



Kirkland Appraisals, LLC

Richard C. Kirkland, Jr., MAI
9408 Northfield Court
Raleigh, North Carolina 27603
Phone (919) 414-8142
rkirkland2@gmail.com
www.kirklandappraisals.com

May 12, 2015

Mr. Nathan Rogers
Ecoplexus, Inc.
650 Townsend Street, Suite 310
San Francisco, CA 94103

Dear Mr. Rogers:

At your request, I have considered the likely impact of a solar farm proposed to be constructed near Plymouth, North Carolina. Specifically, I have been asked to give my professional opinion on whether the proposed solar farm will "substantially injure the value of adjoining or abutting property" and whether "the location and character of the use, if developed according to the plan as submitted and approved, will be in harmony with the area in which it is to be located."

To form an opinion on these issues, I have researched and visited existing and proposed solar farms in North Carolina, researched articles through the Appraisal Institute and other studies, and 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 Ecoplexus, Inc., represented to me by Mr. Nathan Rogers. My findings support the Special Use Permit application. The effective date of this consultation is April 12, 2015 the date of my inspection of the property and surrounding areas.

Proposed Use Description

The proposed solar farm will consist of a fixed solar array located on approximately 65.453 acres on Morratock Road, Plymouth, North Carolina. This property is currently owned by the Ruth Satterhwaite Heirs.

Adjoining land is a mix of agricultural and residential uses. The project proposes a landscaped buffer to help screen the proposed solar farm from adjoining uses. The matched pair study shows no impact on adjoining residential and agricultural values.

The solar farm will consist of stationary solar panels that will generate no noise beyond the fence, no odor, and less traffic than a residential subdivision. The panels are less than 10 feet in height and will be located behind a chain link fence.

I have considered adjoining uses as shown in the map below.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	11.05%	80.00%
Agri/Res	68.08%	4.00%
Agricultural	20.87%	16.00%
Total	100.00%	100.00%

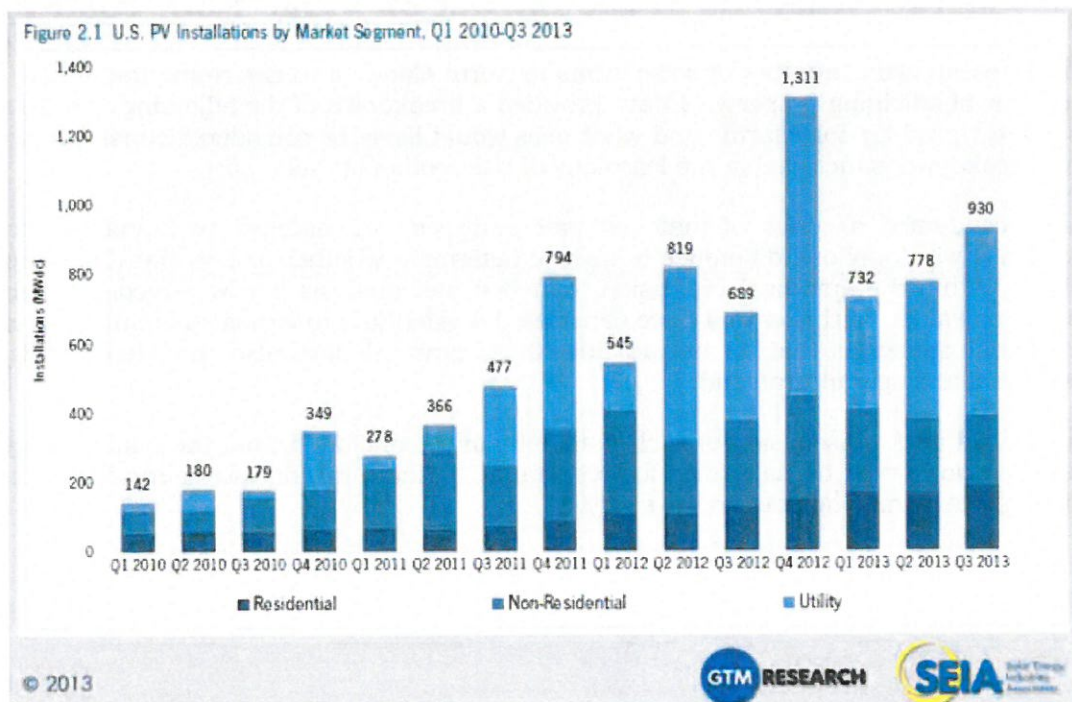
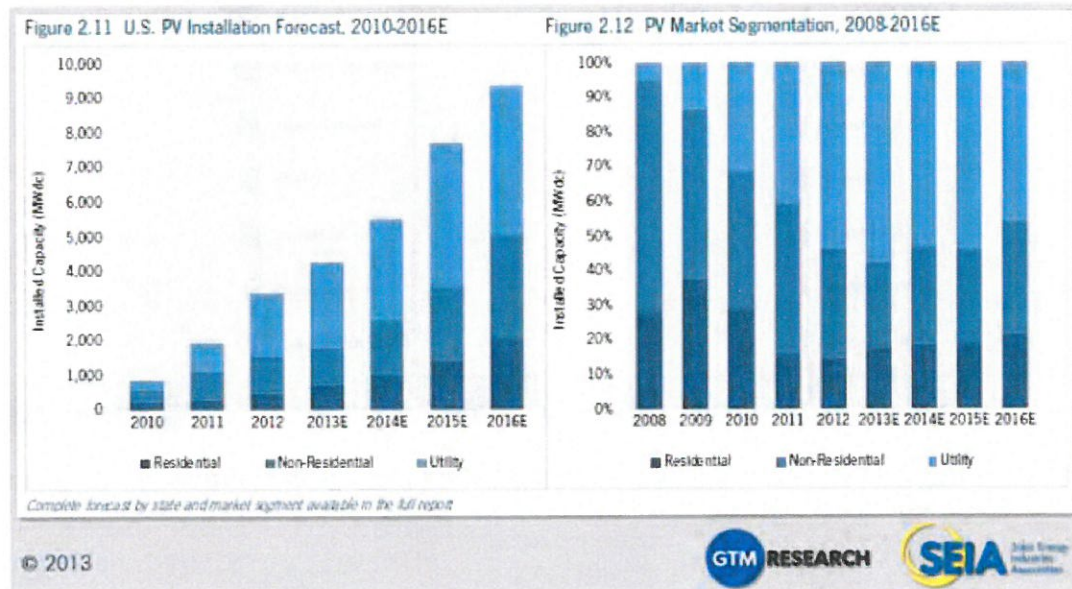


