoise burrows will be conducted by an Authorized Gopher Tortoise Agent within 90 days of relocation activities. The relocation activities should be completed no later than 90 days prior to the initiation of site work. Any commensal species observed during the relocation efforts will be handled in accordance with the relocation permit conditions. If site work does not commence within 90 days of those relocation activities, a re-survey must be completed to ensure gopher tortoises have not moved in per the permitting guidelines. CEMEX will also conduct additional wildlife surveys prior to clearing any phase of the project. The pre-clearing surveys will be conducted within 60 days of clearing each phase. If any listed species are observed onsite, CEMEX will follow the FWC avoidance and minimization measures for the species or contact the FWC to discuss permitting options, as necessary.

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-1742 Fax: (863) 669-1742
WWW.THECOLINASGROUP.COM

cemex
Building a better future

CONCEPTUAL MINE PLAN
BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: August 9, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 9/6/19

REV. No.	DATE	DESCRIPTION	CHK BY:

SEE SHEET

DRAINAGE BASIN

PROPOSED ENCLOSED OVERHEAD CONVEYOR

CITRUS WAY (CR 491)

FORT DADE AVE (CR 484)

DIVERSION POND BASIN No. 1

DIVERSION POND BASIN No. 2

DIVERSION POND BASIN No. 3

DIVERSION POND BASIN No. 4

DIVERSION POND BASIN No. 5

BERM DP-1

BERM DP-2

BERM DP-3

BERM DP-4

DITCH DP-1

DITCH DP-2

DITCH DP-3

DIVERSION POND 2

DIVERSION POND 3

DIVERSION POND 4

50' BUFFER

100' SETBACK

150' SETBACK

200' SETBACK

400' SETBACK

MINING AGREEMENT BOUNDARY

CITRUS WAY EMPLOYEES/CONTRACTOR ENTRANCE

CORTEZ BLVD

N

S

E

W

0 300 450 600

GRAPHIC SCALE (FT)

NOTE:
BERM DP-1, DP-2, DP-3 SHALL BE ±3' HIGH, WITH 2:1 SIDESLOPES

BERM DP-1 CONSTRUCT ±350 LF OF STORMWATER DIVERSION BERM
BERM DP-2 CONSTRUCT ±250 LF OF STORMWATER DIVERSION BERM
BERM DP-3 CONSTRUCT ±300 LF OF STORMWATER DIVERSION BERM
BERM DP-4 CONSTRUCT ±2,140 LF OF STORMWATER DIVERSION BERM

DITCH DP-1 CONSTRUCT ±650 LF OF STORMWATER DITCH
±125.0 South Elev
±120.2 North Elev
3:1 Sideslopes

DITCH DP-2 CONSTRUCT ±455 LF OF STORMWATER DITCH
±109.7 SouthWest Elev
±107.9 NorthEast Elev
3:1 Sideslopes

DITCH DP-3 CONSTRUCT ±455 LF OF STORMWATER DITCH
±91.0 East Elev
±88.7 West Elev
3:1 Sideslopes

DIVERSION POND CALCULATION
(MARK 2018-06-18)

BASIN No	AREA (ac-ft)	OVERBURDEN THICKNESS (feet)	STORMWATER RETENTION AREA (acres)	Volume (10% larger) (ac-ft)	Volume Provided (ac-ft)
1	66.8	10	7.3	73.0	120.6
2	14.2	15	1.0	16.0	20.6
3	15.2	3	5.8	16.8	18.1
4+5	46.4	12.3	5.0	50.0	58.0

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- EXISTING ACTIVE MINE BOUNDARY
- VISUAL BERM (Approximate 10' High)
- VISUAL BARRIER (Using Existing Trees)
- DRAINAGE FLOW
- STORMWATER BERM
- STORMWATER DITCH
- EROSION CONTROL

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 668-1742 Fax: (863) 668-1742
WWW.THECOLINASGROUP.COM

cemex
Building a better future

DURING DEVELOPMENT DRAINAGE PLAN
BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: June 27, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

REV. No.	DATE	DESCRIPTION	CHK BY:

N

GRAPHIC SCALE (FT)

EXISTING MINE BOUNDARY

CITRUS WAY (CR 491)

FORT DADE AVE (CR 484)

TREE CANOPY AREA

OWNERSHIP GROUP BOUNDARY

MINING AGREEMENT BOUNDARY

YEAR 0 TO 2

YEAR 2 TO 4

YEAR 4 TO 6

YEAR 6 TO 8

YEAR 8 TO 10

YEAR 10 TO 12

YEAR 12 TO 14

YEAR 14 TO 16

YEAR 16 TO 18

YEAR 18 TO 20

CITRUS WAY (CR 491) EMPLOYEES/CONTRACTOR ENTRANCE

50

CORTEZ BLVD

MINE PROGRESSION

±32.7 ac	= Year 0 to 2
±40.5 ac	= Year 2 to 4
±31.9 ac	= Year 4 to 6
±22.3 ac	= Year 6 to 8
±33.0 ac	= Year 8 to 10
±39.6 ac	= Year 10 to 12
±29.0 ac	= Year 12 to 14
±40.1 ac	= Year 14 to 16
±25.0 ac	= Year 16 to 18
±19.3 ac	= Year 18 to 20
±313.4 ac	= Total

