



**Staff Report 01/14/2016**

**Owner:** Twyla Jean Southerland

**Applicant:** Southerland Farm, LLC

**Parcel ID:** 0459 01002

**Location:** 571 Gillburg Road; 300 feet south of Bearpond Road/Gillburg Road Intersection; Adjacent to NCDOT Maintenance Yard

**Current Zoning:** (A-R) Agricultural Residential

**Quasi-Judicial Hearing:** 01/14/2016

**Prepared by:** Jordan McMillen

**Description of Conditional Use Permit Request:**

The applicant is requesting a conditional use permit to allow construction of a 5 MW solar farm under the use category of "Solar Energy System, Large Scale".

**Exhibits as follows:**

- Exhibit 1.** Application & signature pages
- Exhibit 2.** Statement of justification
- Exhibit 3.** Omnibus Consent appointing Gerry Dudzik as agent
- Exhibit 4.** NCDOT driveway permit
- Exhibit 5.** NCDEQ Erosion/Sedimentation Control Plan approval Letter
- Exhibit 6.** Interconnection Request
- Exhibit 7.** Decommissioning Plan
- Exhibit 8.** Aerial photography/surrounding Zoning map/Topography map
- Exhibit 9.** Solar Farm regulations (as per zoning ordinance)
- Exhibit 10.** Conditional Use Permit Check List
- Exhibit 11.** Boundary survey
- Exhibit 12.** Site plans

**DRAFT Findings of Fact**

1. The request is for a conditional use permit to allow a 5 MW solar farm on a parcel zoned (A-R) Agricultural Residential.
2. The property is owned by Twyla Jean Southerland.
3. The property is located at 571 Gillburg Road, approximately 300 feet south of the Bearpond Road/Gillburg Road Intersection.
4. The property consists of 121 acres of which approximately 31 acres will be the array footprint. The applicant plans to clear 18 acres.
5. The application requesting a conditional use permit was filed on December 17, 2015.
6. The adjoining property owners were notified on December 31, 2015.
7. The property was posted on January 4, 2016.

**Staff Comments**

The applicant is requesting a conditional use permit to construct a 5 MW solar farm. As proposed, the solar farm would be leased from the current property owner and cover 31 acres. The site plan calls for an 8 ft. fence with 3 strands of barbed wire.

The property includes an area that was previously clear-cut within the center portion of the parcel. The majority of the solar arrays will be within this area. Existing trees are located along Gillburg Road and along the southern portion of the parcel. The property slopes down from a high elevation of 478 feet Above Sea Level (ASL) near Gillburg Road to Gills Little Mill Creek at the back (eastern side of the property) at approximately 390 feet ASL. The applicant does intend to clear approximately 18 acres of woodland and intends to leave a 30 foot wooded area along Gillburg Road and along the southern property boundary. See included pictures for height and extent of existing vegetation along Gillburg Road. It is anticipated that the use of existing vegetation within these areas will provide adequate buffers for the western and southern boundary lines. It is worth noting that the applicant does intend to leave a significant amount of existing vegetation in the southeastern corner of the property. On the eastern side Gill Little Mill Creek runs north to south near the property boundary adjacent to the Gillburg Country Village Subdivision. Due to the neighboring subdivision and lack of vegetation on the eastern property boundary, it will most likely be necessary for the applicant to include an area of new evergreen vegetation in this area. The plantings will need to be sufficient to create an opaque evergreen screening with a minimum buffer width of 30 feet wide. Also

it is not clear as to which vegetation will remain in the northwestern corner adjacent to the Pecan Grove Mobile Home Park. It will be necessary to maintain a vegetative buffer in this area as well.

A temporary construction entrance and permanent site access will be located off Gillburg Road, approximately 300 feet south of the intersection of Bearpond Road and Gillburg Road. The applicant's site plan shows the temporary laydown yard and construction staging area to be located outside of the Gillburg Road Right-of-way. Due to previous issues with construction vehicles being located within the ROW, it is recommended that a condition be placed on the permit excluding vehicles from the ROW area.

The applicant has submitted an NCDOT driveway permit, approved E-911 address, and NC DEQ Erosion and Sedimentation Control Plan approval. The applicant has applied for the interconnection agreement with Duke Energy Progress and the point of interconnection is shown on the site plan near the site entrance. Staff would recommend discussing the interconnection pole locations to ensure they are better protected from the neighboring mobile home park to the north.

Overall the site plan appears to meet the county's setback requirements of 100 feet on the front and 50 feet on the sides for all equipment and fences. The screening may need some additional input and changes in the northwestern corner as well as the eastern side. No lighting is proposed for the site and the applicant states that noise levels will not exceed fifty (50) decibels as per the zoning ordinance. The solar panels will have no moving parts and will have a relatively low profile with a height of 9-10 feet (ordinance requires less than 25 feet). The applicant also states that solar components will have a UL listing and will be designed with anti-reflective coatings while being designed to prevent glare toward any inhabited buildings on adjacent properties and street right-of ways. Also, the applicant states that safety signs will be placed at least every 100 feet surrounding the site.

**Staff Review Items**

- The executed pages of the interconnection agreement with Duke Energy Progress need to be submitted prior to releasing conditional use permit – could be condition of approval.
- Recommend additional vegetative buffer on eastern side of property adjoining Gillburg Country Village and confirming that vegetation will be present adjacent to Pecan Grove Mobile Home Park in northwestern corner. Any new vegetation must be evergreen plantings.
- Solar farm does not show interior access roads. Fire Access lanes will be required as a part of the building review with fire access turnarounds for emergency vehicles.



# Vance COUNTY

NORTH CAROLINA

## Conditional Use Permit Application

Vance County Planning & Development Department

156 Church Street, Suite 3  
Henderson, NC 27536  
Ph: (252) 738-2080  
Fax: (252) 738-2089

**For Administrative Use Only:**

Case #	20160114-1
Fcc Paid	\$400 ck # 2230
BOA Date	1/14/2016

### Property Owner Information

Property Owner: Twyla Jean Southerland

Mailing Address: P O Box 37308

City: Raleigh State: NC Zip Code: 27627

Phone #: ( ) - Fax #: ( ) -

E-mail Address: \_\_\_\_\_

### Applicant Information

Applicant: Southerland Farm, LLC

Mailing Address: c/o Beth Trahos, Esq. Smith Moore Leatherwood LLP, P O Box 27525

City: Raleigh State: NC Zip Code: 27611

Phone #: ( 919 ) 755 - 8760 Fax #: ( 919 ) 828 - 3167

E-mail Address: beth.trahos@smithmoorelaw.com

### Property Information *For multiple properties please attach an additional sheet.*

Property Address: (E911 Address) 571 Gillburg Road, Henderson, NC 27537

Tax Map Number: \_\_\_\_\_ PIN (parcel identification #): 045901002

Type of Petition: Conditional Use Permit

Existing Zoning: Agricultural Residential (A-R) Proposed Zoning: n/a

Acreage: 121.31 ± Road Frontage: 1400 ft. ±

Existing Use: Vacant, Forest Land

### Deed Reference

- Metes and bounds description attached
- Site plan/sketch of proposal attached



# Vance COUNTY

NORTH CAROLINA

## Conditional Use Permit Application

Vance County Planning & Development Department

### Statement of Justification

1. Application is hereby made for the following use: *Please explain below:*

Proposal to construct solar farm under category "Solar Energy System, Large Scale"

2. The intent is to : *Check all that apply:*

- Construct a new structure for a conditional use;
- Repair the existing structure for the conditional use;
- Alter and/or expand the existing structure for the conditional use;
- Other

3. The following requirements have been provided: *Check all that apply:*

- Site plan;
- Property description;
- NC DOT entrance permit (if applicable);

4. Additional information:

Decommissioning Plan.

**In order to issue a Conditional Use Permit, the Board shall consider each of the following conditions, and based on the evidence presented at the hearing(s) make findings in regards to each and must find that the issuance of the Conditional Use Permit is in the best interest of the county.**

A. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

Yes  No

Please see attached.

B. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety;

Yes  No

Please see attached.



# Vance COUNTY

NORTH CAROLINA

## Conditional Use Permit Application

Vance County Planning & Development Department

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications;

Yes  No

Please see attached. \_\_\_\_\_

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that use or development is a public necessity;

Yes  No

Please see attached. \_\_\_\_\_

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.

Yes  No

Please see attached. \_\_\_\_\_

### Property Owners Signature

*Jayla Swint*  
*Please sign in blue or black ink*

Date 12-9-15

**Applicants' Signature**  
*Andy Deubert*  
*Please sign in blue or black ink*

Date 12-9-15

STATE OF NORTH CAROLINA

BEFORE THE BOARD OF  
ADJUSTMENT

COUNTY OF VANCE

IN RE: **Southerland Farm, LLC and Twyla Jean Southerland  
Proposed Solar Farm  
Vance County Parcel Number: 0459 01002  
E911 Address: 571 Gillburg Road, Henderson, North Carolina 27537**

**STATEMENT OF JUSTIFICATION IN SUPPORT OF THE  
CONDITIONAL USE PERMIT APPLICATION**

NOW COMES THE PETITIONER, by and through counsel of record, and respectfully requests approval of their application for a conditional use permit to operate a Solar Farm on the east side of Gillburg Road, just south of its intersection with Bearpond Road. In support of this request, Petitioner provides the following information:

**I. Introduction**

Southerland Farm, LLC (“Petitioner”) proposes to construct a Solar Energy System, Large Scale (“Solar Farm” or “Project”) on 121± acres owned by Twyla Jean Southerland. The property is currently zoned Agricultural Residential (“A-R”). Adjacent and nearby properties are vacant timberland, developed as homes, and a North Carolina Department of Transportation maintenance yard. There is an existing solar farm is located off Bear Pond Road, about 0.8 mile west of this site.

