

Parcel 6: Boatwright 40028

Parcel 1: All of that certain tract or parcel of land lying and being in Maysville Magisterial District of Buckingham County, Virginia, containing 145.00 acres, more or less, bounded on the north by the land of Frank E. Webb; on the east by state Route 633; on the south by the land of Continental Can Company; on the northwest by the land of Ruby Woodson; on the west by State Route 638. Being more particularly described as to metes and bounds by a plat of survey made by J. R. Gillispie, S.B.C., dated November 8, 1901, of record in the Office of the Clerk of the Circuit Court of Buckingham County, Virginia, in Deed Book 34, Page 440.

This is the same property conveyed to West Virginia Pulp and Paper Company, a Delaware Corporation, by deed from John B. Boatwright, Jr. and Araminta R. Boatwright, his wife, et als, dated July 7, 1966, and recorded September 12, 1966 in the aforesaid Clerk's Office in Deed Book 76, Page 116.

Parcel 2: All of that certain tract or parcel of land situate in Maysville District of Buckingham County, Virginia, together with all improvements thereon and appurtenances thereunto belonging, containing 294.0 acres as shown on that certain plat of survey entitled "CONTINENTAL CAN COMPANY, INC., WOOTENTRACTNO. 8845, 294.0 ACRES," dated December 1963, prepared by Alan G. Tayloe, C.L.S., a copy of which is recorded in Plat Book 2, Page 89, reference to which is made for a more specific description of the property. LESS AND EXCEPT those portions of the property conveyed to the Commonwealth of Virginia, by two deeds: (1) dated July 5, 1966, recorded August 1, 1966, in Deed Book 76, Page 8, containing 4.77 acres; and (2) dated February 13, 1986, recorded May 7, 1986, in Deed Book 140, Page 472, containing 1.78 acres, both for highway purposes.

Being the same property conveyed in the Deed recorded at Deed Book 400, Page 57.

Parcel 7: Baber 40448

All those certain adjoining tracts or parcels of land, containing 440.64 acres, more or less, situate in Buckingham County, Virginia, on State Routes 678 and 713, together with the improvements thereon and all easements, rights- of-way, privileges and appurtenances thereunto belonging, including all interest of the Grantor in and to the coal, gas, oil and any other minerals on, within and underlying said real estate, being more particularly described as follows:

Parcel 1: All of that certain tract or parcel of land situate in Slate River Magisterial District of Buckingham County, Virginia, on the Warren Road and on Rock Island Creek, containing 50.55 acres, more or less, and being the property containing 53.00 acres, more or less, described by a plat made by Emmett D. Gillispie, S.R.C., on April 4, 1952, which plat was recorded in the Clerk's Office of the Circuit Court of Buckingham County with deed in Deed Book 55, Page 315, less and excepted therefrom that portion of the property containing 2.45 acres conveyed to the Commonwealth of Virginia from Continental Can Company, Inc., by deed dated July 20, 1962, recorded January 23, 1963, in the aforesaid Clerk's Office in Deed Book 69, Page 461. Being the same real estate described as "Parcel 5 Map Number: BK52501; Tract Number: 8882; Tract Name: L. S. Baber Acreage: 50.55" conveyed to Westvaco Corporation from KMI Continental Pulpwood, Inc. by deed dated November 15, 1989, and recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 161 at page 612. The aforesaid tract is more specifically described on page 615 therein.

Parcel 2: All of that certain tract or parcel of land situate in Slate River Magisterial District of Buckingham County, Virginia, approximately 4 miles (airline) southeast of Scottsville, fronting on the northern margin of State Route No. 678, containing 287.3 acres, more or less, (being formerly described as four smaller tracts aggregating 265 acres, more or less), said tract being shown and fully described on a plat of Paul Saunders, S.C.S., dated December, 1958, which plat was recorded in the Clerk's Office of the Circuit Court of Buckingham County with deed in Deed Book 67, Page 549. Being the same real estate described as "Parcel 30 Map Number: BK52501; Tract Number: 9366; Tract Name: Barnes-Baber Acreage: 287.3" conveyed to Westvaco Corporation from KMI Continental Pulpwood, Inc. by deed dated November 15, 1989, and recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 161 at page 612. The aforesaid tract is more specially described on page 628 therein.

Parcel 3: All of that certain tract or parcel of land, situate in Slate River Magisterial District of Buckingham County, Virginia, on the Baber Road and the Baber Mills Road, now containing 102.79 acres, more or less, and being the property containing 106.50 acres, more or less, described by a plat made by Carroll Gillispie, C.L.S., on March 7, 1952, which plat was recorded in the Clerk's Office of the Circuit Court of Buckingham County with, deed in Plat Book 8, Page 437, less and excepted therefrom that portion of the property containing 0.90 acre conveyed to the Commonwealth of Virginia from Continental Can Company, Inc., by deed dated July 20, 1962, recorded January 23, 1963, in the aforesaid Clerk's Office in Deed Book 69, Page 461, and further less and excepted therefrom that tract or parcel of land containing 2.81 acres conveyed to Clyde L. Catlett, Jr. and Penney D. Catlett, husband and wife, from Westvaco Corporation by deed dated January 20, 2000, recorded May 2, 2000, in the aforesaid Clerk's Office in Deed Book 254, Page 85. Being the residue of the real estate described as "Parcel 3 Map Number:

BK52501; Tract Number: 8835; Tract Name: Bishop Acreage; 106.5" conveyed to Westvaco Corporation from KMI Continental Pulpwood, Inc. by deed dated November 15, 1989, and recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 161 at page 612. The aforesaid tract is more specifically described on page 614 therein.

Being the same property conveyed in the Deed recorded at Deed Book 378, Page 431.

Parcel 8: Baird-Payne 40384

All those two certain adjoining tracts or parcels of land situate in State River Magisterial District, Buckingham County, Virginia, on Big Georgia Creek, containing a total of 183.00 acres, more or less, together with the improvements thereon and all easements, rights-of-way, privileges and appurtenances thereunto belonging, including all interest of the Grantor in and to the coal, gas, oil and any other minerals on, within and underlying said real estate, being shown and described as the 92 acres tract and the upper or western most 91 acres tract on a plat of survey made by Emmett D. Gillispie, Surveyor, dated January, 1943, and recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 51, Page 156. Being the same properly conveyed to Westvaco Corporation from Edward A. Payne and Julia C. Payne, his wife, by deed dated January 12, 1977, and recorded January 26, 1977, in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 103, Page 577.

The party of the first part further grants and conveys to the party of the second part, its successors, heirs and assigns, all of the right, title, and interest that it has in and to the access road or roads leading from the public road to the above described property, including without limit, any rights obtained by prescription, implication, 125stoppels and/or necessity. MeadWestvaco has used the existing access road leading from the public road to the above-described property regularly and continuously, for purposes of accessing such property, for the duration of its ownership.

Being the same property conveyed in the Deed recorded at Deed Book 378, Page 431.

Parcel 9: Bransford 40451

All of that certain tract or parcel of land situate in, State River Magisterial District of Buckingham County, Virginia, on State Route 678, containing 58.00 acres, more or less, together with the improvements thereon and all easements, rights-of-way, privileges and appurtenances thereunto belonging, including all interest of the Grantor in and to the coal, gas, oil and any other minerals on, within and underlying said real estate, described by a plat made by Carroll Gillespie, C.U.S., on July 15, 1953, which plat was recorded in the Clerk's Office of the Circuit Court of Buckingham County with deed in Deed Book 56, Page 270. Being the same real estate described as "Parcel 8 Map Number: BK52502; Tract Number: 9237; Tract Name: Bransford Acreage: 58" conveyed to Westvaco Corporation from KMI Continental Pulpwood, Inc. by deed dated November 15, 1989, and recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 161 at page 612. The aforesaid tract is more specifically described on page 616 therein.

Being the same property conveyed in the Deed recorded at Deed Book 378, Page 431.

Parcel 10: Stegar 40265

All of that certain tract or parcel of land situate in State River District of Buckingham County, Virginia, now containing 361.28 acres, more or less, being that certain tract containing three hundred sixty-eight (368) acres, be the same, more or less, known as the "Stegar Tract", lying on State Road 704 as shown and described on a plat of survey made by Carroll Gillispie, dated May 21-22, July 18 and Nov. 13, 1957, and recorded in the Clerk's Office of the Circuit Court of Buckingham County, Virginia, in Deed Book 70, page 354, LESS AND EXCEPT: All that certain tract or parcel of real estate, together with any and all Improvements thereon being in State River Magisterial District, Buckingham County, Virginia, and being a part of the land known as the "Stegar Tract", containing 5.00 acres, conveyed to Willie Eugene Ragland and Joan E. Ragland, husband and wife, by deed dated October 12, 1996, recorded January 8, 1997, in Deed Book 216, page 64, as shown by a plat of survey made by Fred C. Howell, P.L.S., dated September 30, 1996, and recorded January 8, 1997, in the aforesaid Clerk's Office in Deed Book 216, page 067; and LESS AND EXCEPT 1.72 acres conveyed to the Commonwealth of Virginia by deed dated November 16, 1994.

This being all the rest and remainder of the same property conveyed to West Virginia Pulp and Paper Company, a Delaware corporation, by deed from J.R Spessard and Miriam P. Spessard, his wife, dated May 18, 1963, and recorded May 18, 1963, in the aforesaid Clerk's Office in Deed Book 70, page 354.

Being the same property conveyed in the Deed recorded at Deed Book 378, Page 431.

Parcel 11: Miller-North 40445

All that certain tract or parcel of land lying in State River Magisterial District, Buckingham County, Virginia, containing 123-34/100 acres, more or less. For a more accurate and particular description as to the property hereby conveyed, reference is made to a plat of survey prepared by Carroll Gillispie, CLS, dated March and May of 1952, attached to and recorded with a Deed dated June 10, 1952, and recorded in the Clerk's Office of the Circuit Court of Buckingham County, Virginia, in Deed Book 54, page 476, LESS AND EXCEPT that 1.26 acres, more or less, conveyed to the Commonwealth of Virginia by Deed dated August 20, 1954, recorded in Deed Book 57, page 576.

This is the same real estate conveyed unto Westvaco Corporation by deed dated March 9, 1979, and recorded in the aforesaid Clerk's Office in Deed Book 436 at page 48.

Being the same property conveyed in the Deed recorded at Deed Book 397, Page 518.

Parcel 12: Farrish 40088

All of that certain tract or parcel of land lying in Slate River Magisterial District of Buckingham County, Virginia, containing 75.38 acres, more or less, more particularly described as to metes and bounds according to a plat made by Ralph P. Hines, C.L.S., and dated June 21, 1969, a copy of which is recorded in the aforesaid Clerk's Office along with deed in Deed Book 81, page 15.

This being a portion of the property conveyed to Westvaco Corporation by deed dated July 1, 1969, from J.R. Snoddy, Jr., Special Commissioner, recorded July 8, 1969, in the aforesaid Clerk's Office in Deed Book 81, page 15.

All that certain tract or parcel of land lying and being in Slate River Magisterial District of Buckingham County, Virginia, containing 67.9 acres, more or less, bounded and described more fully by a plat of survey made by Ralph P. Hines, C.L.S., dated August 12, 1969, recorded along with deed in the aforesaid Clerk's Office in Deed Book 81, page 148.

This being the same property conveyed to Westvaco Corporation by deed dated August 19, 1969, from J.R. Snoddy, Jr., Special Commissioner, recorded August 20, 1969, in the aforesaid Clerk's Office in Deed Book 81, page 148.

All of that certain tract or parcel of land, together with all buildings and appurtenances thereunto belonging, situated in Slate River Magisterial District of Buckingham County, Virginia, containing 373.7 acres, more or less, bounded on the north by the lands now or formerly of John Farrish and Virginia Secondary Route No. 655, on the east by Virginia Secondary Highway No. 656 and the land now or formerly of Willie Agee, Joe T. Steger and Thomas B. Nuckols, on the south by the lands now or formerly of Continental Can Company, on the southwest by the lands now or formerly of the Adams Estate and on the west by the lands now or formerly of Continental Can Company, Chesapeake Corporation, James M. Ayers and Walter Edwards and shown on plat of survey by Carroll Gillispie, C.L.S., S.B.C., entitled - West Virginia Pulp & Paper Company and dated November 29, 1969, a copy of which is recorded in the Clerk's Office of the Circuit Court of Buckingham County along with the deed next below mentioned, LESS AND EXCEPT 5.709 acres conveyed to Charlie W. Baird by deed dated March 26, 1998, and recorded in the aforesaid Clerk's Office in Deed Book 229, page 213.

This being the same property conveyed to Westvaco Corporation by deed dated February 10, 1970, from Burney C. Farrish, Executor under the will of Rosa B. Farrish, recorded March 19, 1970, in the aforesaid Clerk's Office in Deed Book 82, page 164.

All that certain tract or parcel of land lying and being in James River Magisterial District of Buckingham County, Virginia, containing 12.31 acres, more or less, and more particularly described as to metes and bounds by a plat of survey made by Ralph P. Hines, C.L.S., dated February 6, 1974, and recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 95, page 155.

This being the same property conveyed to Westvaco Corporation by deed dated May 28, 1974, from Irving Staton and Ruth B. Staton, his wife, recorded November 8, 1974, in the aforesaid

Clerk's Office in Deed Book 95, page 153.

All that certain tract of land lying in State River District, Buckingham County, Virginia, containing 77-1/2 acres, more or less, bounded on the north by the Garrett Tract, on the east by the Emma Patterson place, on the south by the Chambers Tract, and on the west by the residue of the Courtney Maxey Tract, and fully described by metes and bounds by a plat made by Emmett D. Gillispie, S.B.C., recorded in the Clerk's Office of the Circuit Court of Buckingham County, Virginia, in Deed Book 35, page 580.

This being the same property conveyed to Westvaco Corporation by deed dated March 9, 1979, from The Chesapeake Corporation of Virginia recorded October 16, 1979, in the aforesaid Clerk's Office in Deed Book 115, page 365.

All that certain tract or parcel of land, lying, being and situate in Slate River Magisterial District, Buckingham County, Virginia, containing 159.7 acres, more or less, according to a plat entitled "Continental Can Co. Inc. Barnes Lbr. Co., Kellog Tract #9366 State-Virginia County Buckingham District-State River 159.7 Acres", dated October 1958 made by Paul M. Saunders, C.S., attached to and recorded in the Clerk's Office of the Circuit Court of Buckingham County along with the deed next below mentioned.

This being the same property conveyed to Westvaco Corporation by deed dated May 10, 1983, from Continental Hopewell Woodlands, Inc., a Delaware corporation, recorded September 14, 1983, in the aforesaid Clerk's Office in Deed Book 129, page 312.

All that certain tract or parcel of land, with improvements thereon and appurtenances thereunto belonging, situated in State River District of Buckingham County, Virginia, containing 124 acres, more or less, being bounded on the northeast by land now or formerly of Nuckols, on the east by land now or formerly of Maxey, on the southeast by land of Westvaco Corp., on the southwest by land of Westvaco Corp., and land now or formerly of Adams, and on the north by land of Westvaco Corp., said lands being more particularly described by the metes and bounds of a plat of survey of Carroll Gillispie, CLS/SBC, dated October 2, & 11, November 15 and December 20, 1957, a copy of which is recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 129, page 326.

This being the same property conveyed to Westvaco Corporation by deed dated May 10, 1983, from Continental Hopewell Woodlands, Inc., recorded September 14, 1983, in the aforesaid Clerk's Office in Deed Book 129, page 312.

Less and except that certain tract or parcel of land conveyed to STAS, Inc., by deed from MWV-Land Sales, dated May 24, 2010, recorded in Deed Book 380, page 707 and more particularly described below:

All that certain tract or parcel of land containing 680.402 acres, more or less, lying and being on Virginia State Route No. 659 and on the waters of Muddy Creek, in Slate River Magisterial District of Buckingham County, Virginia, together with all easements, rights-of-way, privileges and appurtenances thereunto belonging, including all interest of the Grantor in and to the coal,

gas, oil and any other minerals on, within and underlying said real estate, as more particularly shown and described on a plat of survey entitled "PLAT OF SURVEY 680.402 ACRES", dated May 14, 2010, by Mark D. Goodpasture, LS, of Bagby, Caldwell and Associates, P.C., Civil Engineers and Land Surveyors, 1985 Jefferson Davis Highway, Fredericksburg, Virginia 22401, a copy of which plat is being recorded contemporaneously therewith and made a part thereof.

BEING a portion of the property conveyed to MWV-Land Sales, Inc. from MeadWestvaco Corporation by deed dated April 16, 2010, recorded April 27, 2010, in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 379, page 876, which said property was conveyed to MeadWestvaco Corporation from MWV Community Development and Land Management, LLC by deed dated April 16, 2010, recorded April 27, 2010, in the aforesaid Clerk's Office in Deed Book 379, page 870., which said property was conveyed to MWV Community Development and Land Management, LLC, from MeadWestvaco Corporation by deed dated December 31, 2009, and recorded February 12, 2010, in the aforesaid Clerk's Office in Deed Book 378, page 351. Reference is also made to a Special Commissioner's Deed dated May 21, 2010 from Frank A. Wright, Jr., Successor Special Commissioner, etc, to MWV-Land Sales, Inc., pursuant to an order dated May 13, 2010, entered in the aforementioned Clerk's Office as CL10-44, formerly filed as # 16-A, in the matter of Judy S. Ragland, et al, Committee for Meta S. Robertson V. Meta S. Robertson, such deed being recorded in the aforesaid Clerk's Office immediately prior to this deed. Effective December 31, 2002, Westvaco Corporation, a Delaware corporation, formerly West Virginia Pulp and Paper Company, merged into MeadWestvaco Corporation, a Delaware corporation, with MeadWestvaco Corporation, a Delaware Corporation, being the surviving corporation.

Less and except that parcel of land conveyed to the Commonwealth of Virginia, by deed from Westvaco Corporation, dated April 15, 1980 and recorded in Deed Book 117, page 505.

The above parcels being the same property conveyed to MWV-Land Sales, Inc., by deed from MeadWestvaco Corporation, a Delaware Corporation, successor by merger to Westvaco Corporation, which was formerly West Virginia Pulp and Paper Company, dated April 16, 2010 and recorded in Deed Book 379, page 876.

Parcel 13: Hal Lewis 40443

All that certain tract or parcel of land lying and being situate in James River District of Buckingham County, Virginia, containing two hundred ninety-seven (297) acres. As shown on that certain plat of survey entitled "CONTINENTAL CAN CO. INC. HAL P. LEWIS TRACT #112-301 AREA: 297 ACRES JAMES RIVER DISTRICT, BUCKINGHAM COUNTY, VIRGINIA", dated February 26 and March 5, 1957, prepared by T.W. Saunders, S.N.C., a copy of which is attached to deed recorded as Instrument No. 1355 as Exhibit A-3 and reference to which is made for a more specific description of the property conveyed.

Being part of the real estate conveyed unto Westvaco Corporation by deed from KMI Continental Pulpwood, Inc., a Delaware corporation, dated November 15, 1989, and recorded November 17, 1989, in the Clerk's Office of the Circuit Court of Buckingham County as Instrument No. 1355.

Being the same land that was conveyed to MWV Community Development and Land Management, LLC from MeadWestvaco Corporation as "TRACT 20: FRIS Hal Lewis Tract #40443, estimated to contain 297.0 acres, more or less" by deed dated December 31, 2009, and recorded February 12, 2010, in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 378, page 371, as Instrument No. 10-251, Effective December 31, 2002, Westvaco Corporation, a Delaware Corporation, merged into MeadWestvaco Corporation, a Delaware Corporation, with MeadWestvaco Corporation, a Delaware Corporation, being the surviving corporation.

Being the same property conveyed in the Deed recorded at Deed Book 395, Page 760.

Parcel 14: Davis Catlett 40070

Parcel 1: All that certain tract or parcel of land lying and being in State River Magisterial District, Buckingham County, Virginia, containing Ninety-Six (96) acres, more or less, and more fully described by survey made by Paul M. Saunders, C.L.S., September, 1965.

Being the same land conveyed to West Virginia Pulp and Paper Company from Burruss Land and Lumber Company, Incorporated, a Virginia Corporation, by deed dated September 25, 1965, recorded October 2, 1965, in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 74, Page 455.

Parcel 2: All that certain tract or parcel of land lying and being in State River Magisterial District of Buckingham County, Virginia, containing 61 acres, by survey, being more particularly described by a plat of survey made by Emmett D. Gillispie, S.B.C., dated April 2, 1951.

Being the same land conveyed unto West Virginia Pulp and Paper Company from Claude Davis, single, and Fred Davis, single, by deed dated November 22, 1965, recorded December 10, 1965, in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 75, Page 71.

All being the same land that was conveyed to MWV Community Development and Land Management, LLC from MeadWestvaco Corporation as "TRACT 12: FRIS Davis-Catlett Tract #40070, estimated to contain 157 acres, more or less" by deed dated December 31, 2009, and recorded February 12, 2010, in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 378, page 371, as Instrument No. 10-251, Effective December 31, 2002, Westvaco Corporation, a Delaware Corporation, merged into MeadWestvaco Corporation, a Delaware Corporation, with MeadWestvaco Corporation, a Delaware Corporation, being the surviving corporation.

Being the same property conveyed in the Deed recorded at Deed Book 395, Page 760.