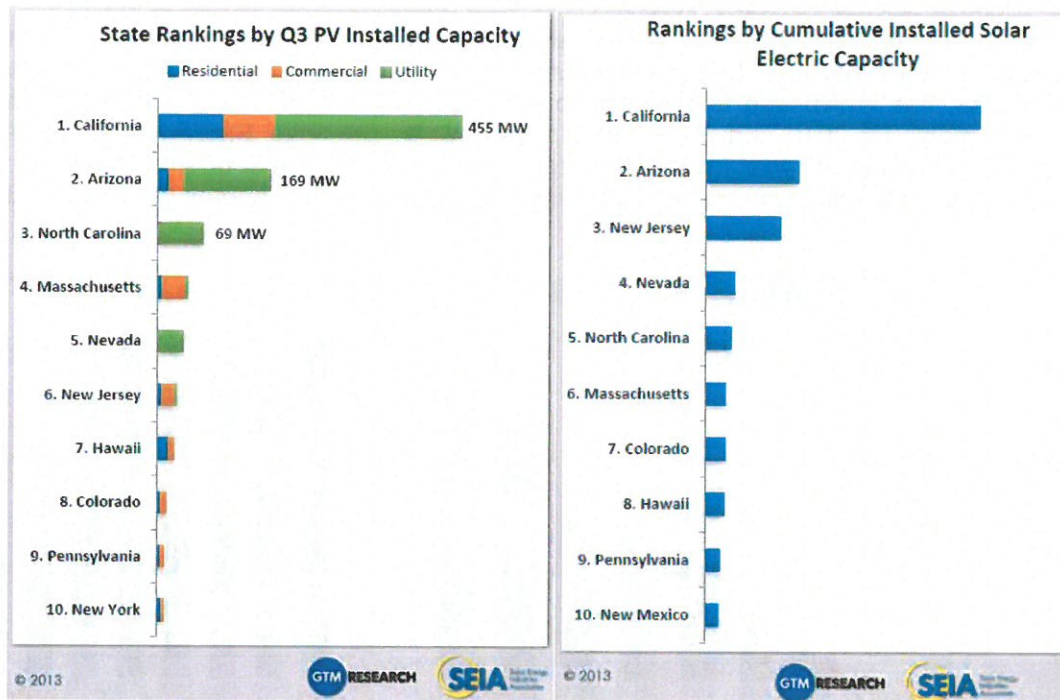
Surrounding Uses

#	MAP ID	Owner	GIS Data		% Adjoining			% Adjoining Distance in Feet:	
			Acres	Present Use	Acres	Parcels	Home to Panels		
1	6766.00-87-0397	Naomi Weede Peele	2.755	Residential	1.03%	4.00%	N/A		
2	6766.00-87-3530	Mary Weede Davenport Heirs	0.950	Residential	0.36%	4.00%	N/A		
3	6776.01-07-7888	Myrtle Hopkins Westmoreland	8.896	Agricultural	3.33%	4.00%	N/A		
4	6776.01-07-5481	Hazel Mobley Arnold	0.315	Residential	0.12%	4.00%	390		
5	6776.01-07-5289	Kyle & Teresa Baker	0.527	Residential	0.20%	4.00%	470		
6	6776.01-07-5199	Joe Gray Beasley Sr	0.761	Residential	0.28%	4.00%	490		
7	6776.01-06-5806	Joe Gray Beasley	2.997	Residential	1.12%	4.00%	N/A		
8	6767.01-06-3864	Gail H Hodges	0.449	Residential	0.17%	4.00%	470		
9	6776.01-06-3588	Kevin & Melanie Sitterson	0.859	Residential	0.32%	4.00%	515		
10	6776.01-06-2568	Kevin & Melanie Sitterson	0.757	Residential	0.28%	4.00%	460		
11	6776.01-06-1458	Ronnie & Stacy Long	1.675	Residential	0.63%	4.00%	480		
12	6766.00-96-7478	Patricia Kay Stout	0.997	Residential	0.37%	4.00%	N/A		
13	6766.00-96-6384	Betty Davenport Pee Swindell	0.967	Residential	0.36%	4.00%	150		
14	6776.01-06-2243	Dorothy Humphreys Spencer	4.552	Residential	1.70%	4.00%	N/A		
15	6766.00-95-8920	James & Leigh Monty	1.097	Agricultural	0.41%	4.00%	540		
16	6766.00-95-7719	Gloria Hale	0.641	Residential	0.24%	4.00%	590		
17	6766.00-95-6731	Kenneth Stotesbury	0.586	Residential	0.22%	4.00%	690		
18	6766.00-95-7163	Raymond David Equils	23.628	Agricultural	8.84%	4.00%	N/A		
19	6766.00-95-5582	Clarence T Bowen	0.325	Residential	0.12%	4.00%	730		
20	6766.00-95-4567	Louis & Janis Mobley	0.335	Residential	0.13%	4.00%	820		
21	6766.00-95-4437	Charlie & Earline Daw	0.569	Residential	0.21%	4.00%	790		
22	6766.00-95-3357	Gary Kelly	0.761	Residential	0.28%	4.00%	850		
23	6766.00-94-4345	Willie & Bidget Davenport	22.171	Agricultural	8.29%	4.00%	N/A		
24	6766.00-85-8557	John & Arnita Cooper	7.775	Residential	2.91%	4.00%	N/A		
25	6766.00-76-3537	Sexton Farms LLC	182.033	Agri/Res	68.08%	4.00%	2,890		
Total			267.378		100.00%	100.00%	708		