A Solar Energy System, Large Scale solar farm is permitted in the A-R district with a conditional use permit approved by the Board of Adjustment. Section 6.10.N of the Vance County Zoning Ordinance (“Zoning Ordinance”) includes standards for the development of a solar farm. The application, including this brief, site plan and decommissioning plan submitted contemporaneously with the application form, is complete and complies with all requirements of the Zoning Ordinance.

The solar farm will contain rows of Photovoltaic (PV) cells mounted on posts set in the ground individually. The posts are set individually in an effort to minimize the amount of grading on site. These rows of PV cells are referred to as “solar arrays.” The solar arrays will be fixed in place facing south in order to receive the maximum amount of solar energy. This configuration contains no moving parts. The power generated from the solar farm will be connected to the power grid for use by consumers.

The proposed solar farm will consume practically no county services: no seats in county schools or on school buses, virtually no refuse or recycling needs, no special sheriff protection, no light pollution, no emissions of any kind, no demand for water from depleted aquifers and no sewage disposal.

## II. Statement in Support of Application

This Conditional Use Permit application for a Large Scale Solar Energy Facility meets all the general standards for approval as required under Section 6 of the Vance County Zoning Ordinance and the Conditional Use Permit Application. In order to issue a Conditional Use Permit, the Board of Adjustment will consider the following conditions; and based on the evidence presented at the hearing(s), make findings in regard to each condition for issuance of the permit in the best interest of the County.

A. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

The subject property, identified as Vance County Parcel Number 0459 01002, is zoned Agricultural Residential A-R District. The Vance County Zoning Ordinance Table of Permitted Uses lists Solar Energy Systems, Large Scale (Solar Farms) as a Conditional Use in A-R District.

B. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety.

The proposed solar farm will not materially endanger the public health or safety. The site will generate almost no traffic. The solar farm will not be staffed daily; employees are expected to visit the property weekly or less frequently to check and maintain the equipment, mow the grass and make repairs. The site will have access from Gillburg Road.

The proposed solar farm will protect against soil erosion and sedimentation. Care is taken to minimize grading on the site by individually setting poles to support the solar cells. The areas beneath the solar panels will be planted with grass or alfalfa to stabilize the site. During construction, erosion control measures will be maintained in accordance with the County regulations. The site will comply with State of North Carolina and Vance County stormwater regulations.

The proposed solar farm will protect the public, community or private water supplies and avoid adverse impacts on surface water or ground water. As there will be no employees on site, there is no need for utilities. State environmental buffers will be maintained and respected.

C. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications.

The proposed Solar Farm, if developed according to the plan as submitted and approved, will comply with all specific requirements under Section 6.10.N Solar Energy System, Large Scale (solar farm) of the Vance County Zoning Ordinance and general conditions and regulations contained therein.

The proposed Solar Farm meets all dimensional and height requirements. As such, no system, equipment or solar arrays will exceed 25 feet in height excluding electrical transmission lines and utility poles. Power transmission lines will be located underground to the extent

practical. Setbacks will be 100 feet from street right-of-way and 50 feet from all property lines unless otherwise allowed by the Board of Adjustment.

The proposed Solar Farm meets all landscape and fencing requirements. The active portion of the site containing equipment will be enclosed and secured by a chain link metal fence 8 feet in height with three strands of barbed wire. It will be accessible by emergency officials 24/7 via a gated entrance. Extensive tree cover/vegetation exists along all sides of the proposed Solar Farm site. Existing vegetation will remain as shown on the Site Plan which will exceed the screening and buffer requirements.

As noted on the accompanying site plan, no lighting is proposed for this site. Noise levels will fall far below and will not exceed fifty (50) decibels. The only sound occurs during daylight hours with the quiet hum of electrical transformers, inverters and substation delivering solar power to the power grid. At night, when the sun is not available, there is no energy being created and no noise on the site.

The proposed Project is designed to conform to- and will be installed in compliance with all building and electrical codes set forth by the State of North Carolina and Vance County. All solar system components will have a UL listing and anti-reflective coating(s). Individual arrays/solar panels will be designed and located to prevent glare toward any inhabited buildings and street rights-of-way.

D. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that the use or development is a public necessity.

The proposed use will not injure the value of adjoining or abutting properties. Solar farms are quiet. The solar arrays have no moving parts. The only sound occurs during daylight hours with the quiet hum of electrical transformers, inverters and substation delivering solar power to the power grid. Similar facilities are located in neighborhoods to deliver power to homes. At night there is no energy being created and no noise on the site. Solar farms generate fewer vehicles trips than the average home. Employees visit the site once a week or even less frequently. Solar panels are designed to absorb light, rather than reflect it.

Solar energy is a public necessity. Demand for electricity has increased in recent years, and our society is dependent upon conventional sources of power such as coal, gas, and nuclear energy. Conventional sources of electricity are expensive, finite resources that require significant environmental disruption and public safety risk to maintain or extract. Solar energy is a clean, inexpensive, unlimited resource with little environmental impact.

E. The use or development will be in harmony with the area in which it is located and will be in general conformity with the plan of development of the County.

The proposed Solar Farm is consistent with the residential and agricultural land use pattern that exists in the area today. Solar farms make good neighbors: they are quiet and they do not create dust or odor as other permitted uses can. The proposed Solar Farm is adjacent to a North Carolina Department of Transportation maintenance yard. An existing solar farm is located off Bear Pond Road, about 0.8 miles west of the proposed site.

The proposed solar farm is consistent with the Vance County Land Use Plan ("Land Use Plan"). The proposed location is in proximity to the Gillburg Community. The Land Use Plan recommends future development around Vance County such that "good quality development, minimum disruptions to highway traffic and an attractive, inviting community will attract new business and residential development." The proposed Project will be in harmony with the current surrounding land uses while introducing non-residential uses recommended in the Land Use Plan. A goal of the Plan is to "promote, expand, and diversify the economic base in Vance County to maximize the use of human resources while protecting important natural features and community values." The proposed Solar Farm embodies this goal. The proposed Project is non-obtrusive, environmentally friendly, and advances the public necessity of adopting renewable sourcing of electricity. Issuance of a conditional use permit for the proposed Project demonstrates the County's commitment to sustainable growth.

**OMNIBUS CONSENT OF MANAGER AND MEMBER(S) IN LIEU OF MEETING  
OF EACH OF  
STRATA SOLAR FARM 2, LLC,  
STRATA MANAGER, LLC  
AND  
SOUTHERLAND FARM, LLC**

**(Appointment of Authorized Agent)**

**Dated Effective as of November 30, 2015**

The undersigned, being the all of the members and Manager (as defined herein) of the Companies (as defined herein) do hereby consent to and adopt the following resolutions in lieu of meeting as the act of each Company, in accordance with the provisions of Chapter 57D of the North Carolina General Statutes (the "NC LLC Act"):

**AS TO MEMBERSHIP:**

WHEREAS, Markus and Cathy Wilhelm (the "Wilhelms") comprise all of the members of Strata Solar Farms 2, LLC, a North Carolina limited liability company ("SSF2"); and

WHEREAS, the Wilhelms comprise all of the members and managers of Strata Manager, LLC, a North Carolina limited liability company ("Strata Manager"); and

WHEREAS, Strata Manager is the sole manager of Southerland Farm, LLC, a North Carolina limited liability company ("Southerland"); and

WHEREAS, SSF2 in turn is the sole member of Southerland; and

**AS TO OWNERSHIP OF LAND AND PROJECT:**

WHEREAS, Southerland and/or SSF2 is the owner, holder and/or licensee, as applicable, of certain solar equipment and related permits, regulatory approvals and agreements necessary to own and operate a solar facility to be located at or around 571 Gillburg Road, Henderson, NC 27537 (the "Land"), with respect to that certain solar project contemplated to be installed on the property located at Land (collectively, the "Project"); and

**AS TO MANAGEMENT:**

WHEREAS, each of SSF2, Strata Manager and Southerland is a manager-managed limited liability company, as set forth in its Articles of Organization and Operating Agreement (with respect to each entity, its "Operating Agreement"); and

WHEREAS, the Wilhelms, with respect to each of the following, are managers (each a "Manager" and together, the "Managers") of each of SSF2 and Strata Manager (each a "Company" and together, the "Companies"); and

WHEREAS, Strata Manager is the Manager of Southerland; and

**AS TO APPOINTMENT OF AUTHORIZED AGENT:**

WHEREAS, each of the Managers and members of each Company desires to appoint Gerry Dudzik as authorized agent (the "Authorized Agent") for and on behalf of such Company with full management right and authority of the Company with respect to any and all negotiations, dealings, agreements, representation, discussions and/or other matters relating to the Land and Project by, between and/or with respect to the Vance County Planning Board, Vance County Board of Adjustment and/or its agents and any municipal persons or authority acting by through or on behalf of such board (collectively, the "Board"), and that any and all acts of the Authorized Agent within the scope of the authority so delegated shall be as effective to bind the Company as would the act of such Manager and/or the members of the Company;

**RESOLUTIONS:**

NOW, THEREFORE, BE IT RESOLVED, that the Authorized Agent be and hereby is appointed by each Company, and that he is authorized , directed and empowered to take any and all actions, to represent, to enter into any such negotiations, discussions and/or agreements, and to negotiate, execute and deliver in the name and on behalf of each Company any instruments, certificates, agreements and documents as the Authorized Agent may deem necessary with respect to such matters as may be appear before or be requested by the Board, or as may be reasonably necessary to accommodate any request by such Board; and be it further

RESOLVED, that the Authorized Agent be and hereby is authorized to take any and all other actions as may be necessary or appropriate for the purpose of carrying out the intent of the foregoing resolutions; and be it further

RESOLVED, that any and all acts of the Authorized Agent , the members, managers and/or agents, as applicable, of each Company with respect to the Project, Land and matters related thereto prior to the date hereof, be and hereby are ratified, confirmed, adopted and approved as the acts of each of such Company, as applicable; and be it further

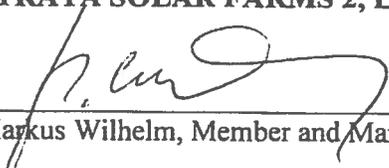
RESOLVED, that to the extent necessary to effectuate the purposes set forth above, the Operating Agreement of each Company be and hereby is amended to permit the appointment of the Authorized Agent in accordance with the terms of the NC LLC Act, by action of all of the members and Manager of such Company; and be it further

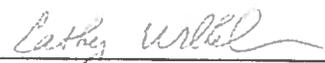
RESOLVED, that this consent may be executed in counterparts, each of which shall constitute an original but both or all of which, when taken together, shall constitute but one instrument, and shall be effective when copies hereof which, when taken together, bear the signatures of all Manager and/or members, as applicable.

