

**VANCE COUNTY BOARD OF ADJUSTMENTS**

The Vance County Board of Adjustments met at a regular and duly advertised meeting on March 14, 2013 at 4:00 p.m. in the Commissioners Meeting Room of the Vance County Administrative Building at 122 Young Street in Henderson, NC.

MEMBERS PRESENT

Ruth Brummitt – Chairperson  
Blake Haley – Vice Chairperson  
Agnes Harvin  
Thomas Shaw  
Rev. Roosevelt Alston

MEMBERS ABSENT

Phyllis Stainback  
Alvin Johnson, Jr.

STAFF PRESENT

Jordan McMillen, Planning Director  
Jonathan Care, County Attorney

ALTERNATES PRESENT

Ruxtin Bobbitt – Alternate #1 – replaced  
Phyllis Stainback  
Darrell Mullinix – Alternate #2 –  
replaced Alvin Johnson, Jr.

Chairperson Brummitt called the meeting of the Board of Adjustment to order and asked for appointment of new chairperson and vice-chairperson for calendar year 2013.

Mr. Shaw made a motion to nominate Mr. Haley as the chairperson of the Board of adjustment. Ms. Harvin seconded said motion and all present were in favor. VOTES: 7-0.

Mr. Shaw made a motion to nominate Ms. Harvin as the vice-chairperson of the board of adjustment. Mr. Alston seconded said motion and all present were in favor. VOTES: 7-0.

The newly nominated chairperson Mr. Haley asked for a review of the minutes from the October 9, 2012 meeting. Ms. Harvin made a motion to approve the minutes as written. Ms. Brummitt seconded said motion and all present were in favor. VOTES: 7-0.

Chairperson Haley asked for comments from the County attorney prior to beginning consideration of the cases. The County attorney gave a review of the agenda items and reminded the board of their duties within a quasi-judicial setting and reviewed the importance of evidence and findings of fact.

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Chairperson Haley introduced the first case explaining the order of business, gave an opportunity for board members to express any conflicts, hearing none and then declared the public hearing open.

**BOA CASE NO. 20130314-1; Herbert, Jr. & Hilda Garrett (owner), Herbert, Jr. & Hilda Garrett (applicants) – Variance to permit garage extension within the setback**

Chairperson Haley asked Mr. McMillen to present the staff report. Mr. McMillen presented the staff report:

The applicant is requesting to add 12 feet to an existing single car carport and enclose as a two car garage. Additionally, a 12 ft. x 24 ft. enclosed porch is proposed on the south side of the garage. Both the garage and the enclosed porch would extend the building envelope an additional 12 feet east and would be within 9.5 feet of the property line. If approved, approximately 35 feet would remain between the addition and the home located to the east. The applicant is requesting a variance from the minimum setback (section 3.2.3) requirement of 20 feet to allow a 9.5 foot setback on east side of the property.

**Findings**

1. The property is owned by Herbert, Jr. and Hilda Garrett.
2. The request is for a variance from the minimum setback requirement of a 20 foot side setback as

- per section 3.2.3 of the zoning ordinance to allow a 9.5 foot setback on the side.
3. The lot is consists of a single family dwelling and is 0.43 acres as per the property description in Deed 544 Page 426.
  4. The property is located at 901 Hedrick Drive and is identified as tax parcel 0600C01006.
  5. The lot is currently zoned R-30 (Residential Low Density).
  6. The application requesting the variance was filed on February 14, 2013.
  7. The adjoining property owners were notified on February 28, 2013.
  8. The property was posted on March 1, 2013.
  9. The legal notice was run on March 5, and March 12, 2013.

#### **Staff Comments**

Mr. McMillen reviewed the staff comments as follows. The applicant is proposing to extend a single car carport an additional 12 feet to the east and enclose it to create a two car garage. The extension would move the structure within 9.5 feet of the property line. The existing lot is 0.43 acres, is zoned R-30 and does not have public water or sewer. The lot is undersized based upon the zoning designation, but is allowed to remain as is due to grandfathering provisions. If public water and sewer were available it would create a better situation for rezoning to an R-20 designation. As it is currently zoned, the property is limited to 20% impervious surface lot coverage. Items included in this calculation would be rooftops, sidewalks, driveways, etc. Based upon the current property size and configuration, the built upon area is just over this limit at approximately 21%. The addition would further increase this to approximately 24% impervious area and should be considered for a variance along with the setback variance request.

In order to address some of the safety concerns raised by the property owner, it may be in the best interest to enclose the carport area. Any further addition would require approval from the Board of Adjustment.

Based upon the 6 similar sized lots in this subdivision, a total of 2 have two car garages, 2 have single car carports, and 2 have no carports/garages. The properties with two car garages would have similar setbacks as this property if the variance were to be approved. Based upon this, an expansion to a two car garage appears to be in harmony within the subdivision and within the surrounding area.

Mr. McMillen mentioned that the property owner to the east (Mr. John Riggan) had contacted the Planning and Development Department. He was unable to attend the hearing, but mentioned that he had no concerns with the request.

Mr. Bobbitt questioned whether the deed addresses any setback requirements. Mr. Care (County Attorney) mentioned that the deed restrictions should not be a concern of the board of adjustment.

Ms. Harvin questioned whether there would be a drainage issue with the additional impervious surface. Mr. McMillen mentioned that there did not appear to be a drainage issue. The water would drain to the south of the property based upon the current grade leading to a pond on the golf course.

#### **THOSE SPEAKING FOR THE REQUEST**

Ms. Hilda Garrett presented the proposal and made the board aware that the request would include an enclosed porch as well as the garage. She mentioned that the porch would not extend to the east any further than the proposed garage. She confirmed the drainage pattern as explained by Mr. McMillen.

She further mentioned that they have sustained damage to vehicles as a result of being located next to the golf course and that this proposal would allow better protection for her vehicles.

Mr. Mullinix questioned whether the surrounding property owner could object to this at a later time, even though he verbally agreed to the proposal. The County attorney mentioned that all surrounding property owners have been given due notice of the hearing and had the opportunity to be present to express concerns.

**THOSE SPEAKING AGAINST THE REQUEST**

None present

*Chairperson Haley declared the public hearing closed.*

**BOARD DISCUSSION**

The Board reviewed the variance check sheet as follows (Chair Haley verbally read each for the board to review):

1. If the applicant complies with the provisions of the Ordinance, he or she can make no reasonable use of their property.
2. The hardship of which the applicant complains results from unique circumstances related to the applicant's property.
3. The hardship is not the result of the applicant's own actions.
4. The variance will be in harmony with the general purpose and intent of the Ordinance and preserves the spirit of the Ordinance.
5. The granting of the variance assures the public safety and welfare and will not be injurious to the property or improvements in the neighborhood.

**DECISION:**

Mr. Shaw made a motion to grant the variance, to include the staff report within the minutes and to approve the findings of fact as presented. Mr. Bobbitt seconded said motion and all present were in favor. VOTES: 7-0.

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Chair Haley introduced the second case and declared the public hearing open.

**BOA CASE NO. 20130314-2; Madison Hedgecock (owner), Strata Solar Development, LLC (applicant) – Conditional Use Permit to allow a Solar Farm**

Chair Haley asked Mr. McMillen to present the staff report. Mr. McMillen presented the staff report as follows: The applicant is requesting a conditional use permit to allow construction of a 5 MW solar farm on property to be owned by the development company.

**Exhibits as follows:**

- Exhibit 1.** Affidavit of George Retschle
- Exhibit 2.** Affidavit of Richard C. Kirkland, MAI
- Exhibit 3.** Affidavit of Gerry Dudzik

Mr. McMillen reviewed the draft findings of fact as follows:

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. Madison Hedgecock is the property owner. The property is to be transferred to the solar farm development company at a later time prior to development.
3. The property is located along NC 39 South; more specifically identified as tax parcel 0547 02015.
4. The parcel consists of 76.9 acres and is proposed to be subdivided into two lots with the proposed solar farm to be on a lot1 consisting of 45.3 acres.
5. The property is currently vacant and used as farmland.
6. The lot is currently zoned (A-R) Agricultural Residential.
7. The application requesting a conditional use permit was filed on 02/14/2013.
8. The adjoining property owners were notified on February 28, 2013.
9. The property was posted on March 1, 2013.
10. The legal notice was run on March 5, and March 12, 2013.

**Staff Comments**

The staff presented the following comments: The applicant is requesting a conditional use permit to construct a 5MW solar farm. Mr. McMillen explained that it was his understanding that the solar farm area would be purchased outright from the current property owner and would cover approximately 45.3

acres. He further mentioned that there was some question as to the current owner of this area and whether a survey has been completed and/or recorded. Mr. McMillen explained that the proposed solar farm would include a 6 ft. chain-link security fencing with barbed wire and highly visible emergency signs at key locations. He further mentioned that the ordinance requires 8ft. of fencing, however the board may consider including the barbed wire within the height allowance therefore allowing the 6 foot chain-link section of the fencing. He further explained that this may make the barbed wire less visible with the screening requirement of 8feet. Additionally, the solar panels will have a low profile with a maximum height of 7 feet; the ordinance requires less than 25 feet. The solar facility is proposed to be setback 50 feet from the right-of-way of NC 39 South and 50 feet from all streams. As per Tar-Pamlico buffer requirements and local requirements, no disturbance should take place within this buffer and it should be extended to include the existing pond on the property. Mr. McMillen explained that several revised plans have been submitted with the last revision by email on the day of the meeting. His recommendation was for the board to consider the plan in front of the board and potentially include any revisions as would be presented in the applicant's testimony.

Mr. McMillen further explained the screening requirements as follows: As per the zoning ordinance, screening shall be provided on all sides that front residential uses. This would include the northern, southern and western sides of the solar farm. As per section 4.16D of the zoning ordinance, the screening shall be a compact evergreen hedge or other type of evergreen foliage reaching a height of at least (8) feet within 3 years. With the screening and buffering requirements, it may be necessary to move the front fence further north to allow room for adequate screening. Existing vegetation on the west and north may be accepted as long as it conceals the use from public view. Based upon this information, it is advisable that additional information and detail be shared as to the specifics of the screening that will be used.

In terms of location, the property is surrounded by A-R zoning to the north and the east, with R-30 zoning to the south across NC 39 South and with R-30 zoning to the west. The property is directly adjacent to the Twelve Oaks Subdivision to the west.

Ms. Harvin questioned whether Twelve Oaks Subdivision borders the solar farm property to the north. Mr. McMillen mentioned that 1 or 2 parcels from that subdivision would be directly adjacent to the northern property line of the solar farm. Ms. Harvin further questioned whether additional buffers should be required if land to the east is ever developed for housing. Mr. McMillen mentioned that this proposal would be based upon the current conditions. Ms. Harvin questioned the effective date of the revised site plan. Mr. McMillen mentioned that the plan in front of the board is stamped by the Engineer on March 5<sup>th</sup>, but a further revision was submitted by email earlier in the day which has a March 11<sup>th</sup> date. Ms. Harvin questioned whether the board should consider the current plan being that there are revised versions that have not been given to the board in a timely manner. She additionally mentioned that there are questions within the staff review that may be determined by an updated plan. She requested that Mr. McMillen review the initial staff questions.