Overview of Solar Farms Development in North Carolina

Across the nation the number of solar installations has dramatically increased over the last few years as changes in technology and the economy made these solar farms more feasible. The charts below show how this market has grown and is expected to continue to grow from 2010 to 2016. The U.S. Solar Market Insight Reports for 2010 and 2011 which is put out by the Solar Energy Industries Association note that 2010 was a “breakout” year for solar energy. The continued boom of solar power is shown in the steady growth. North Carolina was ranked as having the 3rd most active photovoltaic installed capacity in 2013.





As shown in the charts above, North Carolina ranked third in installed solar energy in the third quarter of 2013. North Carolina ranked fifth in installed solar energy in the United States.

I. Market Analysis of the Impact on Value from Solar Farms

I have researched a number of solar farms in North Carolina to determine the impact of these facilities on the value of adjoining property. I have provided a breakdown of the adjoining uses to show what adjoining uses are typical for solar farms and what uses would likely be considered consistent with a solar farm use. This breakdown is included in the Harmony of Use section of this report.

I also conducted a series of matched pair analyses. A matched pair analysis considers two similar properties with only one difference of note to determine whether or not that difference has any impact on value. Within the appraisal profession, matched pair analysis is a well-recognized method of measuring impact on value. In this case, I have considered residential properties adjoining a solar farm versus similar residential properties that do not adjoin a solar farm. I have also considered matched pairs of vacant residential and agricultural land.

As outlined in the discussion of each matched pair, I concluded from the data and my analysis that there has been no impact on sale price for residential, agricultural, or vacant residential land that adjoins the existing solar farms included in my study.

1. Matched Pair A – AM Best Solar Farm, Goldsboro, NC

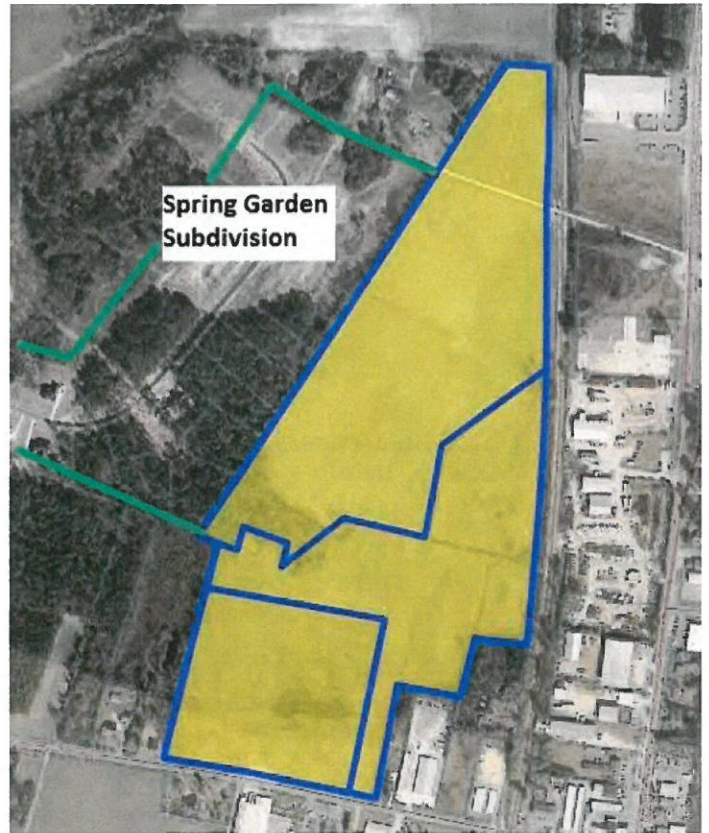
This solar farm adjoins Spring Garden Subdivision which had new homes and lots available for new construction during the approval and construction of the solar farm. The recent home sales have ranged from \$200,000 to \$250,000. This subdivision sold out the last homes in late 2014. The solar farm is clearly visible particularly along the north end of this street where there is only a thin line of trees separating the solar farm from the single-family homes.

Homes backing up to the solar farm are selling at the same price for the same floor plan as the homes that do not back up to the solar farm in this subdivision. According to the builder, the solar farm has been a complete non-factor. Not only do the sales show no difference in the price paid for the various homes adjoining the solar farm versus not adjoining the solar farm, but there are actually more recent sales along the solar farm than not. There is no impact on the sellout rate, or time to sell for the homes adjoining the solar farm.

I spoke with a number of owners who adjoin the solar farm and none of them expressed any concern over the solar farm impacting their property value.

The data presented on the following page shows multiple homes that have sold in 2013 and 2014 adjoining the solar farm at prices similar to those not along the solar farm. These series of sales indicate that the solar farm has no impact on the adjoining residential use.