**[Remainder of Page Intentionally Left Blank; Signature Page Follows]**

IN WITNESS WHEREOF, the undersigned has executed this Omnibus Consent of Members and Manager in Lieu of Meeting as of as of the day and year first above written.

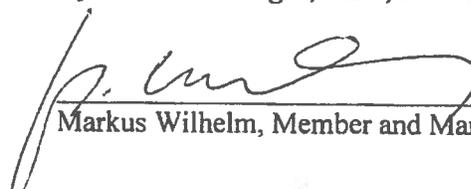
**STRATA SOLAR FARMS 2, LLC**

  
\_\_\_\_\_  
Markus Wilhelm, Member and Manager

  
\_\_\_\_\_  
Cathy Wilhelm, Member

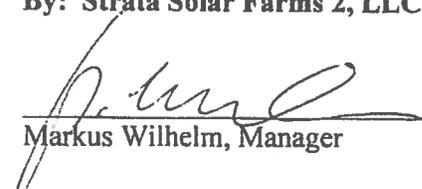
**SOUTHERLAND FARM, LLC**

**By: Strata Manager, LLC, its Manager**

  
\_\_\_\_\_  
Markus Wilhelm, Member and Manager

  
\_\_\_\_\_  
Cathy Wilhelm, Member and Manager

**By: Strata Solar Farms 2, LLC, its sole Member**

  
\_\_\_\_\_  
Markus Wilhelm, Manager



Transportation

PAT McCrory  
Governor

NICHOLAS J. TENNYSON  
Secretary

12/14/2015

Twyla Southerland  
P O Box 37308  
Raleigh, NC 27627

**COUNTY:** Vance

**SUBJECT:** Driveway Permit D53-91-15-017

**ROUTE(S):** SR1519 (250' east from the intersection of SR1519 and SR1115)

Attached for your file is a copy of the Driveway Permit which you requested.

This permit is approved with the understanding the owner/agent is responsible for the proper construction of the above drive and subject to the attached Special Provisions.

Please refer to Permit **D53-91-15-017** in all future correspondence with this office concerning this drive. Should you have any questions, please contact this office at (252) 492-0111.

**A PERFORMANCE AND INDEMNITY BOND IN THE VALUE OF \$1,000.00 IS REQUIRED AND SHALL BE POSTED WITH THE DISTRICT OFFICE PRIOR TO THE START OF WORK.**

Sincerely,

Stephen D. Winstead, P.E.  
District Engineer

cc: J. R. Hopkins, P. E., Division Engineer  
County Maintenance Engineer

State of North Carolina | Department of Transportation | Division Five – District 3  
321 Gillburg Road | CS # 07-15-01 | Henderson, North Carolina 27537  
252-492-0111 Telephone | 252-492-0123 Fax

D53-91-15-017



PAT MCCRORY  
*Governor*

DONALD R. VAN DER VAART  
*Secretary*

December 15, 2015

**LETTER OF APPROVAL WITH MODIFICATIONS**

Strata Solar Development LLC  
Brent Niemann  
50101 Governors Dr.  
Chapel Hill, NC 27517

RE: Project Name: SOUTHERLAND FARM SOLAR ELECTRIC POWER PLANT  
Acres Approved: 51.9  
Project ID: VANCE-2016-011  
County: Vance, City: Kittrell  
Address: Gillburg Rd.  
River Basin: Tar-Pamlico  
Stream Classification: Other  
Submitted By: Ashton Smith, PE  
Date Received by LQS: December 3, 2015  
Plan Type: Utilities

Dear Sir or Madam:

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

Please be aware that your project will be covered by the enclosed NPDES Construction Stormwater General Permit NCG010000. Please become familiar with all the requirements and conditions of this permit in order to achieve compliance.

Title 15A NCAC 4B .0118(a) requires that a copy of the approved erosion control plan be on file at the job site. Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

Division of Energy, Mineral, and Land Resources  
Energy Section • Geological Survey Section • Land Quality Section  
1628 Mail Service Center Raleigh, NC 27699 • Phone: 919-791-4200 • FAX: 919-571-4718  
Internet: <http://portal.ncdenr.org/web/lr/>  
An Equal Opportunity \ Affirmative Action Employer - 50% Recycled \ 10% Post Consumer Paper

## NORTH CAROLINA INTERCONNECTION REQUEST

Utility: Progress Energy Carolinas, Inc.

Designated Contact Person: Distribution-Interconnected Generation Office

Address: Progress Energy – PEB 3, 410 S. Wilmington Street, Raleigh, NC 27601

Telephone Number: 919-546-7918

Fax: 919-546-3272 E-Mail Address: [customer.generation.pec@pgnmail.com](mailto:customer.generation.pec@pgnmail.com)

An Interconnection Request is considered complete when it provides all applicable and correct information required below.

### **Preamble and Instructions**

An Interconnection Customer who requests a North Carolina Utilities Commission jurisdictional interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Utility.

Request for: Fast Track Process  Study Process   
(All Generating Facilities larger than 2 MW must use the Study Process.)

### **Processing Fee or Deposit**

#### Fast Track Process – Non-Refundable Processing Fees

- If the Generating Facility is 20 kW or smaller, the fee is \$100.
- If the Generating Facility is larger than 20 kW but not larger than 100 kW, the fee is \$250.
- If the Generating Facility is larger than 100 kW but not larger than 2 MW, the fee is \$500.

#### Study Process – Deposit

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Utility a deposit not to exceed \$1,000 towards study costs.

#### Change in Ownership – Non-Refundable Processing Fee

If the Interconnection Request is submitted solely due to a transfer of ownership of the Generating Facility, the fee is \$50.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: Southerland Farm, LLC

Contact Person: Cullen Morris

Mailing Address: 50101 Governors Drive, Suite 280

City: Chapel Hill State: NC Zip: 27517

Facility Location (if different from above): 681 Gillburg Rd., Henderson, NC 27537

Telephone (Day): 919-960-6015 Telephone (Evening): \_\_\_\_\_

Fax: 919-960-7717 E-Mail Address: interconnections@stratasolar.com

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: Gabriel Cantor

Title: Head Engineer

Address: 50101 Governors Drive, Suite 280

Telephone (Day): 919-960-6015 Telephone (Evening): \_\_\_\_\_

Fax: 919-960-7717 E-Mail Address: gcantor@stratasolar.com

Application is for:  New Generating Facility

Capacity Addition to Existing Generating Facility

Transfer of Ownership of Existing Generating Facility

If capacity addition to existing Generating Facility, please describe: \_\_\_\_\_

**Southerland Farm, LLC**  
**Decommissioning Plan**  
**Southerland Solar Electric Power Plant**  
**571 Gillburg Road, Henderson, NC 27537**

As required by Vance County, NC as a condition of a Conditional Use Permit to construct the Southerland Solar Electric Power Plant on Gillburg Rd, (the Facility), Facility Owner Southerland Farm, LLC submits this Decommissioning Plan.

Decommissioning will occur as a result of any of the following conditions:

1. The useful life of the farm expires and the land lease is not renewed. Useful life with original equipment is approximately 30 years, however equipment may be replaced to extend the useful life.
2. The Facility ceases to produce energy on a continuous basis for 12 months, unless substantial evidence is provided to the Zoning Administrator to maintain and reinstate the operation of the Facility.

The Facility Owner will perform the following to decommission the project:

1. Remove all equipment, conduits, structures, fencing, and foundations to a depth of at least three feet below grade.
2. Remove all graveled areas and access roads unless the owner of leased real estate requests in writing for it to stay in place.
3. Restore the land to a condition reasonably similar to its condition before solar generation facility development.
4. Revegetate any cleared areas with warm season grasses that are native to the region unless requested in writing by the owner of the real estate to not revegetate due to plans for agricultural planting.

All said removal and decommissioning shall take no longer than 12 months.

The Facility Owner will provide the County Administrator and the Register of Deeds with an updated signed decommissioning plan within 30 days of change in ownership.

This plan may be modified from time to time and a copy of any modified plans will be provided to the County Administrator and filed with the Register of Deeds by the party responsible for decommissioning.