Parcel 15: 1 of 2 Parcels Holman 40444

All that certain lot, piece or parcel of land together with all improvements thereon and appurtenances thereunto belonging, situate, lying and being in Maysville District, Buckingham County, Virginia, containing 324.75 acres as shown on that certain plat of survey entitled "MAP SHOWING THREE HUNDRED TWENTY-FOUR AND THREE FOURTHS (324.75) ACRES OF LAND IN MAYSVILLE MAGISTERIAL DISTRICT, BUCKINGHAM COUNTY, VIRGINIA, DEED FROM W.H. WHITE TO BEDFORD TIMBERLAND LAND RCD. DB 28 P214, PLAT RCD. DB 27 P 585, SURVEYED FEBRUARY 22, 25 AND APR. 6, 1955 FOR THE CONTINENTAL CAN COMPANY", dated February 22, 25 and April 6, 1955, prepared by Carroll Gillispie, C.L.S., a copy of which is attached with deed recorded in the Clerk's Office of the Circuit Court of Buckingham County as Instrument No. 1355 as Exhibit A-2 reference to which is made for a more specific description of the property, LESS AND EXCEPT, certain tracts or parcels of land conveyed to the Commonwealth of Virginia: one containing 2.78 acres and recorded in said Clerk's Office in Deed Book 34, page 268, and the other containing 3.69 acres of record in said Clerk's Office in Deed Book 40, page 167, leaving 318.28 acres (erroneously described as 318.08 acres in Deed Book 123, page 697 and in Deed Book 58, page 63).

This being a portion of the same property conveyed unto Westvaco Corporation, a Delaware corporation, by deed dated November 15, 1989, from KMI Continental Pulpwood, Inc., and recorded November 17, 1989, in the aforesaid Clerk's Office in Deed Book 161, page 619.

Being the same property conveyed in the Deed recorded at Deed Book 397, Page 518.

Parcel 16: Morgan 40455

All that certain parcel of land lying and being situated in Maysville Magisterial District, Buckingham County, Virginia, approximately 2.5 miles (airline) northwest of Andersonville, consisting of 175.8 acres (being formerly described as 177-1/4 acres, more or less) fronting on the eastern margin of State Route #642, said tract being shown and fully described on a plat of Carroll Gillispie, C.L.S., dated December 19, 1958, which plat is recorded in the Clerk's Office of the Circuit Court of Buckingham County in Deed Book 67, page 549, LESS AND EXCEPT that portion of the property conveyed to the Commonwealth of Virginia by deed from KMI Continental Pulpwood, Inc., dated July 21, 1986, recorded October 15, 1986, in Deed Book 143, page 188 (1.37 acres); AND LESS AND EXCEPT that 10 acres conveyed to Edward W. Rush and Sarah E. Rush by deed from KMI Continental Pulpwood, Inc., dated January 26, 1989, recorded February 10, 1989, in Deed Book 157, page 45.

This is the same real estate conveyed unto Westvaco Corporation by deed dated November 15, 1989, from KMI Continental Pulpwood, Inc., and recorded November 19, 1989, in the aforesaid Clerk's Office in Deed Book 161, page 628.

Being the same land that was conveyed to MWV Community Development and Land Management, LLC from MeadWestvaco Corporation as "TRACT 30: FRIS Morgan Tract #40455, now estimated to contain 164.43 acres, more or less" by deed dated December 31, 2009, and recorded February 12, 2010, in the Clerk's Office of the Circuit Court of Buckingham County as Instrument No. 10-251 in Deed Book 378, page 351, Effective December 31, 2002, Westvaco Corporation, a Delaware Corporation, merged into MeadWestvaco Corporation, a Delaware Corporation, with MeadWestvaco Corporation, a Delaware Corporation, being the surviving corporation.

Being the same property conveyed in the Deed recorded at Deed Book 393, Page 797.

EXHIBIT A-3

Tax Map/Parcel No.'s for Property described on Exhibit A-1

(CDLM)

Tax Map/Parcel Number	Assessed Value
Parcel 1 - 113-3	\$749,000.00
Parcel 2 - 151-14	\$772,400.00
Parcel 3 - 161-10	\$2,235,400.00
Parcel 4 - 46-27	\$130,400.00
Parcel 5 - deleted	\$0
Parcel 6 - 61-34	\$1,937,500.00
Parcel 7 - 61-55	\$641,800.00
Parcel 8 - 62-13	\$129,300.00
Parcel 9 - 62-41	\$72,000.00
Parcel 10 - 62-53	\$624,600.00
Parcel 11 - 73-20	\$10,322,400.00
Parcel 12 - 75-3	\$698,000.00
Parcel 13 - 75-14	\$1,486,600.00
Parcel 14 - 76-1	\$12,200.00
Parcel 15 - 76-9	\$115,600.00
Parcel 16 - 76-21	\$65,000.00
Parcel 17 - 76-22	\$82,200.00
Parcel 18 - 77-1	\$112,000.00
Parcel 19 - 89-14	\$86,900.00
Parcel 20 - 90-1	\$507,500.00
Parcel 21 - 90-32	\$4,703,400.00
Parcel 22 - 91-1	\$32,900.00
Parcel 23 - 91-21	\$1,263,400.00
Parcel 24 - 92-60	\$579,100.00
Parcel 25 - 105-26	\$98,800.00
Parcel 26 - 104-27 (commitment has 105-27)	\$145,600.00
Parcel 27 - Not mapped	\$73,000.00
Parcel 28 - 106-35	\$150,700.00
Parcel 29 - 106-47	\$3,920,200.00
Parcel 30 - 107-32	\$55,400.00
Parcel 31 - 117-5	\$2,869,900.00
Parcel 32 - 117-6	\$50,000.00
Parcel 33 - 117-8	\$20,000.00
Parcel 34 - 120-13	\$129,900.00
Parcel 35 - 120-39	\$109,200.00

Parcel 36 - 120-40	\$107,800.00
Parcel 37 - 131-22	\$9,743,200.00
Parcel 38 - deleted	\$0
Parcel 39 - 156-4	\$641,500.00
Parcel 40 - 156-5	\$54,400.00
Parcel 41 - 157-1	\$77,000.00
Parcel 42 - 157-13	\$44,000.00
Parcel 43 - 157-17	\$479,600.00
Parcel 44 - 166-1	\$574,800.00
Parcel 45 - 166-2	\$801,500.00
Parcel 46 - 167-1	\$128,000.00
Parcel 47 - 55-2	\$432,300.00
Parcel 48 - 68-1	\$702,500.00
Parcel 49 - 68-13	\$909,000.00
Parcel 50 - 69-52	\$773,500.00
Parcel 51 - deleted	\$0
Parcel 52 - 82-4	\$1,539,900.00
Parcel 53 - 85-16	\$94,600.00
Parcel 54 - 85-17	\$1,415,300.00
Parcel 55 - 115-8	\$613,500.00
Parcel 56 - 92-61	\$57,400.00
Parcel 57 - 107-28	\$833,100.00
Parcel 58 - 107-33	\$15,000.00
Parcel 59 - 108-25	\$799,500.00
Parcel 60 - 110-22	\$834,500.00
Parcel 61 - 124-40	\$7,188,700.00
Parcel 62 - 137-36	\$522,700.00
Parcel 63 - 148-7	\$255,000.00
Parcel 64 - 17-8	\$780,300.00
Parcel 65 - 17-9	\$164,200.00
Parcel 66 - 17-13	\$83,300.00
Parcel 67 - 18-2	\$2,328,800.00
Parcel 68 - deleted	\$0
Parcel 69 - 26-72	\$707,300.00
Parcel 70 - deleted	\$0
Parcel 71 - 26-75	\$2,445,700.00
Parcel 72 - deleted	\$0
Parcel 73 - deleted	\$0
Parcel 74 - 39-21	\$1,457,000.00
Parcel 75 - 76-6	\$56,700.00
Parcel 76 - 64-23	\$1,420,600.00
Total	\$74,064,500.00

EXHIBIT A-4

Tax Map/Parcel No.'s for Property described on Exhibit A-2

(LS) Tax Map/Parcel Number	Assessed Value
Parcel 1 – deleted	
Parcel 2 – 158-42	\$390,000.00
Parcel 3 – 208-10	\$740,100.00
Parcel 4 – 35-4	\$578,700.00
Parcel 5 – 80-17	\$289,000.00
Parcel 6 – 136-46	\$512,000.00
Parcel 7 – 8-45	\$649,500.00
Parcel 8 – 10-11	\$235,500.00
Parcel 9 – 26-8	\$174,600.00
Parcel 10 – 26-20	\$717,500.00
Parcel 11 – 51-29	\$259,700.00
Parcel 12 – 64-23	\$1,420,600.00
Parcel 13 – 24-3	\$636,600.00
Parcel 14 – 26-67	\$343,200.00
Parcel 15 – 95-39	\$527,600.00
Parcel 16 – 159-21	\$325,500.00
Total	\$7,800,100.00

EXHIBIT B

RESERVED INTERESTS

NONE.

PERMITTED EXCEPTIONS

(a) zoning, entitlement and other land use, building and fire, health and safety, environmental, wetlands, coastal or marshlands protection, forest protection, so-called "endangered species", and similar acts, codes, ordinances, laws, rules, and regulations by any nation or government, any state, province or other political subdivision thereof, and any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government, including any government authority, agency, department, board, commission or instrumentality of the United States, any state of the United States or any political subdivision thereof ("Governmental Authority");

(b) any lien for current Taxes, assessments or other claims by a Governmental Authority not yet due and payable;

(c) rights (if any) previously granted to or reserved by others to minerals of whatever kind and character, including all coal, iron ore, oil, gas, sulfur, occluded methane and gob gas in coal seams, limestone and other minerals, metals and ores located on, in or under each parcel of real property and all leases, licenses, rights, limitations, restrictions, severances and reservations with respect to the mining, extraction, storage, transmission and removal of the minerals so located;

(d) grant or lease of water rights by persons other than Grantor, including the rights of riparian landowners for the use and the continued flow of the streams and creeks running over, upon, and through the Property, if any;

(e) all existing public and private roads, roadways and streets whether dedicated or undedicated, proposed or opened, and all existing railroad lines, spur tracks, sidings and rights-of-way in connection therewith, and all rights of others to use or access the same;

(f) covenants, conditions, restrictions, encroachments, boundary line disputes, overlaps, gaps, strips and gores, de minimis shortages in area, drainage, slope and other easements, cemeteries and burial grounds, of record, or which would be disclosed by a current and accurate survey of the Property, which do not, individually or in the aggregate, materially interfere with the operation and management of the affected Property as commercial timberlands or are listed on Exhibit C-1;

(g) all existing leases, licenses, permissions and other agreements or arrangements, if any, for roads, bridges, boat ramps, woodyards, nurseries, orchards, forestry practice and research and testing activities, hunting and fishing (including cabins and camps relating thereto) and other residential and recreational purposes which do not, individually or in the aggregate, materially interfere with the operation and management of the affected Property as commercial timberlands, or are listed on Exhibit C-1;

(h) all electric power, telephone, cable, gas, sanitary sewer, storm sewer, water and other utility lines, pipelines, service lines, drains, drainage ditches, dikes, berms, detention

ponds, conduits, tunnels, culverts, roads, bridges, improvements, buildings, fixtures and structures located on, over or under any real property, of record or which would be disclosed by a current and accurate survey of the Property;

(i) all rights of access or access restrictions pursuant to recorded interests, ingress and egress and rights-of-way of record or which would be disclosed by a current and accurate survey of the Property;

(j) any state of facts not described in items (a) through (i) above which a visual inspection or a current and accurate survey of the Property would disclose which do not, individually or in the aggregate, materially interfere with the operation and management of the affected Property as commercial timberlands;

(k) lack of access to any portion of the Property; and

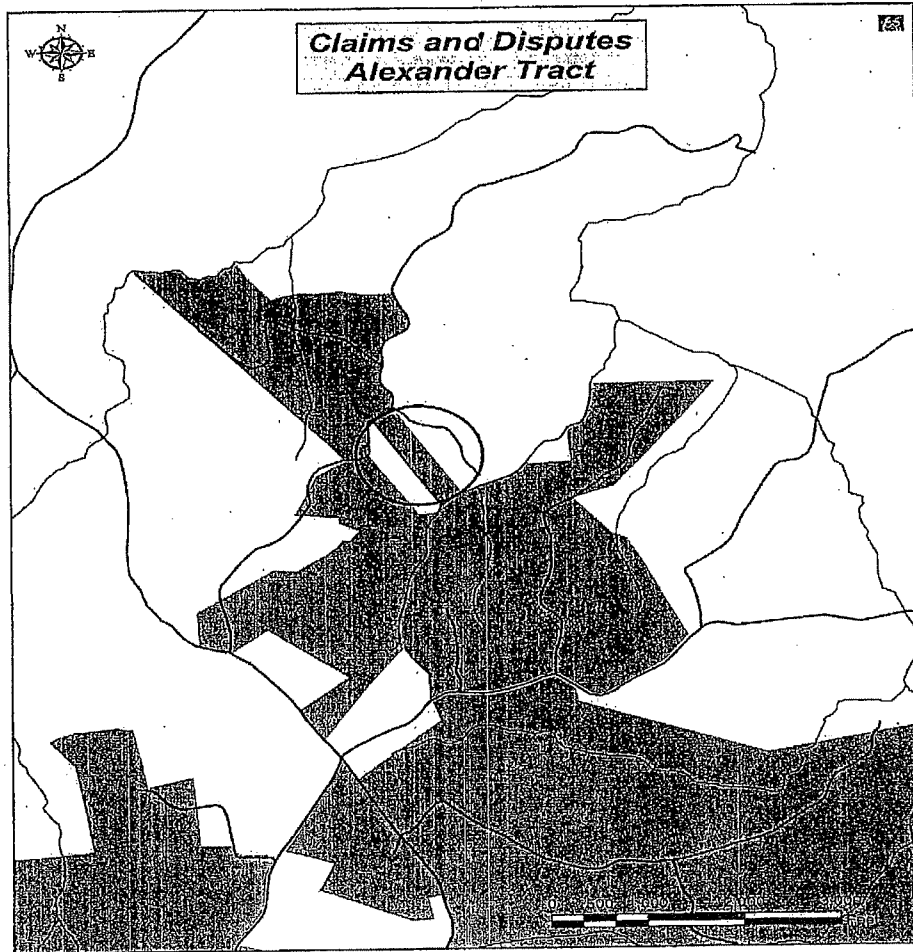
(l) items attached as Exhibit C-2A and Exhibit C-2B.

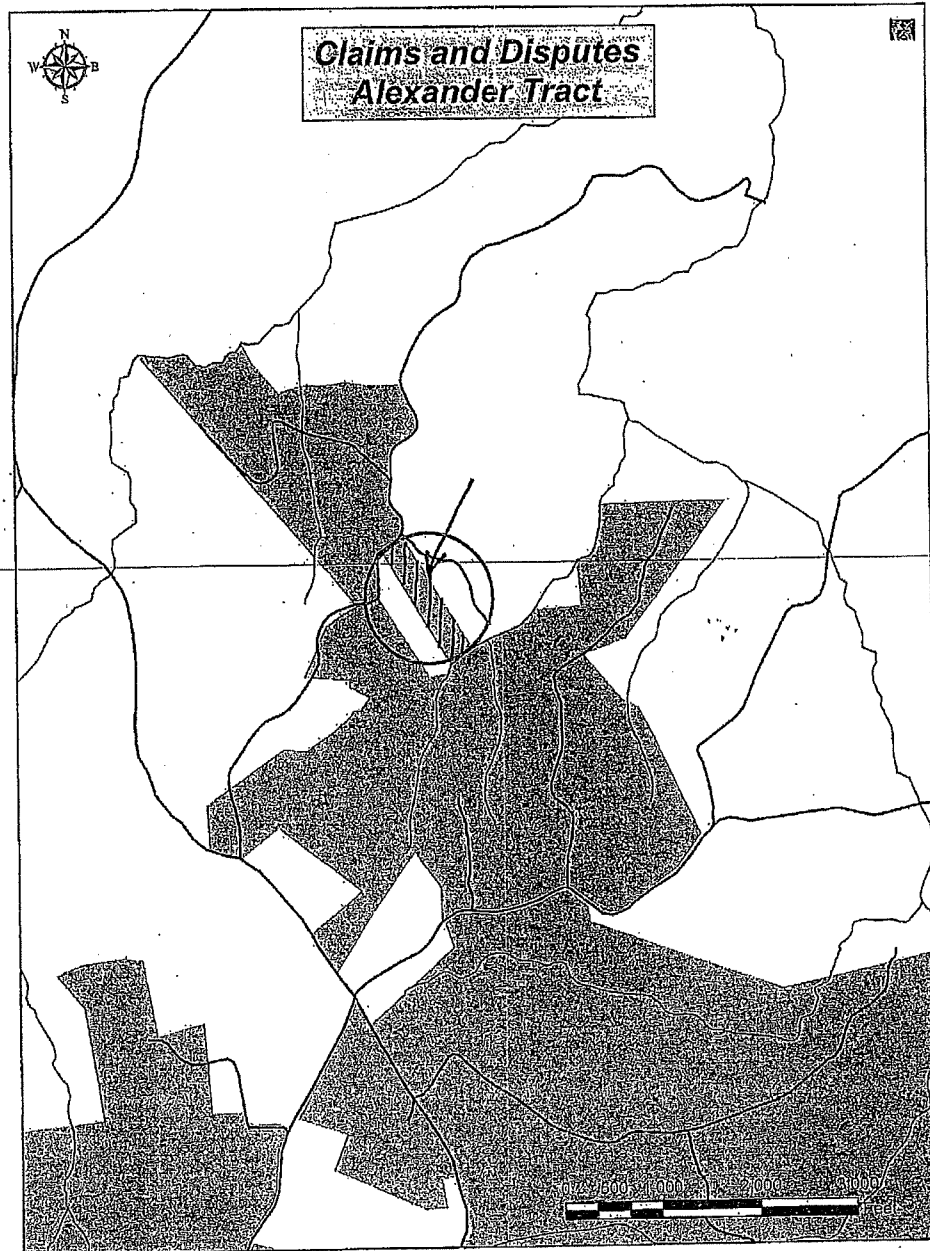
EXHIBIT C-1

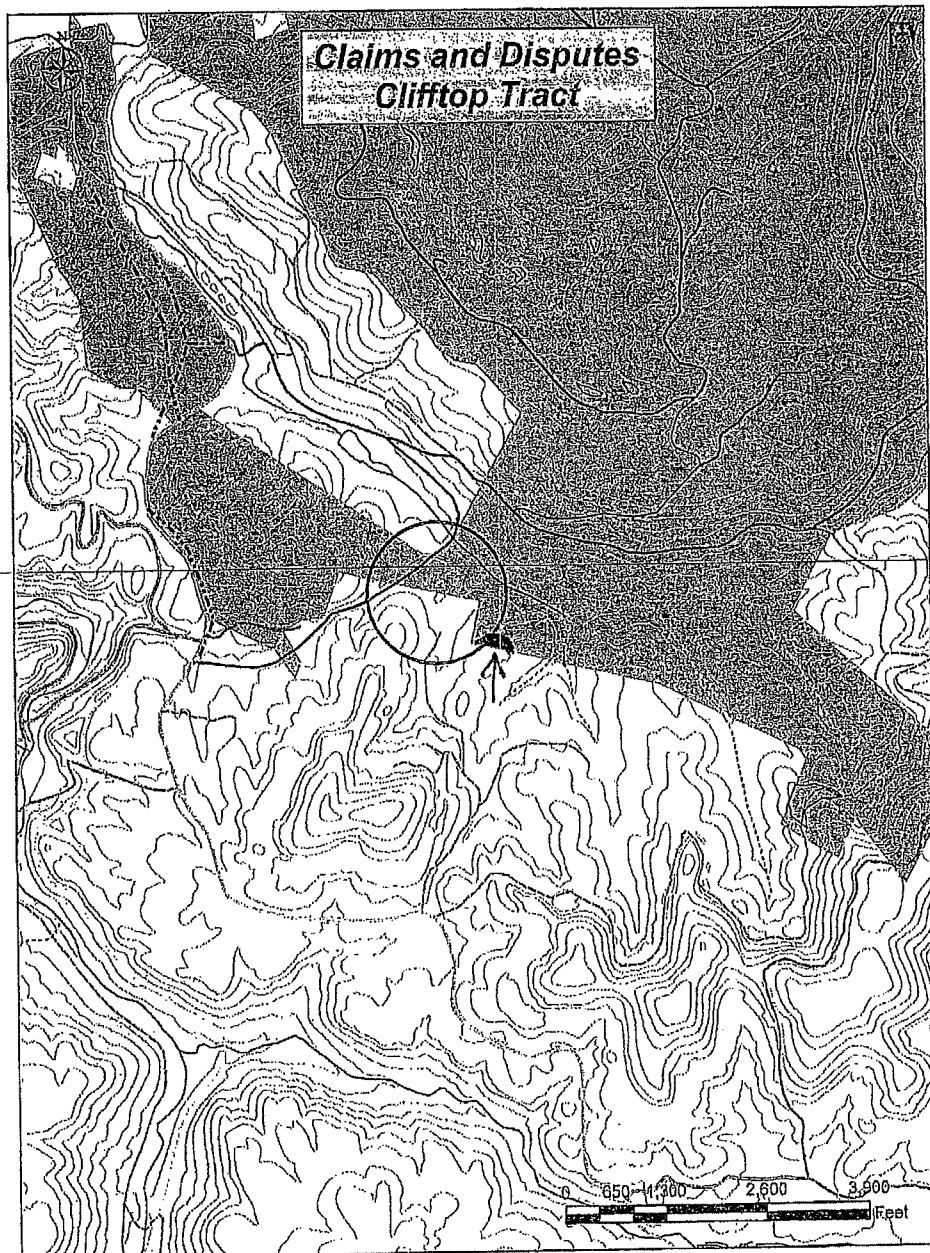
1. Lease Agreement dated September 22, 2002, between MeadWestvaco Corporation and WBNN-FM Radio.