The homes that were marketed at Spring Garden are shown below.



Americana
SqFt: 3,194
Bed / Bath:
3 / 3.5

Price: \$237,900

[View Now »](#)



Washington
SqFt: 3,292
Bed / Bath:
4 / 3.5

Price: \$244,900

[View Now »](#)



Presidential
SqFt: 3,400
Bed / Bath:
5 / 3.5

Price: \$247,900

[View Now »](#)



Kennedy
SqFt: 3,494
Bed / Bath:
5 / 3

Price: \$249,900

[View Now »](#)



Virginia
SqFt: 3,449
Bed / Bath:
5 / 3

Price: \$259,900

[View Now »](#)

AM Best Solar Farm, Goldsboro, NC**Matched Pairs**

As of Date: 9/3/2014

Adjoining Sales After Solar Farm Completed

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600195570	Helm	0.76	Sep-13	\$250,000	2013	3,292	\$75.94	2 Story
3600195361	Leak	1.49	Sep-13	\$260,000	2013	3,652	\$71.19	2 Story
3600199891	McBrayer	2.24	Jul-14	\$250,000	2014	3,292	\$75.94	2 Story
3600198632	Foresman	1.13	Aug-14	\$253,000	2014	3,400	\$74.41	2 Story
3600196656	Hinson	0.75	Dec-13	\$255,000	2013	3,453	\$73.85	2 Story
	Average	1.27		\$253,600	2013.4	3,418	\$74.27	
	Median	1.13		\$253,000	2013	3,400	\$74.41	

Adjoining Sales After Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
0	Feddersen	1.56	Feb-13	\$247,000	2012	3,427	\$72.07	Ranch
0	Gentry	1.42	Apr-13	\$245,000	2013	3,400	\$72.06	2 Story
	Average	1.49		\$246,000	2012.5	3,414	\$72.07	
	Median	1.49		\$246,000	2012.5	3,414	\$72.07	

Adjoining Sales Before Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600183905	Carter	1.57	Dec-12	\$240,000	2012	3,347	\$71.71	1.5 Story
3600193097	Kelly	1.61	Sep-12	\$198,000	2012	2,532	\$78.20	2 Story
3600194189	Hadwan	1.55	Nov-12	\$240,000	2012	3,433	\$69.91	1.5 Story
	Average	1.59		\$219,000	2012	2,940	\$74.95	
	Median	1.59		\$219,000	2012	2,940	\$74.95	

Nearby Sales After Solar Farm Completed

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600193710	Barnes	1.12	Oct-13	\$248,000	2013	3,400	\$72.94	2 Story
3601105180	Nackley	0.95	Dec-13	\$253,000	2013	3,400	\$74.41	2 Story
3600192528	Mattheis	1.12	Oct-13	\$238,000	2013	3,194	\$74.51	2 Story
3600198928	Beckman	0.93	Mar-14	\$250,000	2014	3,292	\$75.94	2 Story
3600196965	Hough	0.81	Jun-14	\$224,000	2014	2,434	\$92.03	2 Story
3600193914	Preskitt	0.67	Jun-14	\$242,000	2014	2,825	\$85.66	2 Story
3600194813	Bordner	0.91	Apr-14	\$258,000	2014	3,511	\$73.48	2 Story
3601104147	Shaffer	0.73	Apr-14	\$255,000	2014	3,453	\$73.85	2 Story
	Average	0.91		\$246,000	2013.625	3,189	\$77.85	
	Median	0.92		\$249,000	2014	3,346	\$74.46	

Nearby Sales Before Solar Farm Announced

TAX ID	Owner	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	Style
3600191437	Thomas	1.12	Sep-12	\$225,000	2012	3,276	\$68.68	2 Story
3600087968	Lilley	1.15	Jan-13	\$238,000	2012	3,421	\$69.57	1.5 Story
3600087654	Burke	1.26	Sep-12	\$240,000	2012	3,543	\$67.74	2 Story
3600088796	Hobbs	0.73	Sep-12	\$228,000	2012	3,254	\$70.07	2 Story
	Average	1.07		\$232,750	2012	3,374	\$69.01	
	Median	1.14		\$233,000	2012	3,349	\$69.13	

Matched Pair Summary

	Adjoins Solar Farm		Nearby Solar Farm	
	Average	Median	Average	Median
Sales Price	\$253,600	\$253,000	\$246,000	\$249,000
Year Built	2013	2013	2014	2014
Size	3,418	3,400	3,189	3,346
Price/SF	\$74.27	\$74.41	\$77.85	\$74.46

Percentage Differences

Median Price	-2%
Median Size	-2%
Median Price/SF	0%

The Median Price is the best indicator to follow in any analysis as it avoids outlying samples that would otherwise skew the results. The median sizes and median prices are all consistent throughout the sales both before and after the solar farm whether you look at sites adjoining or nearby to the solar farm. The average for the homes nearby the solar farm shows a smaller building size and a higher price per square foot. This reflects a common occurrence in real estate where the price per square foot goes up as the size goes down. This is similar to the discount you see in any market where there is a discount for buying larger volumes. So when you buy a 2 liter coke you pay less per ounce than if you buy a 16 oz. coke. So even comparing averages the indication is for no impact, but I rely on the median rates as the most reliable indication for any such analysis.

AM Best Solar Farm, Goldsboro, NC



View of home in Spring Garden with solar farm located through the trees and panels visible.



View from vacant lot at Spring Garden with solar farm panels visible through trees.