Signed:

Facility Owner:

Southerland Farm, LLC  
Jackson Naftel, Director of Development

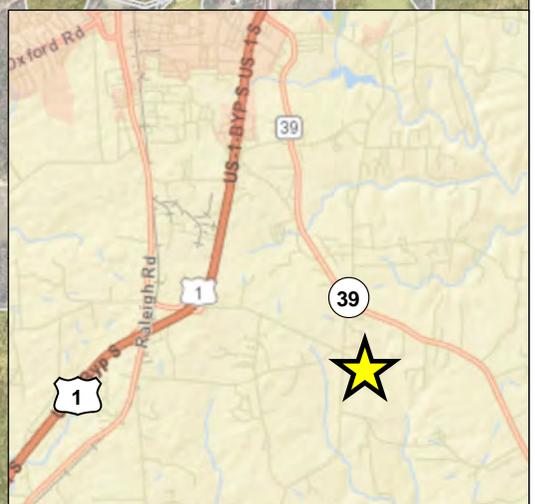
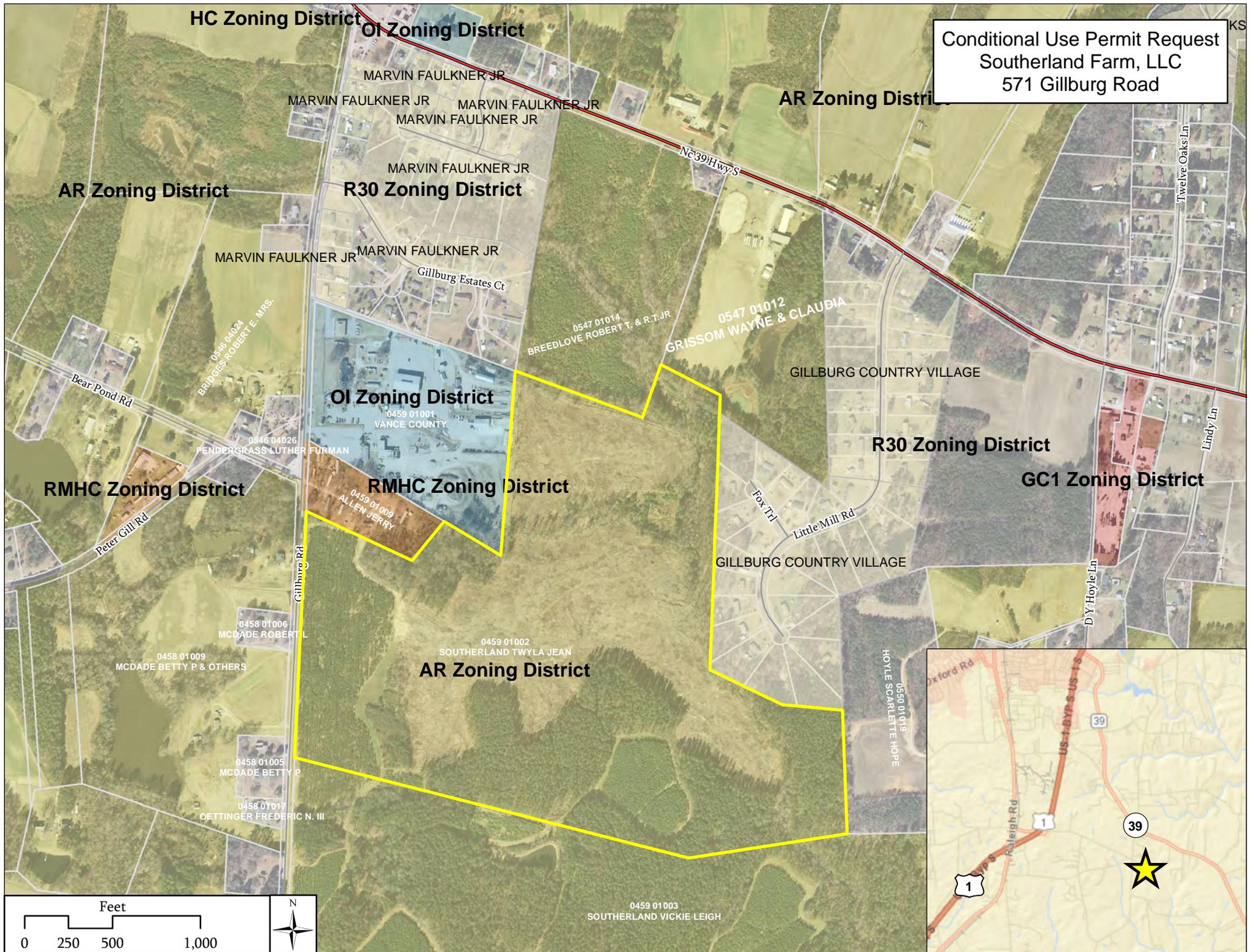
A handwritten signature in black ink, appearing to read 'J. Naftel', written over a horizontal line.

Landowner:

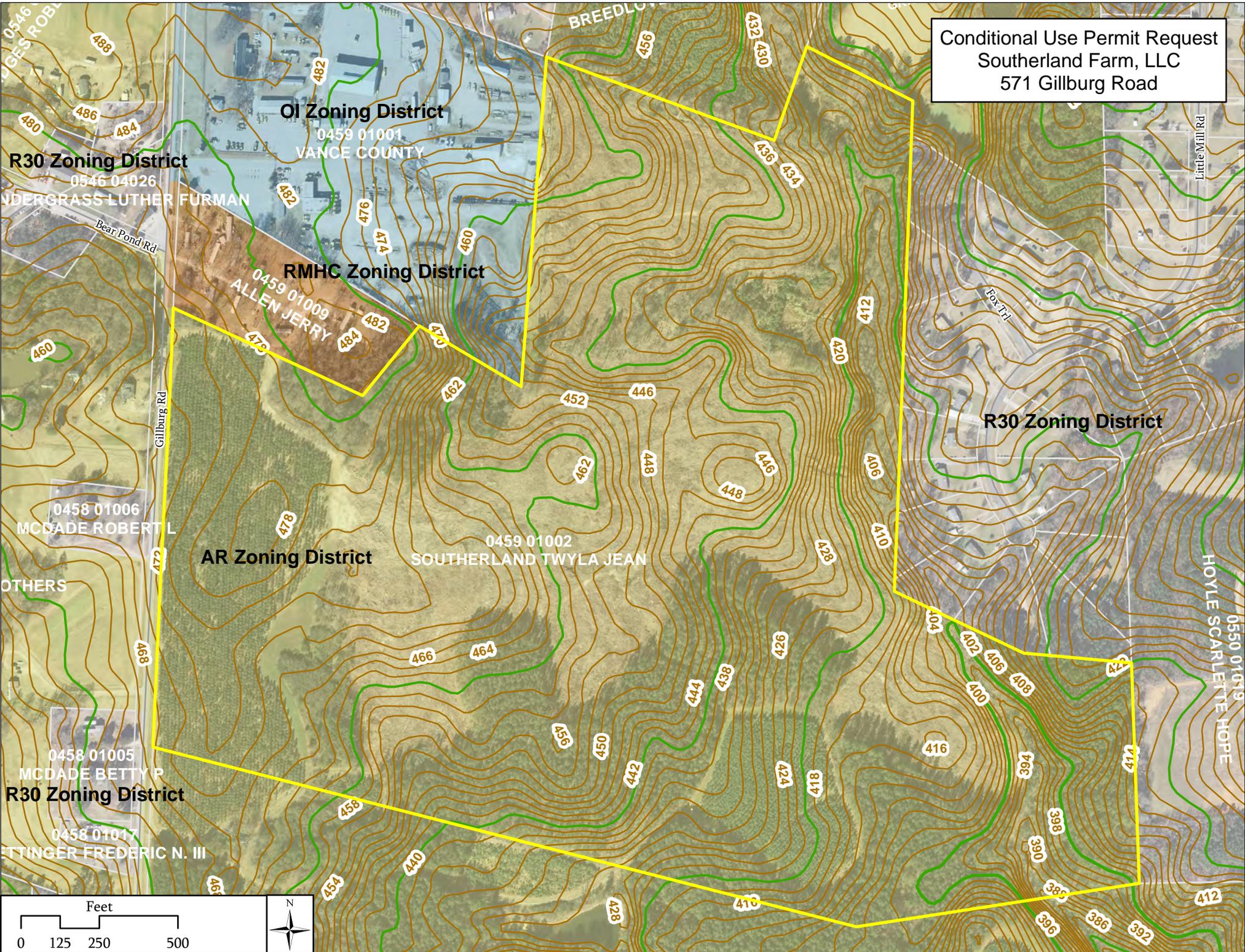
Twyla Jean Southerland:

A handwritten signature in black ink, reading 'Twyla Jean Southerland', written over a horizontal line.