NOTE:
MINE PROGRESSION DEPENDS ON MARKET CONDITIONS

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- VISUAL BERM (Approximate 10' High)
- VISUAL BARRIER/BUFFER (Using Existing Trees)
- TREE CANOPY AREA, UNDISTURBED VISUAL BARRIER/BUFFER (Using Existing Trees)
- POTENTIAL FUTURE RESERVES

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-1742 Fax: (863) 669-1742
www.THECOLINASGROUP.com

Cemex
Building a better future

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: June 27, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 9/6/19

N

GRAPHIC SCALE (FT)

FOR CROSS SECTIONS
SEE SHEETS 11 and/or 12

REV. No.	DATE	DESCRIPTION	CHK BY:

Note:

The reclamation plan is designed in a manner that allows for the long-term end use and redevelopment of the property as a viable mixed-use community.

Reclamation Notes:

1. *Vegetation will occur or be re-established throughout the site, except for approved sheer walls, resulting water bodies, areas to be utilized as settling ponds or areas approved by Hernando county for other land uses.*
2. *Twenty (20) percent of the area will be retained or re-established native vegetation consistent with that existing on the site prior to the mining activity.*
3. *Revegetation of reclaimed areas will be designed to provide for natural vegetative associations which will mature to productive wildlife habitat. Revegetation will consist primarily of perennial species native to the area or other species approved by Hernando County and the Florida Department of Environmental Protection (FDEP). The methods of its establishment will be specified and will be consistent with accepted and recommended agronomic practices. Whenever possible, the species of vegetative cover reestablished will closely resemble those found on the active mining area prior to mining operations.*

All overburden and spoil banks will be left in a configuration which is in accordance with accepted conservation practices and which is consistent with the approved future use of the land or a proposed use for which a rezoning or comp plan amendment has been filed. Whenever practical, said overburden and spoil banks will be used as topsoil to facilitate revegetation of slopes and other surfaces. Overburden will be retained on site in sufficient quantities to support reclamation purposes. Any removal of soil offsite will be approved as part of the mining operation plan approval (MOPA) with Hernando County and the Florida Department of Environmental Protection (FDEP)

5. *If nuisance exotic vegetative species have occurred naturally in the area and the effects are determined by the department to be hazardous to reclamation efforts, the Cemex will use acceptable control mechanisms to eliminate the nuisance species.*
6. *Except for sheer walls, the final slopes after reclamation will not exceed a steepness of three(3) horizontal feet to one vertical foot.*
7. *The establishment of wetlands on a portion of the reclaimed area, if feasible, will be considered.*
8. *Provisions for safety to persons, livestock, and to adjoining property has been provided.*
9. *Where a sheer wall occurs above the water line and within one thousand (1,000) feet of mining property boundaries, it will be sloped. Slopes will not exceed two (2) horizontal feet to one vertical foot.*
10. *The slope will be stabilized, if necessary, with the planting of vegetation compatible with the soil type and approved by Hernando County and the Florida Department of Environmental Protection (FDEP).*
11. *Where the sheer wall is not within one thousand (1,000) feet of the mining property boundaries or an access area, a transition shelf designed in accordance with the rules of Hernando County and the Florida Department of Environmental Protection (FDEP) will be established.*

EXISTING MINE BOUNDARY

CITRUS WAY (CR 491)

FORT DADE AVE (CR 484)

MINING AGREEMENT BOUNDARY

OWNERSHIP GROUP BOUNDARY

CORTEZ BLVD

CITRUS WAY (CR 491) EMPLOYEES / CONTRACTOR ENTRANCE

CROSS SECTION E-E'
not to scale

CROSS SECTION F-F'
not to scale

SAFETY BERM (SEE DETAIL ON SHEET 11)

LEGEND

- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-1742 Fax: (863) 669-1742
www.THECOLINASGROUP.com