2. Matched Pair B – White Cross Solar Farm, Chapel Hill, NC

A new solar farm was built at 2159 White Cross Road in Chapel Hill, Orange County in 2013. After construction, the owner of the underlying land sold the balance of the tract not encumbered by the solar farm in July 2013 for \$265,000 for 47.20 acres, or \$5,606 per acre. This land adjoins the solar farm to the south and was clear cut of timber around 10 years ago. I compared this purchase to a nearby transfer of 59.09 acres of timber land just south along White Cross Road that sold in November 2010 for \$361,000, or \$6,109 per acre. After purchase, this land was divided into three mini farm tracts of 12 to 20 acres each. These rates are very similar and the difference in price per acre is attributed to the timber value and not any impact of the solar farm.

Type	TAX ID	Owner	Acres	Date	Price	\$/Acre	Notes	Conf By
Adjoins Solar	9748336770	Haggerty	47.20	Jul-13	\$265,000	\$5,614	Clear cut	Betty Cross, broker
Not Near Solar	9747184527	Purcell	59.09	Nov-10	\$361,000	\$6,109	Wooded	Dickie Andrews, broker

The difference in price is attributed to the trees on the older sale.

No impact noted for the adjacency to a solar farm according to the broker.

I looked at a number of other nearby land sales without proximity to a solar farm for this matched pair, but this land sale required the least allowance for differences in size, utility and location.

Matched Pair Summary

	Adjoins Solar Farm		Nearby Solar Farm	
	Average	Median	Average	Median
Sales Price	\$5,614	\$5,614	\$6,109	\$6,109
Adjustment for Timber	\$500	\$500		
Adjusted	\$6,114	\$6,114	\$6,109	\$6,109
Tract Size	47.20	47.20	59.09	59.09

Percentage Differences

Median Price Per Acre	0%
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This matched pair again supports the conclusion that adjacency to a solar farm has no impact on adjoining residential/agricultural land.

3. Matched Pair C – Wagstaff Farm, Roxboro, NC

This solar farm is located at the northeast corner of a 594-acre farm with approximately 30 acres of solar farm area. This solar farm was approved and constructed in 2013.

After approval, 18.82 acres were sold out of the parent tract to an adjoining owner to the south. This sale was at a similar price to nearby land to the east that sold in the same time from for the same price per acre as shown below.

Type	TAX ID	Owner	Acres	Present Use	Date Sold	Price	\$/AC
Adjoins Solar	0918-17-11-7960	Piedmont	18.82	Agricultural	8/19/2013	\$164,000	\$8,714
Not Near Solar	0918-00-75-9812 et al	Blackwell	14.88	Agricultural	12/27/2013	\$130,000	\$8,739

Matched Pair Summary

	Adjoins Solar Farm		Nearby Solar Farm	
	Average	Median	Average	Median
Sales Price	\$8,714	\$8,714	\$8,739	\$8,739
Tract Size	18.82	18.82	14.88	14.88