Mr. McMillen reviewed the staff questions as follows: (1) What are the plans for landscaped buffers surrounding the fence of the farm? (2) The site plan shows two separate lots, have these been officially split? (3) Detailed parking information is to be submitted with revised site plan – need 1 parking spot/2 employees on shift of greatest employment. (4) Need details for entrance gate location and size. Mr. McMillen mentioned that staff felt comfortable with all responses with the exception of question #2. Staff feels that there are still questions as to the timing of the land being subdivided. Additionally, Mr. McMillen mentioned the need for revising the rear and side setback as they are shown incorrectly on the site plan.

#### **THOSE SPEAKING FOR THE REQUEST**

*Ms. Beth Trahos* (attorney with Smith, Moore, Leatherwood, LLP on behalf of strata solar) addressed the board. She mentioned that Strata Solar was the contract purchaser of the property at the time of the application, and is now the owner of the property. She gave an overview of strata solar being the largest

provider of solar in North Carolina with more farms than anyone else within the state. She provided affidavits of testimony from Mr. George Retschle, Mr. Richard Kirkland, and Mr. Gerry Dudzik.

She further explained that they were aware that setbacks had been inadvertently reversed on the site plan and requested conditional approval of those items. Additionally she mentioned that a determination had been made by NCDENR that the pond on the property is not subject to state buffer requirements and therefore the plan would not require 50 foot buffers surrounding streams and ponds, but would comply with local buffer requirements of 30 feet. She mentioned that they were aware of the 6ft. fence showing on the plans and would provide an 8ft. fence if necessary at the boards discretion.

*Mr. George Retschle* (project engineer) addressed the board. See exhibit 1 for copy of testimony. Ms. Harvin questioned whether lighting would be provided. Mr. Retschle responded that no lighting would be provided.

*Mr. Richard Kirkland*, MAI (real estate appraiser) addressed the board. See exhibit 2 for copy of testimony. Ms. Harvin questioned whether there was any comparable data available for similar project types. Mr. Kirkland responded that there is no hard data available to make a determination one way or the other. From the limited data that is available, the suggestion is that solar farms would have little impact.

*Mr. Gerry Dudzik* (Partner with Carolina Solar Energy) addressed the board. See exhibit 3 for copy of testimony. Additionally, he explained the co-development arrangement that Carolina Solar Energy has with Strata Solar Energy. He explained that approximately 130 employees will be used during construction. He estimated based upon the current tax rate that approximately \$24,000 would be realized by the local government per year in taxes. As far as maintenance of lawn, it would either be mowed on a regular basis by a landscaping company, or would involve the use of sheep for grazing. Mr. Bobbitt questioned whether a contract has been completed with Progress Energy. Mr. Dudzik mentioned that this is not in place, but would be done as soon as practical following approval of the conditional use permit and would be in place for 15 years with a renewable clause for 15 years. Ms. Harvin questioned which entity would maintain the planted buffer. Mr. Dudzik responded that natural watering or a landscaping company if necessary would be available to maintain the plants.

Mr. Care (county attorney) questioned whether there was a valid interconnection agreement as signature pages have not been provided. Mr. Dudzik mentioned that this can be provided. Mr. Care questioned the various entities that are involved in the process (i.e. Strata Land Holdings, LLC; Dement Farm, LLC; and Strata Solar, LLC, Carolina Solar Energy, LLC) and questioned which entity the board would be approving. Additionally, Mr. Care questioned whether a proper subdivision has taken place as a deed has already been recorded subdividing the property and questioned the site plan version to be approved with the various revisions that have taken place. Mr. Care mentioned a concern with lack of information and possibly an incomplete application being filed.

Ms. Trahos responded that the site has not been subdivided, but that it has been transferred and the intention would be to complete the subdivision. Mr. Care presented a deed recorded on February 28<sup>th</sup> creating a subdivision and transferring the property.

#### **THOSE SPEAKING AGAINST THE REQUEST**

*Mr. Gordon Wilder*, neighboring property owner, (6086 NC 39 Hwy South) addressed the board. Mr. Wilder mentioned the standards that must be met for a conditional use to be issued. Specifically, he mentioned that the proposed use is listed as an eligible conditional use within the zoning district and that it appears that the solar farm would not have a negative effect on public safety. Mr. Wilder pointed out that currently the proposed use does not appear to meet all of the required regulations of the zoning ordinance particularly with there being some confusion as to the owner of the property and whether or not a valid applicant is involved. Mr. Wilder questioned whether the front setback was 50 feet and pointed out that no vegetative screening is shown on the eastern side of the property. He has requested screening

to be present along that property line as it will be within his visible area. Additionally, Mr. Wilder mentioned that no evidence has been presented by the appraiser to confirm that adjacent property values would not be affected negatively. Mr. Wilder contended that the use may be in general conformity with the plan of development for the county, but that a solar farm would not be in harmony with the area. He added that another concern would be taking farmland out of production. Mr. Wilder mentioned that alternative energy is appreciated, but that in this situation it would have a significant visual impact on the area.

*Greg Taylor*, neighboring property owner, addressed the board. He mentioned that he is in favor of green technology, but has some concerns with the proposed solar farm. Specifically he questioned the ownership status of the remaining land surrounding the proposed solar farm and inquired as to whether commercial uses may be put there in the future. Mr. McMillen responded that the land is zoned Agricultural Residential and that by right a commercial use would not be permitted in that location. Mr. Taylor questioned whether access to his property would be affected by the solar farm or the associated construction process. Ms. Harvin responded that this would be separate from the project and would remain as it currently is in terms of maintenance and effects from construction. Mr. Taylor questioned whether a visual analysis has been completed and expressed concerns with the visual impact of the solar farm. He pointed out that due to the higher elevation of NC Hwy 39 relative to the solar farm property, there would be potential for the farm to be more visible.

**REBUTTAL**

Ms. Trahos summarized the position of the applicant and reiterated the value of having the certified appraiser on hand while summarizing that all testimony presented indicates that the use would be in harmony with the area.

*Chairman Haley closed the public hearing.*

**BOARD DISCUSSION**

Several board members expressed a desire to see buffering along the entire eastern edge of the property as well as to see more details on landscaping provisions for the buffer. The board discussed whether the remaining questions for the applicant could be conditioned within approval or whether these items should be resubmitted in a continued meeting. The board discussed the need for an updated site plan, the need for having a valid subdivision survey recorded with a possibility for a correction deed to reflect the survey, the need for amending the application to include valid owners and an applicant, and the need for signature pages from the interconnection agreement. These are listed as some of the concerns discussed by the board as a guide for the staff in working with the applicant.

**DECISION:**

Ms. Brummitt made a motion to continue the hearing until the next regular scheduled meeting of the board to allow adequate time for additional items to be presented to allow a better review of the proposal. Mr. Thomas Shaw seconded said motion and all present were in favor. VOTES: 7-0.

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**ADJOURNMENT:** There being no further business, Chair Haley declared the meeting adjourned.

STATE OF NORTH CAROLINA

BEFORE THE  
BOARD OF ADJUSTMENT

COUNTY OF VANCE

CONDITIONAL USE PERMIT )  
APPLICATION FOR A LARGE )  
SCALE SOLAR ENERGY )  
SYSTEM )

AFFIDAVIT OF  
GEORGE RETSCHLE

NOW COMES the undersigned Affiant, who, being first duly sworn deposes and says:

1. I am over eighteen (18) years of age and competent to testify to the matters set forth in this Affidavit.
2. I am a licensed North Carolina professional engineer and I hold the Leadership in Energy and Environmental Design Accredited Professional (LEED AP) designation. I am the Vice-President of the engineering firm of Ballentine Associates, PA.
3. Strata Solar proposes to construct a solar farm on approximately 45.30± acres of a 76.09± acres tract. The property is owned by Madison Hedgecock; the property, referred to as the Dement Farm, is located just off NC Hwy 39, about half way between Henderson and the Franklin County line.. I am familiar with the proposed solar farm use, including the conditional use permit request. I have personally toured the property and specifically inspected the location of the proposed project.
4. I have reviewed the Vance County Unified Development Ordinance and a solar farm is permitted as a “Solar Energy System, Large Scale (Solar Farm)” with a Conditional Use Permit by the Board of Adjustment.
5. The solar farm will contain rows of Photovoltaic panels. The panels will be mounted to posts, which will be driven directly into the existing ground to minimize grading. The site will be constructed in one phase. The solar panel configuration contains no moving parts.
6. It is my professional opinion that the proposed solar farm will not materially endanger the public health or safety. Access to the site will be from a new driveway onto NC Hwy 39, across from Lindy Lane. The site is appropriately located to be served by fire, police and emergency services, if needed.
7. The proposed solar farm will generate almost no traffic. The solar farm will not be staffed daily. Employees will visit the site weekly or less frequently to check and maintain the equipment. The proposed solar farm will generate far fewer daily trips than one average single-family detached home.
8. The creation of solar energy is virtually silent. The only sound is the quiet hum of equipment converting and conveying electricity to the power grid during daylight hours.

Similar facilities are already located in residential neighborhoods to deliver power to homes. Solar panels are designed to absorb rather than reflect light.

9. The area beneath the solar panels will be planted with grass or alfalfa to stabilize the soil. The active area of the solar farm will be enclosed by a six foot (6') high fence to prevent unauthorized access to the site.

10. It is my professional opinion that the location and character of the use will be in harmony with that area in which it is located. The proposed solar farm is consistent with the residential and agricultural land uses that exist in the area today.

11. It is my professional opinion that the proposed solar farm will be in general conformity with the Land Use Plan for the area in question. The Dement Farm is located within a large area that the Vance County Land Use Plan designates as the Gillburg Development Community. This is one of five such "Development Communities" in Vance County. These are the areas, outside of Henderson, that serve as the County's long term recommended growth areas.

12. It is my professional opinion that the use meets all conditions and specifications required by Vance County Zoning Ordinance Section 6.10.N. for Solar Farms.

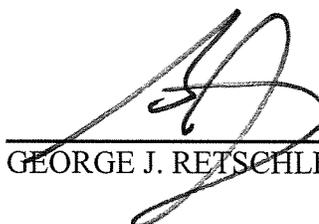
- A. Height: Systems, equipment and structures shall not exceed twenty-five (25) feet in height when ground mounted. Excluded from this height requirement, however, are electric transmission lines and utility poles. Roof mounted systems shall not exceed the maximum height for the applicable zoning district.
- B. Setback: Active solar system structures must meet the following setbacks:
  - a. Ground mounted– Ground mounted solar energy systems as part of a solar farm shall meet the minimum zoning setback for the zoning district in which it is located.
- C. Screening and Fencing: Adequate fencing shall be provided along the perimeter of the area (with all entrances gated) to prevent trespassing on the property.
- D. Lighting: All lighting shall be arranged and shaded so as to reflect the light away from adjoining properties and streets.
- E. Noise: Noise levels measured at the property line shall not exceed fifty (50) decibels when located adjacent to an existing residence or residential district.
- F. 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.

- G. Approved Solar Components: Electric solar system components must have a UL listing.
- H. 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.
- I. 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.
- J. Abandonment: It is the responsibility of the owner 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.

13. It is my professional opinion that the proposed solar farm meets all of the requirements for issuance of a Conditional Use Permit for a Solar Farm.

Further the Affiant Sayeth Not.

This the 12<sup>th</sup> day of March, 2013.