Cemex
Building a better future

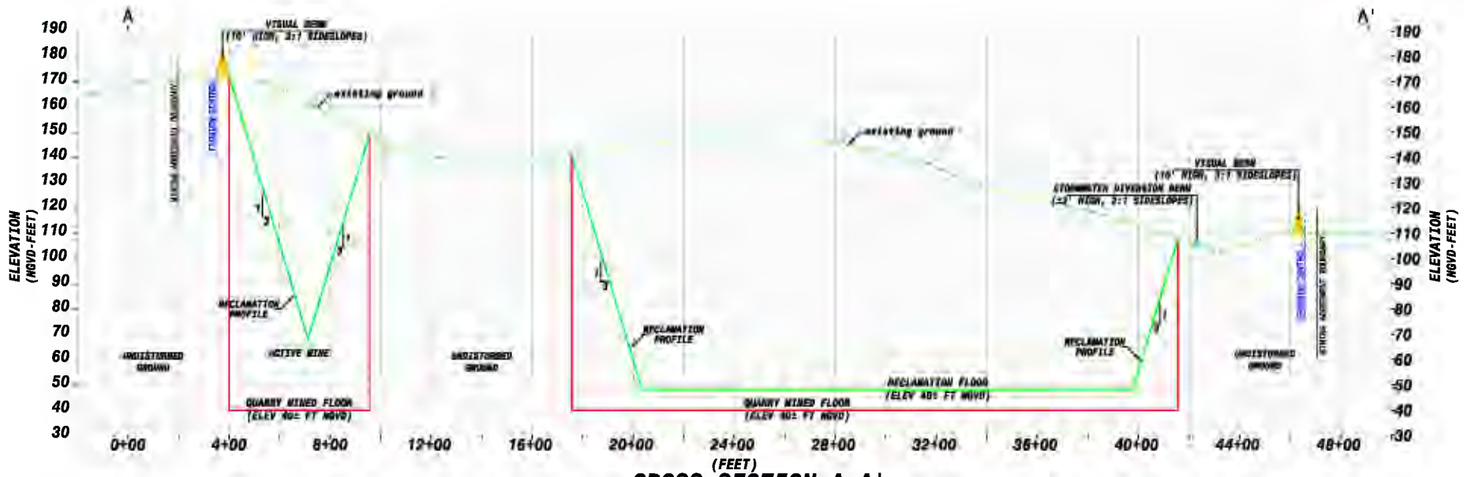
CONCEPTUAL RECLAMATION PLAN

CEMEX CONSTRUCTION
MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

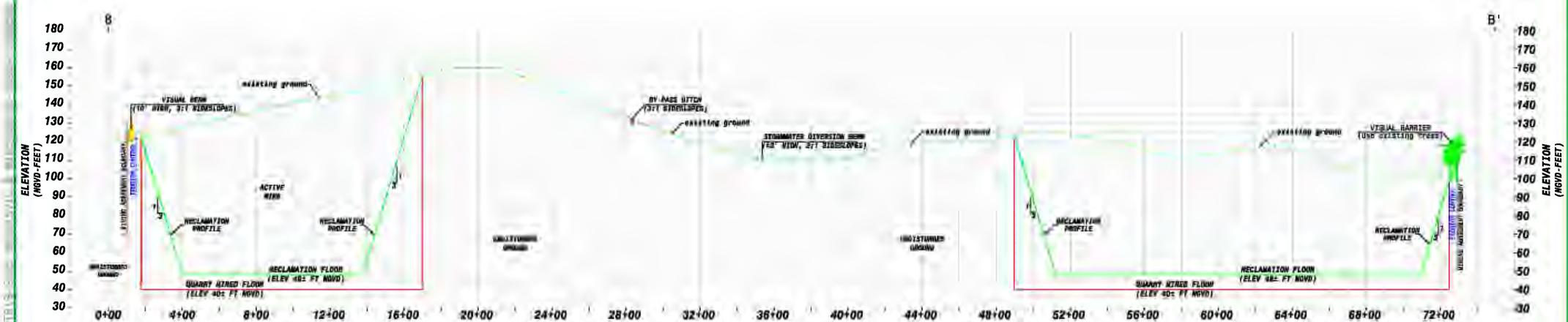
JOB #	S-2628A	DATE:	June 27, 2019
SCALE:	as noted	CALC BY:	MRS
FIELD BY:	n/a	DRAWN BY:	gd
CHECKED BY:	MRS		

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

REV. No.	DATE	DESCRIPTION	CHK BY:



CROSS SECTION A-A'



CROSS SECTION B-B'

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 699-1741 Fax: (863) 699-1742
www.THECOLINASGROUP.com