Conditional Use Permit Request  
Southernland Farm, LLC  
571 Gillburg Road



Conditional Use Permit Request  
Southernland Farm, LLC  
571 Gillburg Road



**Site Entrance Area**



**Existing vegetation along Gillburg Road**



**View into site from Little Mill Road**



Use Type	AR	R30	R20	R10	RMHC	HC	GC1	LI	IM	EIA	OI	OS	WOZ	Parking-Loading
Adult Establishments	X	X	X	X	X	CU	CU	CU	X	X	X	X	X	Parking: 4 per 1,000 SF Loading: N/A
Airports	CU	X	X	X	X	X	CU	CU	CU	CU	CU	X	X	Special Study Required***
Commercial Communications Towers (Cell Towers)	CU	X	X	X	X	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 2 per tower Loading: 1
Cemetery (Church, Family)	P	P	P	X	X	X	X	X	X	X	P	P	CU	N/A
Cemetery (Commercial)	P	CU	X	X	X	X	X	X	X	X	X	CU	CU	Parking: 6 per 1,000 SF of office-building Loading: 1
Shooting Ranges	CU	X	X	X	X	X	X	X	X	X	X	CU	CU	Parking: 1.5 per shooting station Loading: 1
Solar Collector (Accessory)	P	P	P	P	P	P	P	P	P	P	P	P	P	N/A
Solar Energy Systems, Large Scale (Solar Farms)	CU	X	X	X	X	X	X	CU	CU	CU	CU	X	X	Parking: 1/every 2 employees on shift of greatest employment
<b>TEMPORARY USES</b>														
Commercial (temporary-see Definitions) Outdoor Sales	P	P	X	X	X	P	P	P	P	P	P	P	P	Parking: staff review Loading: N/A
Concrete/Asphalt Operations	X	X	X	X	X	X	X	CU	P	X	X	X	X	Parking: staff review Loading: 1 per vehicle
Contractor's Office (located at project site for duration of project)	CU	CU	X	X	X	CU	CU	CU	P	CU	CU	X	CU	Parking: 1 per 200 SF Loading: N/A
Farmstand	P	P	X	X	X	P	P	P	X	X	X	P	P	Parking: 8 spaces Loading: N/A
Manufactured Housing Unit for Office and/or Exhibition	CU	CU	CU	CU	P	P	P	P	X	X	CU	CU	CU	Parking: 1 per vehicle Loading: N/A
Manufactured Home for Hardship	CU	CU	CU	CU	P	X	X	X	X	X	X	X	CU	Parking: 2 per dwelling unit Loading: N/A
Public Interest Event and/or Special Event	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 1/patron Loading: 1 per vehicle
Temporary Miscellaneous Sales (see Definitions)	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	CU	Parking: 1 per vehicle Loading: N/A
<b>***See Section 6.10.L</b>														

- c. *Warning signs.* Warning signs meeting National Rifle Association (NRA) guidelines for shooting ranges shall be posted at one hundred-foot intervals along the entire perimeter of the shooting range facility and along the entire perimeter of the property lines in the same intervals.
  - d. *Distance from occupied dwelling.* All shooting stations, targets, and firing lines shall be located at least one-half (1/2) mile from any existing, occupied dwelling.
  - e. *Access to facility.* Access to the facility and shooting range shall be secured and controlled, with ingress and egress permitted only during operating hours as established below. Prior to issuance of a permit, a valid driveway permit must be obtained from North Carolina Department of Transportation.
  - f. *Written variance.* The distance requirements of this section may be varied with written permission in the form of an affidavit from all adjoining property owners and all rightful leaseholders of dwellings located within the ½ mile surrounding area affected thereby, except that written approval is not needed for any adjoining land owned by the State of North Carolina.
5. Operational Requirements:
- a. *Maintenance.* Where not otherwise specified within this ordinance, shooting range facilities shall be operated and maintained in a manner that shall meet or exceed the guidelines as specified by the Range Technical Team Advisor upon inspection going by the guidelines in the NRA's Range Source Book: A Guide to Planning and Construction, current edition.
  - b. *Best Management Practices.* Outdoor Shooting Ranges shall provide a plan outlining its Best Management Practices (BMPs) relating to lead management. Said plan shall meet or exceed the guidelines as specified by the Environmental Protection Agency's (EPA) Best Management Practices for Lead at Outdoor Shooting Ranges, current edition.
  - c. *Hours of operation.* Shooting Ranges shall be allowed to operate between sunrise and sunset Monday through Saturday, except that the hours may be extended after sunset for purposes of subdued-lighting certification of law enforcement officers, or may be extended for other purposes only when a permit allowing such activity is issued in advance by the Sheriff's Office.
  - d. *Liability insurance.* The permittee shall be required to carry a minimum of three million dollars (\$3,000,000.00) per occurrence of liability insurance. Such insurance shall name Vance County as an additional insured party and shall save and hold Vance County, its elected and appointed officials, and employees acting within the scope of their duties harmless from and against all claims, demands, and causes of action of any kind or character, including the cost of defense thereof, arising in favor of a person or group's members or employees or third parties on account of any property damage arising out of the acts or omissions of the permittee, his/her group, club, or its agents or representatives. The County shall be notified of any policy changes or lapses in coverage.
- N. **Solar Energy Systems, Large Scale (Solar Farms)**
1. Height: Systems, equipment and structures shall not exceed twenty-five (25) feet in height when ground mounted. Excluded from this height requirement, however, are

- electric transmission lines and utility poles. Roof mounted systems shall not exceed the maximum height for the applicable zoning district.
2. **Setback:** Ground mounted solar energy systems as part of a solar farm shall have a setback for all equipment including fences a minimum of 100 feet from street right-of-ways and 50 feet from other property lines. The Board of Adjustment may reduce such setback requirement if the proposed or existing buffer is sufficient to screen the project from view from adjoining properties or public right-of-ways.
  3. **Screening and Fencing:** Systems, equipment and structures shall be fully enclosed and secured by a fence with a minimum height of 8 feet. A thirty (30) foot vegetative buffer consisting of a compact evergreen hedge or other type of evergreen foliage shall be required along the entire perimeter of the facility. The buffer shall be planted at a minimum of three (3) feet tall and reach the height of at least eight (8) feet within three years and shall be maintained in good condition. Failure to maintain the buffer shall constitute a violation of this ordinance. Earth-berms, other topographical features and existing wooded areas may be accepted in lieu of the above requirements, if they conceal the use from public view and are maintained.
  4. **Lighting:** If lighting is provided at the site, lighting shall be shielded and downcast such that the light does not spill onto the adjacent parcel or the night sky. Motion sensor control is preferred.
  5. **Noise:** Noise levels measured at the property line shall not exceed fifty (50) decibels when located adjacent to an existing residence or residential district.
  6. **Power Transmission Lines:** To the extent practical, all new power transmissions lines to any building, structure or utility connection shall be located underground. Existing above ground utility lines shall be allowed to remain in their current location.
  7. **Installation and Design:** Electric solar system components must have a UL listing and must be designed with anti-reflective coating(s). Individual arrays/solar panels shall be designed and located in order to prevent glare toward any inhabited buildings on adjacent properties as well as adjacent street rights-of-way.
  8. **Compliance with Building and Electrical Codes:** All solar farms shall be in conformance with the requirements of the State Building and Electrical Codes (current addition), the State of North Carolina and Vance County. All active solar systems shall be inspected by a Vance County building inspector.
  9. **Inspections:** Each solar farm shall be required to have the facility inspected annually for 3 years following the issuance of the zoning permit to verify continued compliance with the Zoning Ordinance. Additional inspections necessitated by complaints or otherwise shall not replace the annual inspection requirement.
  10. **Utility Notification:** No grid tied photovoltaic system shall be installed until evidence has been given to the Planning and Development Department that the owner has been approved by the utility company to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
  11. **Abandonment and Decommissioning:** It is the responsibility of the solar system owner and landowner to notify the County and to remove all obsolete or unused systems within twelve (12) months of cessation of operations. Reusable components are to be recycled whenever possible.

A decommissioning plan signed by the party responsible for decommissioning and the landowner (if different) addressing the following shall be submitted with the permit application.

- a. Defined conditions upon which decommissioning will be initiated (i.e. end of land lease, no power production for 12 months, etc.)

- b. Removal of all non-utility owned equipment, conduit, structures, fencing, roads, and foundations
- c. Restoration of property to condition prior to development of the solar farm.
- d. The timeframe for completion of decommissioning activities.
- e. Description of any agreement (e.g. lease) with landowner regarding decommissioning.
- f. The party currently responsible for decommissioning.
- g. Plans for updating this decommissioning plan.

O. WIRELESS COMMUNICATIONS TOWERS (“CELL TOWERS”)

1. The purpose of the following requirements is to promote and to protect the public health, welfare, and safety by regulating existing and proposed communication towers. The requirements are intended to protect property values, create a more attractive economic and business climate, and enhance and protect the scenic and natural beauty of designated areas.
2. *General Requirements.* When allowed, such towers and associated equipment shall be subject to the following additional requirements:
  - a. Towers shall not interfere with normal radio and television reception in the vicinity. Commercial messages shall not be displayed on any tower. Violations shall be considered zoning violations and shall be corrected under the enforcement provisions.
  - b. Lighting shall not exceed the Federal Aviation Administration (FAA) minimum if lighting is required by the FAA. The lights shall be oriented so as not to project directly onto surrounding residential property, consistent with FAA requirements. Prior to issuance of a building permit, the applicant shall be required to submit documentation from the FAA that the lighting is the minimum lighting required by the FAA.
  - c. Towers shall be constructed and maintained in conformance with all applicable building code requirements.
  - d. In order to protect the public from unnecessary exposure to electromagnetic radiation, the tower owner shall provide appropriate Federal Communications Commissioner (FCC) documentation indicating that the power output levels do not exceed federally approved levels.
  - e. In allowed districts, towers of 75 feet or more require that a Conditional Use Permit be granted by the Board of Adjustment. The Board of Adjustment may consider variances up to 10 % of the setback requirements for such towers as a part of the Conditional Use Permit approval.
  - f. To encourage shared use of towers, no new tower shall be located within one (1) mile of an existing tower. The Board of Adjustment may allow a tower to be placed within one (1) mile of an existing tower upon being presented written documentation that (1) appropriate space on the tower is not available, (2) the new sponsor has made good faith efforts to negotiate an agreement with the owner of the current tower, or (3) equipment currently on the tower is not compatible with the proposed equipment. If the petitioner cannot locate on an existing tower and a new tower has to be constructed, the height of the tower cannot exceed two hundred feet (200'). The new tower cannot be located closer than one mile from an existing tower.

### Conditional Use Permit Check Sheet

1. The use requested is among those listed as an eligible conditional use in the district in which the subject property is located.