2. Alexander Tract Buckingham, VA

Unresolved boundary line dispute with a neighbor, which has not yet resulted in litigation, concerning the boundary area depicted on the attached map.







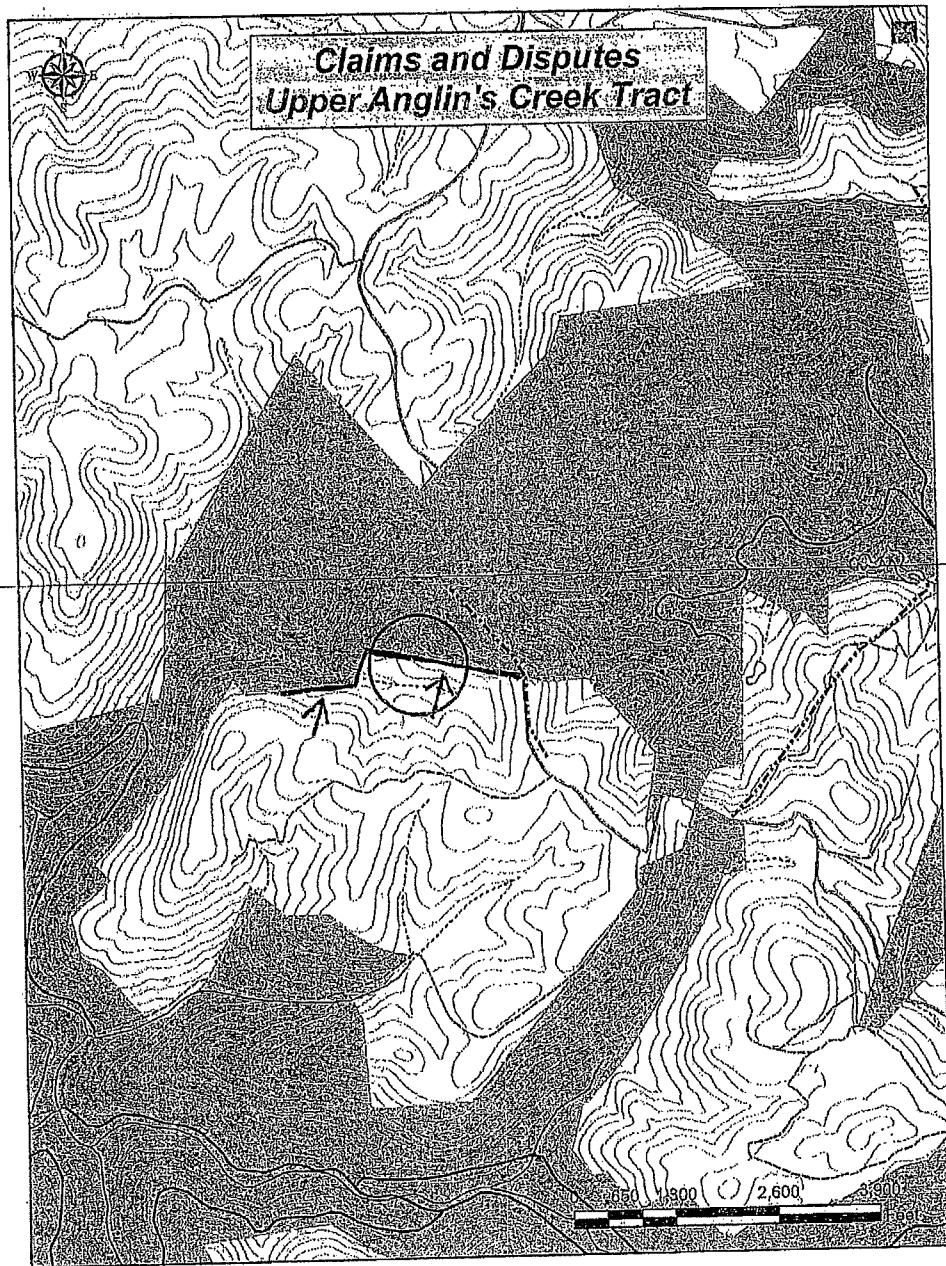


EXHIBIT C-2A

(PERMITTED EXCEPTIONS AS TO PROPERTY DESCRIBED ON EXHIBIT A-1)
(continued)

(Affects Parcel 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 69, 71, 74, 75, 76)

1. This parcel is currently enrolled in the Land Use program. Past, present or future real estate taxes due resulting from the land being enrolled in the Land Use Program.

(Affects Parcel 1)

2. Easements recorded January 11, 2004 in Deed Book 130, page 702.
3. Rights of others in and to right of way as established in Deed of Right of Way recorded August 28, 1975 in Deed Book 98, page 171.

(Affects Parcel 3)

4. Easement to Central Telephone Company recorded November 22, 1976 in Deed Book 102, page 632.

(Affects Parcel 4)

5. Boundary Line Agreement as recorded in Deed dated May 23, 2008 in Deed Book 360, page 287.

(Affects Parcel 6)

6. Easement Deed to Commonwealth of VA dated July 27, 1989, in Deed Book 162, page 43.
7. Boundary Line Agreement W/Johnson dated September 16, 1985 in Deed Book 140, page 574.

(Affects Parcel 8)

8. Right of others in and to the use of the "Fire Trail" and the "Woods Road" as shown on plat of survey by William W. Dickerson, Jr., CLS, dated November 17, 2008, recorded in Plat Cabinet A, Slide 193E.

(Affects parcel 10)

9. Easement granted Transcontinental Gas Pipe Line Corporation dated April 14, 1950, recorded June 5, 1950, in Deed Book 52, page 85, for transportation of gas, oil, etc.

10. Reservation of ½ acre for a cemetery with full rights of ingress and egress as reserved in Deed Book 52, page 172.
11. Right of ingress and egress to the cemetery situated on the insured premises and title to such portion of the insured premises as is embraced within the bounds of the cemetery.
12. Colonial Pipeline Easement recorded November 6, 1965 in Deed Book 74, page 530.

(Affects Parcel 11)

13. Roadways as shown on plat recorded with Affidavit recorded January 3, 2003 in Deed Book 284, page 513 and Plat Cabinet A, page 123F.
14. Affidavit recorded in Deed Book 378, page 273.
15. Affidavit and Plat recorded in Deed Book 107, page 445.
16. Easement to American Telephone and Telegraph Co. of VA dated July 5, 1963 in Deed Book 70, page 519.
17. Boundary line agreement dated April 13, 1977 in Deed Book 104, page 515.
18. Easement to Central Telephone Co. of VA in Deed Book 104, page 358.
19. Rights of others in and to the right of way contained in Easement granted to Westvaco Corp at Deed Book 94, page 571.
20. Deed of Easement recorded August 18, 1994 in Deed Book 194, page 704.
21. Boundary Agreement as mentioned in Sch. A, recorded in Deed Book 23, page 302.

(Affects Parcel 13)

22. Easement to W. Kidd Central Telephone Co. of VA dated February 24, 1978 in Deed Book 108, page 477.
23. Deed to Commonwealth of VA dated February 9, 1990 in Deed Book 164, page 122.

(Affects Parcel 14, 16, 17, 18)

24. Parcel does not appear to abut a public road.

(Affects Parcel 16)

25. Subject to any and all matters shown on the plat of survey by Carroll Gillispie, C.L.S/S.B.C., dated August 10, 1963 and May 6, 1964, and recorded in Deed Book 72, at Page 324.

(Affects Parcel 17)

26. Boundary Line Agreement recorded December 9, 1981 in Deed Book 123, page 208.

(Affects Parcel 18)

27. Rights of parties of appeal with respect to Chancery Suit styled Jefferson M. Catlett V. Mary Carroll Montuszko, et al, Case No. CL 11000071-0.
28. Title to that portion of the property within the bounds of cemetery and rights of others for ingress and egress to the aforementioned cemetery.

(Affects Parcel 19)

29. Affidavit recorded January 3, 2003 in Deed Book 284, page 513.

(Affects Parcel 21)

30. Easement to Co. of Buckingham dated May 20, 1955 in Deed Book 59, page 147.
31. Easement to Commonwealth of VA dated December 2, 1966 in Deed Book 76, page 476.

(Affects Parcel 23)

32. Deed to Commonwealth of VA for improvements to Rt 661, deed dated March 15, 1988 in Deed Book 152, page 472.

(Affects Parcel 25)

33. Subject to matters shown on the plat of survey by Carroll Gillispie dated June 22, 1963 and recorded in Deed Book 194, at Page 45, as follows:
- a) Old road shown on the eastern boundary line of 100.9 acres.
34. Deed to Commonwealth of Va. Recorded January 4, 1979, in Deed Book 111, Page 576.

(Affects Parcel 26)

35. Roadways as shown on Plat at Deed Book 90, page 440, 441.

(Affects Parcel 30)

36. Easement to Peter Francisco Soil and Water Conservation District of VA dated September 8, 1976 in Deed Book 108, page 445.
37. Deed of Easement recorded April 24, 1991 in Deed Book 170, page 314.
38. Easement to Central Telephone Co of VA dated November 30, 1988 in Deed Book 158, page 128.

39. Easement to Central Telephone Co. of Va recorded November 22, 1976 in Deed Book 103, page 7.
40. Easement to Colonial Pipeline Co dated August 21, 1980 in Deed Book 119, page 597.
41. Deed to Commonwealth of VA dated May 20, 1982 in Deed Book 125, page 65.
42. Deed of Easement dated March 18, 1991 in Deed Book 170, page 327.
43. Deed of Easement dated March 18, 1991 in Deed Book 193, page 23.

(Affects Parcel 21, 30, 31, 37)

44. Easement to Cathodic Protection Easement recorded August 2, 2004 in Deed Book 305, page 275.
45. Easement to VYVX of Va., Inc., recorded July 29, 1997 in Deed Book 221, page 295.
46. Easement to Colonial Pipeline Ea. Dated August 21, 1980 in Deed Book 119, page 604.
47. Easement to Transcontinental Gas Pipe Line Corp, dated February 23, 1987 in Deed Book 145, page 164.

(Affects Parcel 31)

48. Easement to Colonial Pipeline Co recorded May 21, 1979 in Deed Book 113, page 460.
49. Easement Transcontinental Gas Pipe Line Corp recorded August 1950 in Deed Book 51, page 585.
50. Boundary Line Agreement recorded May 8, 2006 in Deed Book 329, page 511.

(Affects Parcel 33)

51. Rights of the public in and to that portion of the insured property lying within the bounds of State Route 662, as shown on Tax Map Sheet 120, Parcel 39.
52. Title to that portion of the insured property lying within the bounds of the cemetery reserved in instrument recorded in Deed Book 210, page 299; together with the rights of access thereto.

(Affects Parcel 37)

53. Easement to Central Va. Electric Co-op recorded November 22, 1976 in Deed Book 103, page 7.
54. Easement Transcontinental Gas Pipe Line Corporation recorded March 28, 1950 in Deed Book 51, page 585.

- 55. Cathodic Protection Easement recorded August 2, 2004 in Deed Book 305, page 273.
- 56. Easement to Commonwealth of VA recorded April 17, 1996 in Deed Book 209, page 384.
- 57. Commonwealth of VA dated October 5, 1978 in Deed Book 112, page 101.
- 58. Easement to Colonial Pipeline recorded June 25, 1979 in Deed Book 114, page 53.

(Affects Parcel 39)

- 59. Pipeline Easement to Colonial Pipeline Co. recorded December 09, 1980 in Deed Book 119, page 611.

(Affects Parcel 40)

- 60. See letter of Agreement recorded November 12, 2003 in Deed Book 296, page 133

(Affects Parcel 44)

- 61. See Reservation of Cemetery recorded in Deed Book 90, page 730.

(Affects Parcel 45)

- 62. Easement recorded January 31, 2007 in Deed Book 341, page 181.

(Affects Parcel 50)

- 63. Order entered September 28, 2005 in Deed Book 321, page 215.

(Affects Parcel 53)

- 64. Rights of others in and to the continued uninterrupted flow of the creek and "drainage" as shown on plat of survey made by Gregory A. Watson, L.S., dated August 22, 2006, recorded with deed recorded in Deed Book 343, page 716.
- 65. Rights of others in and to the use of that portion of the insured premises lying within the bounds of the soil road crossing the insured premises as shown on plat of survey made by Gregory A. Watson, L.S., dated August 22, 2006, recorded with deed recorded in Deed Book 343, page 716.

(Affects Parcel 54)

- 66. Rights of others for ingress and egress over and across the private roadway running from said property to State Route 696.
- 67. Physical survey prepared by Woodrow K. Cofer, Inc., dated April 4, 1985 discloses:
 - a. Old road thru said property as shown on plat.
- 68. Easement to Colonial Pipeline Company in Deed Book 69, page 378.

(Affects Parcel 55)

69. Easement to Colonial Pipeline Company recorded April 8, 1963 in Deed Book 70, page 180.

(Affects Parcel 56)

70. Easement ease to use private road from Samuel Mosley and wife dated July 12, 1988 in Deed Book 159, page 364.

(Affects Parcels 59)

71. Easement granted County of Buckingham dated June 16, 1965, recorded June 22, 1965, in Deed Book 74, Page 101, 40' right of way for a road/street together with such additional width as may be necessary for the extension and maintenance of road slopes and / or ditches.

(Affects Parcels 60)

72. Deed of Easement to Commonwealth of VA for improvement to Rt 631 recorded August 19, 1998 in Deed Book 234, page 467.
73. Easement to Colonial Pipeline recorded May 2, 1963 in Deed Book 70, page 265.

(Affects Parcel 61)

74. Deed of Easement to Commonwealth of VA for improvement to Rt 665 recorded September 30, 1985 in Deed Book 137, page 525.
75. Easement to VA Elec. & Power Com, dated November 7, 1958 in Deed Book 63, page 325.

(Affects Parcel 63)

76. Easement granted Central Virginia Electric Cooperative dated July 14, 1975, recorded August 19, 1975, in Deed Book 98, page 58, for a 50' right-of-way for the purpose of transmitting.

(Affects Parcel 67)

77. Easement to Va Telephone & Telegraph recorded July 17, 1967 in Deed Book 71, page 253.
78. Easement to Appalachian Electric Power Co, dated August 11, 1949 in Deed Book 50, page 419.

(Affects Parcel 75)

79. Rights of other in and to the use of that portion of the insured premises lying within the bounds of the soil road as shown on plat of survey made by William W. Dickerson, Jr., L.S., dated January 3, 2007.

(Affects Parcel 76)

80. Matters contained in Affidavit recorded in Deed Book 285, page 670.

(Affects Parcel 77)

81. Intentionally Deleted.
82. Rights of ingress and egress to cemetery situated on insured premises and title to such portion of insured premises as is embraced within the bounds of the cemetery mentioned on the Notes in the Plat recorded at Plat Book 4, Page 1 .
83. Easement granted Commonwealth of Virginia by deed dated May 20, 1980, recorded May 6, 1981, in Deed Book 121, Page 59, to construct, improve and maintain and drain ditches or other drainage facilities for proper and adequate drainage for State Route #606.
84. Intentionally Deleted.

(Affects Parcel 78)

85. Rights of others in an to the easement for ingress and egress as contained in Deed of Easement recorded in Deed Book 167, page 670, grants 501 R/W for access to our premises

EXHIBIT C-2B

(PERMITTED EXCEPTIONS AS TO PROPERTY DESCRIBED ON EXHIBIT A-2)
(continued)

(Affects Parcels 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16)

1. This parcel is currently enrolled in the Land Use program. Past, present or future real estate taxes due resulting from the land being enrolled in the Land Use Program.

(Affects Parcel 3)

2. Easement granted American Telephone and Telegraph Company dated June 5, 1963, recorded July 17, 1963, in Deed Book 70, page 543, for communication lines and systems.
3. Easement granted Department of Conservation and Economic Development, Division of Forestry dated May 17, 1963, recorded September 12, 1963, in Deed Book 71, page 155, for a forest truck trail 24' in width and approximately ¼ of a mile in length.
4. Easement granted Department of Conservation and Economic Development, Division of Forestry dated May 13, 1967, recorded May 12, 1967, in Deed Book 77, page 160, for a forest trail 25' in width and approximately 1 mile in length.
5. Easement granted Department of Conservation and Economic Development, Division of Forestry dated November 17, 1967, recorded November 30, 1967, in Deed Book 78, page 99, for a forest truck trail, 30' in width and approximately 1 mile in length.
6. Deed of Easement recorded November 21, 1991, in Deed Book 173, page 747.

(Affects Parcel 4)

7. Easement granted to Commonwealth of Virginia (with reverter) by instrument dated November 14, 1986 recorded December 3, 1986, in Deed Book 143, Page 665.
8. Rights of other in and the use of Old Mill Road (Route 740) and to the cemetery as described in deed dated December 29, 1954, recorded on December 30, 1954 in Deed Book 58, Page 61.
9. Title to that portion of the Land lying within the bounds of the flavius Cobb Family Cemetery, together with the right of ingress and egress.

(Affects Parcel 6)

10. Easement granted Virginia Electric and Power Company dated November 20, 1950, recorded January 3, 1951, in Deed Book 52, page 577, for a pole line.

11. Easement granted the Commonwealth of Virginia by two deeds recorded in Deed Book 76, page 8, and Deed Book 140, page 472, for the proper execution, construction and maintenance of work by the Commonwealth of Virginia for three drainage outlet ditches.

(Affects Parcel 7)

12. Easements granted Virginia Telephone and Telegraph Company dated February 15, 1951, recorded March 5, 1952, in Deed Book 54, page 209, for a pole line.
13. Easement granted Central Virginia Electric Cooperative dated January 30, 1981, recorded February 24, 1981, in Deed Book 120, page 354, for a pole line.
14. Easement granted Commonwealth of Virginia dated July 20, 1962, recorded January 23, 1963, in Deed Book 69, page 461, for the proper construction and maintenance of drainage ditches.

(Affects Parcel 8)

15. Easement granted to Columbia Gas of Virginia, Inc., dated April 17, 2009 recorded on May 28, 2009 in Deed Book 370, Page 984.

(Affects Parcel 11)

16. Deed of Easement recorded August 22, 1990 in Deed Book 166, page 572.

(Affects Parcel 12)

17. Easement to Transcontinental Gas Pipe Line Corporation as recorded in Deed Book 307, page 603.

(Affects Parcel 15)

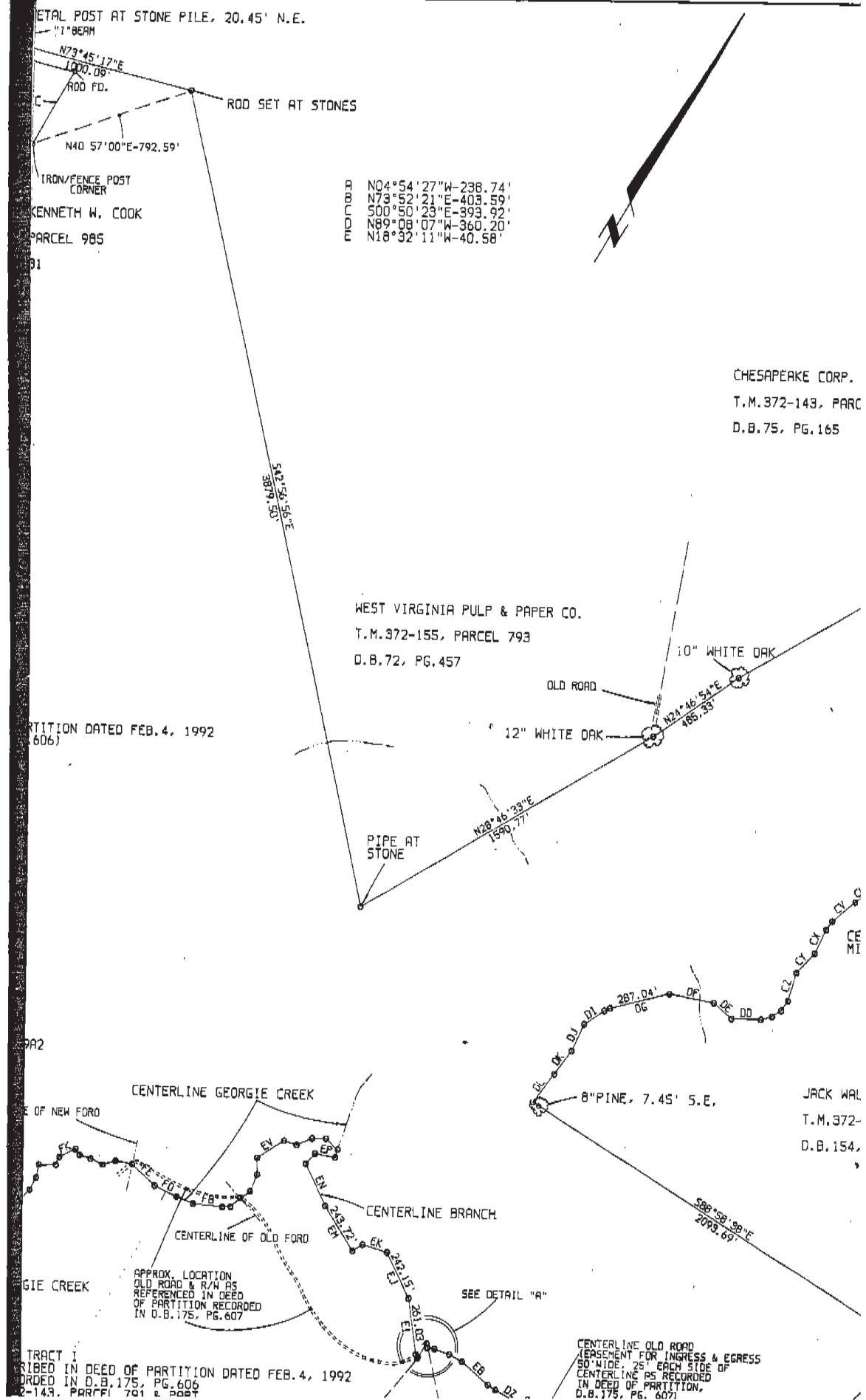
18. Easement granted Central Virginia Electric Cooperative dated November 20, 1979, recorded January 20, 1980, in Deed Book 116, Page 184, for a 40' right-of-way.