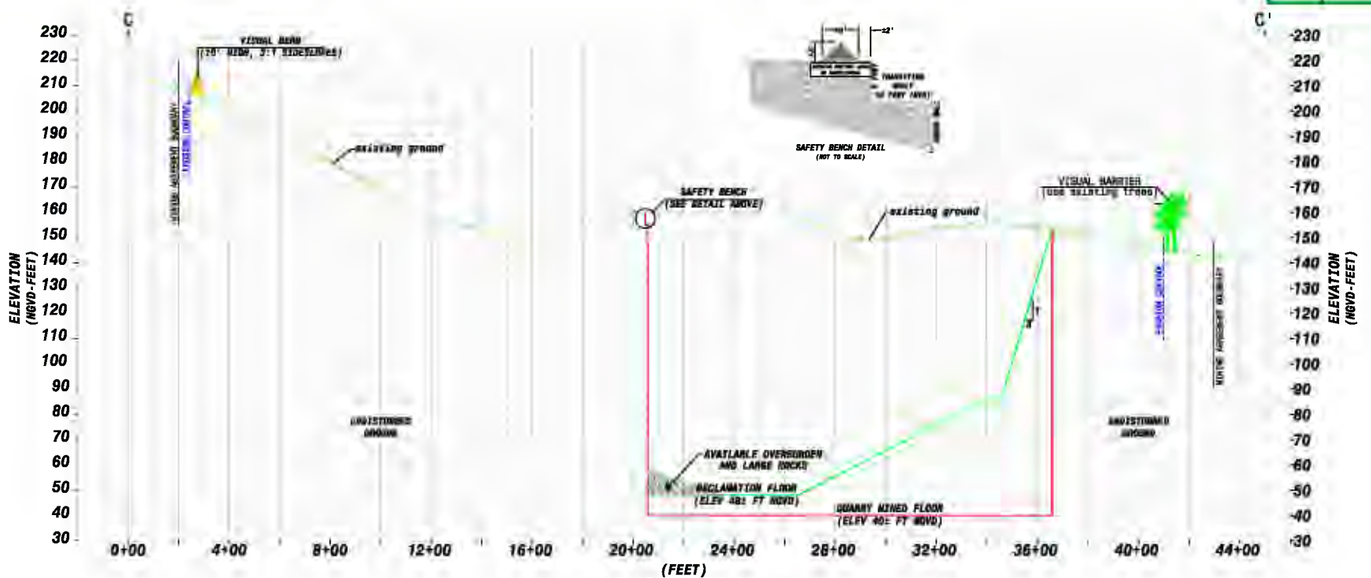
Cemex
Building a better future

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

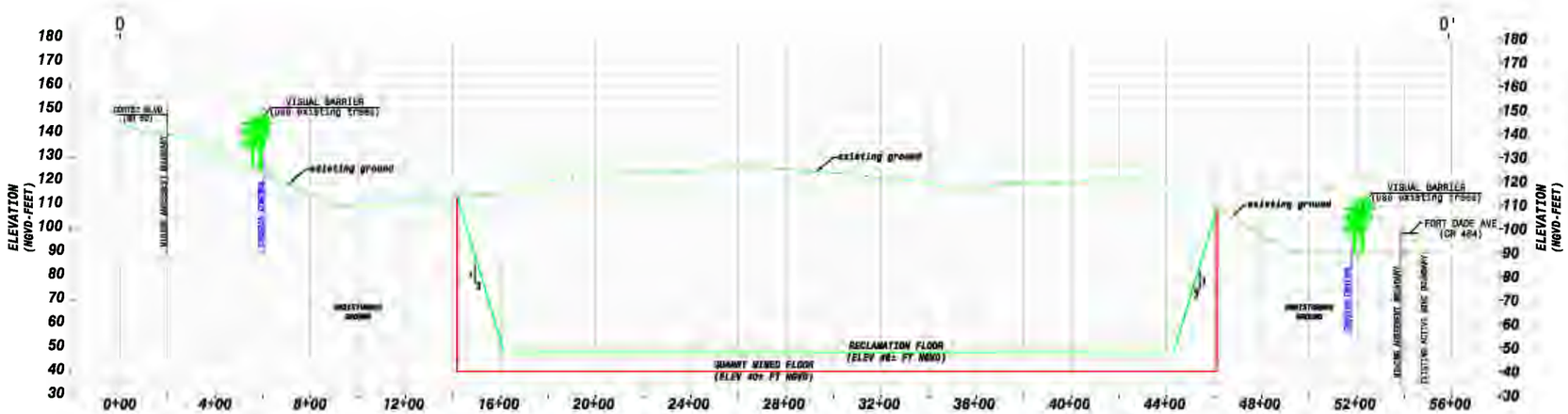
JOB #	S-2628A	DATE:	June 27, 2019
SCALE:	as noted	CALC BY:	MRS
FIELD BY:	n/a	DRAWN BY:	gd
CHECKED BY:	MRS		

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 699-8141

REV. No.	DATE	DESCRIPTION	CHK BY:



CROSS SECTION C-C'



CROSS SECTION D-D'

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 699-1742 Fax: (863) 699-1742
www.THECOLINASGROUP.com

Cemex
Building a better future

CEMEX CONSTRUCTION
MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: June 27, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 699-9141

REV. No.	DATE	DESCRIPTION	CHK BY:

Section 24-22-18

Section 19-22-19

Section 25-22-18

Section 30-22-19

R24 422 18 0000 0000
Parcel Key: 1708806
Area: ±9.9 acres
Hernando County (Roads)
20 N. Main St, Rm 263
Brooksville, Fl 34601-2817