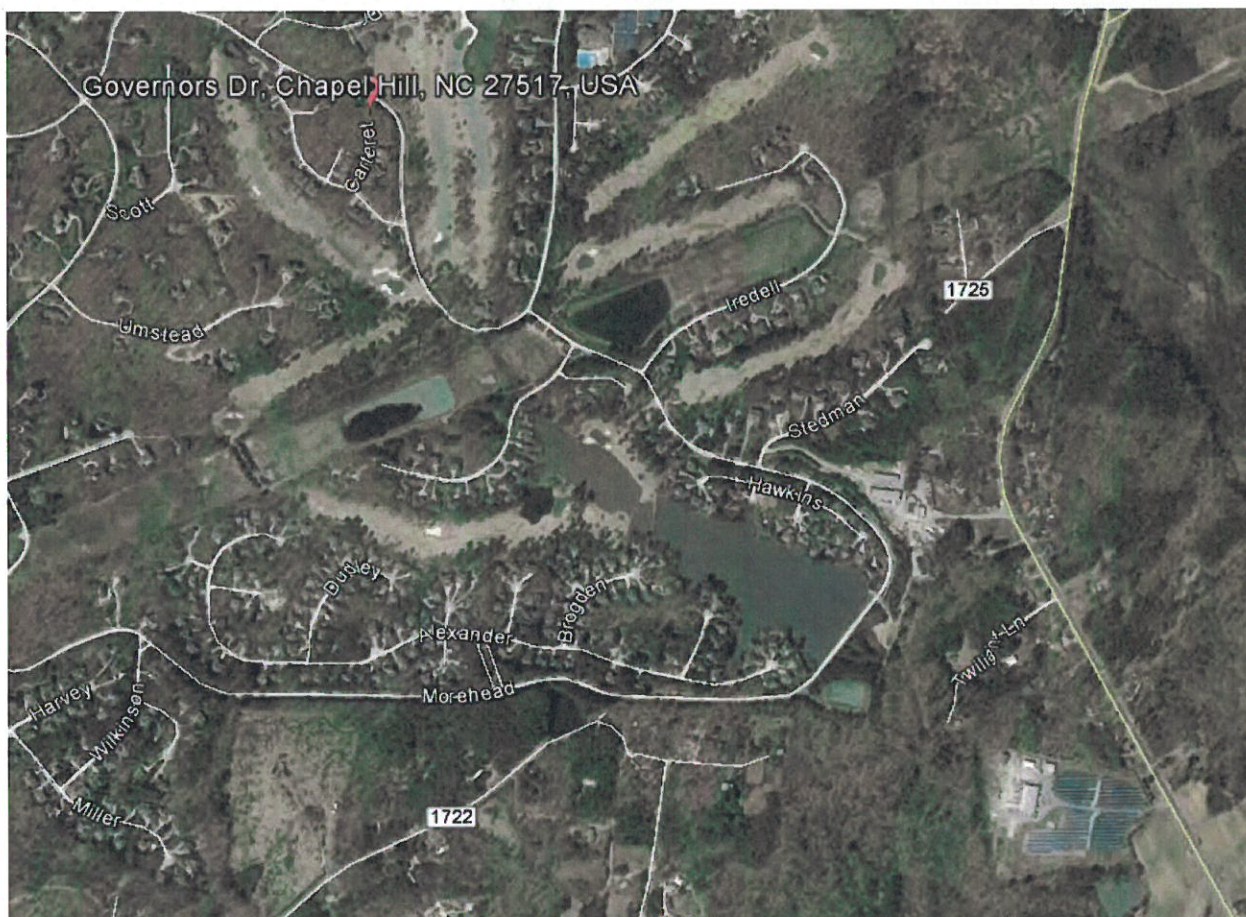
Percentage Differences

Median Price Per Acre 0%

This matched pair again supports the conclusion that adjacency to a solar farm has no impact on adjoining residential/agricultural land.

Harmony of Use/Compatibility of Use

I have visited over 40 solar farms and sites on which solar farms are proposed in North Carolina to determine what uses are compatible with a solar farm. The data I have collected and provide in this report strongly supports the compatibility of solar farms with adjoining agricultural and residential uses. While I have focused on adjoining uses, I note that there are many examples of solar farms being located within a quarter mile of residential developments, including such notable developments as Governor's Club in Chapel Hill, which has a solar farm within a quarter mile as you can see on the following aerial map. Governor's Club is a gated golf community with homes selling for \$300,000 to over \$2 million.



The subdivisions included in the matched pair analysis also show an acceptance of residential uses adjoining solar farms as a harmonious use.

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

Percentage By Adjoining Acreage									All Res	All Comm
		Res	Ag	Res/AG	Park	Sub	Comm	Ind	Uses	Uses
1	Goldsboro	35%	23%	0%	0%	3%	2%	37%	61%	39%
2	Willow Springs	8%	26%	66%	0%	0%	0%	0%	100%	0%
3	Kings Mtn	3%	12%	4%	0%	0%	0%	82%	18%	82%
4	White Cross	5%	51%	44%	0%	0%	0%	0%	100%	0%
5	Two Lines	3%	87%	8%	0%	3%	0%	0%	100%	0%
6	Strata	0%	0%	0%	100%	0%	0%	0%	100%	0%
7	Avery	13%	40%	47%	0%	0%	0%	0%	100%	0%
8	Mayberry	24%	51%	0%	0%	0%	4%	20%	76%	24%
9	Progress I	0%	45%	4%	0%	0%	0%	50%	50%	50%
10	Progress II	1%	99%	0%	0%	0%	0%	0%	100%	0%
11	Sandy Cross	0%	0%	100%	0%	0%	0%	0%	100%	0%
12	Baldenboro	18%	59%	22%	0%	0%	0%	0%	100%	0%
13	Dement	33%	40%	27%	0%	0%	0%	0%	100%	0%
14	Vale Farm	1%	13%	86%	0%	0%	0%	0%	100%	0%
15	Eastover	0%	0%	0%	0%	0%	0%	0%	0%	0%
16	Wagstaff	7%	89%	4%	0%	0%	0%	0%	100%	0%
17	Roxboro	1%	93%	5%	0%	0%	0%	1%	99%	1%
18	McCallum	5%	93%	1%	0%	0%	0%	0%	100%	0%
19	Vickers	21%	58%	13%	0%	0%	2%	6%	92%	8%
20	Stout	52%	38%	0%	0%	0%	0%	10%	90%	10%
21	Mile	0%	36%	45%	0%	0%	0%	18%	82%	18%
22	Sun Fish	19%	57%	23%	0%	0%	0%	0%	100%	0%
23	Freemont	0%	100%	0%	0%	0%	0%	0%	100%	0%
24	Yadkin 601	4%	45%	51%	0%	0%	0%	0%	100%	0%
25	Battleboro	2%	75%	23%	0%	0%	0%	0%	100%	0%
26	Greenville 2	1%	98%	0%	0%	1%	0%	0%	100%	0%
27	Parmelee Farm	2%	86%	12%	0%	0%	0%	0%	100%	0%
28	Erwin	63%	9%	0%	0%	22%	2%	3%	94%	6%
29	Star Solar	6%	94%	0%	0%	0%	0%	0%	100%	0%
30	Morgans Corner N	29%	70%	0%	0%	1%	0%	0%	100%	0%
31	Morgans Corner S	16%	84%	0%	0%	0%	0%	0%	100%	0%
32	Whitakers	2%	94%	4%	0%	0%	0%	0%	100%	0%
33	Binks	15%	78%	6%	0%	0%	0%	0%	100%	0%
	Average	12%	56%	18%	3%	1%	0%	7%	90%	7%
	Median	5%	57%	4%	0%	0%	0%	0%	100%	0%
	High	63%	100%	100%	100%	22%	4%	82%	100%	82%
	Low	0%	0%	0%	0%	0%	0%	0%	0%	0%

Res = Residential, Ag = Agriculture, Sub = Substation, Com = Commercial, Ind = Industrial.

I have also included a breakdown of each solar farm by number of adjoining parcels rather than acreage. Using both factors provides a more complete picture of the neighboring properties.