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 GEORGE J. RETSCHLE

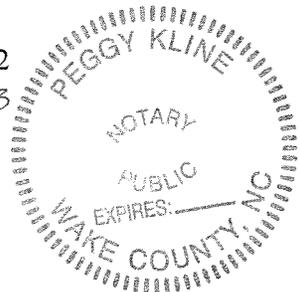
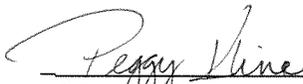
**ACKNOWLEDGMENT**

STATE OF NORTH CAROLINA

COUNTY OF ORANGE

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he or she signed the foregoing document: George J. Retschle.

Date: ~~July 16, 2012~~  
MARCH 12, 2013

\_\_\_\_\_  
 [Notary's signature as name appears on seal]

PEGGY KLINE, Notary Public  
 [Notary's printed name as name appears on seal]

(SEAL)

My commission expires: 12.27.2014

STATE OF NORTH CAROLINA  
VANCE COUNTY

BEFORE THE  
BOARD OF ADJUSTMENT

CONDITIONAL USE PERMIT )  
APPLICATION FOR A LARGE )  
SCALE SOLAR ENERGY )  
SYSTEM )

AFFIDAVIT OF  
RICHARD C. KIRKLAND, MAI

NOW COMES the undersigned Affiant, who, being first duly sworn deposes and says:

1. I am over eighteen (18) years of age and competent to testify to the matters set forth in this Affidavit.
2. I am a licensed North Carolina real estate appraiser with an MAI Designation, actively practicing in North Carolina for 14 years. A copy of my report and qualifications is attached to this affidavit as Exhibit A.
3. Strata Solar proposes to construct a solar farm on approximately 45.30± acres of a 76.09± acres tract. The property – referred to as the Dement Farm - is located just off NC Hwy 39, about half way between Henderson and the Franklin County line. The solar farm will consist of fixed solar panels that generate no noise, no smell and less traffic than one typical residential dwelling. The solar panels will be approximately seven feet (7') in height, much lower than the typical house.
4. As a part of my study, I conducted research through the Appraisal Institute and other sources regarding the impact of a solar farm on adjacent properties. I found nothing to suggest a negative impact.
5. I inspected the property and the immediate neighborhood as a part of my evaluation. I looked at the specific adjacent parcels of land surrounding this proposed solar farm. The property is surrounded by farm land and single-family residences, which, I believe are compatible uses.
6. Based upon the detailed information contained in my report, I conclude that the proposed solar farm is located, designed and proposed to be operated so as to maintain the value of adjoining and abutting property, and that it will be in harmony with the area where it is located.

Further the Affiant Sayeth Not.

This the 14<sup>th</sup> day of March, 2013.

  
RICHARD C. KIRKLAND

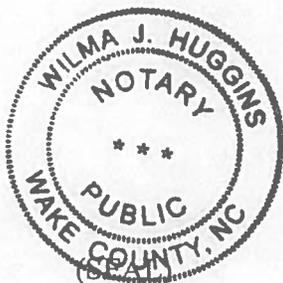
**ACKNOWLEDGMENT**

STATE OF NORTH CAROLINA

COUNTY OF Wake

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he signed the foregoing document: Richard C. Kirkland.

Date: March 14, 2013



Wilma J. Huggins  
[Notary's signature as name appears on seal]

Wilma J. Huggins, Notary Public  
[Notary's printed name as name appears on seal]

My commission expires: 12-01-2016

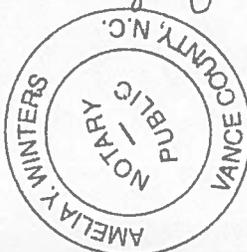
3/14/13



Acknowledged before me this 14<sup>th</sup> day of March 2013

Amelia J. Winters  
Amelia J. Winters

My Commission expires 03-18-2013 2





# Kirkland Appraisals

Richard C. Kirkland, Jr., MAI  
3540 Layton Ridge Road  
Apex, North Carolina 27539  
Phone (919) 771-2202  
[rich.kirkland@att.net](mailto:rich.kirkland@att.net)  
[www.kirklandappraisals.com](http://www.kirklandappraisals.com)

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March 14, 2013

Mr. Lance Williams  
Strata Solar  
Suite 101  
1119 US 15-501 Hwy South  
Chapel Hill, North Carolina 27517

Dear Mr. Williams:

At your request, I have considered the likely impact of a solar farm to be located on roughly 45 acres to be formed out of multiple parcels at 5393 US Highway 39, Henderson, North Carolina.

The scope of this assignment is to address the likely impact this may have on adjoining properties. To this end I have researched and visited existing and proposed solar farms, researched articles through the Appraisal Institute and other studies, as well as discussed the likely impact with other real estate professionals. I have not been asked to assign any value to any specific property.

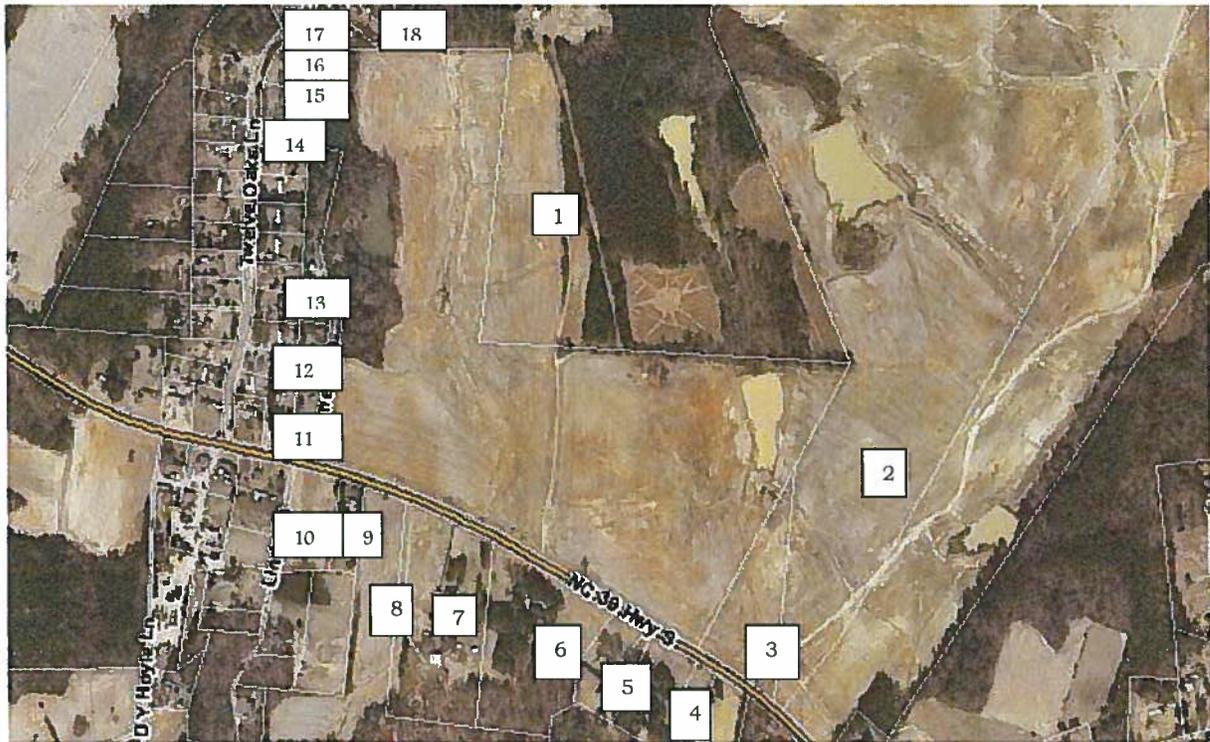
This letter is a limited report of a real property appraisal consulting assignment and subject to the limiting conditions attached to this letter. My client is Strata Solar represented to me by Mr. Lance Williams. The intended use is to assist in the Special Use Permit application. The effective date of this consultation is March 14, 2013, the date of my inspection.

### **Proposed Use Description**

The property is located on the north side of NC Highway 39 and the east side of Dement Lane. The property is currently used for agriculture. The owner also owns additional acreage adjacent to the parcel on the eastern side.

The solar farm will consist of fixed solar panels that will generate no noise, no odor, and less traffic than a residential subdivision. The appearance will all be panels less than 8 feet in height that will be located behind a chain link fence.

The property has 18 parcels that adjoin the subject property. I have numbered the parcels as shown on the following map.



#	Parcel ID	Owner	Acres	Use	% Adjoining	
					Acres	Parcels
1	0547 02016	Taylor	73.00	Residential	22.08%	5.56%
2	0548 01013	Minerva	132.09	Agriculture	39.96%	5.56%
3	0550 01015A	Duke	42.8	Residential/Agriculture	12.95%	5.56%
4	0550 01016	Boone	3.72	Residential	1.13%	5.56%
5	0550 01017	Wilder	2.54	Residential	0.77%	5.56%
6	0550 01026	Tharrington	8.77	Residential	2.65%	5.56%
7	0550 01025	Prewer	9.59	Residential	2.90%	5.56%
8	0550 01018	Burgess	45	Residential/Agriculture	13.61%	5.56%
9	0547 01001	Newman	1.3	Residential	0.39%	5.56%
10	0547 01017	Worldwide Full Gospel	2.64	Residential- vacant	0.80%	5.56%
11	0547 02053	Currin Enterprise Inc.	1.01	Mobile home	0.31%	5.56%
12	0547 02058	Currin	0.98	Mobile home	0.30%	5.56%
13	0547 02057	None listed in GIS	2.41	Residential	0.73%	5.56%
14	0547 02044	Lopez	0.74	Mobile home	0.22%	5.56%
15	0547 02046	Wiesner	0.92	Mobile home	0.28%	5.56%
16	0547 02049	Wiesner	0.84	Mobile home- vacant	0.25%	5.56%
17	0547 02022	Rodriguez	1.28	Mobile home	0.39%	5.56%
18	0547 02069	Hispanic Services Inc.	0.95	Mobile home- vacant	0.29%	5.56%
Total			330.58		100.00%	100.00%

**Breakdown**

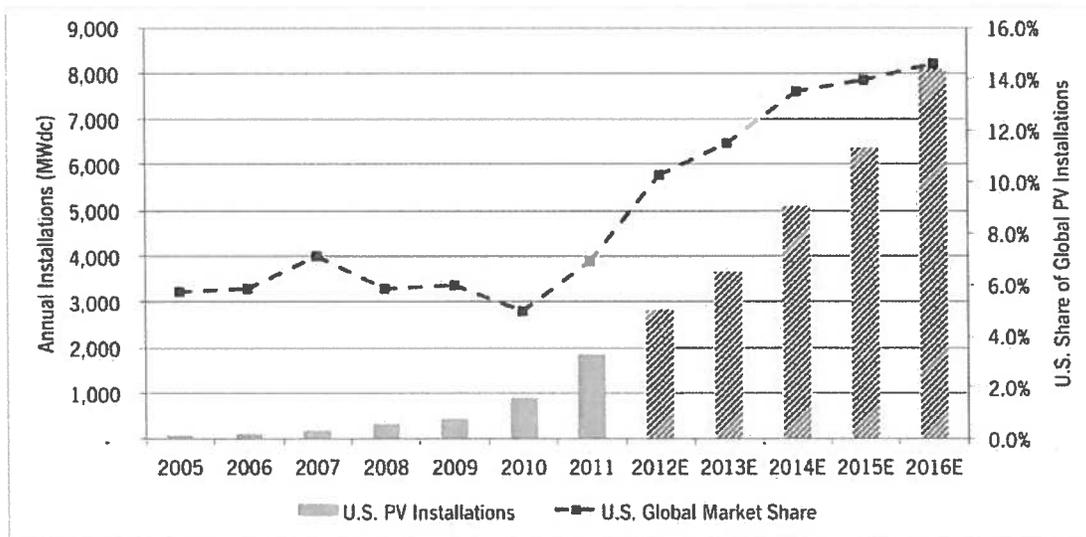
	<b>Acreage</b>	<b>Parcels</b>
Mobile home	2.03%	38.89%
Residential	31.45%	44.44%
Agriculture	39.96%	5.56%
Res/Ag	26.56%	11.11%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

**Matched Pair Analysis**

I have researched a number of solar farms in North Carolina looking for recent sales that could be used to derive a matched pair analysis. I have included a breakdown of each of the solar farms that I have researched in the addenda of this report.