R24 422 18 0000 0070
Parcel Key: 345451
Area: ±111.7 acres
Old Spring Hill LLC
101 S Main St
Brooksville, Fl 34601-3336

R19 422 19 0000 0050
Parcel Key: 352594
Area: ±455.8 acres
Old Spring Hill LLC
101 S Main St
Brooksville, Fl 34601-3336

Ownership Information was Obtained from:
Hernando County Property Appraiser's Website
on July 30, 2019
https://www.hernandocountygis-fl.us

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 E. Edgewood Drive, Suite S
LAKELAND, FL. 33803
Phone: (863) 869-9141 Fax: (863) 869-1742
www.thecolinasgroup.com

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-2628A DATE: 7/29/2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite S
Lakeland, FL 33803-3801
(863) 869-9141

Agreement Parcel Boundary Detail

Note: County Road No. 491 is a publicly dedicated right-of-way per Florida Department of Transportation (F.D.O.T.) Right-of-way Map Section No. 08510-2603. Said right-of-way is in the process of being vacated, therefore, SurvTech has included the right-of-way as a part of the overall boundary of the Agreement Parcel.

Surveyor's Notes

1.) Not valid without the signature and original raised seal of a Florida Licensed Surveyor and Mapper.
2.) The horizontal datum utilized for this project is NAD 1983 Florida West Zone, U.S. Survey Feet.
3.) All utilities depicted hereon are from visible evidence only. Surveyor did not contact subsurface utility locator service.
4.) No underground foundations or footers were excavated or located for this survey.
5.) The original size of this survey is 22" x 34". All other sizes need to be scaled accordingly.

Legal Description

A parcel of land lying and being in Sections 24 and 25, Township 22 South, Range 18 East and Sections 19 and 30, Township 22 South, Range 19 East, Hernando County, Florida;
More particularly described as follows:

Commencing at a point marking the Southeast corner of the Northeast 1/4 of Section 25, Township 22 South, Range 18 East, also known as the Southwest corner of the Northwest 1/4 of said Section 30, Township 22 South, Range 19 East; thence departing said point coincident with the East Boundary of said Northeast 1/4, also being the West Boundary of said Northwest 1/4, N00°19'25"W a distance of 1180.28 feet to the POINT OF BEGINNING; thence departing said East Boundary, S89°13'39"W a distance of 286.57 feet; thence S 86°28'17" W a distance of 1281.52 feet; thence N90°00'00"W a distance of 359.45 feet; thence N00°00'00"E a distance of 1087.27 feet; thence N26°42'20"E a distance of 1830.00 feet; thence N90°00'00"E a distance of 805.00 feet; thence N00°00'00"E a distance of 1471.17 feet to a point coincident with the South Right-of-way Boundary of Fort Dade Avenue (by occupation and maintenance); thence coincident with said South Right-of-way Boundary for the following three (3) courses: 1.) S88°52'36"E a distance of 542.82 feet; 2.) thence N05°45'40"E a distance of 11.99 feet; 3.) thence N87°57'37"E a distance of 3964.49 feet to a point coincident with the West Boundary of the East 1/2 of the Southeast 1/4 of said Section 19; thence departing said South Right-of-way Boundary coincident with said West Boundary, S00°06'48"E a distance of 2618.44 feet to a point coincident with the South Boundary of the Southeast 1/4 of said Section 19, also being the North Boundary of the Northeast 1/4 of Section 30, Township 22 South, Range 19 East; thence departing said West Boundary coincident with said North Boundary, N87°46'00"E a distance of 174.32 feet; thence departing said North Boundary, S02°14'00"E a distance of 100.00 feet; thence N87°46'00"E a distance of 120.00 feet; thence N02°14'00"W a distance of 100.00 feet to the aforementioned North Boundary of the Northeast 1/4 of said Section 30; thence coincident with said North Boundary, N87°46'00"E a distance of 619.78 feet; thence departing said North Boundary, S34°52'34"E a distance of 252.86 feet to a point coincident with a line lying 300.00 feet West of and parallel with the East Boundary of the Northeast 1/4 of said Section 30; thence coincident with said parallel line, S00°05'40"E a distance of 2150.07 feet to a point coincident with the North Right-of-way Boundary of Cortez Boulevard (State Road No. 50) per Florida Department of Transportation (FDOT) Right-of-way Map Section No. 08040-2509, dated June 2, 1993, said point also being coincident with a curve concave northerly, said curve having a radius of 2734.79 feet, a delta angle of 03°24'49" and being subtended by a chord bearing S66°39'55"W for a distance of 162.91 feet; thence coincident the aforesaid North Right-of-way Boundary of Cortez Boulevard for the following fourteen (14) courses: 1.) thence coincident with the arc of said curve a distance of 162.93 feet; 2.) thence departing said curve, S21°37'41"E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2744.79 feet, a delta angle of 02°00'00" and being subtended by a chord bearing S69°22'19"W for a distance of 95.81 feet; 3.) thence coincident with the arc of said curve a distance of 95.81 feet; 4.) thence departing said curve, S19°37'41"E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2754.79 feet; a delta angle of 04°00'00" and being subtended by a chord bearing S72°22'19"W for a distance of 192.28 feet; 5.) thence coincident with the arc of said curve a distance of 192.32 feet; 6.) thence departing said curve, S15°37'41"E a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2764.79 feet, a delta angle of 10°00'00" and being subtended by a chord bearing S79°22'19"W for a distance of 481.93 feet; 7.) thence coincident with the arc of said curve a distance of 482.55 feet; 8.) thence departing said curve, N05°37'41"W a distance of 10.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2754.79 feet, a delta angle of 04°00'00" and being subtended by a chord bearing S86°22'19"W for a distance of 192.28 feet; 9.) thence coincident with the arc of said curve a distance of 192.32 feet; 10.) thence departing said curve, N01°37'41"W a distance of 15.00 feet to a point coincident with a non-tangent curve concave northerly, said curve having a radius of 2739.79 feet, a delta angle of 00°51'58" and being subtended by a chord bearing S88°48'18"W for a distance of 41.41 feet; 11.) thence coincident with the arc of said curve a distance of 41.41 feet; 12.) thence departing said curve, S89°14'17"W a distance of 756.70 feet; 13.) thence S00°45'43"E a distance of 10.00 feet; 14.) thence S89°14'17"W a distance of 100.00 feet; thence departing the North Right-of-way Boundary of Cortez Boulevard, N00°00'00"E a distance of 1000.09 feet; thence S89°14'17"W a distance of 808.06 feet; thence N00°00'00"E a distance of 650.37 feet; thence N90°00'00"W a distance of 1570.00 feet; thence S00°00'00"E a distance of 656.67 feet; thence S89°13'39"W a distance of 919.42 feet to the POINT OF BEGINNING.
Containing an area of 24,980,392.95 square feet, 573.471 acres more or less.