Percentage By Number of Parcels Adjoining									All Res	All Comm
		Res	Ag	Res/AG	Park	Sub	Comm	Ind	Uses	Uses
1	Goldsboro	47%	3%	0%	0%	3%	3%	43%	53%	47%
2	Willow Springs	42%	37%	21%	0%	0%	0%	0%	100%	0%
3	Kings Mtn	40%	30%	10%	0%	0%	0%	20%	80%	20%
4	White Cross	33%	20%	40%	0%	7%	0%	0%	100%	0%
5	Two Lines	38%	46%	8%	0%	8%	0%	0%	100%	0%
6	Strata	71%	0%	14%	14%	0%	0%	0%	100%	0%
7	Avery	50%	38%	13%	0%	0%	0%	0%	100%	0%
8	Mayberry	42%	8%	0%	0%	0%	25%	25%	50%	50%
9	Progress I	0%	50%	25%	0%	0%	0%	25%	75%	25%
10	Progress II	20%	80%	0%	0%	0%	0%	0%	100%	0%
11	Sandy Cross	17%	0%	83%	0%	0%	0%	0%	100%	0%
12	Bladenboro	62%	28%	7%	0%	3%	0%	0%	100%	0%
13	Dement	83%	6%	11%	0%	0%	0%	0%	100%	0%
14	Vale Farm	10%	20%	70%	0%	0%	0%	0%	100%	0%
15	Eastover	0%	0%	0%	0%	0%	0%	0%	0%	0%
16	Wagstaff	65%	30%	3%	0%	0%	0%	3%	98%	3%
17	Roxboro	33%	50%	8%	0%	0%	0%	8%	92%	8%
18	McCallum	77%	15%	4%	0%	0%	0%	4%	96%	4%
19	Vickers	47%	32%	5%	0%	0%	5%	11%	84%	16%
20	Stout	78%	6%	0%	0%	0%	0%	17%	83%	17%
21	Mile	0%	36%	45%	0%	0%	0%	18%	82%	18%
22	Sun Fish	78%	4%	17%	0%	0%	0%	0%	100%	0%
23	Freemont	14%	86%	0%	0%	0%	0%	0%	100%	0%
24	Yadkin 601	44%	28%	28%	0%	0%	0%	0%	100%	0%
25	Battleboro	53%	33%	7%	0%	7%	0%	0%	100%	0%
26	Greenville 2	38%	50%	0%	0%	13%	0%	0%	100%	0%
27	Parmelee Farm	21%	68%	5%	0%	5%	0%	0%	100%	0%
28	Erwin	67%	5%	0%	0%	5%	19%	5%	76%	24%
29	Star Solar	38%	63%	0%	0%	0%	0%	0%	100%	0%
30	Morgans Corner N	71%	19%	0%	0%	5%	0%	5%	95%	5%
31	Morgans Corner S	69%	31%	0%	0%	0%	0%	0%	100%	0%
32	Whitakers	71%	24%	6%	0%	0%	0%	0%	100%	0%
33	Binks	90%	5%	5%	0%	0%	0%	0%	100%	0%
Average		46%	29%	13%	0%	2%	2%	6%	90%	7%
Median		44%	28%	6%	0%	0%	0%	0%	100%	0%
High		90%	86%	83%	14%	13%	25%	43%	100%	50%
Low		0%	0%	0%	0%	0%	0%	0%	0%	0%

Res = Residential, Ag = Agriculture, Sub = Substation, Com = Commercial, Ind = Industrial.

Both of the above charts show a marked residential and agricultural adjoining use for most solar farms. 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 residential uses along with agricultural uses.

II. Specific Factors on Harmony of Use

1. **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. As shown below, solar farms are comparable to larger greenhouses. This is not surprising 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.



The fixed solar panels are all less than 12 feet high, which means that the visual impact of the solar panels will be similar in height to a typical greenhouse or lower than 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 panels will be located behind a chain link fence.

2. **Noise**

The proposed solar panels will track to follow the sun with adjustments made around 6 times per day with a staggered approach so all of the panels will not track at the same time. The motors kick on for about 15 seconds for each adjustment. Obviously, these panels will not track at all during night time hours when the solar farm should generate no noise. The transformers have a slight hum that can only be heard in close proximity to this transformers and the buffers on the property are sufficient to make this hum inaudible from the adjoining properties.

The noise proposed to be generated by this tracking system is minimal and not considered a nuisance for adjoining property owners.

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

3. 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.

4. 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.

5. 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.

6. Conclusion

On the basis of the factors described above, it is my professional opinion that the proposed solar farm will be in harmony with the area in which it is to be developed.

III. Market Commentary

I have surveyed a number of builders, developers and investors regarding solar farms over the last year. I have received favorable feedback from a variety of sources; below are excerpts from my conversations with different clients or other real estate professionals.

I spoke with Betty Cross with Keller Williams Realty in Chapel Hill, who sold the tract of land adjoining the White Cross Road solar farm. She indicated that the solar farm was not considered a negative factor in marketing the property and that it had no impact on the final price paid for the land.

I spoke with Lynn Hayes a broker with Berkshire Hathaway who sold a home at the entrance to Pickards Mountain where the home exits onto the Pickard Mountain Eco Institute's small solar farm. This property is located in rural Orange County west of Chapel Hill. This home closed in January 2014 for \$735,000. According to Ms. Hayes the buyer was excited to be living near the Eco Institute and considered the solar farm to be a positive sign for the area. There are currently a number of 10 acre plus lots in Pickards Meadow behind this house with lots on the market for \$200,000 to \$250,000.