	True	False		True	False		True	False	TOTAL
Brummitt:	<input type="checkbox"/>	<input type="checkbox"/>	Johnson:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 1:	<input type="checkbox"/>	<input type="checkbox"/>	
Haley:	<input type="checkbox"/>	<input type="checkbox"/>	Shaw:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 2:	<input type="checkbox"/>	<input type="checkbox"/>	
Harvin:	<input type="checkbox"/>	<input type="checkbox"/>	Stainback:	<input type="checkbox"/>	<input type="checkbox"/>				

2. The use or development is located, designed and proposed to be operated so as to maintain or promote the public health or safety.

	True	False		True	False		True	False	TOTAL
Brummitt:	<input type="checkbox"/>	<input type="checkbox"/>	Johnson:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 1:	<input type="checkbox"/>	<input type="checkbox"/>	
Haley:	<input type="checkbox"/>	<input type="checkbox"/>	Shaw:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 2:	<input type="checkbox"/>	<input type="checkbox"/>	
Harvin:	<input type="checkbox"/>	<input type="checkbox"/>	Stainback:	<input type="checkbox"/>	<input type="checkbox"/>				

3. The use or development complies with all required regulations of the Zoning Ordinance and all applicable specific conditions and specifications.

	True	False		True	False		True	False	TOTAL
Brummitt:	<input type="checkbox"/>	<input type="checkbox"/>	Johnson:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 1:	<input type="checkbox"/>	<input type="checkbox"/>	
Haley:	<input type="checkbox"/>	<input type="checkbox"/>	Shaw:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 2:	<input type="checkbox"/>	<input type="checkbox"/>	
Harvin:	<input type="checkbox"/>	<input type="checkbox"/>	Stainback:	<input type="checkbox"/>	<input type="checkbox"/>				

4. The use or development is located, designed and proposed to be operated so as to maintain or enhance the value of adjoining or abutting property, or that the use is a public necessity;

	True	False		True	False		True	False	TOTAL
Brummitt:	<input type="checkbox"/>	<input type="checkbox"/>	Johnson:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 1:	<input type="checkbox"/>	<input type="checkbox"/>	
Haley:	<input type="checkbox"/>	<input type="checkbox"/>	Shaw:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 2:	<input type="checkbox"/>	<input type="checkbox"/>	
Harvin:	<input type="checkbox"/>	<input type="checkbox"/>	Stainback:	<input type="checkbox"/>	<input type="checkbox"/>				

5. The use or development will be in harmony with the area in which it is to be located and will be in general conformity with the plan of development of the County.

	True	False		True	False		True	False	TOTAL
Brummitt:	<input type="checkbox"/>	<input type="checkbox"/>	Johnson:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 1:	<input type="checkbox"/>	<input type="checkbox"/>	
Haley:	<input type="checkbox"/>	<input type="checkbox"/>	Shaw:	<input type="checkbox"/>	<input type="checkbox"/>	Alternate 2:	<input type="checkbox"/>	<input type="checkbox"/>	
Harvin:	<input type="checkbox"/>	<input type="checkbox"/>	Stainback:	<input type="checkbox"/>	<input type="checkbox"/>				

**SURVEYOR'S CERTIFICATE:**

I, **KIM B. LILLY**, CERTIFY THAT THIS SURVEY WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, FROM DEED DESCRIPTIONS RECORDED IN DEED BOOK 705, PAGE 578; DEED BOOK 513, PAGE 370; DEED BOOK 311, PAGE 419; AND PLAT BOOK V, PAGE 103; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN DEED BOOK 200, PAGE 244; DEED BOOK 301, PAGE 609; DEED BOOK 623, PAGE 848; DEED BOOK 705, PAGE 578; DEED BOOK 728, PAGE 121; DEED BOOK 783, PAGE 308; DEED BOOK 788, PAGE 38; DEED BOOK 798, PAGE 261; DEED BOOK 808, PAGE 158; DEED BOOK 837, PAGE 301; DEED BOOK 878, PAGE 521; DEED BOOK 913, PAGE 419; DEED BOOK 1110, PAGE 518; DEED BOOK 1158, PAGE 188; DEED BOOK 1187, PAGE 323; DEED BOOK 1188, PAGE 523; DEED BOOK 1281, PAGE 836; DEED BOOK 1283, PAGE 287; PLAT BOOK U, PAGE 526; PLAT BOOK U, PAGE 721; AND PLAT BOOK V, PAGE 103; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:22,048; THIS SURVEY WAS PREPARED IN ACCORDANCE WITH TITLE 21, CHAPTER 56, SECTION 1600 OF THE NORTH CAROLINA ADMINISTRATION CODE, WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL, THIS 29TH DAY OF OCTOBER, A.D. 2015.

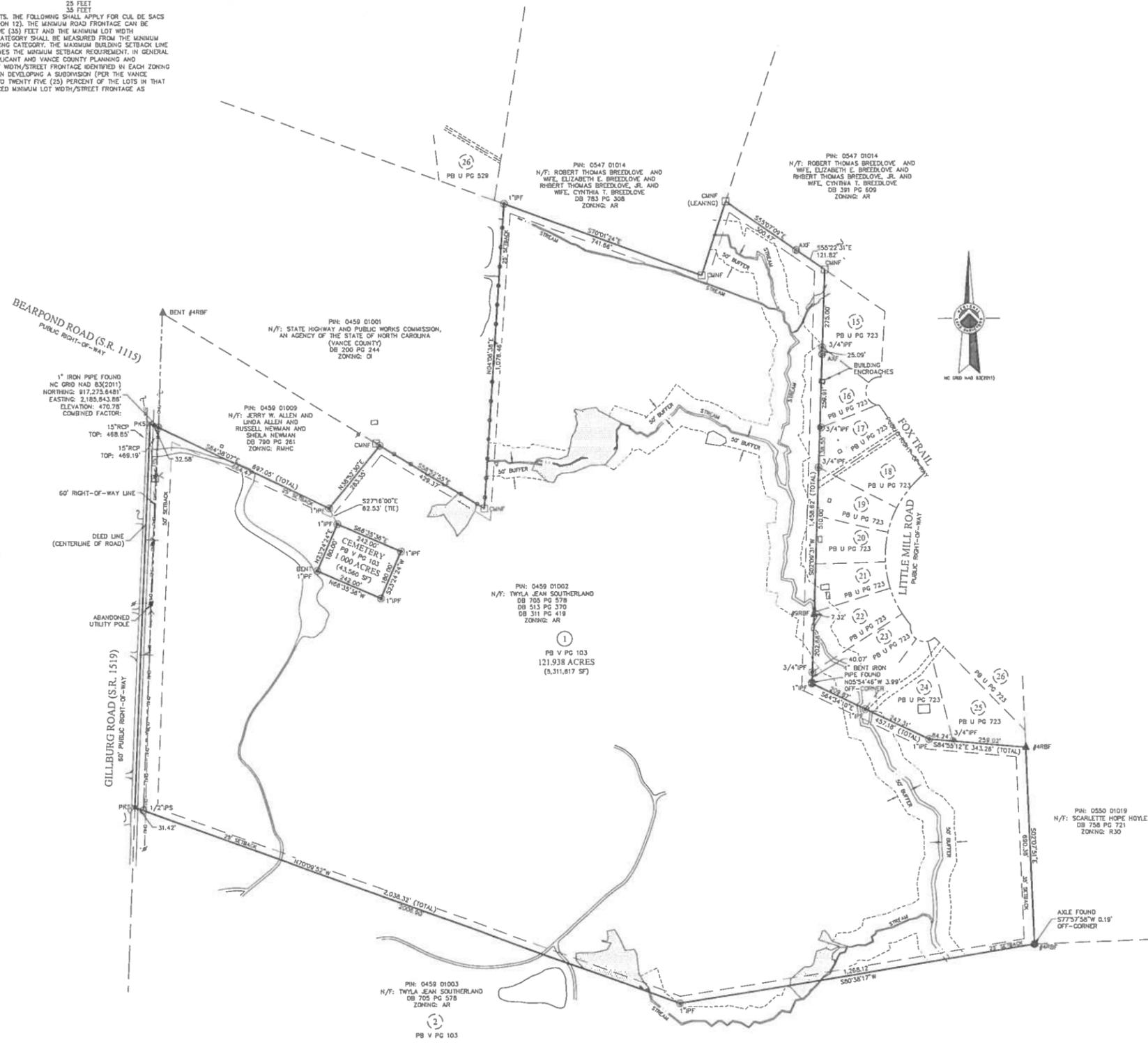
*Kim B. Lilly*  
SURVEYOR  
L-3612  
LICENSE NUMBER



10-29-2015

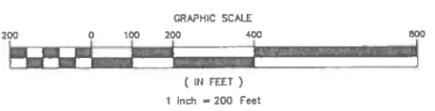
**DIMENSIONAL REQUIREMENTS, VANCE COUNTY AGRICULTURAL RESIDENTIAL DISTRICT (AR)**