One of the reasons that matched pairs are difficult to find is the combination of the recession and the newness of this size of solar powered use in this area. The recession significantly impacted residential and agricultural sales over the last few years, especially in rural areas. The newness of this product is illustrated by the data presented by the U.S. Solar Market Insight Reports for 2010 and 2011 which is put out by the Solar Energy Industries Association. These reports point out that 2010 was a “breakout” year for solar energy and 2011 continued the boom of solar power. North Carolina was ranked as the 9<sup>th</sup> most active photovoltaic installations in 2010 and 8<sup>th</sup> in 2011. A total of 31 MW were installed in 2010 and 55 MW in 2011 in North Carolina.

Across the nation the shift in solar installations is shown to have dramatically increased over the last few years as the change in the technology and economy made these solar farms more feasible. The chart below shows how this market has grown and is expected to continue to grow from 2007 through 2009, with a significant leap in 2010 and 2011. All of this is to say that there are not a lot of examples of this type of solar farm prior to that boom in the solar industry, which happened to coincide with a downturn in the market. This means that the short period for analysis does not provide many opportunities at this time to identify any matched pairs. The solar farm comparables listed in the addenda of this report shows all neighboring sales to the solar farms considered so far.



## **National Studies**

I have researched the Appraisal Institute Lum Library for articles and studies on solar farms as well as searching other industry publications. I was unable to identify any practical or useful studies regarding proximity solar farms.

## **Impact Analysis**

Typically, for an adjoining use to impact property value, it will do so due to the appearance, noise, odor, traffic, hazardous material, or incompatible use. I have considered each of these factors below.

### **Appearance**

Solar farm panels have no associated stigma at this time and in smaller collections are found in yards and roofs in many residential communities. Larger solar farms using fixed panels are a passive use of the land that is considered in keeping with a rural/residential area. Comparing a solar farm to a larger greenhouse as shown below is a very reasonable comparison given that a greenhouse is essentially another method for collecting passive solar energy. The greenhouse use is well received in residential/rural areas and has a similar visual impact as a solar farm.



I note that the fixed solar panels are generally only 7 feet high, which means that the visual impact of the solar panels will be less high than a typical greenhouse or even a single story residential dwelling. This property could be developed with single family housing that would have a much greater visual impact on the surrounding area given that a two-story home with attic could be four times as high as these proposed panels.

The comparable solar farms that I have considered are presented in the addenda and include a variety of photos of solar farms. The photos show that these sites are generally well-maintained and there is no significant negative view.

For the reasons stated above, I conclude that the appearance of the proposed solar farm will maintain or enhance adjoining property values.

### **Noise**

The proposed solar panels will be fixed and will not move to follow the sun. As these are passive, fixed solar panels there is no noise associated with these panels. The transformer reportedly has a hum that can only be heard in close proximity to this transformer and the buffers on the property are sufficient to make this hum inaudible from the adjoining properties.

There will be minimal onsite traffic generating additional noise.

The various solar farms that I have inspected and identified in the addenda were inaudible from the roadways. I heard nothing on any of these sites associated with the solar farm.

For the reasons stated above, I conclude that the lack of any noise associated with the proposed solar farm indicates that this use will maintain or enhance adjoining property values.

### **Odor**

The solar panels give off no odor of which I am aware.

The various solar farms that I have inspected and identified in the addenda produced no noticeable odor off site.

I therefore conclude that odor from the proposed project is not a factor and the project as designed will maintain or enhance the value of contiguous properties.

### **Traffic**

The solar farm will have no onsite employee's or staff. Maintenance of the site is minimal and relative to other potential uses of the site, such as a residential subdivision, the additional traffic on this site is insignificant.

For the reasons stated above, I conclude that the lack of any significant traffic associated with the proposed solar farm indicates that this use will maintain or enhance adjoining property values.

### **Hazardous material**

The solar farm presents no potential hazardous waste byproduct as part of normal operation. Any fertilizer, weed control, vehicular traffic, or construction will be significantly less than typically applied in a residential development or even most agricultural uses.

The various solar farms that I have inspected and identified in the addenda have no known pending environmental impacts associated with the development and operation of those farms.

I therefore conclude that there is no hazardous material concerns associated with the proposed project and therefore the project as designed will maintain or enhance the value of contiguous properties.

### **Compatibility of Use**

I have visited a number of existing and proposed solar farms to determine what compatible uses with a solar farm are.

The remarks included in the solar farm comparables in the addenda also provide very telling information on proposed developments such as the proposed solar farm project to be located in Willow Springs on Old Store Road. This solar farm will have a 45-acre solar farm adjoining land proposed for a residential subdivision. Both the solar farm and the residential subdivision are to be developed by the same owner with no concern over any negative impact from the solar farm on the potential residential subdivision.

Another proposed solar farm project to be located in Chapel Hill on White Cross Road will have a 45-acre solar farm adjoining land currently being used as a mobile home park and adjoining agriculture land. The mobile home park and the agriculture land are directly adjacent to the proposed solar farm and owned by the same owner of the proposed solar farm. This owner anticipates no impact from the adjacency of the solar farm on the mobile home and agricultural uses of their property.

Beyond these anecdotal references, I have quantified the adjoining uses for each solar farm comparable to derive a breakdown of the adjoining uses for each solar farm. The chart below shows the breakdown of adjoining uses by total acreage as well as by the number of parcels adjoining the property.

Percentage By Adjoining Acreage								All Res	All Comm
	Res	Ag	Res/AG	Park	Sub	Comm	Ind	Uses	Uses
Willow Springs	8.34%	25.58%	66.08%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Kings Mtn	2.53%	12.01%	3.63%	0.00%	0.00%	0.00%	81.83%	18.17%	81.83%
Chapel Hill	4.58%	50.98%	44.16%	0.00%	0.00%	0.00%	0.00%	99.72%	0.00%
Vale Farm	1.21%	12.96%	85.83%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Two Lines	2.84%	86.64%	7.71%	0.00%	2.81%	0.00%	0.00%	100.00%	0.00%
Strata	0.02%	0.00%	0.13%	99.85%	0.00%	0.00%	0.00%	100.00%	0.00%
Avery	12.70%	40.25%	47.05%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Mayberry	24.07%	51.49%	0.00%	0.00%	0.00%	4.14%	20.29%	75.56%	24.44%
Progress I	0.00%	45.39%	4.42%	0.00%	0.00%	0.00%	50.19%	49.81%	50.19%
Progress II	1.47%	98.53%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Sandy Cross	0.42%	0.00%	99.58%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Zebulon	46.59%	0.00%	53.41%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
<b>Average</b>	8.73%	35.32%	34.33%	8.32%	0.23%	0.35%	12.69%	86.94%	13.04%
<b>Median</b>	2.68%	32.91%	25.93%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
<b>High</b>	46.59%	98.53%	99.58%	99.85%	2.81%	4.14%	81.83%	100.00%	81.83%
<b>Low</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.17%	0.00%

Res = Residential, Ag = Agriculture, Sub = Substation, Com = Commercial, Ind = Industrial.  
 Prison use included in industrial. Religious and Mobile Home included in Residential.

I have also included a breakdown of each solar farm by number of adjoining parcels by use as the acreage can vastly overstate the adjoining use when say 200 acres of agriculture is on one side of the project and five single family homes on an acre each are located on another side. Using both factors provides a better concept of what the neighboring properties consist.

Percentage By Number of Parcels Adjoining								All Res	All Comm
	Res	Ag	Res/AG	Park	Sub	Comm	Ind	Uses	Uses
Willow Springs	42.11%	36.84%	21.05%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Kings Mtn	40.00%	30.00%	10.00%	0.00%	0.00%	0.00%	20.00%	80.00%	20.00%
Chapel Hill	33.33%	20.00%	40.00%	0.00%	6.67%	0.00%	0.00%	100.00%	0.00%
Vale Farm	10.00%	20.00%	70.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Two Lines	38.46%	46.15%	7.69%	0.00%	7.69%	0.00%	0.00%	100.00%	0.00%
Strata	71.43%	0.00%	14.29%	14.29%	0.00%	0.00%	0.00%	100.00%	0.00%
Avery	50.00%	37.50%	12.50%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Mayberry	41.67%	8.33%	0.00%	0.00%	0.00%	25.00%	25.00%	50.00%	50.00%
Progress I	0.00%	50.00%	25.00%	0.00%	0.00%	0.00%	25.00%	75.00%	25.00%
Progress II	20.00%	80.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Sandy Cross	16.67%	0.00%	83.33%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Zebulon	90.00%	10.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
<b>Average</b>	<b>37.81%</b>	<b>28.24%</b>	<b>23.66%</b>	<b>1.19%</b>	<b>1.20%</b>	<b>2.08%</b>	<b>5.83%</b>	<b>92.08%</b>	<b>7.92%</b>
<b>Median</b>	<b>39.23%</b>	<b>25.00%</b>	<b>13.39%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>
<b>High</b>	<b>90.00%</b>	<b>80.00%</b>	<b>83.33%</b>	<b>14.29%</b>	<b>7.69%</b>	<b>25.00%</b>	<b>25.00%</b>	<b>100.00%</b>	<b>50.00%</b>
<b>Low</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>50.00%</b>	<b>0.00%</b>

Both of the above charts show a marked residential and agricultural adjoining use for most solar farms. In fact every single solar farm considered included an adjoining residential use except for Progress I, which included an adjoining residential/agricultural use. These comparable solar farms clearly support a compatibility with adjoining low density residential uses along with agricultural uses.

Furthermore, searching for comparable sales on LoopNet, I identified a total of 103 properties that were identified by the search term “Solar Farm”. In each case the property was being advertised as a potential solar farm with good proximity to a substation, but also listed the alternative use based on the area. The breakdown of these alternative uses shown below is a good indicator of the uses compatible with solar farms. The vast majority of these compatible uses is agriculture and followed by residential.

Combining the agriculture and residential uses they make up 68% of the potential solar farm sites, while industrial, commercial and office uses make up only 32%. This shows that a solar farm is twice as likely to be located in a rural/residential area as opposed to an industrial/commercial site, but all of these locations are considered reasonable locations for solar power.