Schedule B-2 Exceptions

per Title Commitment Serial No. C-13102391 issued by Stewart Title Guaranty Company, bearing an effective date of October 15, 2013, at 8:00 AM.

Items not listed below are standard title exceptions and/or are not matters or issues that pertain to this survey.

(4) Easement for Right-of-Way from Thomas E. Bronson, Trustee of the BMM Land Trust, to Withlacoochee River Electric Cooperative, dated August 10, 2010, recorded in OR Book 2767, page 1024, public records of Hernando County, Florida. Affects subject property as depicted hereon.

(5) ~~Resolution No. 2006-307 adopted October 24, 2006~~, recorded in OR Book 2348, page 729, public records of Hernando County, Florida. Affects property but not a matter of survey, therefore not plotted.

(6) Lease from Alfred A. McKethan, J.M. Mason and Dorothy M. Mason, to Hernando County, a political subdivision of the State of Florida, dated February 15, 1971, recorded in OR Book 254, page 504, public records of Hernando County, Florida. Affects subject property as depicted hereon.

(7) Purchase Money Mortgage between BK Land Trust and AAM Family Limited Partnership, dated August 26, 1999, recorded in OR Book 1313, page 677, public records of Hernando County, Florida. Affects property but not a matter of survey, therefore not plotted.

Agreement Parcel Acreage
24980392.95 Square Feet
573.471 Acres

Line Information: Field

LINE	BEARING	DISTANCE
L1	S 88°52'36" E	542.82'
L2	N 05°45'40" E	11.99'
L3	N 87°46'00" E	174.32'
L4	S 02°14'00" E	100.00'
L5	N 87°46'00" E	120.00'
L6	N 02°14'00" W	100.00'
L7	N 87°46'00" E	619.78'
L8	S 34°52'34" E	252.86'
L9	S 21°37'41" E	10.00'
L10	N 19°37'41" E	10.00'
L11	S 15°37'41" E	10.00'
L12	N 05°37'41" W	10.00'
L13	N 01°37'41" W	15.00'
L14	S 89°14'17" W	756.70'
L15	S 00°45'43" E	10.00'
L16	S 89°14'17" W	100.00'

Curve Information: Field

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH	DELTA ANGLE	TANGENT
C1	2734.79'	162.93'	S 66°39'55" W	162.91'	03°24'49"	81.49'
C2	2744.79'	95.81'	S 69°22'19" W	95.81'	02°00'00"	47.91'
C3	2754.79'	192.32'	S 72°22'19" W	192.28'	04°00'00"	96.20'
C4	2764.79'	482.55'	S 79°22'19" W	481.93'	10°00'00"	241.89'
C5	2754.79'	192.32'	S 86°22'19" W	192.28'	04°00'00"	96.20'
C6	2739.79'	41.41'	S 88°48'18" W	41.41'	00°51'58"	20.71'