- MINIMUM LOT AREA IN SQUARE FEET: 1 ACRE (43,560 SQUARE FEET)
  - MINIMUM LOT WIDTH: 150 FEET (SEE NOTE E)
  - MINIMUM STREET FRONTAGE: 150 FEET (SEE NOTE E)
  - MAXIMUM BUILDING HEIGHT: 35 FEET
  - MAXIMUM DWELLING UNITS (DENSITY PER ACRE): 1.00
  - MAXIMUM LOT COVERAGE-NET AREA (BUILT-UPON AREA): 24%
  - MINIMUM SETBACKS:
    - FRONT: 50 FEET
    - SIDE: 25 FEET
    - REAR: 35 FEET
- E. NOTE - CUR, DE SACS AND FLAG LOTS, THE FOLLOWING SHALL APPLY FOR CUR, DE SACS AND FLAG LOTS (SEE DEFINITIONS SECTION 12). THE MINIMUM ROAD FRONTAGE CAN BE REDUCED TO NO LESS THAN THIRTY-FIVE (35) FEET AND THE MINIMUM LOT WIDTH REQUIREMENT PER INDIVIDUAL ZONING CATEGORY SHALL BE MEASURED FROM THE MINIMUM SETBACK LINE PER THE INDIVIDUAL ZONING CATEGORY. THE MAXIMUM BUILDING SETBACK LINE SHALL BE NO MORE THAN FOUR (4) TIMES THE MINIMUM SETBACK REQUIREMENT, IN GENERAL (WITH COORDINATION BETWEEN THE APPLICANT AND VANCE COUNTY PLANNING AND DEVELOPMENT STAFF) THE MINIMUM LOT WIDTH/STREET FRONTAGE IDENTIFIED IN EACH ZONING CATEGORY BELOW IS ENCOURAGED. WHEN DEVELOPING A SUBDIVISION (PER THE VANCE COUNTY SUBDIVISION ORDINANCE), UP TO TWENTY FIVE (25) PERCENT OF THE LOTS IN THAT SUBDIVISION MAY BE ALLOWED A REDUCED MINIMUM LOT WIDTH/STREET FRONTAGE AS IDENTIFIED IN THIS SECTION.



- LEGEND**
- P-K NAIL SET
  - 1/2" IRON PIPE SET
  - IRON PIPE FOUND (SIZE AS NOTED)
  - REBAR FOUND (SIZE AS NOTED)
  - AXLE FOUND
  - CONCRETE MONUMENT FOUND
  - TELEPHONE PEDESTAL
  - SOB
  - UTILITY POLE
  - GLY ANCHOR
  - POLE LIGHT
  - TREE SMALL
  - TREE MEDIUM
  - TREE LARGE
  - DOT SPOT ELEVATION
  - WETLAND AREA
  - N/F HOW OR FORMERLY
  - DB DEED BOOK
  - PB PLAT BOOK
  - PG PAGE
  - R/W RIGHT-OF-WAY
  - E/P EDGE OF PAVEMENT
  - RCP REINFORCED CONCRETE PIPE
  - CMNF CONCRETE MONUMENT FOUND
  - IRP IRON PIPE FOUND
  - RSF REBAR FOUND
- LINE LEGEND**
- BOUNDARY LINE
  - ADJOINING PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - TIE LINE
  - EASEMENT LINE
  - SETBACK LINE
  - BUFFER LINE
  - OVERHEAD UTILITY
  - CHAIN LINK FENCE
  - STREAM LINE
  - EXISTING DRAINAGE
  - STORM DRAIN (SIZE AND TYPE AS NOTED)
  - ROAD EDGE PAVED
  - TREELINE-BRUSHLINE
  - MAJOR CONTOUR
  - MINOR CONTOUR

- NOTES:**
1. SITE BEING PARCEL IDENTIFICATION NO. 0459 01002; TWYLA JEAN SOUTHERLAND AS RECORDED IN DEED BOOK 705, PAGE 578; DEED BOOK 513, PAGE 370 AND DEED BOOK 311, PAGE 419 AS RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS OF VANCE COUNTY, NORTH CAROLINA.
  2. ALL DISTANCES ARE HORIZONTAL GROUND, UNLESS OTHERWISE NOTED.
  3. GROSS AREA: 122.838 ACRES (5,355,177 SF)  
CEMETERY AREA: 1.000 ACRE (43,560 SF)  
NET AREA: 121.838 ACRES (5,311,617 SF)
  4. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
  5. VANCE COUNTY ZONING: AR
  6. VERTICAL DATUM: NAVD83
  7. THE PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (NORTH CAROLINA FLOOD MAPS), COMMUNITY PANEL NO.: 372019800K, DATED: APRIL 16, 2007.
  8. INFORMATION SHOWN HEREON IS FROM DIRECT FIELD DATA SEPTEMBER 14 TO OCTOBER 20, 2015.
  9. NORTH CAROLINA GRID COORDINATES AS SHOWN HEREON WERE DERIVED FROM DIRECT GPS OBSERVATIONS UTILIZING THE NORTH CAROLINA GEODETIC SURVEY'S NETWORK RTK SYSTEM AND ARE REFERENCED TO THE NAD83(NSRS2011) DATUM GPS OBSERVATION PERFORMED ON SEPTEMBER 28, 2015.
  10. TOPOGRAPHIC AND PLANIMETRIC INFORMATION PROVIDED BY SPATIAL DATA CONSULTANTS INC.



DEVELOPER:  
CONTACT: BEN VOLLMER  
STRATA SOLAR, LLC  
50101 GOVERNORS DRIVE, SUITE 280  
CHAPEL HILL, NORTH CAROLINA 27517  
PHONE: (919)960-6053/307

DATE OF PHOTOGRAPHY: 2/21/2013  
SCALE OF PHOTOGRAPHY: 1:12,000 DS  
HORIZONTAL DATUM: NAD83  
VERTICAL DATUM: NAVD83  
UNITS: INTERNATIONAL FEET



SHEET 1 OF 6  
BOUNDARY AND TOPOGRAPHIC SURVEY  
STRATA SOLAR, LLC  
SOUTHERLAND FARM, LLC  
GILLBURG ROAD  
KITRELL TOWNSHIP, VANCE COUNTY  
TOWN OF BUTNER, NORTH CAROLINA

Regional Land Surveyors, Inc.  
8642 WEST MARKET STREET, SUITE 100  
GREENSBORO, NORTH CAROLINA 27409  
TELEPHONE (336) 665-8155  
DRAWN BY: HAD | DATE: 10-28-2015 | TOWN: CHM





50101 Commerce Drive, Suite 280  
Chapel Hill, NC 27517  
919-960-6015  
www.stratasolar.com  
NC License No. D-0285

PROJECT NAME & ADDRESS  
**SOUTHERLAND SOLAR  
ELECTRIC POWER PLANT**  
571 GILLBURG RD  
HENDERSON, NC 27537  
VANICE COUNTY

DATE: 11/13/2015  
PROJECT NUMBER: C-361-14-SOUTH  
PROJECT NAME: SOUTHERLAND FARM  
NETER SIZE: 5.00 MWp AC  
ENGINEER: BTN  
CHECKER: BTN  
DATE BY: APL

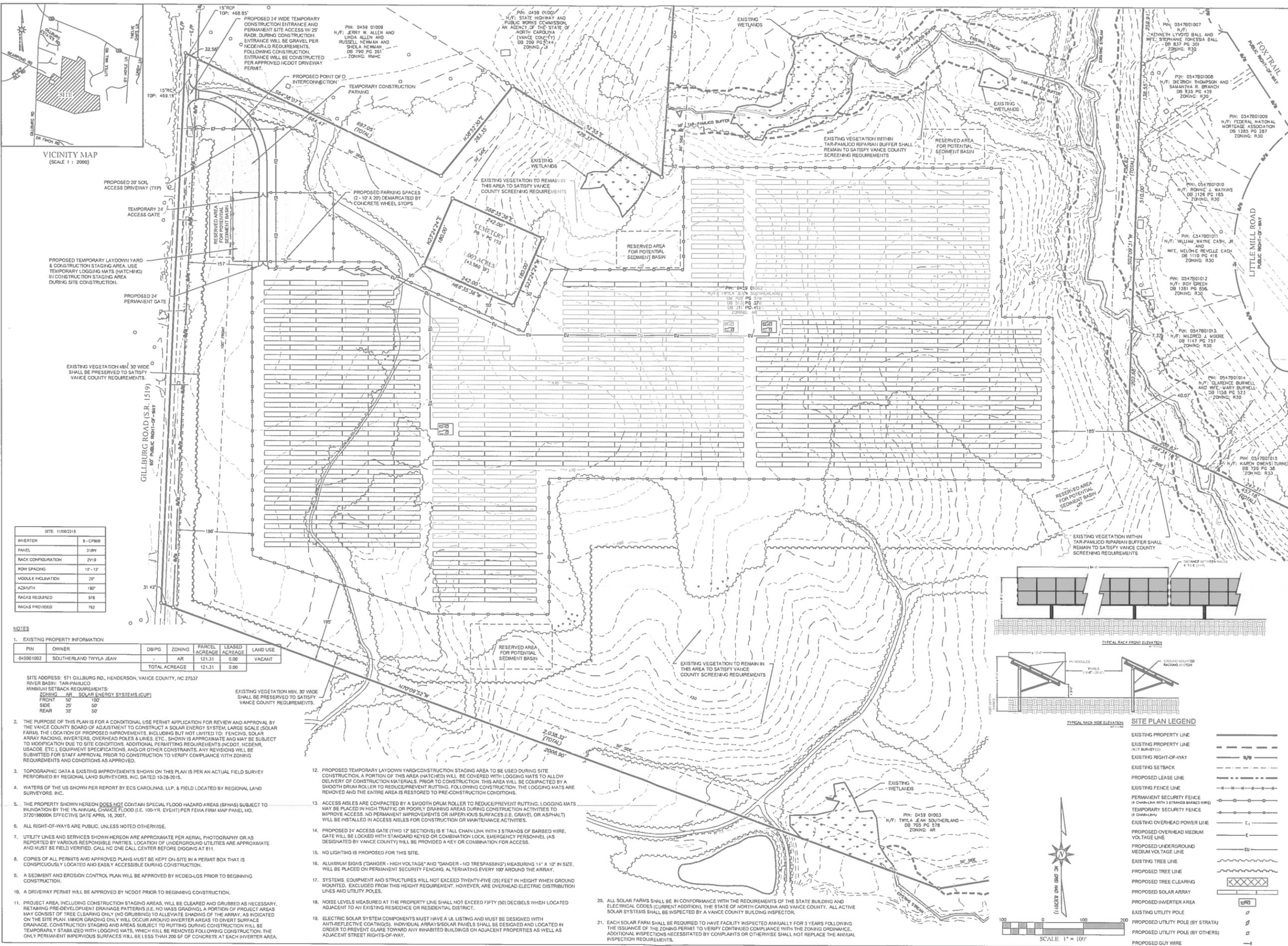


11/13/15  
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REVISIONS

NO.	DESCRIPTION

PRELIMINARY  
SITE PLAN  
SCALE: 1" = 100'  
C 2.1



SITE 1106/2213

INVERTER	6 - CP800
PANEL	310W
BACK CONFIGURATION	2Y18
ROW SPACING	17 - 17'
MODULE INCLINATION	23°
AZIMUTH	180°
RACKS REQUIRED	576
RACKS PROVIDED	762