(Affects Parcel 16)

19. Easement granted Commonwealth of Virginia dated July 21, 1986, recorded October 15, 1986, in Deed Book 143, Page 188, for a permanent right-of-way and easement to use area for the proper construction and maintenance of a drainage outlet ditch.

035 Rec Fee	1.00	VIRGINIA: CLERK'S OFFICE OF THE CIRCUIT COURT OF BUCKINGHAM COUNTY
St. R. Tax	204661.50	
Co. R. Tax	68220.50	
Transfer	48.50	The foregoing instrument with acknowledgement
Clerk	1.50	was admitted to record on 12/12/2012
Lib.(145)	5.00	at 12:15 P.M. in D.B. 412 Page(s) 91-945
T.T.F.		
Grantor Tax	81853.20	Tests: MALCOLM BOOKER, JR., CLERK
036 Proc. Fee	20.00	BY: <i>Ann Bryant</i> , DEPUTY CLERK
Total \$	374829.00	

Plat Book 3, Page 74 - Parcel Number 17-8



PLAT BK 3-74

RTITION DATED FEB. 4, 1992
(606)

WEST VIRGINIA PULP & PAPER CO.
T.M. 372-155, PARCEL 793
D.B. 72, PG. 457

OLD ROAD

10" WHITE OAK

12" WHITE OAK

PIPE AT
STONE

N28°46'33"E
1590.77'

N21°46'54"E
495.33'

CE
MI

9A2

CENTERLINE GEORGIE CREEK

E OF NEW FORD

GE CREEK

APPROX. LOCATION
OLD ROAD & R/W AS
REFERENCED IN DEED
OF PARTITION RECORDED
IN D.B. 175, PG. 607

CENTERLINE BRANCH

CENTERLINE OF OLD FORD

SEE DETAIL "A"

CENTERLINE OLD ROAD
(EASEMENT FOR INGRESS & EGRESS
50' WIDE, 25' EACH SIDE OF
CENTERLINE AS RECORDED
IN DEED OF PARTITION,
D.B. 175, PG. 607)

TRACT I
DESCRIBED IN DEED OF PARTITION DATED FEB. 4, 1992
RECORDED IN D.B. 175, PG. 606
2-143, PARCEL 791 & PART
OF PARCEL 790A)

CLAYTON C. BRYANT
T.M. 372-141, PARCEL 776

PART OF TRACT I
AS DESCRIBED IN DEED
OF PARTITION DATED
FEB. 4, 1992 AND
RECORDED IN D.B. 175,
PG. 606 (T.M. 372-143,
PART OF PARCEL 790B)

TO ROUTE 652

WESTVACO

T.M. 372-143, PARCEL 794
D.B. 161, PG. 612

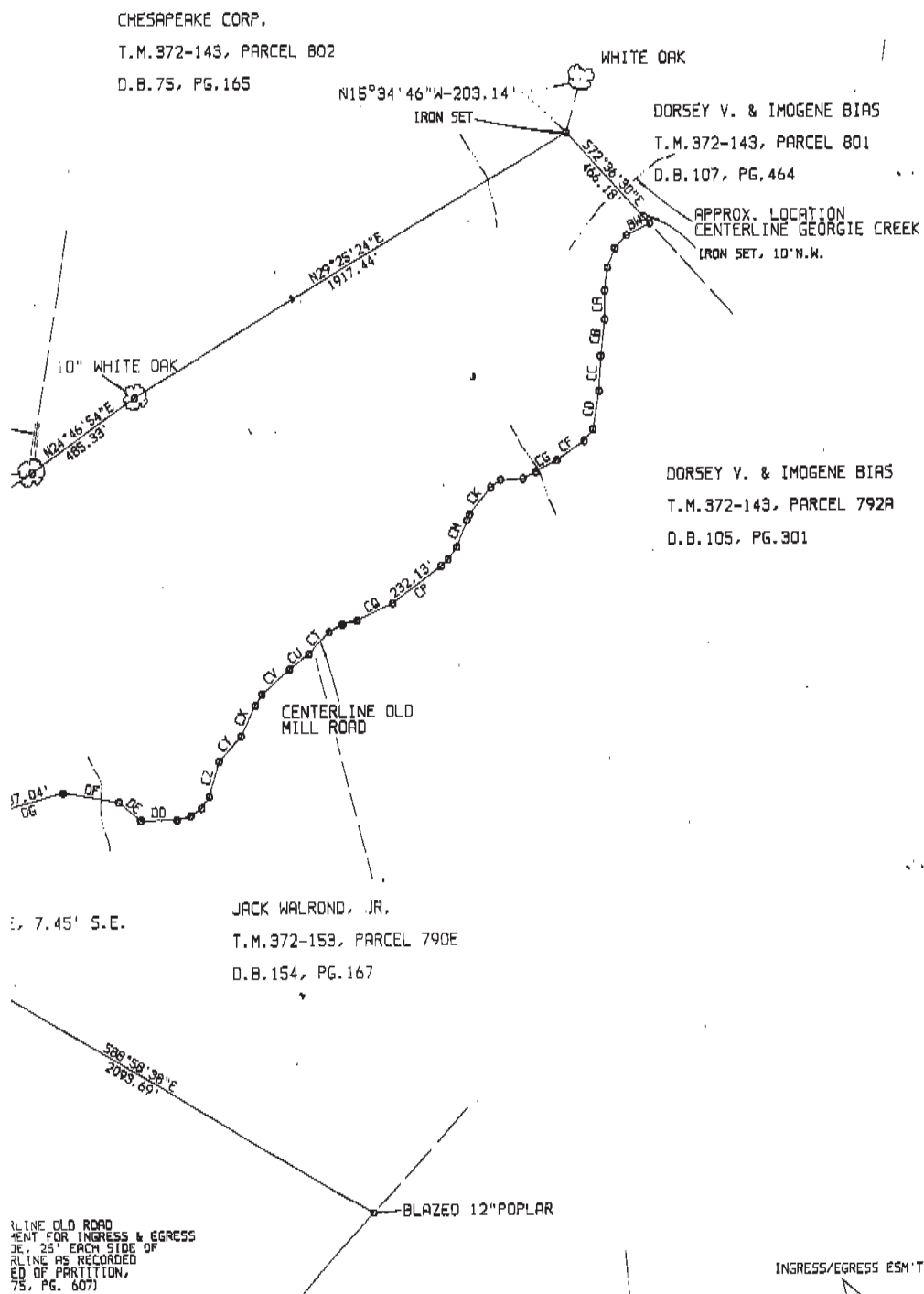
IRON IN ROCK PILE

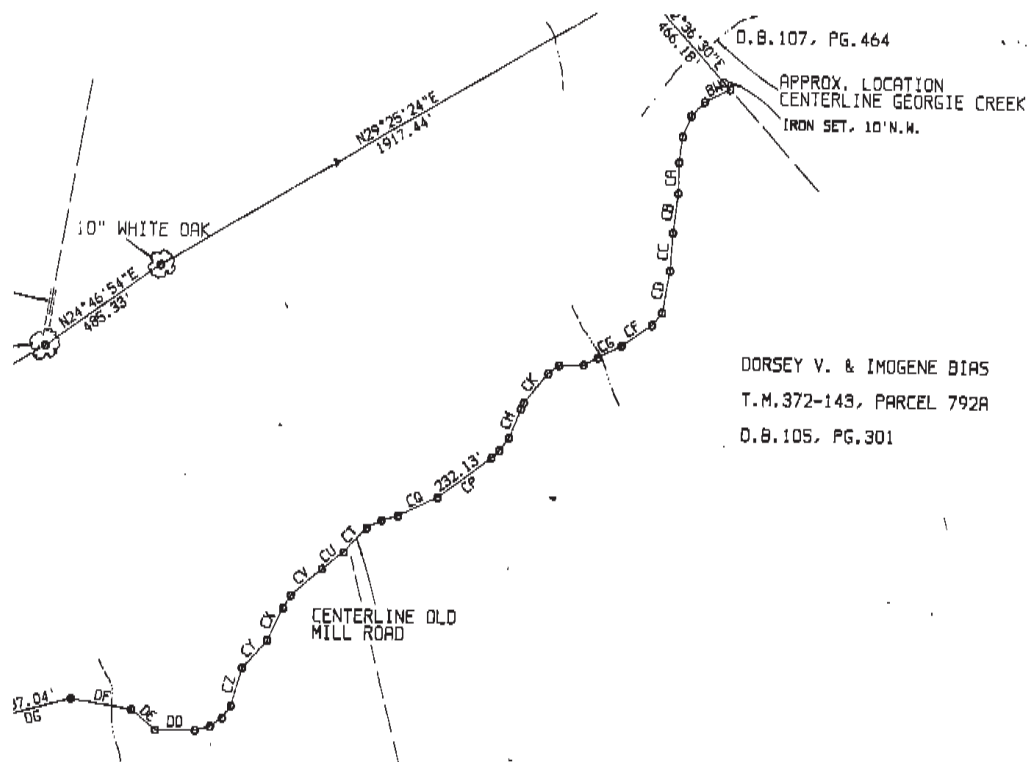
See DB 183 PG 819 also see plat BK#3 pg 55
VIRGINIA In the Clerk's Office of the Circuit Court of Buckingham County, 4-8 1993
the foregoing plat was this day presented in said office and thereupon together with the certificate
hereto annexed, admitted to record.

ATTEST: MALCOLM BOOKER JR., CLERK
BY: *[Signature]* DEP. CLERK

MAKE THIS LINE 1.6" (APPROX. 1 19/32")
LONG TO ACHIEVE SCALE 1" = 2000'

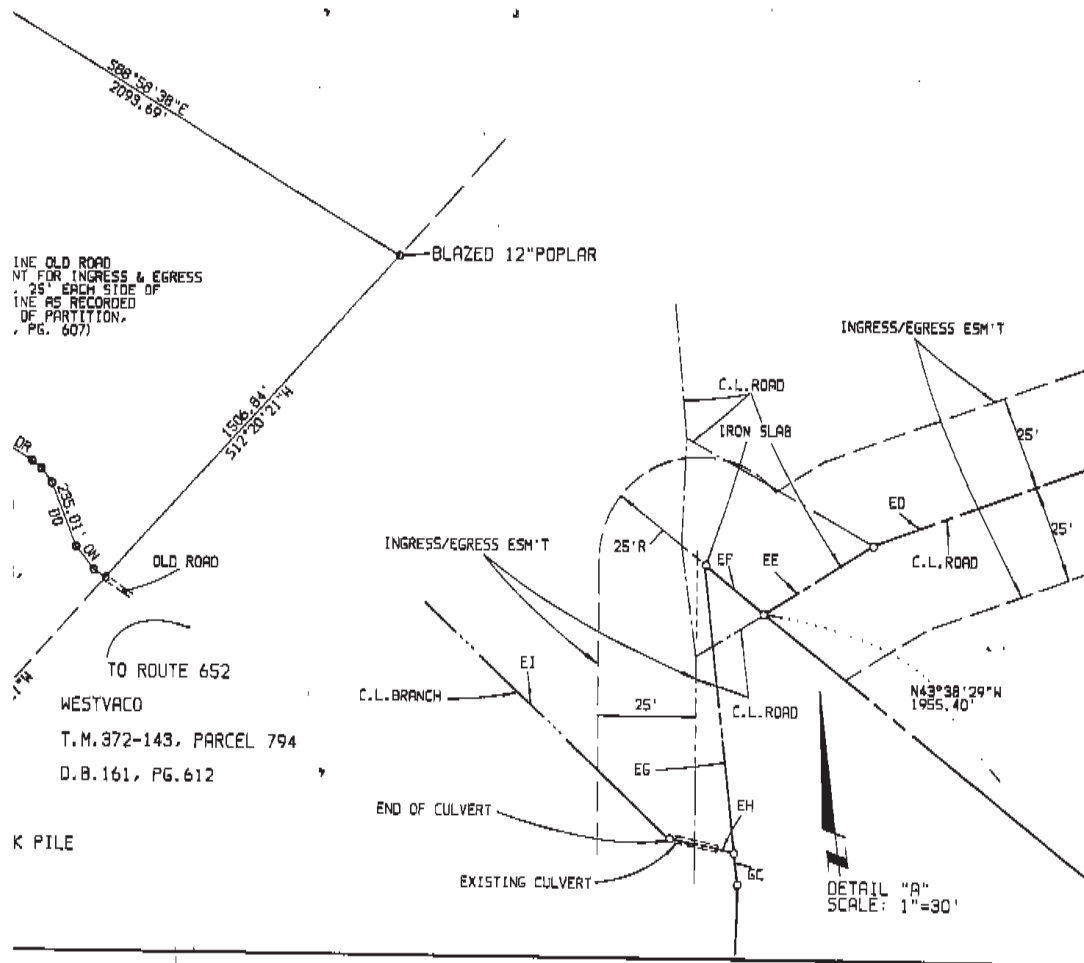
#3 Pg 74





7.45' S.E.

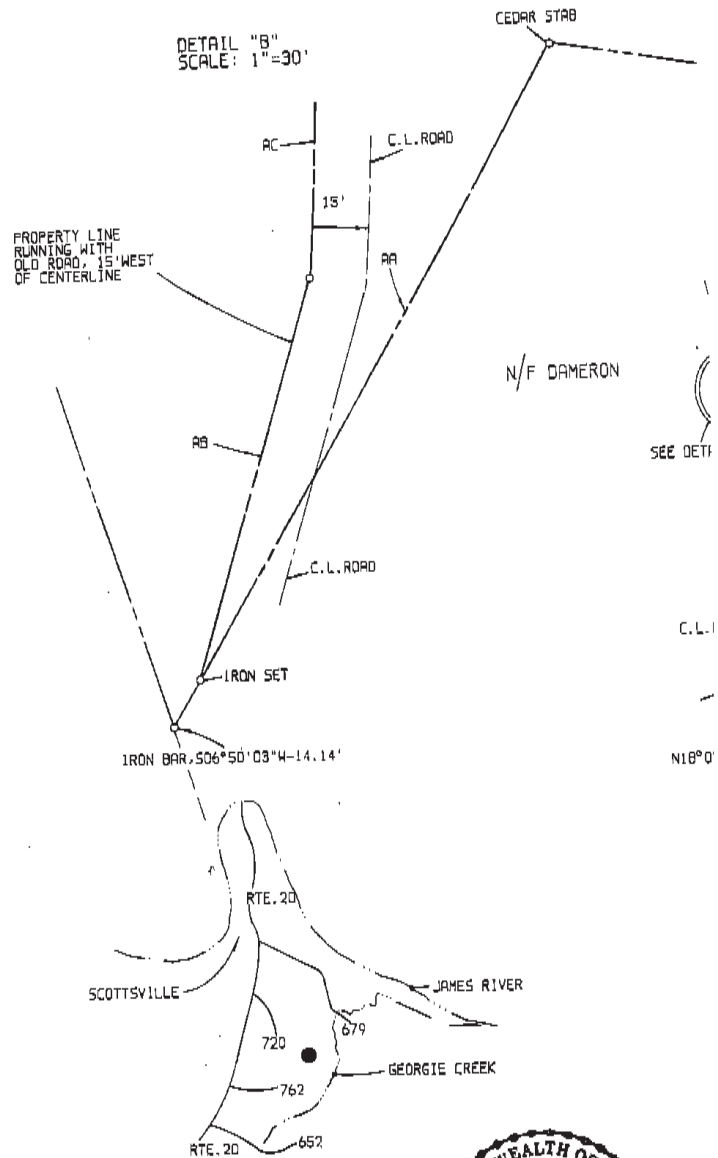
JACK WALROND, JR.
T.M.372-153, PARCEL 790E
D.B.154, PG.167



T.M. 372-155, PARCEL 9491

D.B. 123, PG. 416

BV	N09°28'54"W	28.67'
BS	S33°17'58"W	99.06'
BX	S12°58'28"W	65.62'
BY	S08°31'59"E	78.60'
BZ	S22°49'26"E	85.78'
CB	S26°46'30"E	107.50'
CC	S23°03'39"E	135.94'
CD	S26°57'14"E	132.05'
CE	S20°02'00"E	146.68'
CF	S08°31'09"W	54.62'
CG	S25°32'22"W	127.31'
CH	S32°22'37"W	91.70'
CI	S57°43'03"W	54.92'
CJ	S24°29'22"W	86.03'
CK	S09°24'25"W	46.42'
CL	S03°52'14"E	130.02'
CM	S08°13'39"E	22.96'
CN	S06°34'31"W	106.28'
CO	S17°03'34"W	56.06'
CP	S23°08'27"W	34.98'
CQ	S34°44'27"W	232.13'
CR	S44°05'27"W	151.40'
CS	S31°19'15"W	58.86'
CT	S19°37'59"W	58.21'
CU	S22°34'27"W	113.05'
CV	S19°28'25"W	95.99'
CW	S02°23'05"W	140.69'
CX	S04°09'51"E	50.08'
CY	S12°07'10"W	122.81'
CZ	S13°59'20"E	127.96'
DB	S04°26'31"W	135.19'
DC	S26°05'46"W	54.37'
DD	S45°07'23"W	50.60'
DE	S59°54'35"W	53.70'
DF	N80°27'49"W	138.89'
DG	S70°08'52"W	108.69'
DH	S45°00'59"W	214.55'
DI	S35°25'00"W	267.04'
DJ	S25°49'01"W	29.58'
DK	S06°01'06"E	113.58'
DL	S06°03'38"W	137.34'
DM	S06°00'05"W	135.11'
DN	N88°08'17"W	165.46'
DO	N68°42'34"W	48.93'
DP	N51°02'38"W	100.30'
DQ	N66°34'50"W	235.01'
DR	N79°47'07"W	61.80'
DS	N88°23'39"W	43.28'
DT	N71°49'09"W	107.66'
DV	N62°19'57"W	25.00'
DW	N79°54'18"W	114.08'
DX	N80°39'32"W	20.66'
DY	S88°10'06"W	113.70'
DZ	S87°38'57"W	133.22'
EA	S79°17'51"W	81.50'
EB	S89°37'53"W	88.05'
EC	N87°46'42"W	131.98'
ED	N79°52'34"W	43.90'
EE	S88°09'46"W	162.93'
EF	S77°54'56"W	69.54'
EG	S65°52'18"W	74.20'
EH	N43°38'29"W	32.21'
EI	S01°45'23"W	20.05'
EJ	N70°18'58"W	75.06'
EK	N38°45'17"W	17.54'
EL	N56°31'59"W	261.03'
EM	S75°33'19"W	242.15'
EN	S27°12'47"W	119.94'
EO	N63°10'35"W	56.60'
EP	N56°26'35"W	243.72'
EQ	N11°21'02"E	216.67'
ER	N70°08'46"E	65.48'
ES	N15°54'39"W	96.55'
ET	N78°19'08"W	38.43'
	S59°18'27"W	73.95'
	S36°02'36"W	65.56'
		79.31'



PLAT SHOWING TRACT II.