Monumentation Legend

"A" Denotes: Found ⅝" Iron Rod (No Id.)
"B" Denotes: Found ⅝" Capped Iron Rod "LB #3704"
"C" Denotes: Found ⅝" Capped Iron Rod "FDOT"

Flood Zone Information:
Subject property is located in Flood Zones "A" & "X" according to:
Flood Insurance Rate Map: 12053C
Panel No.'s: 0187 D & 0191 D
Community Name/No.: Hernando County/120110
Effective Date: February 2, 2012

Scale: 1" = 300'

Specific Purpose Survey
Prepared For:
CEMEX, USA

SURVTECH SOLUTIONS, INC.
10220 U.S. Highway 92 East
Tampa, FL 33610
Licensed Business #7340
phone: (813)-621-4929
fax: (813)-621-7194
email: sbrown@survtechsolutions.com
http://www.survtechsolutions.com

SHEET: 1

REV. No.	DATE	DESCRIPTION	CHK BY:

FOR CROSS SECTIONS
SEE SHEETS 11 and/or 12

GROUND SURFACE
EL ±110 FT NGVD

QUARRY FLOOR
EL ±32 FT NGVD
(TYPICAL)

POTENTIOMETRIC WATER
TABLE EL ±25 FT NGVD
(TYPICAL)

TYPICAL CROSS-SECTION
OF ACTIVE MINING
not to scale

N
W E
S

0 300 450 600
GRAPHIC SCALE (FT)

EXISTING MINE BOUNDARY
PROPOSED ENCLOSED OVERHEAD CONVEYOR
TREE CANOPY AREA
FORT DADE AVE (CR 484)
CITRUS WAY (CR 491)
SPRING HILL CEMETERY
100' BUFFER
200' SETBACK
150' SETBACK
50' BUFFER
100' SETBACK
POTENTIAL FUTURE RESERVES
CONCEPTUAL EXCAVATION LIMITS
70'
OWNERSHIP GROUP BOUNDARY
655'±
705'±
830'±
765'±
780'±
1210'± to Tucker Residence
1345'± to Nolan Residence
1000'± to Bell Residence
990'±
990'±
110'±
200'±
314'±
90'±
322'±
415'±
EMPLOYEES/CONTRACTOR ENTRANCE
400' SETBACK
CORTEZ BLVD
(50)

LEGEND
- AGREEMENT BOUNDARY (573.47± ac)
- OWNERSHIP GROUP BOUNDARY
- EXISTING ACTIVE MINE BOUNDARY
- QUARRY AREA (313.38± ac)
- HAUL ROAD - 70'± WIDE
- RESIDENTIAL STRUCTURE (Approximate Location)
- VISUAL BERM (Approximate 10' High)
- VISUAL BARRIER/BUFFER (Using Existing Trees)
- TREE CANOPY AREA, UNDISTURBED VISUAL BARRIER/BUFFER (Using Existing Trees)
- MAMPA FOOTPRINT (494.17± ac)
- OVERHEAD POWER LINE (digitized from aerial)

Berms:
The following are requirements for berms where utilized to augment vegetative buffers:
(1) The berm will generally run parallel to, and no closer than fifty (50) feet from, the property line. The above two (2) standards may be modified where there are impeding physical features (wetlands, etc.), if necessary.
(2) The berm will be built to the height necessary (not to exceed ten (10) feet above the natural surface of the ground) to shield mining activity located within one thousand five hundred (1,500) feet of the property line (excluding booms, towers, stockpiles or other similar items which extend above the buffer) so that it cannot be viewed through the buffer from adjoining properties when viewed from the property line.
(3) The berm will be stabilized with the planting of vegetation. Sloping requirements for the exterior face of the berm will not exceed 2:1.
(4) Adequate control will be provided to protect the adjacent properties from additional runoff caused by the earthen berm.
(5) The following activities are allowed and may occur within the setbacks and buffer areas:
(a) Within setbacks, the following activities are allowed and may occur: Roads, fences, berms, utility services, buffers, agriculture, silviculture, reclamation, and monitoring.
(b) Within buffers, the following activities are allowed and may occur: Berms (for a buffer), reclamation, monitoring and fences located within the inner or outer five (5) feet of the vegetated screening.
(6) Reduction in requirements. The county may eliminate or reduce the setback, buffer and berm standards set out above if one of the following circumstances exist:
(a) Written authorization has been provided from the adjacent property owner(s) agreeing to the elimination of, or reduction in, setback, buffer and/or berm requirements. This will occur on various portions of this Bronson Extension property.