NOTES

- EXISTING PROPERTY INFORMATION  

PIN	OWNER	DB/PG	ZONING	PARCEL ACREAGE	LEASED ACREAGE	LAND USE
04590102	SOUTHERLAND TWYLA JEAN	-	AR	121.31	0.00	VACANT
TOTAL ACREAGE				121.31	0.00	

SITE ADDRESS: 571 GILLBURG RD., HENDERSON, VANICE COUNTY, NC 27537  
RIVER BASIN: TAR-PANLUICO  
MINIMUM SETBACK REQUIREMENTS:  
ZONING AR SOLAR ENERGY SYSTEMS (CUP)  
FRONT 50' 100'  
SIDE 25' 50'  
REAR 35' 50'
- THE PURPOSE OF THIS PLAN IS FOR A CONDITIONAL USE PERMIT APPLICATION FOR REVIEW AND APPROVAL BY THE VANICE COUNTY BOARD OF ADJUSTMENT TO CONSTRUCT A SOLAR ENERGY SYSTEM, LARGE SCALE (SOLAR FARM). THE LOCATION OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCING, SOLAR ARRAY RACKING, INVERTERS, OVERHEAD POLES & LINES, ETC., SHOWN IS APPROXIMATE AND MAY BE SUBJECT TO MODIFICATION DUE TO SITE CONDITIONS, ADDITIONAL PERMITTING REQUIREMENTS (NCDOT, NCDENR, USACE, ETC.), EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS. ANY REVISIONS WILL BE SUBMITTED FOR STAFF APPROVAL PRIOR TO CONSTRUCTION TO VERIFY COMPLIANCE WITH ZONING REQUIREMENTS AND CONDITIONS AS APPROVED.
- TOPOGRAPHIC DATA & EXISTING IMPROVEMENTS SHOWN ON THIS PLAN IS PER AN ACTUAL FIELD SURVEY PERFORMED BY REGIONAL LAND SURVEYORS, INC. DATED 10-28-2015.
- WATERS OF THE US SHOWN PER REPORT BY ECS CAROLINAS, LLP, & FIELD LOCATED BY REGIONAL LAND SURVEYORS, INC.
- THE PROPERTY SHOWN HEREON DOES NOT CONTAIN SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD (I.E. 100-YR. EVENT) PER FEMA FIRM MAP PANEL NO. 372019000K EFFECTIVE DATE APRIL 16, 2007.
- ALL RIGHT-OF-WAYS ARE PUBLIC, UNLESS NOTED OTHERWISE.
- UTILITY LINES AND SERVICES SHOWN HEREON ARE APPROXIMATE PER AERIAL PHOTOGRAPHY OR AS REPORTED BY VARIOUS RESPONSIBLE PARTIES. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. CALL NC ONE CALL CENTER BEFORE DIGGING AT 811.
- COPIES OF ALL PERMITS AND APPROVED PLANS MUST BE KEPT ON-SITE IN A PERMIT BOX THAT IS CONSPICUOUSLY LOCATED AND EASILY ACCESSIBLE DURING CONSTRUCTION.
- A SEDIMENT AND EROSION CONTROL PLAN WILL BE APPROVED BY NCDENR PRIOR TO BEGINNING CONSTRUCTION.
- A DRIVEWAY PERMIT WILL BE APPROVED BY NCDOT PRIOR TO BEGINNING CONSTRUCTION.
- PROJECT AREA, INCLUDING CONSTRUCTION STAGING AREAS, WILL BE CLEARED AND GRUBBED AS NECESSARY, RETAINING PRE-DEVELOPMENT DRAINAGE PATTERNS (I.E. NO MASS GRADING). A PORTION OF PROJECT AREAS MAY CONSIST OF TREE CLEARING ONLY (NO GRUBBING) TO ALLEVIATE SHADING OF THE ARRAY, AS INDICATED ON THE SITE PLAN. MINOR GRADING ONLY WILL OCCUR AROUND INVERTER AREAS TO DIVERT SURFACE DRAINAGE. CONSTRUCTION STAGING AND AREAS SUBJECT TO RUTTING DURING CONSTRUCTION WILL BE TEMPORARILY STABILIZED WITH LOGGING MATS, WHICH WILL BE REMOVED FOLLOWING CONSTRUCTION. THE ONLY PERMANENT IMPERVIOUS SURFACES WILL BE LESS THAN 200 SF OF CONCRETE AT EACH INVERTER AREA.
- PROPOSED TEMPORARY LAYDOWN YARD/CONSTRUCTION STAGING AREA TO BE USED DURING SITE CONSTRUCTION. A PORTION OF THIS AREA (HATCHED) WILL BE COVERED WITH LOGGING MATS TO ALLOW DELIVERY OF CONSTRUCTION MATERIALS. PRIOR TO CONSTRUCTION, THIS AREA WILL BE COMPACTED BY A SMOOTH DRUM ROLLER TO REDUCE/PREVENT RUTTING. FOLLOWING CONSTRUCTION, THE LOGGING MATS ARE REMOVED AND THE ENTIRE AREA IS RESTORED TO PRE-CONSTRUCTION CONDITIONS.
- ACCESSIBLE AREAS ARE COMPACTED BY A SMOOTH DRUM ROLLER TO REDUCE/PREVENT RUTTING. LOGGING MATS MAY BE PLACED IN HIGH TRAFFIC OR POORLY DRAINING AREAS DURING CONSTRUCTION ACTIVITIES TO IMPROVE ACCESS. NO PERMANENT IMPROVEMENTS OR IMPERVIOUS SURFACES (I.E. GRAVEL OR ASPHALT) WILL BE INSTALLED IN ACCESSIBLE AREAS FOR CONSTRUCTION OR MAINTENANCE ACTIVITIES.
- PROPOSED 24' ACCESS GATE (TWO 12' SECTIONS) IS 8' TALL CHAIN LINK WITH 3 STRANDS OF BARBED WIRE. GATE WILL BE LOCKED WITH STANDARD KEYS OR COMBINATION LOCK. EMERGENCY PERSONNEL (AS DESIGNATED BY VANICE COUNTY) WILL BE PROVIDED A KEY OR COMBINATION FOR ACCESS.
- NO LIGHTING IS PROPOSED FOR THIS SITE.
- ALUMINUM SIGNS ("DANGER - HIGH VOLTAGE" AND "DANGER - NO TRESPASSING") MEASURING 14" X 10" IN SIZE, WILL BE PLACED ON PERMANENT SECURITY FENCING, ALTERNATING EVERY 100' AROUND THE ARRAY.
- SYSTEMS, EQUIPMENT AND STRUCTURES WILL NOT EXCEED TWENTY-FIVE (25) FEET IN HEIGHT WHEN GROUND MOUNTED, EXCLUDED FROM THIS HEIGHT REQUIREMENT, HOWEVER, ARE OVERHEAD ELECTRIC DISTRIBUTION LINES AND UTILITY POLES.
- NOISE LEVELS MEASURED AT THE PROPERTY LINE SHALL NOT EXCEED FIFTY (50) DECIBELS WHEN LOCATED ADJACENT TO AN EXISTING RESIDENCE OR RESIDENTIAL DISTRICT.
- ELECTRIC SOLAR SYSTEM COMPONENTS MUST HAVE A UL LISTING AND MUST BE DESIGNED WITH ANTI-REFLECTIVE COATINGS. INDIVIDUAL ARRAY/SOLAR PANELS SHALL BE DESIGNED AND LOCATED IN ORDER TO PREVENT GLARE TOWARD ANY INHABITED BUILDINGS ON ADJACENT PROPERTIES AS WELL AS ADJACENT STREET RIGHTS-OF-WAY.
- ALL SOLAR FARMS SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE STATE BUILDING AND ELECTRICAL CODES (CURRENT ADDITION). THE STATE OF NORTH CAROLINA AND VANICE COUNTY. ALL ACTIVE SOLAR SYSTEMS SHALL BE INSPECTED BY A VANICE COUNTY BUILDING INSPECTOR.
- EACH SOLAR FARM SHALL BE REQUIRED TO HAVE FACILITY INSPECTED ANNUALLY FOR 3 YEARS FOLLOWING THE ISSUANCE OF THE ZONING PERMIT TO VERIFY CONTINUED COMPLIANCE WITH THE ZONING ORDINANCE. ADDITIONAL INSPECTIONS NECESSITATED BY COMPLAINTS OR OTHERWISE SHALL NOT REPLACE THE ANNUAL INSPECTION REQUIREMENTS.

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