TAX MAP 372-143, PARCELS 790, 790D

AND PARTS OF PARCELS 790A, & 790B

JARL B. HANNUM, ET AL

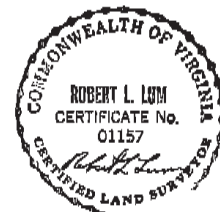
SLATE RIVER DISTRICT BUCKINGHAM COUNTY, VIRGINIA

SCALE: 1" = 400' DATE: APRIL 7, 1992 REVISED: JUNE 28, 1992

ROBERT L. LUM REVISED: MARCH 31, 1993

LAND PLANNING & SURVEYING

PALMYRA, VIRGINIA



NO.	BEARING	DISTANCE
AA	S06°50'03"W	188.40'
AB	N07°14'42"W	107.91'
AC	N18°55'51"W	85.60'
AD	N27°47'18"W	223.17'
AE	N09°37'24"W	158.39'
AF	N14°02'12"W	175.47'
AG	N25°14'40"W	219.47'
AH	N17°43'09"W	278.50'
AI	N14°00'22"W	237.22'
AJ	N04°28'51"W	301.81'
AK	N05°10'51"E	50.43'
AL	N14°01'22"E	151.92'

NO.	BEARING	DISTANCE
EU	S77°14'11"W	61.49'
EV	S26°40'55"W	149.08'
EW	S31°09'08"E	79.04'
EX	S08°33'59"E	83.39'
EY	S24°57'39"W	55.85'
EZ	S16°56'35"W	61.00'
FA	S57°40'10"W	39.91'
FB	S64°24'50"W	138.29'
FC	S81°51'04"W	85.57'
FD	S84°47'40"W	115.02'
FE	N78°34'41"W	144.92'
FF	S69°52'19"W	79.57'
FG	S42°46'29"W	62.95'
FH	S84°45'06"W	62.99'
FI	S77°00'01"W	55.75'
FJ	N66°15'17"W	32.39'
FK	N33°31'52"W	67.01'
FL	S08°14'45"E	39.25'
FM	S58°52'26"W	83.13'
FN	S17°34'30"E	61.88'
FO	S00°47'57"E	63.69'
FP	S13°39'21"W	159.85'
FQ	S50°08'07"W	59.91'
FR	S42°37'20"W	85.80'
FS	S11°45'26"W	104.81'
FT	S61°56'45"W	102.22'
FU	S63°26'43"W	55.24'
FV	S40°37'07"W	64.32'
FW	N19°50'17"W	52.96'
FX	N88°56'17"W	37.01'
FY	S69°01'31"W	49.69'
FZ	N50°14'38"W	38.43'
GA	S43°03'17"W	0.94'
GB	N18°02'12"W	235.49'
GC	S01°45'23"W	8.39'

RONALD E. C
T.M.372-153
D.B.153, PG

RONALD E. DORRIER
T.M.372-153, PARCEL 950B
D.B.104, PG.281

TO ROUTE 762

OI	N05°21'45"E	280.50'
OJ	N10°24'34"E	74.26'
OK	N02°02'29"E	98.09'
OL	N03°28'13"E	60.23'
OM	N09°45'33"E	190.38'
ON	N21°35'45"E	72.79'
OO	N34°06'26"E	158.86'
OP	N37°58'59"E	254.73'
OQ	N30°08'52"E	105.10'
OR	N13°32'08"E	83.55'
OS	N11°43'57"E	116.01'
OT	N12°57'02"E	60.60'
OU	N04°17'57"W	227.22'
OV	N09°28'54"W	28.67'
OW	S33°17'58"W	99.06'
OX	S12°58'28"W	65.62'
OY	S08°31'59"E	78.60'
OZ	S22°49'26"E	85.78'
CA	S29°46'30"E	107.50'
CB	S23°03'39"E	135.94'
CC	S26°57'14"E	192.05'
CD	S20°02'00"E	146.68'
CE	S08°31'09"W	54.62'
CF	S25°32'22"W	127.31'
CG	S32°22'37"W	91.70'
CH	S32°22'37"W	54.92'
CI	S57°43'03"W	86.03'
CJ	S24°29'22"W	46.42'
CK	S09°24'25"W	130.02'
CL	S03°52'14"E	22.96'
CM	S08°13'39"E	106.28'
CN	S06°34'31"W	56.06'
CO	S17°03'34"W	34.98'
CP	S23°08'27"W	232.13'
CQ	S34°44'27"W	151.40'
CR	S44°05'27"W	58.86'
CS	S31°19'15"W	58.21'
CT	S13°37'59"W	113.05'
CU	S22°34'27"W	95.99'
CV	S19°28'25"W	140.69'
CW	S02°23'05"W	50.08'
CX	S04°09'51"E	122.81'
CY	S12°07'10"W	127.36'
CZ	S13°59'20"E	135.19'
DA	S04°26'31"W	54.37'
DB	S26°05'46"W	50.60'
DC	S45°07'23"W	53.70'
DD	S59°54'35"W	138.89'
DE	N80°27'49"W	108.69'
DF	S70°08'52"W	214.55'
DG	S45°00'59"W	287.04'
DH	S35°25'00"W	29.58'
DI	S25°49'01"W	113.58'
DJ	S06°01'06"E	137.34'
DK	S06°03'38"W	135.11'
DL	S06°00'05"W	165.46'
DM	N88°08'17"W	48.93'
DN	N68°42'34"W	100.30'
DO	N51°02'38"W	235.01'
DP	N66°34'50"W	61.80'
DQ	N79°47'07"W	43.28'
DR	N88°23'39"W	107.66'
DS	N71°49'09"W	25.00'
DT	N62°19'57"W	114.08'
DU	N76°54'18"W	20.66'
DV	N80°39'32"W	113.70'
DW	S88°10'06"W	133.22'
DX	S87°38'57"W	81.50'
DY	S79°17'51"W	88.05'
DZ	S89°37'53"W	131.98'
EA	N87°46'42"W	43.90'
EB	N79°52'34"W	162.93'
EC	S88°09'46"W	69.54'

JARL B. & CAROL K. HF
T.M.372-155, PARCEL 9
D.B.123, PG.416

DETAIL "B"
SCALE: 1"=30'

PROPERTY LINE
RUNNING WITH
OLD ROAD, 15' WEST
OF CENTERLINE

CEDAR STAB

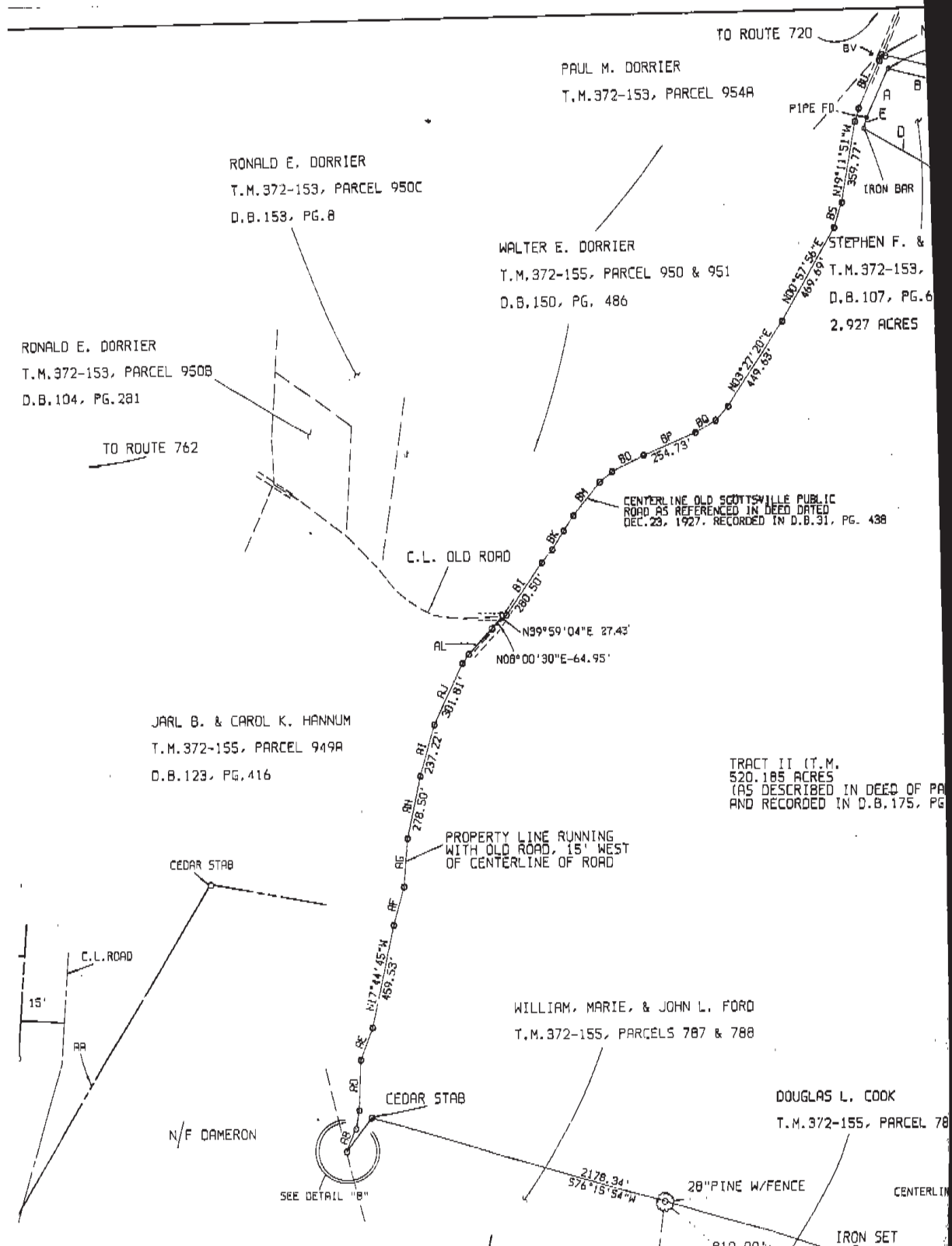
N/F DAMERON

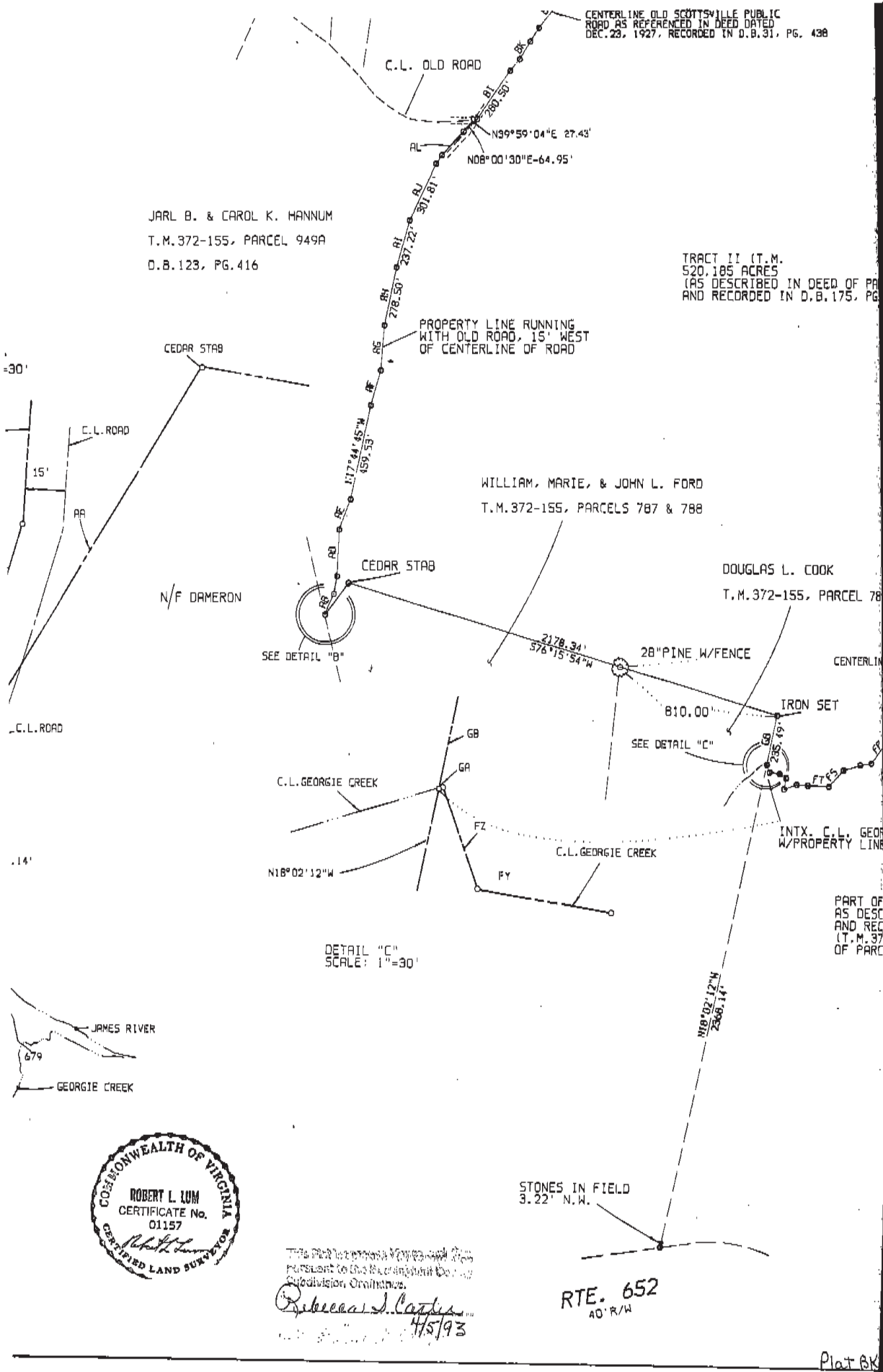
SEE D

C.

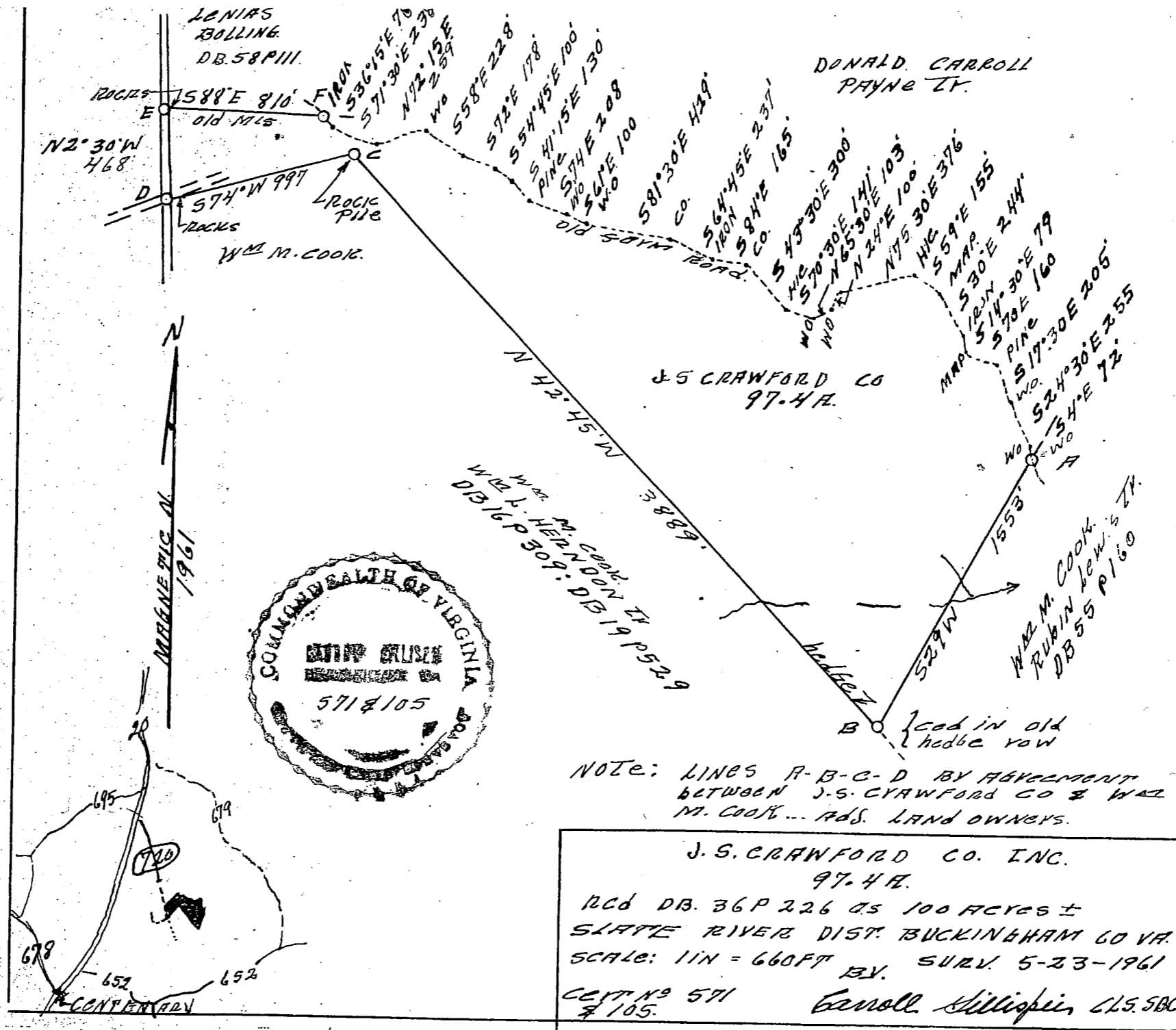
IRON BAR, S06°50'03"W-14.14'

N18



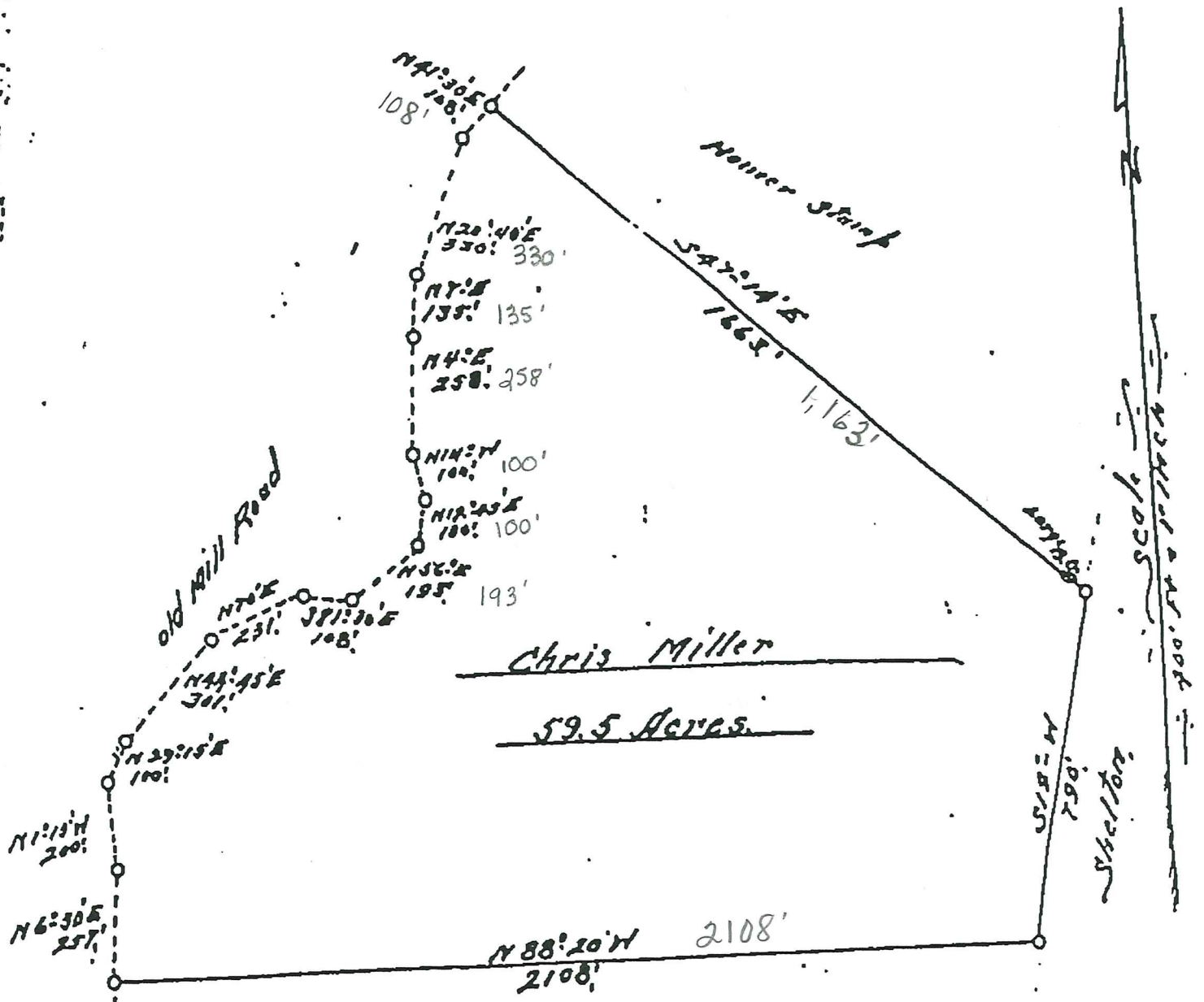


Deed Book 67, Page 296 -
Parcel Number 17-9



BD 67-293

Parcel Number 17-13



THIS PLAT NOT SUBJECT TO PROVISIONS OF
THE BUCKINGHAM COUNTY SUBDIVISION
ORDINANCE.