ANTICIPATED SCHEDULE

Note:

In accordance with the Gopher Tortoise Permitting Guidelines April 2008 (revised January 2017), the required 100% survey for gopher tortoise burrows will be conducted by an Authorized Gopher Tortoise Agent within 90 days of relocation activities. The relocation activities should be completed no later than 90 days prior to the initiation of site work. Any commensal species observed during the relocation efforts will be handled in accordance with the relocation permit conditions. If site work does not commence within 90 days of those relocation activities, a re-survey must be completed to ensure gopher tortoises have not moved in per the permitting guidelines. CEMEX will also conduct additional wildlife surveys prior to clearing any phase of the project. The pre-clearing surveys will be conducted within 60 days of clearing each phase. If any listed species are observed onsite, CEMEX will follow the FWC avoidance and minimization measures for the species or contact the FWC to discuss permitting options, as necessary.

THE COLINAS GROUP, INC.
Engineering and Environmental Consultants
2031 East Edgewood Drive, Suite #5
LAKELAND, FL. 33803
Phone: (863) 669-1742 Fax: (863) 669-1742
www.THECOLINASGROUP.com

cemex
Building a better future

CONCEPTUAL MINE PLAN
BRONSON EXTENSION
BROOKSVILLE QUARRY
CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC.
11430 CAMP MINE ROAD
BROOKSVILLE, FLORIDA

JOB # S-262BA DATE: August 9, 2019
SCALE: as noted CALC BY: MRS
FIELD BY: n/a DRAWN BY: gd
CHECKED BY: MRS

Mark R. Stephens, P.E., P.G.
Florida P.E. Reg. No. 36179
Engineering Business No. EB-0007934
The Colinas Group, Inc.
2031 E. Edgewood Drive, Suite 5
Lakeland, FL 33803-3601
(863) 669-9141

D:\CIVIL 3D PROJECTS\S-262B BROOKSVILLE MINE\DWG\S-262BA BRONSON SITE ERP-REVISED 2018.DWG 9/6/19

RECEIVED
By BCROSBY at 9:57 am, Sep 10, 2019

CEMEX CONSTRUCTION MATERIALS FLORIDA, LLC
BROOKSVILLE QUARRY - BRONSON EXTENSION (±573.5 ACRES)
HERNANDO COUNTY, FLORIDA
PROPOSED SCHEDULE AND PHASING PLAN

Prepared For:

CEMEX Construction Materials Florida, LLC
11430 Camp Mine Road
Brooksville, FL 34601

Prepared by:

8306 Laurel Fair Circle•Suite 120
Tampa, FL 33610•813-600-5747

CONTENTS

1.0 OBJECTIVES

CEMEX Construction Materials Florida, LLC (CEMEX) proposes to extend the existing Brooksville Quarry by constructing a limestone mine on several parcels collectively referred to as the Bronson Extension consisting of approximately 573.5 acres located in Brooksville, Hernando County, Florida.

In accordance with the adopted Comprehensive Plan Amendment (CPAM1702), CEMEX is providing the following environmental criteria to be included in the Hernando County Application for Master Mining Plan Approval (MAMPA). The objective of this Proposed Schedule and Phasing Plan is to provide the proposed schedule for when wildlife surveys will be performed in accordance with the previously submitted Wildlife Survey Methodology and at what stages in the mining process it will be updated to conform to future phases.

2.0 PROPOSED MINING SCHEDULE AND PHASING PLAN

The conceptual mine plan, which covers the first phase of the mining operation, has previously been provided and meets the requirements of Section 19-32 of this Chapter. The mine progression plan currently commences at Year 0 and continues to Year 20. Each mining block (phase) accounts for two years (i.e. Year 0 to Year 2). Please note that the mine progression plan may change throughout the course of mining operations as necessary for any unforeseeable circumstances and/or market conditions.

3.0 WILDLIFE SURVEYS

In accordance with the Wildlife Survey Methodology, pre-clearing wildlife surveys will be conducted prior to land disturbance activities. The pre-clearing surveys will be conducted within 60 days of clearing each phase (mine block). If any listed species are observed onsite, CEMEX will follow the FWC avoidance and minimization measures for the species or contact the FWC to discuss permitting options, as necessary.

In addition, because gopher tortoise burrows have been observed within the mine site, a 100% survey for gopher tortoise burrows will be conducted by an Authorized Gopher Tortoise Agent in accordance with the Gopher Tortoise Permitting Guidelines April 2008 (revised January 2017). These surveys will occur prior to any land disturbance activities and must be conducted no earlier than 90-days prior to relocation activities. The relocation activities will also be completed no later than 90-days prior to the initiation of site work. Any commensal species observed during the relocation efforts will be handled in accordance with the relocation permit conditions. If site work does not commence within 90-days of those relocation activities, a re-survey must be completed to ensure gopher tortoises have not moved in per the permitting guidelines.