Alt Use	Listings	%
<b>Agriculture</b>	47	46%
<b>Residential</b>	22	21%
<b>Industrial</b>	16	16%
<b>Commercial</b>	14	14%
<b>Multifamily</b>	3	3%
<b>Office</b>	1	1%

<b>Ag/Res/MF</b>	70	68%
<b>Ind/Com/Off</b>	33	32%

For the reasons stated above, I conclude that the proposed solar farm is a compatible use with a residential and rural area. I therefore conclude that such a use would maintain or enhance the adjoining property values.

**Conclusion**

The matched pair analysis on the comparable solar farms provided no usable matched pairs. The national survey indicates no impact from the solar farm. The criteria for making downward adjustments on property values such as appearance, noise, odor and traffic all indicated that a solar farm is a compatible use for a rural/residential area.

Based on the presented information and my experience in appraising land and residential subdivision developments, I conclude that the proposed solar farm will have no negative impact on the adjoining properties.

If you have any further questions please call me any time.

Sincerely,



Richard C. Kirkland, Jr., MAI  
State Certified General Appraiser



### ***Limiting Conditions and Assumptions***

Acceptance of and/or use of this report constitutes acceptance of the following limiting conditions and assumptions; these can only be modified by written documents executed by both parties.

- ❖ The basic limitation of this and any appraisal is that the appraisal is an opinion of value, and is, therefore, not a guarantee that the property would sell at exactly the appraised value. The market price may differ from the market value, depending upon the motivation and knowledge of the buyer and/or seller, and may, therefore, be higher or lower than the market value. The market value, as defined herein, is an opinion of the probable price that is obtainable in a market free of abnormal influences.
- ❖ I do not assume any responsibility for the legal description provided or for matters pertaining to legal or title considerations. I assume that the title to the property is good and marketable unless otherwise stated.
- ❖ I am appraising the property as though free and clear of any and all liens or encumbrances unless otherwise stated.
- ❖ I assume that the property is under responsible ownership and competent property management.
- ❖ I believe the information furnished by others is reliable, but I give no warranty for its accuracy.
- ❖ I have made no survey or engineering study of the property and assume no responsibility for such matters. All engineering studies prepared by others are assumed to be correct. The plot plans, surveys, sketches and any other illustrative material in this report are included only to help the reader visualize the property. The illustrative material should not be considered to be scaled accurately for size.
- ❖ I assume that there are no hidden or unapparent conditions of the property, subsoil, or structures that render it more or less valuable. I take no responsibility for such conditions or for obtaining the engineering studies that may be required to discover them.
- ❖ I assume that the property is in full compliance with all applicable federal, state, and local laws, including environmental regulations, unless the lack of compliance is stated, described, and considered in this appraisal report.
- ❖ I assume that the property conforms to all applicable zoning and use regulations and restrictions unless nonconformity has been identified, described and considered in this appraisal report.
- ❖ I assume that all required licenses, certificates of occupancy, consents, and other legislative or administrative authority from any local, state, or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimate contained in this report is based.
- ❖ I assume that the use of the land and improvements is confined within the boundaries or property lines of the property described and that there is no encroachment or trespass unless noted in this report.
- ❖ I am not qualified to detect the presence of floodplain or wetlands. Any information presented in this report related to these characteristics is for this analysis only. The presence of floodplain or wetlands may affect the value of the property. If the presence of floodplain or wetlands is suspected the property owner would be advised to seek professional engineering assistance.
- ❖ For this appraisal, I assume that no hazardous substances or conditions are present in or on the property. Such substances or conditions could include but are not limited to asbestos,

urea-formaldehyde foam insulation, polychlorinated biphenyls (PCBs), petroleum leakage or underground storage tanks, electromagnetic fields, or agricultural chemicals. I have no knowledge of any such materials or conditions unless otherwise stated. I make no claim of technical knowledge with regard to testing for or identifying such hazardous materials or conditions. The presence of such materials, substances or conditions could affect the value of the property. However, the values estimated in this report are predicated on the assumption that there are no such materials or conditions in, on or in close enough proximity to the property to cause a loss in value. The client is urged to retain an expert in this field, if desired.

- ❖ Unless otherwise stated in this report the subject property is appraised without a specific compliance survey having been conducted to determine if the property is or is not in conformance with the requirements of the Americans with Disabilities Act (effective 1/26/92). The presence of architectural and/or communications barriers that are structural in nature that would restrict access by disabled individuals may adversely affect the property's value, marketability, or utility.
- ❖ Any allocation of the total value estimated in this report between the land and the improvements applies only under the stated program of utilization. The separate values allocated to the land and buildings must not be used in conjunction with any other appraisal and are invalid if so used.
- ❖ Possession of this report, or a copy thereof, does not carry with it the right of publication.
- ❖ I have no obligation, by reason of this appraisal, to give further consultation or testimony or to be in attendance in court with reference to the property in question unless further arrangements have been made regarding compensation to Kirkland Appraisals, LLC.
- ❖ Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraiser, or the firm with which the appraiser is connected) shall be disseminated to the public through advertising, public relations, news, sales, or other media without the prior written consent and approval of Kirkland Appraisals, LLC, and then only with proper qualifications.
- ❖ Any value estimates provided in this report apply to the entire property, and any proration or division of the total into fractional interests will invalidate the value estimate, unless such proration or division of interests has been set forth in the report.
- ❖ Any income and expenses estimated in this report are for the purposes of this analysis only and should not be considered predictions of future operating results.
- ❖ This report is not intended to include an estimate of any personal property contained in or on the property, unless otherwise stated.
- ❖ This report is subject to the Code of Professional Ethics of the Appraisal Institute and complies with the requirements of the State of North Carolina for State Certified General Appraisers. This report is subject to the certification, definitions, and assumptions and limiting conditions set forth herein.
- ❖ The analyses, opinions and conclusions were developed based on, and this report has been prepared in conformance with, our interpretation of the guidelines and recommendations set forth in the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA).
- ❖ This is a Real Property Appraisal Consulting Assignment as identified in Standard 4 of USPAP and reported following Standard 5 of USPAP.

**Certification – Richard C. Kirkland, Jr., MAI**

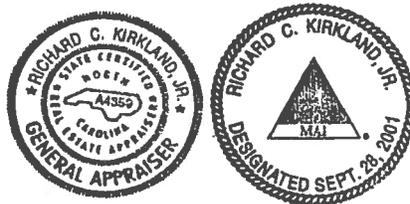
I certify that, to the best of my knowledge and belief:

1. The statements of fact contained in this report are true and correct;
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions;
3. I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved;
4. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment;
5. My engagement in this assignment was not contingent upon developing or reporting predetermined results;
6. My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of the appraisal;
7. The reported analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute;
8. The reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.
9. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives;
10. I have made a personal inspection of the property that is the subject of this report, and;
11. No one provided significant real property appraisal assistance to the person signing this certification.
12. As of the date of this report I have completed the requirements of the continuing education program of the Appraisal Institute;
13. I have not appraised this property within the last three years.

Disclosure of the contents of this appraisal report is governed by the bylaws and regulations of the Appraisal Institute and the National Association of Realtors.

Neither all nor any part of the contents of this appraisal report shall be disseminated to the public through advertising media, public relations media, news media, or any other public means of communications without the prior written consent and approval of the undersigned.

Richard C. Kirkland, Jr., MAI  
State Certified General Appraiser



**Solar Farm Comparable**

**Name** Proposed Fuquay Farm  
**Address** 9205 Old Store Road  
**City** Willow Springs  
**County** Wake



**Tract Acres** 111.75  
**Effective Acres** 45  
**Output (MW)** 6.4

**Remarks:** Proposed to be built on Phase III Subdivision Land. Phases I and II still proposed.

**Date Built** Proposed  
**SUP Approved** 2012  
**Inspection Date** 3/26/2012

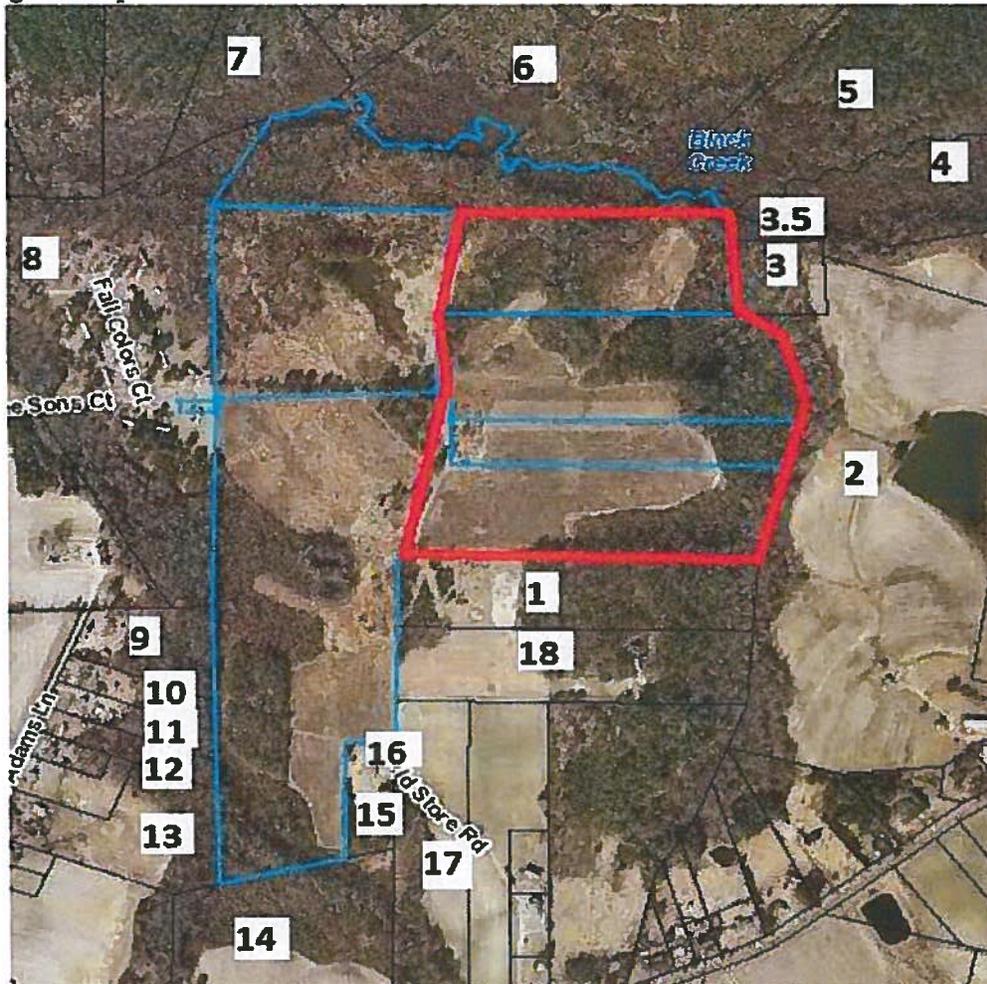
**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining Acres	% Adjoining Parcels
1	18765	Smith	11.1	Agricultural	2.37%	5.26%
2	22412	Fish	55.6	Res/Ag	11.85%	5.26%
3	49877	Fish	2.75	Agricultural	0.59%	5.26%
3.5	22361	Fish	0.72	Agricultural	0.15%	5.26%
4	82343	Monday	69.84	Res/Ag	14.88%	5.26%
5	37106	Jones	135	Res/Ag	28.76%	5.26%
6	42320	Lipscomb	76.24	Agricultural	16.24%	5.26%
7	243541	Avera	8.09	Residential	1.72%	5.26%
8	164035	Rowland	49.71	Res/Ag	10.59%	5.26%
9	88496	Prince	4	Mobile home	0.85%	5.26%
10	113555	Adams	2	Mobile home	0.43%	5.26%
11	143495	Searcy	2	Mobile home	0.43%	5.26%
12	164374	Willow	2	Mobile home	0.43%	5.26%
13	479	Wood	8.99	Residential	1.92%	5.26%
14	51923	Wall	17.12	Agricultural	3.65%	5.26%
15	188755	Denton	1.18	Agricultural	0.25%	5.26%
16	107287	Denton	1.09	Residential	0.23%	5.26%
17	64991	Talley	10.95	Agricultural	2.33%	5.26%
18	18753	Molinard	10.95	Residential	2.33%	5.26%
Total			469.33			