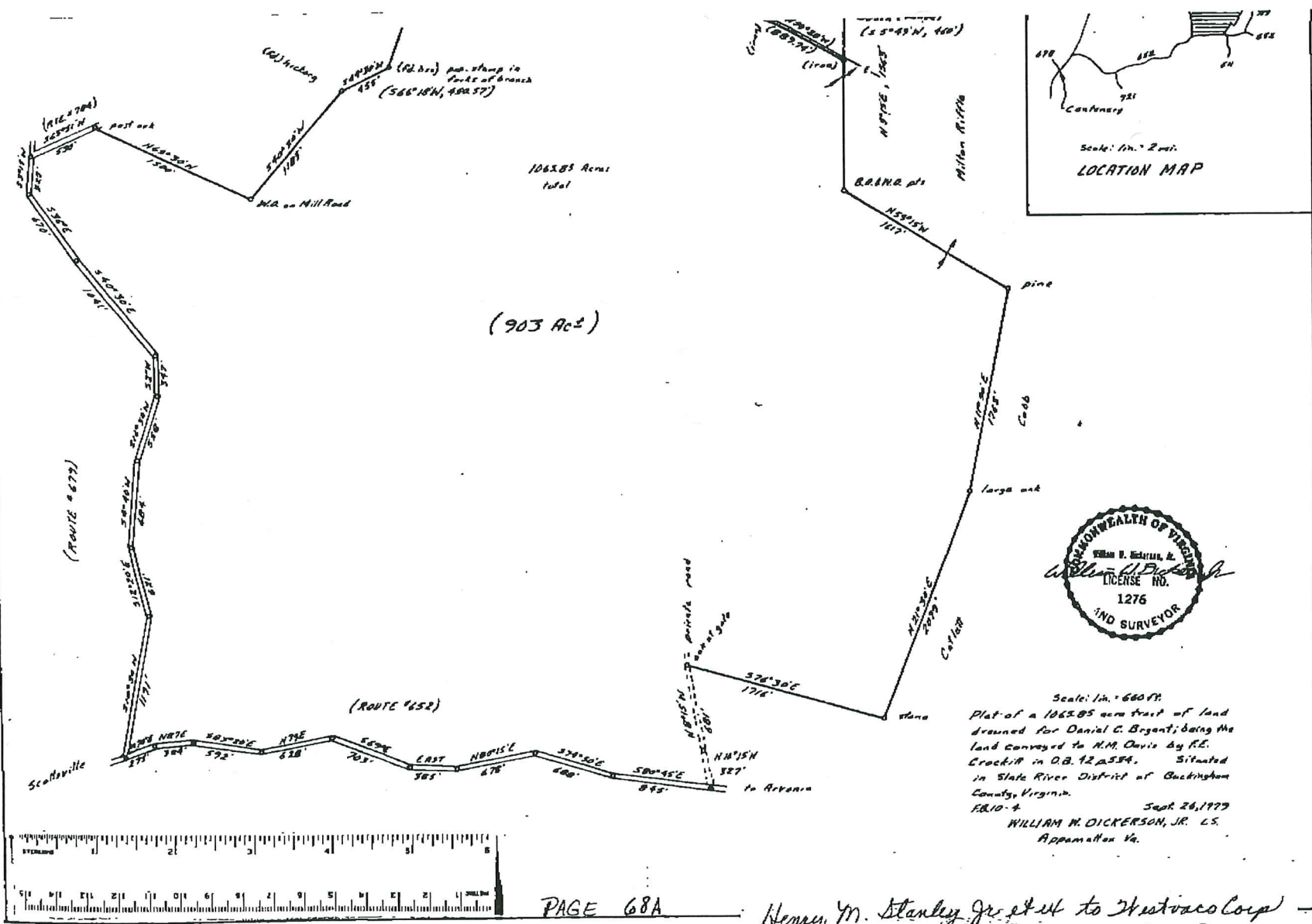
[Signature]
Buckingham County Subdivision Agent

Surveyed April 15-1937

by

Edward J. Cole C.E. S.D.C.

Plat Book 1, Page 68 - Parcel Number 18-2



PLAT BK 1-68
CHANGED IN A-13
PLAT C-10

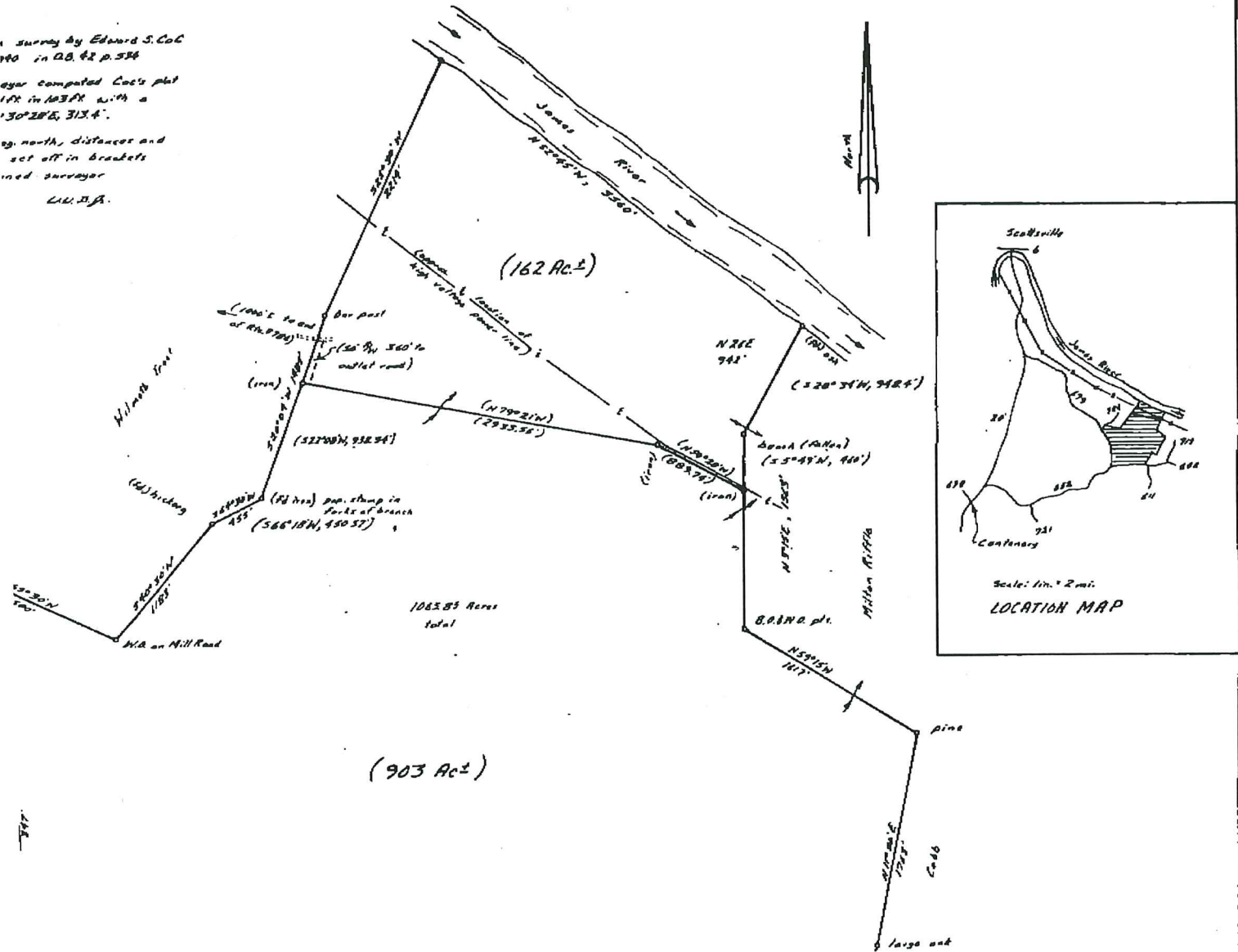


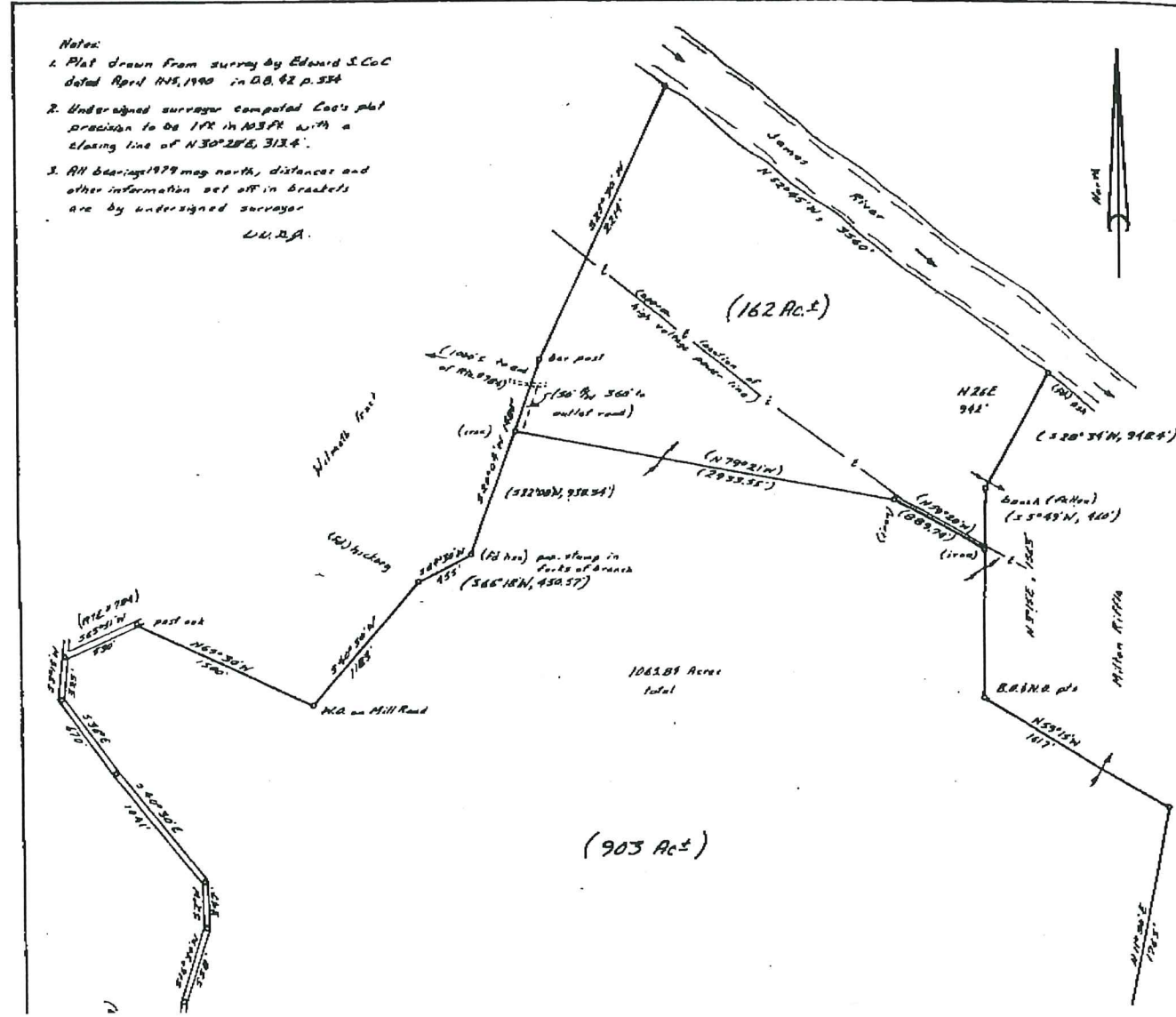
Scale: 1 in. = 660 ft.
Plat of a 1063.85 acre tract of land
drawn for Daniel C. Bryant, being the
land conveyed to H.M. Davis by R.E.
Crocker in O.B. 12, 1884. Situated
in State River District of Buckingham
County, Virginia.
F.B. 10-4
WILLIAM H. DICKERSON, JR. L.S.
Appomattox Va.

PAGE 68A

Henry M. Stanley Jr. et al to Stratvaco Corp
Red. 11-9-79 PB 115 Pg 589

Survey by Edward S. Coe
1860 in O.B. 42 p. 534
ayer computed Coe's plat
1871 in 1038 ft. w. m. a
130° 28' E, 313.4'.
eg. north, distances and
set off in brackets
ined surveyor
L.H. B.B.





3.9. Economic and Fiscal Contribution to Buckingham County, Virginia

JULY 29, 2021

RIVERSTONE SOLAR LLC

ECONOMIC AND FISCAL CONTRIBUTION TO
BUCKINGHAM COUNTY, VIRGINIA



4201 DOMINION BOULEVARD, SUITE 114
GLEN ALLEN, VIRGINIA 23060
804-346-8446

MANGUMECONOMICS.COM



About Mangum Economics, LLC

Mangum Economics, LLC is a Richmond, Virginia based firm that specializes in producing objective economic, quantitative, and qualitative analysis in support of strategic decision making. Much of our recent work relates to IT & Telecom Infrastructure (data centers, terrestrial and subsea fiber), Renewable Energy, and Economic Development. Examples of typical studies include:

POLICY ANALYSIS

Identify the intended and, more importantly, unintended consequences of proposed legislation and other policy initiatives.

ECONOMIC IMPACT ASSESSMENTS AND RETURN ON INVESTMENT ANALYSES

Measure the economic contribution that businesses and other enterprises make to their localities.

WORKFORCE ANALYSIS

Project the demand for, and supply of, qualified workers.

CLUSTER ANALYSIS

Use occupation and industry clusters to illuminate regional workforce and industry strengths and identify connections between the two.

The Project Team

Martina Arel, M.B.A.

Research Director

– Economic Development and Renewable Energy

A. Fletcher Mangum, Ph.D.

Founder and CEO



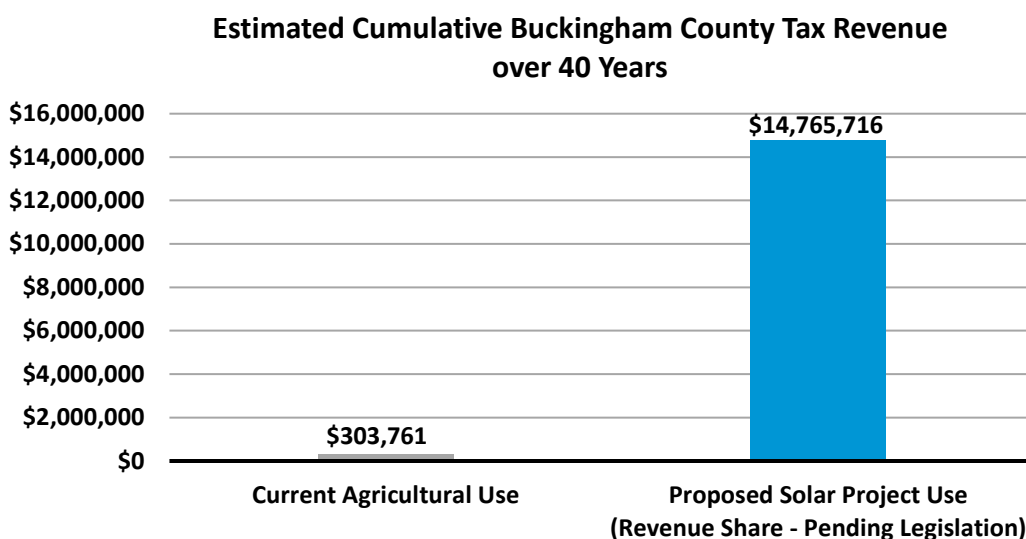
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Executive Summary

This report assesses the economic and fiscal contribution that the proposed Riverstone Solar LLC project would make to Buckingham County, Virginia. The primary findings from that assessment are as follows:

- 1) Riverstone Solar is a proposed 149.5-Megawatt (MW) AC solar photovoltaic power generating facility. The project would be located north of Bridge Port Road, east of Route 20, and west of Hardware Road (Rt 719) in Buckingham County, Virginia. The total acreage to be leased encompasses approximately 1,965 acres that are currently used primarily for timber operations. The actively used, fenced-in portion of the solar site would be approximately 1,000 acres.
- 2) **The proposed Riverstone Solar project would make a significantly greater fiscal contribution to Buckingham County than the property generates in its current agricultural use. We estimate that the proposed project would generate approximately:**
 - \$1.9 million in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction (*see p. 15*).
 - \$14.8 million in cumulative county revenue over the facility's anticipated 40-year operational life assuming revenues are generated from the reassessment of the property and a revenue share agreement between Riverstone Solar and Buckingham County that is based on the project's generation capacity (*see p. 17ff*), as compared to approximately \$303,761 in cumulative county revenue in the property's current agricultural use (*see p. 27f*) – a difference of approximately \$14.5 million.¹



¹ Revenue share estimate includes a 10 percent escalator that is applied to the \$1,400 per MW revenue share every five years. This escalator was introduced and signed into law in the 2021 General Assembly and went into effect on July 1, 2021 (SB 1201/HB 2006).

3) The proposed Riverstone Solar project would also make a significant economic contribution to Buckingham County:

- The proposed Riverstone Solar project would provide an estimated one-time pulse of economic activity to Buckingham County during its construction phase (*see p. 15*) supporting approximately:
 - 482 jobs.
 - \$24.3 million in associated labor income.
 - \$66.7 million in economic output.
- The proposed Riverstone Solar project would provide an estimated annual economic impact to Buckingham County during its ongoing operational phase (*see p. 16f*) supporting approximately:
 - 6 jobs.
 - \$255,564 in associated labor income.
 - \$725,187 in economic output.

4) The proposed Riverstone Solar project would provide a boost to Buckingham County's construction sector:

- At 144 jobs, construction is Buckingham County's 3rd largest major industry sector. It also pays average weekly wages (\$924/week) that are 21 percent above the county-wide average (\$764/week).
- We estimate that the proposed Riverstone Solar project could directly support 399 jobs and \$30.9 million in wages in Buckingham County's construction sector.²

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

² Please note that although employment within a local construction sector can sometimes quickly expand to take advantage of new opportunities, because of the relatively small size of Buckingham County's existing construction sector it is not possible to know with certainty what proportion of these jobs would go to county construction contractors or be filled by County residents.

Introduction

This report assesses the economic and fiscal contribution that the proposed Riverstone Solar LLC project would make to Buckingham County, Virginia. This report was commissioned by Apex Clean Energy, Inc. and produced by Mangum Economics.

The Project

Riverstone Solar is a proposed 149.5-Megawatt (MW) AC solar photovoltaic power generating facility. The project would be located north Bridge Port Road, east of Route 20, and west of Hardware Road (Rt 719) in Buckingham County, Virginia. The total acreage to be leased encompasses approximately 1,965 acres that are currently used primarily for timber operations. The actively used, fenced-in portion of the solar site would be approximately 1,000 acres.

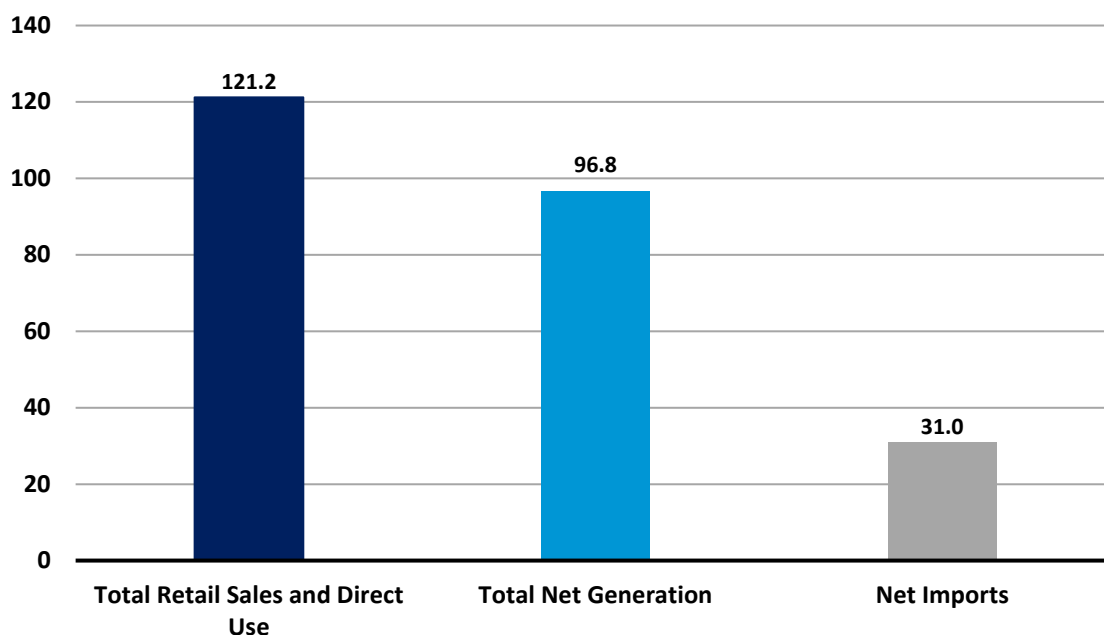
Electricity Production in Virginia

In this section, we provide a backdrop for the proposed Riverstone Solar project by profiling Virginia's electricity production sector and the role that solar energy could play in that sector.

Overall Market

As shown in Figure 1, in 2019 electricity sales and direct use in Virginia totaled 121.2 million megawatt hours, ranking the state 11th among the fifty states in terms of electricity consumption. However, only 80 percent of that demand was met by in-state utilities, independent producers, and other sources. As a result, Virginia had to import the remaining electricity it consumed from producers in other states. As with all imports, this means that the jobs, wages, and economic output created by that production went to localities in those states, not to localities in Virginia.

Figure 1: Demand and Supply of Electricity in Virginia in 2019 (in millions of megawatt-hours)³



Sources of Production

Between 2009 and 2019, the total amount of electricity produced in Virginia increased from 70.1 to 96.8 million megawatt hours, while retail and direct consumption of electricity only increased from 110.9 to 121.2 million megawatt hours. Consequently, imports of electricity decreased by 17.7 million megawatt hours (or 36 percent) during this time. Figure 2 provides a comparison of the energy sources that were used to produce electricity in Virginia in each of those years. As these data show, the most significant change between 2009 and 2019 was a decrease in the use of coal and an increase in the use of natural gas. Where coal was the state's second largest source of electricity in 2009, accounting for 25.6 million megawatt hours (or 37 percent) of production, by 2019 production had fallen by 22.2 million megawatt hours, making coal a distant third place source of electricity with only 4 percent of production.