A new solar farm was built on Zion Church Road, Hickory at the Two Lines Solar Farm on the Punch property. After construction of the solar farm in 2013, an adjoining tract of land with 88.18 acres sold for \$250,000, or \$2,835 per acre. This was a highly irregular tract of land with significant tree cover between it and the solar farm. I have compared this to a current listing of 20.39 acres of land that is located southeast just a little ways from this solar farm. This land is on the market for \$69,000, or \$3,428 per acre. Generally, a smaller tract of land would be listed for more per acre. Considering a size adjustment of 5%

per doubling in size, and a 10% discount for the likely drop in the closed price off of the asking price, I derive an indicated value per acre of the smaller tract of \$2,777 per acre. This is very similar to the recently closed sale adjoining the solar farm, which further supports the matched pair analysis earlier in this report.

Rex Vick with Windjam Developers has a subdivision in Chatham County off Mt. Gilead Church Road known as The Hamptons. Home prices in The Hamptons start at \$600,000 with homes over \$1,000,000. Mr. Vick expressed interest in the possibility of including a solar farm section to the development as a possible additional marketing tool for the project.

Mr. Eddie Bacon, out of Apex North Carolina, has inherited a sizeable amount of family and agricultural land, and he has expressed interest in using a solar farm as a method of preserving the land for his children and grandchildren while still deriving a useful income from the property. He believes that solar panels would not in any way diminish the value for this adjoining land.

I spoke with Carolyn Craig, a Realtor in Kinston, North Carolina who is familiar with the Strata Solar Farms in the area. She noted that a solar farm in the area would be positive: "A solar farm is color coordinated and looks nice." "A solar farm is better than a turkey farm," which is allowed in that area. She would not expect a solar farm will have any impact on adjoining home prices in the area.

Mr. Michael Edwards, a broker and developer in Raleigh, indicated that a passive solar farm would be a great enhancement to adjoining property: "You never know what might be put on that land next door. There is no noise with a solar farm like there is with a new subdivision."

These are just excerpts I've noted in my conversations with different clients or other real estate participants that provided other thoughts on the subject that seemed applicable.


IV. Conclusion

The matched pair analysis shows no impact in home values due to the adjacency to the solar farm as well as no impact to adjacent vacant residential or agricultural land and by extension industrial uses. The solar farm at Pickards Mountain Eco Institute shows no impact on lot and home marketing nearby. The criteria for making downward adjustments on property values such as appearance, noise, odor, and traffic all indicate that a solar farm is a compatible use for a rural/residential transition area and by extension would have no negative impacts on adjoining industrial uses.

Similar solar farms have been approved adjoining agricultural uses and residential developments. The adjoining residential uses have included single family homes up to \$260,000 on lots as small as 0.74 acres. The solar farm at the Pickards Mountain Eco Institute adjoins a home that sold in January 2014 for \$735,000 and in proximity to lots being sold for \$200,000 to \$250,000 for homes over a million dollars. A recent sale in Chapel Hill adjoining a solar farm shows no impact. Clearly, adjoining agricultural uses are consistent with a solar farm and industrial uses rarely receive negative impacts.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will not substantially injure the value of adjoining or abutting property and that the proposed use is in harmony with the surrounding area.

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.

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





Kirkland Appraisals, LLC

Richard C. Kirkland, Jr., MAI
9408 Northfield Court
Raleigh, North Carolina 27603
Mobile (919) 414-8142
rkirkland2@gmail.com
www.kirklandappraisals.com

PROFESSIONAL EXPERIENCE

Kirkland Appraisals, LLC , Raleigh, N.C. Commercial appraiser	2003 – Present
Hester & Company , Raleigh, N.C. Commercial appraiser	1996 – 2003

PROFESSIONAL AFFILIATIONS

MAI (Member, Appraisal Institute) designation #11796	2001
NC State Certified General Appraiser # A4359	1999

EDUCATION

Bachelor of Arts in English , University of North Carolina, Chapel Hill	1993
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CONTINUING EDUCATION:

Business Practices and Ethics	2014
Online Subdivision Valuation	2014
Uniform Standards of Professional Appraisal Practice Update	2014
Introduction to Vineyard and Winery Valuation	2013
Appraising Rural Residential Properties	2012
Uniform Standards of Professional Appraisal Practice Update	2012
Supervisors/Trainees	2011
Rates and Ratios: Making sense of GIMs, OARs, and DCFs	2011
Advanced Internet Search Strategies	2011
Analyzing Distressed Real Estate	2011
Uniform Standards of Professional Appraisal Practice Update	2011
Business Practices and Ethics	2011
Appraisal Curriculum Overview (2 Days – General)	2009
Appraisal Review - General	2009
Uniform Standards of Professional Appraisal Practice Update	2008
Subdivision Valuation: A Comprehensive Guide	2008
Office Building Valuation: A Contemporary Perspective	2008
Valuation of Detrimental Conditions in Real Estate	2007
The Appraisal of Small Subdivisions	2007
Uniform Standards of Professional Appraisal Practice Update	2006
Evaluating Commercial Construction	2005
Conservation Easements	2005
Uniform Standards of Professional Appraisal Practice Update	2004
Condemnation Appraising	2004
Land Valuation Adjustment Procedures	2004
Supporting Capitalization Rates	2004
Uniform Standards of Professional Appraisal Practice, C	2002
Wells and Septic Systems and Wastewater Irrigation Systems	2002
Appraisals 2002	2002
Analyzing Commercial Lease Clauses	2002
Conservation Easements	2000
Preparation for Litigation	2000
Appraisal of Nonconforming Uses	2000
Advanced Applications	2000
Highest and Best Use and Market Analysis	1999
Advanced Sales Comparison and Cost Approaches	1999
Advanced Income Capitalization	1998
Valuation of Detrimental Conditions in Real Estate	1999
Report Writing and Valuation Analysis	1999
Property Tax Values and Appeals	1997
Uniform Standards of Professional Appraisal Practice, A & B	1997
Basic Income Capitalization	1996