**Use Breakdown**

	Acreage	Parcels
Agricultural	25.58%	36.84%
Res/Ag	66.08%	21.05%
Residential	6.20%	21.05%
Mobile Home	2.13%	21.05%
Total	100.00%	100.00%

Surrounding Use Map



Matched Pairs

As of Date:

1/20/2013

None Identified

**Solar Farm Comparable**

**Name** Kings Mountain  
**Address** 1633 Battleground Ave  
**City** Shelby  
**County** Cleveland

**Tract Acres** 690.26  
**Effective Acres** 30  
**Output (MW)** 5



**Remarks:** Parent tract is also shown as Surrounding Use 1 below.

**Date Built** 2011  
**SUP Approved** 2011  
**Inspection Date** 7/31/2012

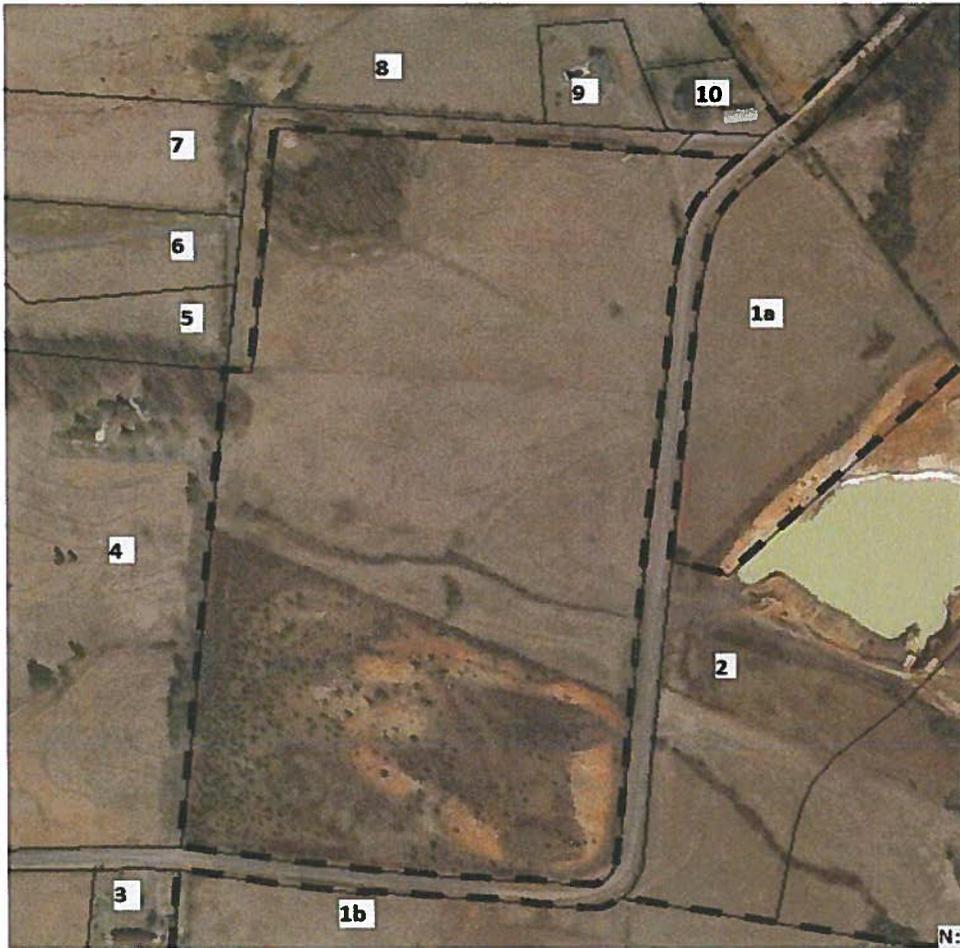
**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining Acres	% Adjoining Parcels
1	11496	Neisler	690.26	Industrial	79.91%	10.00%
2	60020	Neisler	16.65	Industrial	1.93%	10.00%
3	10647	Cogdell	1.83	Residential	0.21%	10.00%
4	71264	Church	31.32	Res/Ag	3.63%	10.00%
5	10695	Bell	17.26	Residential	2.00%	10.00%
6	56445	Bell	17.82	Agricultural	2.06%	10.00%
7	10694	Dixon	41.74	Agricultural	4.83%	10.00%
8	10693	Dixon	44.23	Agricultural	5.12%	10.00%
9	57784	Dixon	1.55	Residential	0.18%	10.00%
10	10692	Bell	1.17	Residential	0.14%	10.00%
<b>Total</b>			<b>863.83</b>			

**Use Breakdown**

	Acreage	Parcels
Res/Ag	3.63%	10.00%
Agricultural	12.01%	30.00%
Residential	2.53%	40.00%
Industrial	81.83%	20.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

Surrounding Use Map



**Matched Pairs**

As of Date:

1/23/2013

None identified

**Solar Farm Comparable**

**Name** Proposed White Cross  
**Address** 2159 White Cross Rd  
**City** Chapel Hill  
**County** Orange

**Tract Acres** 121.21  
**Effective Acres** 45  
**Output (MW)** 5

**Remarks:** Proposed to be built on land adjoining a mobile home park with the same ownership of the solar farm. Owner also adjoining agricultural land.

**Date Built** Proposed  
**SUP Approved** 2012  
**Inspection Date** 3/26/2012



**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining Acres	% Adjoining Parcels
1	9748456955	Cheek	19.88	Res/Ag	3.59%	6.67%
2	9748652607	Tripp	8.96	Residential	1.62%	6.67%
3	9748656467	Rich	31.76	Res/Ag	5.73%	6.67%
4	9748557159	Cecil	5.52	Residential	1.00%	6.67%
5	9748642712	Cecil	34.69	Res/Ag	6.26%	6.67%
6	9748734645	Barber	143.7	Agriculture	25.92%	6.67%
7	9748535992	Hackney	28.31	Agriculture	5.11%	6.67%
8	9748620795	Hackney	110.62	Agriculture	19.95%	6.67%
9	9748446160	Hackney	3.95	Residential	0.71%	6.67%
10	9748432369	Duke Energy	1.55	Substation	0.28%	6.67%
11	9748431180	Hackney	2.01	Residential	0.36%	6.67%
12	9748320786	Byron	35.8	Res/Ag	6.46%	6.67%
13	9748233155	Goodman	4.95	Residential	0.89%	6.67%
14	9748242720	Bradshaw	95.47	Res/Ag	17.22%	6.67%
15	9748267381	Cecil	27.24	Res/Ag	4.91%	6.67%
<b>Total</b>			554.41		100%	100%

**Use Breakdown**

	Acres	Parcels
Agricultural	50.98%	20.00%
Res/Ag	44.16%	40.00%
Residential	4.58%	33.33%
Substation	0.28%	6.67%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

Surrounding Use Map



Matched Pairs

As of Date:

1/20/2013

None Identified

**Solar Farm Comparable**

**Name** Proposed Vale Farm  
**Address** NC Highway 27  
**City** Vale  
**County** Lincoln

**Tract Acres** 48.999  
**Effective Acres** 48.999  
**Output (MW)** 5

**Remarks:** Owner of solar farm also owns two of the adjoining residential/agricultural tracts.



**Date Built** Proposed  
**SUP Approved** 2012  
**Inspection Date** 6/4/2012

**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining Acres	% Adjoining Parcels
1	12250	Leonhardt	8.967	Res/Agri	3.29%	10.00%
2	78024	Leonhardt	3.28	Residential	1.21%	10.00%
3	89384	Sain	20.002	Agriculture	7.35%	10.00%
4	10382	Mitchem	54.539	Res/Agri	20.04%	10.00%
5	72663	Kurnik	33.43	Res/Agri	12.28%	10.00%
6	11088	Neal	46.397	Res/Agri	17.05%	10.00%
7	10416	Mitchem	38.34	Res/Agri	14.09%	10.00%
8	11018	Baker	38.28	Res/Agri	14.06%	10.00%
9	12029	Yarbro	13.67	Res/Agri	5.02%	10.00%
10	12037	Yarbro	15.281	Agriculture	5.61%	10.00%
Total			272.186		100%	100%

**Use Breakdown**

	Acreage	Parcels
Agricultural	12.96%	20.00%
Res/Ag	85.83%	70.00%
Residential	1.21%	10.00%
Total	100.00%	100.00%

Surrounding Use Map



Matched Pairs

As of Date: 1/20/2013

None Identified

**Solar Farm Comparable**

**Name** Proposed Two Lines Farm  
**Address** Zion Church Road  
**City** Hickory  
**County** Catawba

**Tract Acres** 100.56  
**Effective Acres** 100.56  
**Output (MW)** 6.4

**Remarks:** Owner of solar farm also owns 87% of adjoining acreage and 46% of adjoining parcels. Two large powerline easements cross this property.