In contrast, the share of electricity produced using cleaner-burning low-emissions energy sources increased over the period. Where natural gas accounted for only 12.2 million megawatt hours (or 17 percent) of Virginia's electricity production in 2009, by 2019 that proportion had more than quadrupled to 58.0 million megawatt hours (or 60 percent of production), making natural gas the state's largest source of electricity. In addition, solar, which entered the Virginia electricity production market in 2016, increased its share to 0.9 million megawatt hours by 2019.

³ Data Source: U.S. Energy Information Administration. In this chart, "Net Imports" also takes into account losses during transmission. As a result, it does not directly equal the residual of "Total Net Generation" minus "Total Retail Sales and Direct Use."

Figure 2: Electricity Generation in Virginia by Energy Source in 2009 and 2019
(in millions of megawatt-hours) ⁴

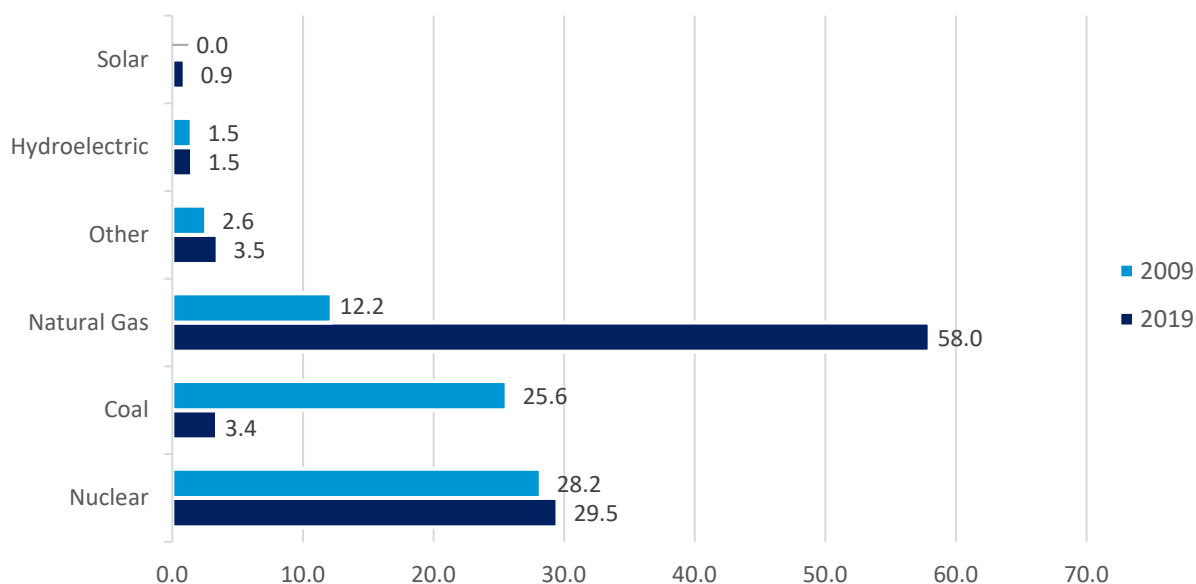
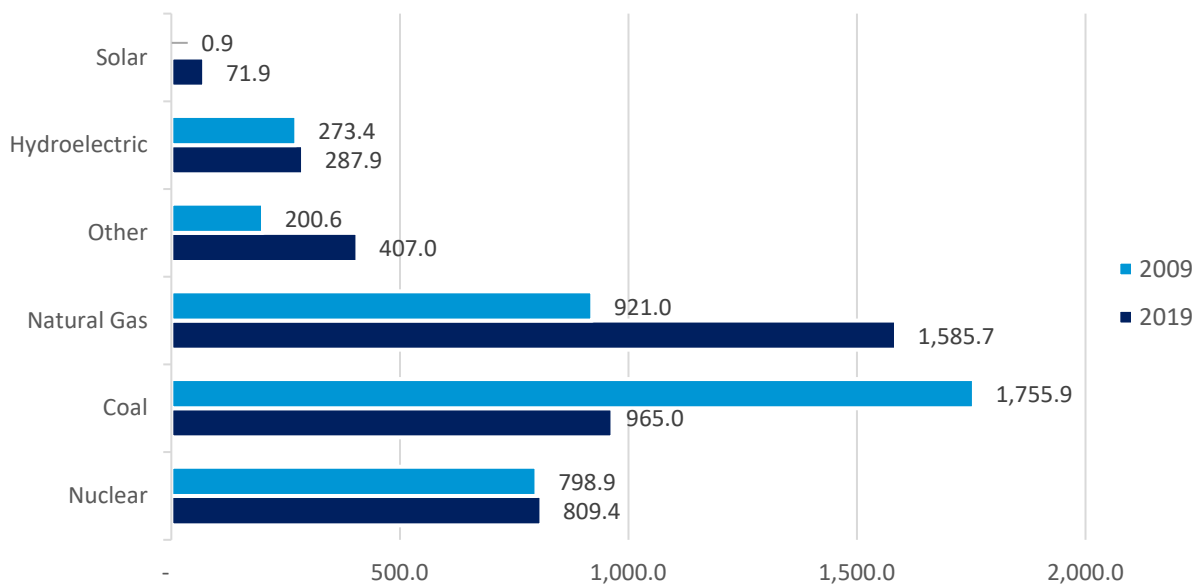


Figure 3 provides similar data for the U.S. as a whole. A quick comparison of Figures 2 and 3 shows that although the degree of reliance on specific energy sources for electricity production is quite different between the U.S. and Virginia, the trend toward lower-emissions energy sources is the same. Nationally, between 2009 and 2019 the amount of electricity produced using coal declined by 790.9 million megawatt hours from 44 to 23 percent of production, while in contrast the amount of electricity produced using natural gas increased by 664.6 million megawatt hours from 23 to 38 percent of production. Nationwide, as in Virginia, the reliance on renewable energy sources such as solar increased during this time but at a much faster pace than in Virginia. Between 2009 and 2019, the amount of electricity produced using solar increased by 71.0 million megawatt hours to 2 percent of total electricity production in the nation compared to 1 percent of total electricity production in Virginia.

⁴ Data Source: U.S. Energy Information Administration. “Other” includes other biomass, other, petroleum, pumped storage, and wood.

Figure 3: Electricity Generation in the United States by Energy Source in 2009 and 2019
(in millions of megawatt-hours) ⁵

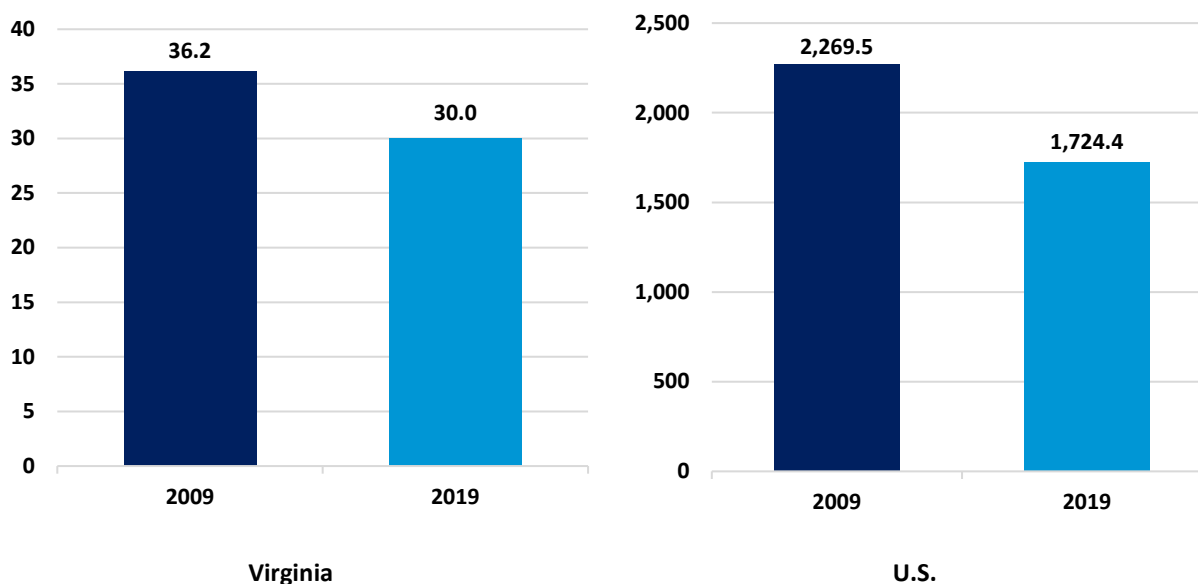


Impact on the Environment

In discussing the impact of these trends on the environment, it is important to realize that electricity production is the U.S.'s largest source of greenhouse gas emissions. Figure 4 depicts carbon dioxide emissions from electricity production in 2009 and 2019 for both Virginia and the U.S. As these data indicate, between 2009 and 2019, as the share of electricity produced in Virginia by coal fell from 37 to 4 percent, carbon dioxide emissions from electricity production fell from 36.2 to 30.0 million metric tons. Where at the national level, as the share of electricity produced by coal fell from 44 to 23 percent, carbon dioxide emissions from electricity production fell from 2,269.5 to 1,724.4 million metric tons.

⁵ Data Source: U.S. Energy Information Administration. "Other" includes battery, geothermal, other, other biomass, other gas, petroleum, pumped storage, wind, and wood.

Figure 4: Carbon Dioxide Emissions from Electricity Production (millions of metric tons)⁶



Local Economic Profile

In this section, we provide context for the economic and fiscal impact assessments to follow by profiling the local economy of Buckingham County.

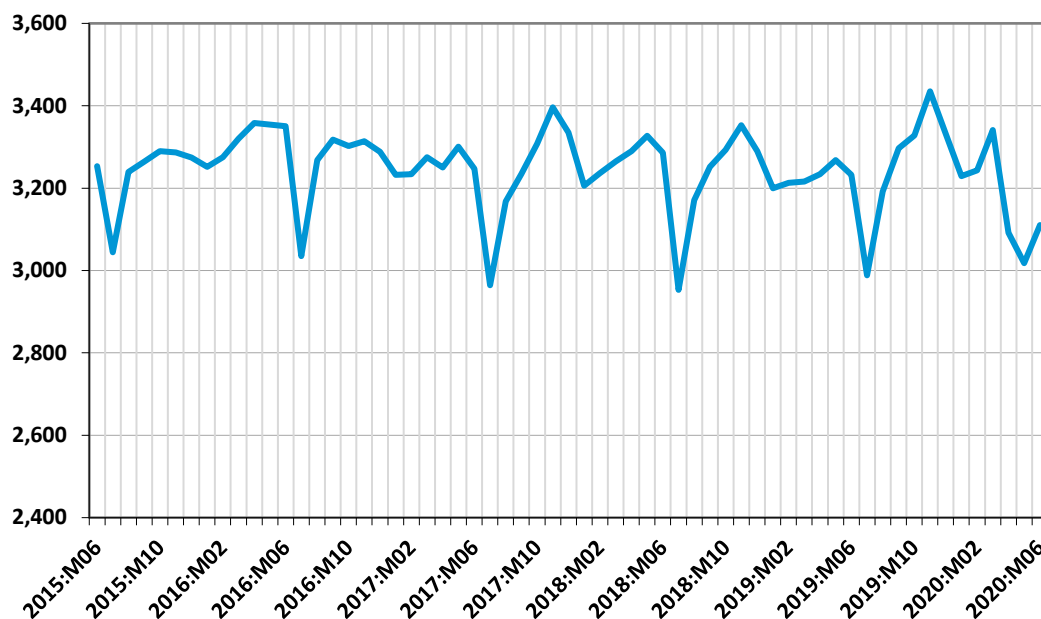
Total Employment

Figure 5 depicts the trend in total employment in Buckingham County from June 2015 to June 2020. Beyond seasonal variation, employment generally remained flat over this period. As of June 2020, total employment stood at 3,110 jobs, which represents a loss of 143 jobs or negative 4.4 percent employment growth over the five-year period. To put this number in perspective, total statewide employment in Virginia fell by only 3.7 percent over the same period.⁷

⁶ Data Source: U.S. Energy Information Administration.

⁷ Data Source: Bureau of Labor Statistics.

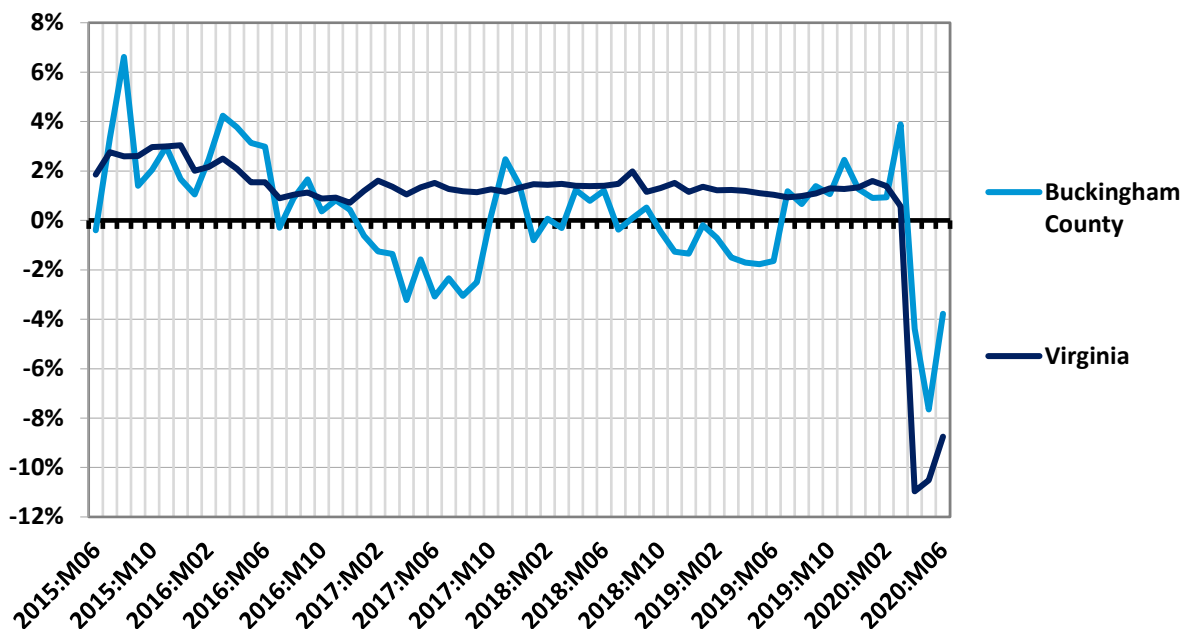
Figure 5: Total Employment in Buckingham County – June 2015 to June 2020⁸



To control for seasonality and provide context for the growth numbers given above, Figure 6 compares the year-over-year change in total employment in Buckingham County to that of Virginia as a whole over the same five-year period. Any point above the zero line in this graph indicates an increase in employment, while any point below the zero line indicates a decline in employment. As these data show, year-over-year employment growth in Buckingham County generally underperformed the statewide average from 2016 through 2019. During this period, total employment in Virginia grew at a steady rate of just below two percent, whereas total employment in Buckingham County often declined year-over-year. Beginning in April 2020, both Buckingham County and the state of Virginia experienced significant drops in employment numbers as a result of labor dislocations caused by the coronavirus pandemic. As of June 2020, the year-over-year change in total employment in Buckingham County was negative 3.8 percent while the change in employment for Virginia as a whole was negative 8.8 percent.

⁸ Data Source: Bureau of Labor Statistics.

Figure 6: Year-Over-Year Change in Total Employment – June 2015 to June 2020⁹



Employment and Wages by Major Industry Sector

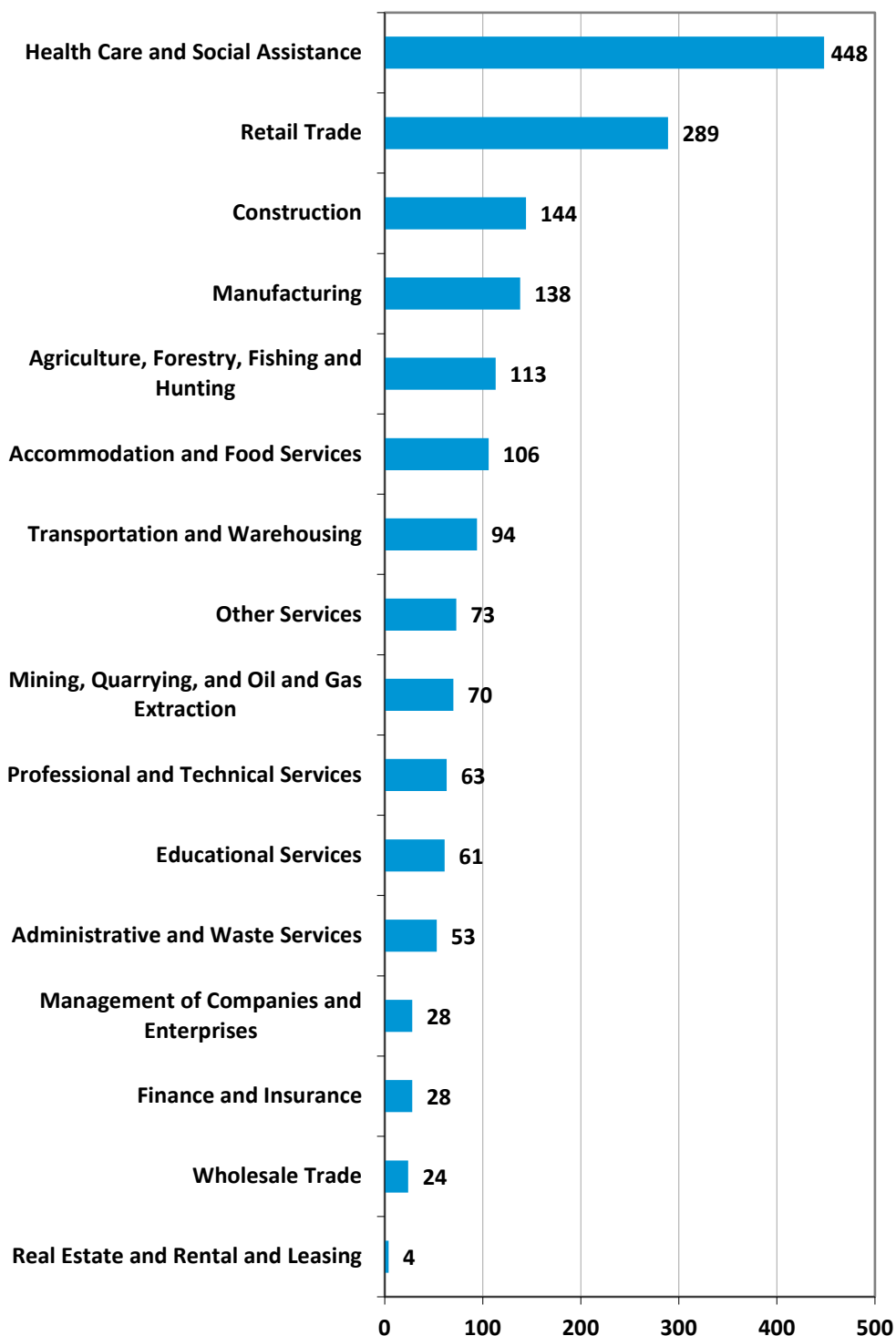
To provide a better understanding of the underlying factors motivating the total employment trends depicted in Figures 5 and 6, Figures 7 through 9 provide data on private employment and wages in Buckingham County by major industry sector.

Figure 7 provides an indication of the distribution of private sector employment across major industry sectors in Buckingham County for the second quarter of 2020. As these data indicate, the county's largest industry sector that quarter was Health Care and Social Assistance (448 jobs), followed by Retail Trade (289 jobs) and Construction (144 jobs).

Figure 8 provides a similar ranking for average private sector weekly wages by major industry sector in Buckingham County for the second quarter of 2020. As these data show, the highest paying industry sectors that quarter were Management of Companies and Enterprises (\$1,840 per week), Mining, Quarrying, and Oil and Gas Extraction (\$973 per week), and Professional and Technical Services (\$943 per week). For reference, the average private sector weekly wage across all industry sectors in Buckingham County that quarter was \$764 per week.