**Date Built** To be completed in 2013  
**SUP Approved** 2012  
**Inspection Date** 6/4/2012

**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining Acres	% Adjoining Parcels
1	700850	Duke Energy	10.46	Substation	2.81%	7.69%
2	1440	Childers	28.7	Res/Ag	7.71%	7.69%
3	1439	Dice	1.4	Residential	0.38%	7.69%
4	1437	Bolick	2.26	Residential	0.61%	7.69%
5	1429	Punch	24.23	Agricultural	6.51%	7.69%
6	1424	Punch	39.52	Agricultural	10.61%	7.69%
7	1426	Ramseur	0.44	Residential	0.12%	7.69%
8	1427	Mungro	0.69	Residential	0.19%	7.69%
9	1905	Alice M Raefor	5.8	Residential	1.56%	7.69%
10	1403	Punch	49.6	Agricultural	13.32%	7.69%
11	1402	Punch	59.35	Agricultural	15.93%	7.69%
12	1401	Punch	61.18	Agricultural	16.43%	7.69%
13	1428	Punch	88.83	Agricultural	23.85%	7.69%
Total			372.46		100%	100%

**Use Breakdown**

	Acreage	Parcels
Agricultural	86.64%	46.15%
Res/Ag	7.71%	7.69%
Residential	2.84%	38.46%
Substation	2.81%	7.69%
Total	100.00%	100.00%



**Solar Farm Comparable**

**Name** Strata Warehouse Project  
**Address** 2835 Farrington Point Rd  
**City** Chapel Hill  
**County** Chatham

**Tract Acres** 14.154  
**Effective Acres** 14.154  
**Output (MW)** 1.57

**Remarks:** Warehouse for Strata Solar with solar panels installed in yard.

**Date Built** 2012  
**SUP Approved** 2011  
**Inspection Date** 3/26/2012



**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining Acres	% Adjoining Parcels
1	19522	Parker	50.3	Res/Ag	0.13%	14.29%
2	77726	USA	38565	Park	99.85%	14.29%
3	19399	Baldwin	0.36	Residential	0.00%	14.29%
4	19515	Baldwin	2.24	Residential	0.01%	14.29%
5	19451	Pettiford	2.45	Residential	0.01%	14.29%
6	20126	Thompson	1	Residential	0.00%	14.29%
7	20125	Williams	3.274	Residential	0.01%	14.29%
Total			38624.62		100%	100%

**Use Breakdown**

	Acreage	Parcels
Res/Ag	0.13%	14.29%
Residential	0.02%	71.43%
Park	99.85%	14.29%
Total	100.00%	100.00%

Surrounding Use Map



Matched Pairs

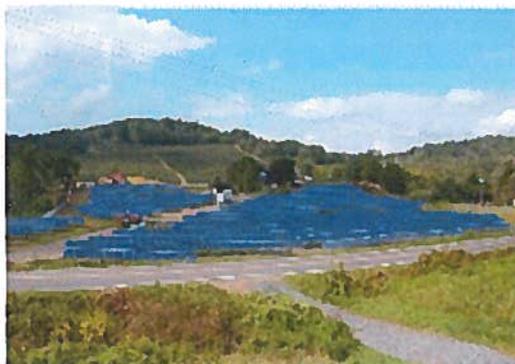
As of Date: 1/20/2013

None Identified



**Solar Farm Comparable**

**Name** Avery Solar, LLC  
**Address** Trim Branch Road  
**Town** Newland  
**County** Avery



**Tract Acres** 6.08  
**Effective Acres** 6.08  
**Output (MW)** 0.9

**Remarks:** located at the corner of Trim Branch Road and Mount Pleasant Road property was a part of a Christmas tree farm that was difficult to grow on

**Date Built** 2011  
**Deed Date** 5/12/2011  
**SUP Approved**  
**Inspection Date**

**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining	% Adjoining
					Acres	Parcels
1	182400760367	Gragg	3.00	Residential	5.71%	12.50%
2	182400764904	Henderson	24.70	Res/Ag	47.05%	12.50%
3	182400769723	Buchanan- Vance	3.38	Agricultural	6.44%	12.50%
4	182400768232	Vance- Life estate	0.90	Residential	1.71%	12.50%
5	182400768041	Vance	1.50	Residential	2.86%	12.50%
6	182400751583	Chadwick	7.00	Agricultural	13.33%	12.50%
7	182400658796	Webb	1.27	Residential	2.42%	12.50%
8	182400665111	Twin Branch	10.75	Agricultural	20.48%	12.50%
Total			52.50			

**Use Breakdown**

Agricultural	40.25%	37.50%
Res/Ag	47.05%	12.50%
Residential	12.70%	50.00%
Mobile Home	0.00%	0.00%
Total	100.00%	100.00%

Surrounding Use Map



Matched Pairs

None Identified

As of Date:

1/20/2013

**Solar Farm Comparable**

**Name** Mayberry Solar LLC  
**Address** Wastewater Treatment Road  
**City** Mount Airy  
**County** Surry



**Tract Acres** 48.24  
**Effective Acres** 6  
**Output (MW)** 1

**Remarks:** 2 separate parcels  
 The smaller parcel is inside of the bigger parcel and is covered completely covered by solar panels  
 The larger parcel contains solar panels, a waste water treatment plant, and vacant land

**Date Built** 2011

**SUP Approved**

**Inspection Date**

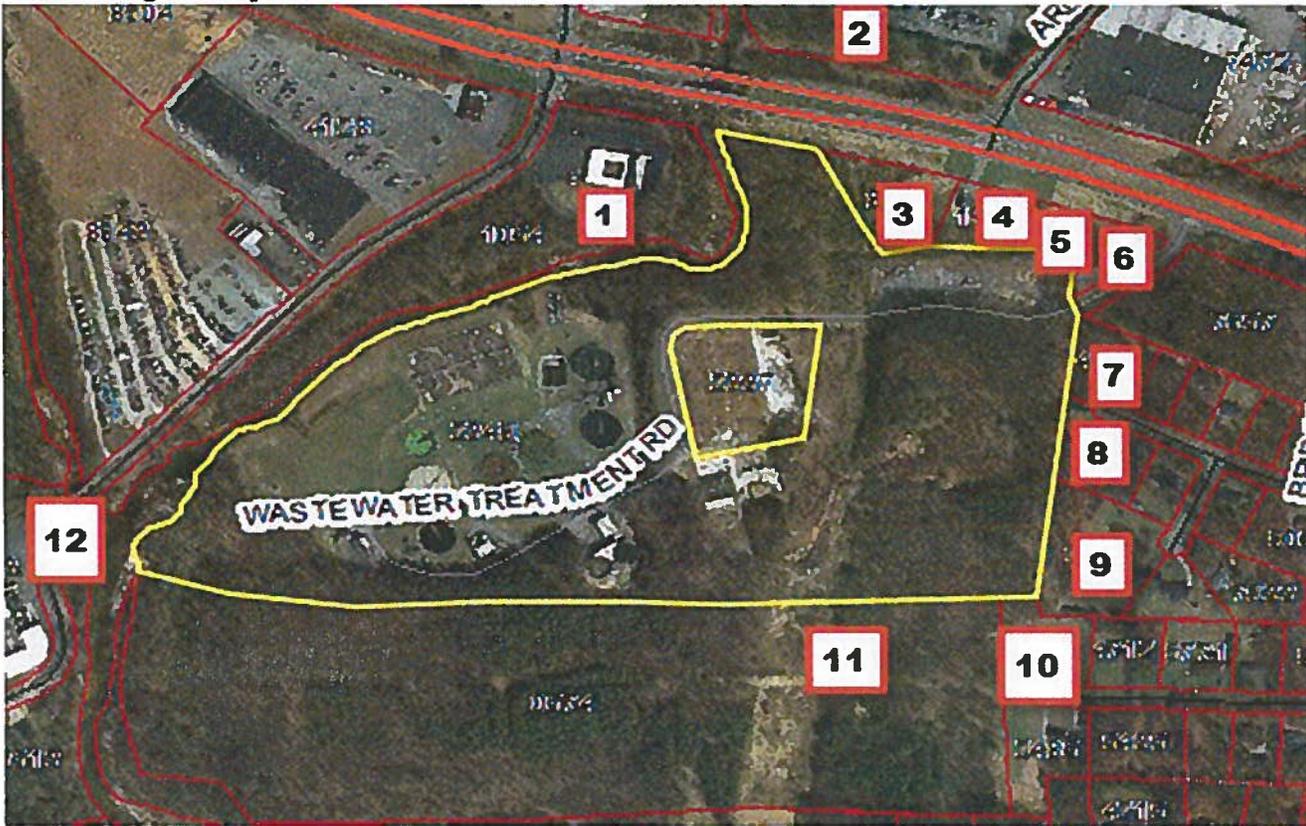
**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining	% Adjoining
					Acres	Parcels
1	5929-12-97-1054	Mount Airy	9.13	Religious	14.94%	8.33%
2	5929-08-97-8539	Duke Energy	7.70	Substation	12.60%	8.33%
3	5929-12-97-8095	York	1.31	Vacant Commercial	2.14%	8.33%
4	5939-09-06-1917	York	1.05	Commercial	1.72%	8.33%
5	5939-09-06-2933	York	0.17	Vacant Commercial	0.28%	8.33%
6	5939-09-06-4900	TJ Enterprises	1.00	Mini Storage	1.64%	8.33%
7	5939-09-06-4504	Marion	1.00	Vacant Residential	1.64%	8.33%
8	5939-09-06-3341	Bennett	1.00	Residential	1.64%	8.33%
9	5939-09-05-3973	Alvaro	2.27	Residential	3.72%	8.33%
10	5939-09-05-2783	Cave	1.31	Residential	2.14%	8.33%
11	5929-12-95-0574	City	31.46	Agricultural	51.49%	8.33%
12	5929-12-75-6513	Nester	3.70	Vacant Industrial	6.06%	8.33%
Total			61.10			

**Use Breakdown**

Agricultural	51.49%	8.33%
Religious	14.94%	8.33%
Residential	9.13%	33.33%
Industrial	20.29%	25.00%
Commercial	4.14%	25.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

Surrounding Use Map



Matched Pairs

None Identified

As of Date:

1/20/2013

**Solar Farm Comparable**

**Name** Progress Solar I LLC  
**Address** 5814 NC 39 Hwy S  
**Town** Bunn  
**County** Franklin



**Tract Acres** 46.59  
**Effective Acres** 46.59  
**Output (MW)** 4.5

**Remarks:** Owned by O2 Energies DBA Progress Solar I LLC

**Date Built** 2012  
**Deed Date** 6/5/2012  
**SUP Approved**  
**Inspection Date** 1/20/2013

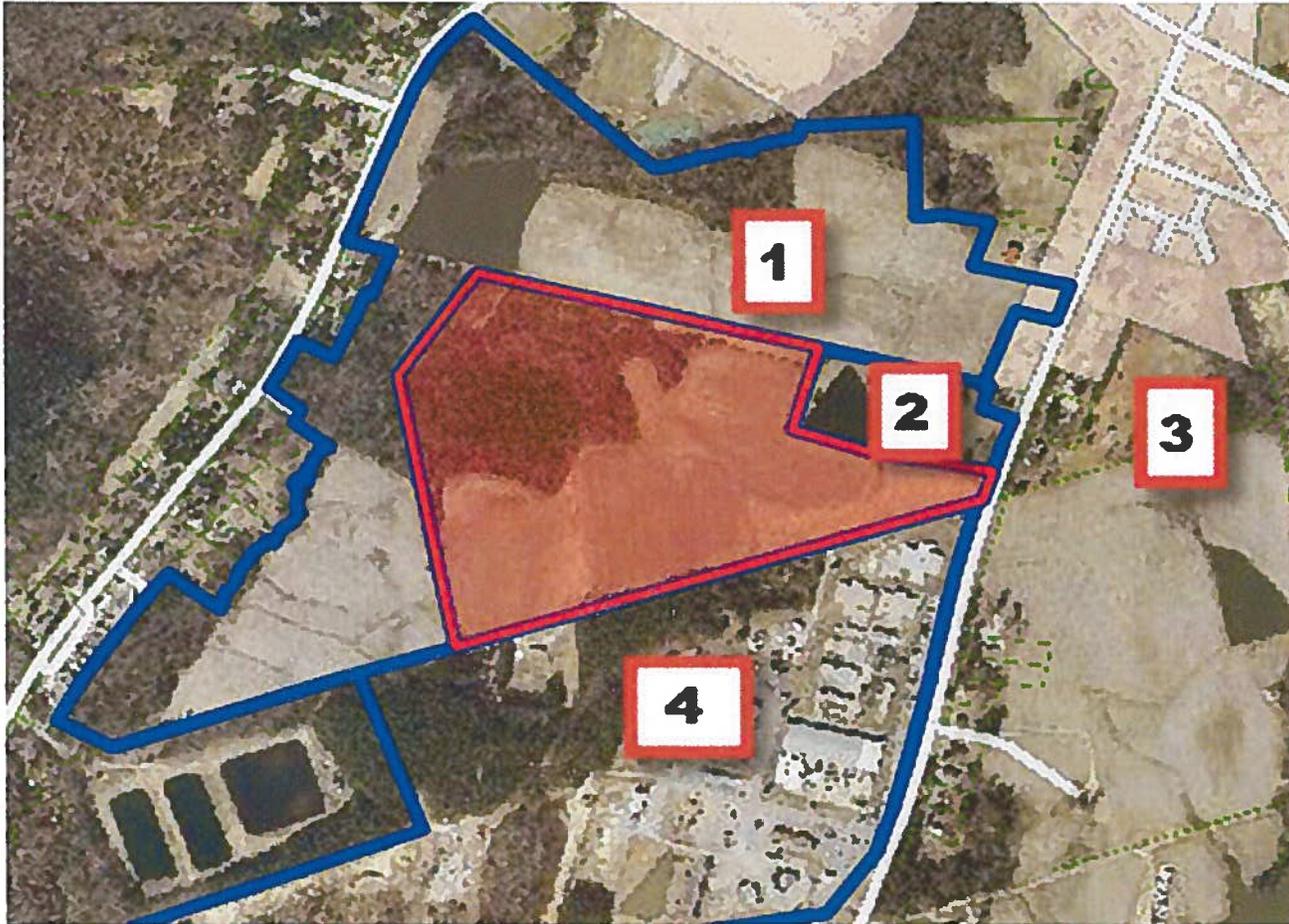
**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining	
					Acres	Parcels
1	026459	Jeffreys	77.01	Agricultural	41.90%	25.00%
2	000985	Horton	6.41	Agricultural	3.49%	25.00%
3	000982	Horton	8.12	Res/Ag	4.42%	25.00%
4	006888	NC	92.25	Prison	50.19%	25.00%
			<b>Total</b>			
			183.79			

**Use Breakdown**

Agricultural	45.39%	50.00%
Res/Ag	4.42%	25.00%
Prison	50.19%	25.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

**Surrounding Use Map**



**Matched Pairs**

None Identified

As of Date:

1/20/2013

**Solar Farm Comparable**

**Name** Progress Solar II LLC  
**Address** 5719 Old Stage Road  
**Town** Fairmont  
**County** Robeson

**Tract Acres** unknown, GIS unavailable  
**Effective Acres** 25  
**Output (MW)** 4.5



**Remarks:** located close by Fairmont High School

**Date Built** 2012  
**Deed Date**  
**SUP Approved**  
**Inspection Date**

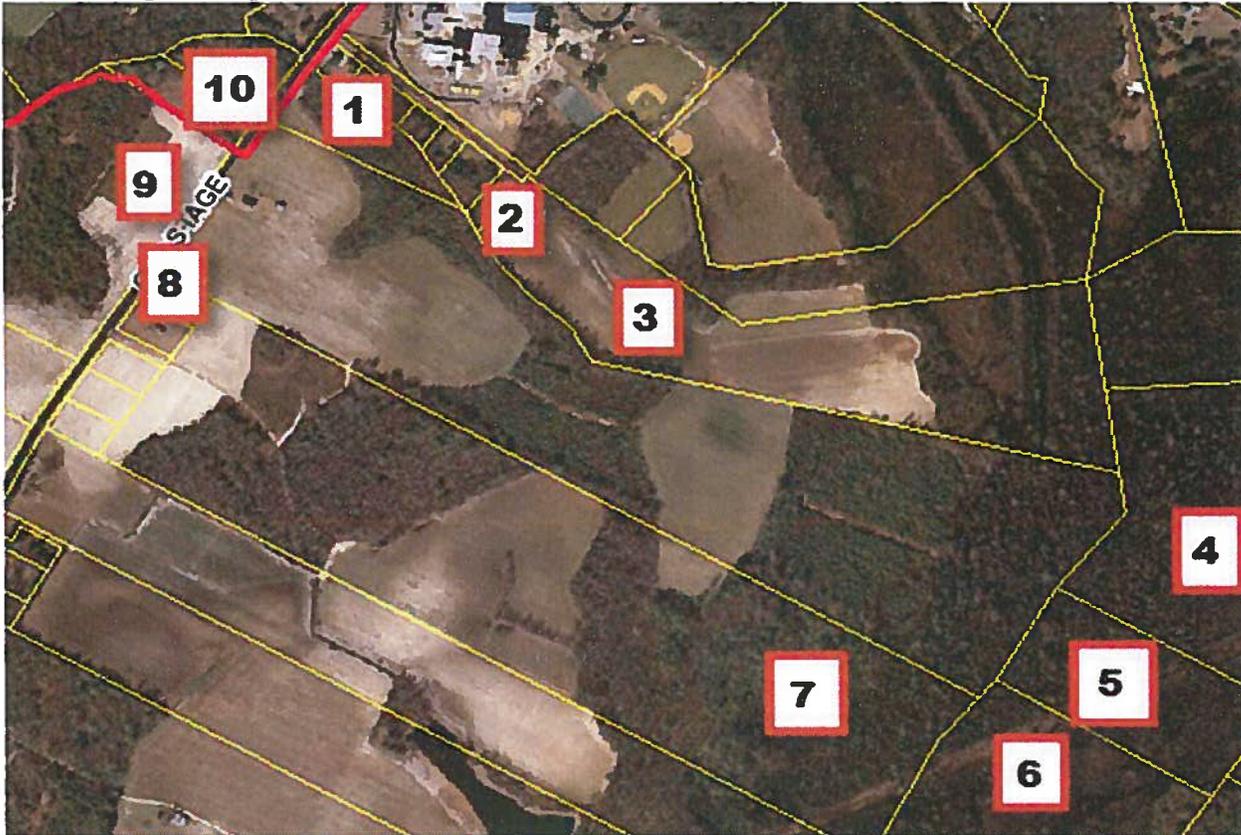
**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining	
					Acres	Parcels
1	927604882713	Lewis	4.14	Ag	1.69%	10.00%
2	927614359700	Brown	0.50	Ag	0.20%	10.00%
3	927623199400	Hedgpeth	33.00	Ag	13.51%	10.00%
4	927643605400	White	41.00	Ag	16.78%	10.00%
5	927642210800	Lennon	14.50	Ag	5.94%	10.00%
6	927631657400	Cox	29.00	Ag	11.87%	10.00%
7	927612671900	Jenkins	43.40	Ag	17.76%	10.00%
8	927604004900	Oxendine	1.00	Res	0.41%	10.00%
9	926684747600	Evans	75.17	Ag	30.77%	10.00%
10	927605008800	McDaniel	2.60	Res	1.06%	10.00%
Total			244.31			

**Use Breakdown**

Agricultural	98.53%	80.00%
Residential	1.47%	20.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

Surrounding Use Map



**Matched Pairs**

None Identified

As of Date: 1/20/2013

**Solar Farm Comparable**

**Name** Sandy Cross Solar LLC  
**Address** 2999 Lewis Road  
**Town** Elm City  
**County** Nash



**Tract Acres** 21.66  
**Effective Acres** 11  
**Output (MW)** 1.5

**Remarks:** Located on a farm that was split due to I-95 construction  
 On the other side of I-95 is Sandy Cross Vineyards  
 Cemetery lot is inside the solar parcel

**Date Built** 2012  
**Deed Date**  
**SUP Approved**  
**Inspection Date**

**Surrounding Uses**

#	TAX ID	Owner	Acres	Present Use	% Adjoining	
					Acres	Parcels
1	024362	Shelton	3.97	Res/Ag	1.68%	16.67%
2	026032	Winstead	71.90	Res/Ag	30.46%	16.67%
3	023811	Poland	1.00	Residential	0.42%	16.67%
3	020993	Poland	76.87	Res/Ag	32.56%	16.67%
5	020803	Carr	39.51	Res/Ag	16.74%	16.67%
6	022939	Webb	42.83	Res/Ag	18.14%	16.67%
Total			236.08			

**Use Breakdown**

Res/Ag	99.58%	83.33%
Residential	0.42%	16.67%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

Surrounding Use Map



Matched Pairs

None Identified

As of Date:

1/23/2013

STATE OF NORTH CAROLINA  
VANCE COUNTY

BEFORE THE  
BOARD OF ADJUSTMENT

CONDITIONAL USE PERMIT )  
APPLICATION FOR A LARGE )  
SCALE SOLAR ENERGY )  
SYSTEM )

AFFIDAVIT OF  
GERRY DUDZIK

NOW COMES the undersigned Affiant, who, being first duly sworn, deposes and says:

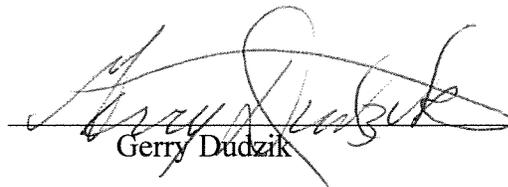
1. I am over eighteen (18) years of age and competent to testify to the matters set forth in this Affidavit.
2. I work at Carolina Solar Energy II, LLC (CSE), a renewable energy company that specializes in the development and construction of utility scale commercial photovoltaic (PV) solar distributed energy projects in the US. My responsibilities at CSE are new business development that include solar project site selection, land owner negotiation, project permitting, , project proposal development, marketing communications, and technology vendor relations. I have been involved in the Strata Solar Vance County project (described below) from its inception.
3. Strata Solar proposes to construct a solar farm on approximately 45.30± acres of a 76.09± acres tract. The property – referred to as the Dement Farm - is located just off NC Hwy 39, about half way between Henderson and the Franklin County line. I am familiar with the proposed solar farm use, including the conditional use permit request. I have personally toured the property and specifically inspected the location of the proposed project.
4. The solar farm will contain rows of Photovoltaic cell set in the ground by hand to minimize grading. The site will be constructed in one phase. The solar cell configuration contains no moving parts. All electrical solar components will have a UL listing.
5. Access to the site will be from a new driveway onto NC Hwy 39, across from Lindy Lane. The site is appropriately located to be served by fire, police and emergency services, if needed.
6. The proposed solar farm will generate almost no traffic. The solar farm will not be staffed daily. Employees will visit the site weekly or less frequently to check and maintain the equipment.
7. The creation of solar energy is virtually silent. The only sound is the quiet hum of equipment converting and conveying electricity to the power grid during daylight hours. Solar panels are designed to absorb rather than reflect light.

8. The area beneath the solar panels will be planted with grass or alfalfa to stabilize the soil. The active area of the solar farm will be enclosed by a six foot (6') high fence, including gates at all access points, to prevent unauthorized access to the site.

9. The proposed solar farm is consistent with the residential and agricultural land uses that exist in the area today. No building is proposed as a part of the proposed solar farm so no sewage system will be required. The site is of adequate size for the proposed solar farm.

Further the Affiant Sayeth Not.

This the 12 day of March, 2013.

  
Gerry Dudzik

**ACKNOWLEDGMENT**

STATE OF NORTH CAROLINA

COUNTY OF DURHAM

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he signed the foregoing document: Gerry Dudzik.

Date: March 12<sup>th</sup>, 2013



  
[Notary's signature as name appears on seal]

SAM SAWAYA, Notary Public  
[Notary's printed name as name appears on seal]

My commission expires: July 29<sup>th</sup>, 2014