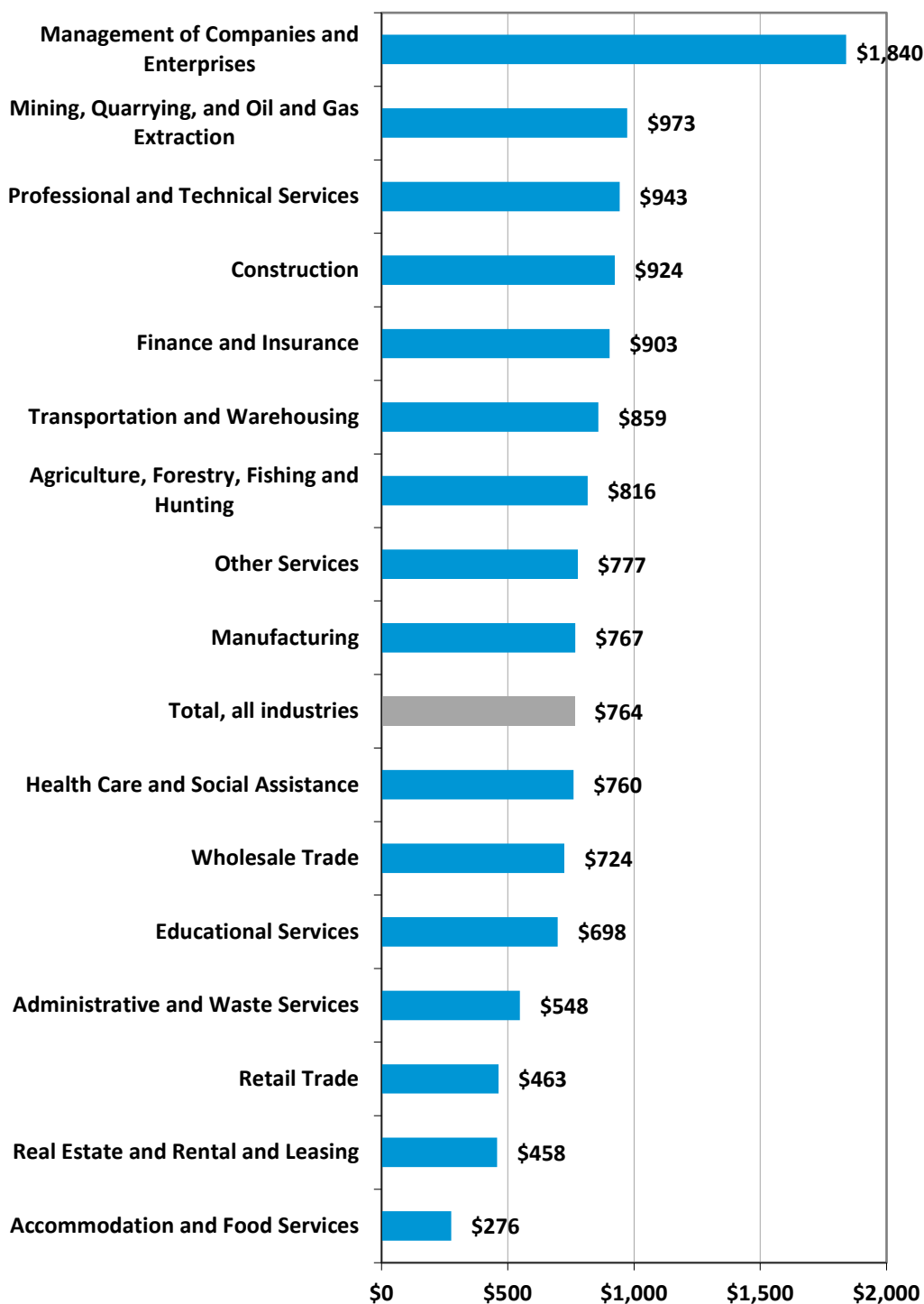
⁹ Data Source: Bureau of Labor Statistics.

Figure 7: Private Employment by Major Industry Sector in Buckingham County – 2nd Qu 2020 ¹⁰



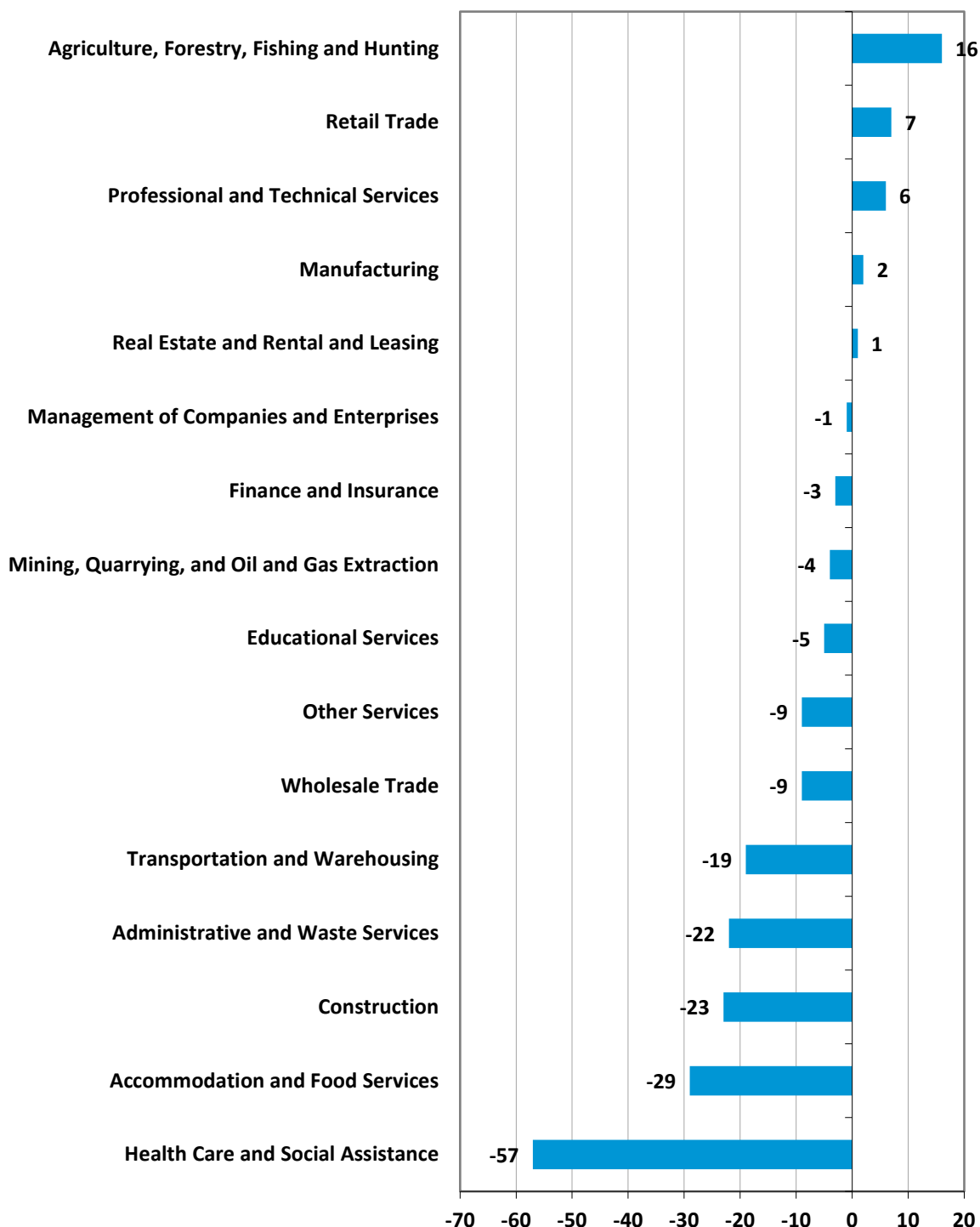
¹⁰ Data Source: Virginia Employment Commission. Please note that data on the Utilities; Information; and Arts, Entertainment, and Recreation sectors have been suppressed due to issues of data confidentiality.

Figure 8: Average Private Weekly Wages by Major Industry in Buckingham County – 2nd Qu 2020¹¹



¹¹ Data Source: Virginia Employment Commission. Please note that data on the Utilities; Information; and Arts, Entertainment, and Recreation sectors have been suppressed due to issues of data confidentiality.

Figure 9: Change in Private Employment by Industry in Buckingham County
from 2nd Qu 2019 to 2nd Qu 2020¹²



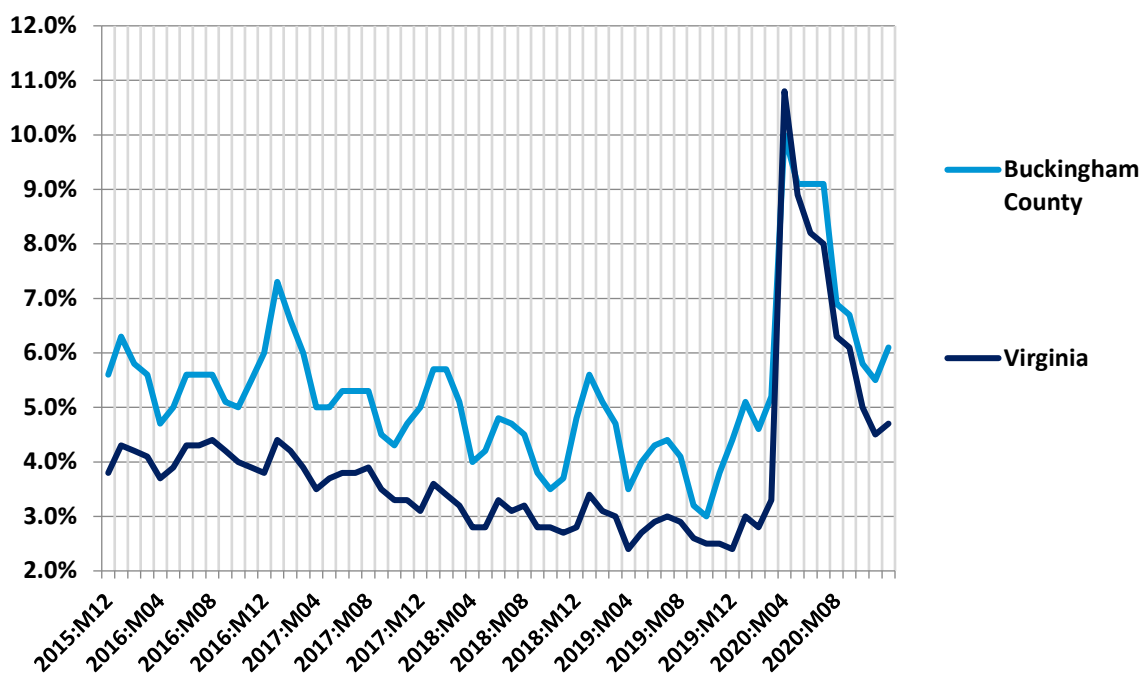
¹² Data Source: Virginia Employment Commission.

Lastly, Figure 9 details the year-over-year change in private sector employment from the second quarter of 2019 to the second quarter of 2020 in Buckingham County by major industry sector. Over this period, the largest employment gains occurred in the Agriculture, Forestry, Fishing and Hunting (up 16 jobs), Retail Trade (up 7 jobs), and Professional and Technical Services (up 6 jobs) sectors. The largest employment losses occurred in the Health Care and Social Assistance (down 57 jobs), Accommodation and Food Services (down 29 jobs), and Construction (down 23 jobs) sectors.

Unemployment

Figure 10 illustrates the trend in Buckingham County's unemployment rate over the five-year period from December 2015 through December 2020 and benchmarks those data against the statewide trend for Virginia. As these data show, unemployment rates in Buckingham County generally tracked closely with statewide trends but at rates on average one and a half percentage points higher than the statewide rate. As of December 2020, unemployment stood at 6.1 percent in Buckingham County as compared to 4.7 percent in Virginia as a whole, reflecting the beginning of a recovery from the recent economic downturn caused by the coronavirus pandemic.

Figure 10: Unemployment Rate – December 2015 to December 2020¹³



¹³ Data Source: Virginia Employment Commission.

Economic and Fiscal Impact

In this section, we quantify the economic and fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County. Our analysis separately evaluates the one-time pulse of economic activity that would occur during the construction phase of the project, as well as the annual economic activity that the project would generate during its ongoing operations phase.

Method

To empirically evaluate the likely local economic impact attributable to the proposed Riverstone Solar project, we employ a regional economic impact model called IMPLAN.¹⁴ The IMPLAN model is one of the most commonly used economic impact simulation models in the U.S., and in Virginia is used by UVA's Weldon Cooper Center, the Virginia Department of Planning and Budget, the Virginia Employment Commission, and other state agencies and research institutes. Like all economic impact models, the IMPLAN model uses economic multipliers to quantify economic impact.

Economic multipliers measure the ripple effects that an expenditure generates as it makes its way through the economy. For example, as when the Riverstone Solar project purchases goods and services – or when contractors hired by the facility use their salaries and wages to make household purchases – thereby generating income for someone else, which is in turn spent, thereby becoming income for yet someone else, and so on, and so on. Through this process, one dollar in expenditures generates multiple dollars of income. The mathematical relationship between the initial expenditure and the total income generated is the economic multiplier.

One of the primary advantages of the IMPLAN model is that it uses regional and national production and trade flow data to construct region-specific and industry-specific economic multipliers, which are then further adjusted to reflect anticipated actual spending patterns within the specific geographic study area that is being evaluated. As a result, the economic impact estimates produced by IMPLAN are not generic. They reflect as precisely as possible the economic realities of the specific industry, and the specific study area, being evaluated.

In the analysis that follows, these impact estimates are divided into three categories. First round direct impact measures the direct economic contribution of the entity being evaluated (e.g., own employment, wages paid, goods and services purchased by the Riverstone Solar project). Second round indirect and induced impact measures the economic ripple effects of this direct impact in terms of business to business, and household (employee) to business, transactions. Total impact is simply the sum of the preceding two. These categories of impact are then further defined in terms of employment (the jobs that are created), labor income (the wages and benefits associated with those jobs), and economic output (the total amount of economic activity that is created in the economy).

¹⁴ IMPLAN is produced by IMPLAN Group, LLC.

Construction Phase

In this portion of the section, we assess the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Riverstone Solar project would have on Buckingham County.

Assumptions

In conducting our analysis, we employ the following assumptions:

- For ease of analysis, all construction expenditures are assumed to take place in a single year.
- Total investment in the Riverstone Solar project is estimated to be \$188.0 million.¹⁵
- Of that total:
 - Architecture, engineering, site preparation, and other construction and development costs are estimated to be \$120.1 million.¹⁶ It is estimated that up to 45 percent of that total could be spent with vendors in Buckingham County.¹⁷
 - Capital equipment costs are estimated to be \$67.9 million.¹⁸ It is anticipated that no capital equipment would be purchased from vendors in Buckingham County.¹⁹

Results

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Riverstone Solar project would directly provide a one-time pulse supporting approximately: 1) 399 jobs, 2) \$20.9 million in labor income, and 3) \$53.9 million in economic output to Buckingham County.²⁰

Taking into account the economic ripple effects that direct investment would generate, we estimate that the total one-time impact on Buckingham County would support approximately: 1) 482 jobs, 2) \$24.3 million in labor income, 3) \$66.7 million in economic output, and 4) \$1.9 million in state and local tax revenue.

¹⁵ Data Source: Apex Clean Energy, Inc.

¹⁶ Data Source: Apex Clean Energy, Inc.

¹⁷ Data Source: IMPLAN Group LLC.

¹⁸ Data Source: Apex Clean Energy, Inc.

¹⁹ Data Source: IMPLAN Group LLC.

²⁰ It is important to note that construction sector jobs are not necessarily new jobs but the investments made can also support an existing job during the construction of the project.

Table 1: Estimated One-Time Economic and Fiscal Impact on Buckingham County from Construction of the Riverstone Solar Project²¹

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	399	\$20,875,220	\$53,902,000
2nd Round Indirect and Induced Economic Activity	83	\$3,439,157	\$12,750,608
Total Economic Activity	482	\$24,314,377	\$66,652,608
Fiscal Impact			
State and Local Tax Revenue			\$1,940,388

**Totals may not sum due to rounding.*

Ongoing Operations Phase

In this portion of the section, we assess the annual economic and fiscal impact that the proposed Riverstone Solar project would have on Buckingham County during its anticipated 40-year operational phase.

Assumptions

In conducting our analysis, we employ the following assumptions:

- The Riverstone Solar project would spend approximately \$835,197 each year for maintenance and repair, vegetative control, and other operational expenditures.²²
- The Riverstone Solar project would involve an investment of approximately \$188.0 million in capital equipment and improvements to the existing property.²³
- The proposed Riverstone Solar project would be situated on approximately 1,000 fenced-in acres within an approximate 1,964-acre tract of leased timberland.²⁴
- Only the fenced-in acreage would be reassessed at a commercial solar use value estimated at approximately \$10,000 per acre.²⁵
- Tax rates and locality ratios remain constant throughout the analysis.
- The Riverstone Solar project's total generation capacity would be 149.9 MW AC.²⁶

²¹ Please note that although employment within a local construction sector can sometimes quickly expand to take advantage of new opportunities, because of the relatively small size of Buckingham County's construction sector, it is not possible to know with certainty what proportion of these jobs would go to county construction contractors or be filled by County residents. However, all workers employed at the site would have an indirect economic impact on Buckingham County through their purchases of food, beverages, accommodations, and other goods and services.

²² Data Source: Apex Clean Energy, Inc.

²³ Data Source: Apex Clean Energy, Inc.

²⁴ Data Source: Apex Clean Energy, Inc.

²⁵ Data Source: Based on informal discussion with County Commissioner of Revenue, actual future assessment value for fenced-in acreage is currently unknown. Potential future assessment value is an estimate based on experience with comparable solar projects in Virginia.

²⁶ Data Source: Apex Clean Energy, Inc.

- The Riverstone Solar project would become operational in the fourth quarter of 2023.²⁷
- The Riverstone Solar project's operational life expectancy is approximately 40 years.²⁸

Results – Economic Impact

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Riverstone Solar project would directly support approximately: 1) 5 jobs, 2) \$213,641 in labor income, and 3) \$569,784 in economic output to Buckingham County. Taking into account the economic ripple effects that direct impact would generate, we estimate that the total annually supported impact on Buckingham County would be approximately: 1) 6 jobs, 2) \$255,564 in labor income, and 3) \$725,187 in economic output.

Table 2: Estimated Annual Economic Impact on Buckingham County from the Ongoing Operation of the Riverstone Solar Project

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	5	\$213,641	\$569,784
2nd Round Indirect and Induced Economic Activity	1	\$41,923	\$155,403
Total Economic Activity	6	\$255,564	\$725,187

**Totals may not sum due to rounding.*

Results – Fiscal Impact

In this portion of the section, we quantify the direct fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County. We first estimate the additional revenue that the project would generate for the county over a 40-year period from the increased property assessments associated with reassessing the site as solar use property. We then describe the additional revenue that Riverstone Solar would generate for Buckingham County from a revenue share agreement between Riverstone Solar and Buckingham County based on the project's total generation capacity. Last, we illustrate the revenue that could be generated from taxes levied on the capital investment, which would be in place of a revenue share agreement.

Reassessment of Property

Table 3 details the increased property assessments associated with reassessing the 1,000-acre fenced-in site as solar use property. We estimate the county real estate tax revenue from the project after reassessment to be approximately \$52,000 per year, for a cumulative total of approximately \$2.1 million over the project's anticipated 40-year operational life expectancy.²⁹ In contrast, the property currently

²⁷ Data Source: Apex Clean Energy, Inc.

²⁸ Data Source: Apex Clean Energy, Inc.

²⁹ Assumes property will be reassessed at \$10,000 per acre once it is under solar use.

generates approximately \$7,594 per year in real estate tax revenue for the county, for a cumulative total of approximately \$303,761 over 40 years.³⁰

Table 3: Estimated County Revenue Generated by the Proposed Riverstone Solar Project over 40 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use ³¹	\$10,000,000
Buckingham County Real Estate Tax Rate ³²	0.0052
Annual County Real Estate Tax – Solar Use	\$52,000
Cumulative Revenue over 40 years	\$2,080,000

Revenue Share Agreement

Calculation

In this section, we describe the additional annual revenue that the proposed Riverstone Solar project would generate for Buckingham County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636. The Virginia Code currently stipulates that a locality may assess an annual revenue share of up to \$1,400 per megawatt (MW) alternating current (AC) generation capacity of a solar facility. However, legislation that was passed in the 2021 General Assembly (SB 1201/HB 2006) and went into effect on July 1, 2021, allows a 10 percent escalator to be applied to the \$1,400 per MW revenue share every five years. Section 58.1-2636 further stipulates that capital investment associated with the solar project will be exempt from taxation if the county and solar company enter into such a revenue share agreement.

Table 4 details the revenue generated from a revenue share agreement between Riverstone Solar and Buckingham County with the 10 percent escalator. Based on a total generation capacity of 149.5 MW AC and an assumed commissioning date in the fourth quarter of 2023, a revenue share agreement would generate approximately \$12.7 million over the anticipated 40-year operational life of the project.

Table 4: Estimated County Revenue Generated from a Revenue Share Agreement over 40 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	149.5	\$1,400	\$209,300
2	149.5	\$1,400	\$209,300
3	149.5	\$1,540	\$230,230
4	149.5	\$1,540	\$230,230
5	149.5	\$1,540	\$230,230
6	149.5	\$1,540	\$230,230

³⁰ Derived from property card data provided by the Buckingham County Commissioner of Revenue's office.

³¹ Calculated as 1,000 acres times \$10,000 per acre.

³² Data Source: Buckingham County Commissioner of Revenue's Office.

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
7	149.5	\$1,540	\$230,230
8	149.5	\$1,694	\$253,253
9	149.5	\$1,694	\$253,253
10	149.5	\$1,694	\$253,253
11	149.5	\$1,694	\$253,253
12	149.5	\$1,694	\$253,253
13	149.5	\$1,863	\$278,578
14	149.5	\$1,863	\$278,578
15	149.5	\$1,863	\$278,578
16	149.5	\$1,863	\$278,578
17	149.5	\$1,863	\$278,578
18	149.5	\$2,050	\$306,436
19	149.5	\$2,050	\$306,436
20	149.5	\$2,050	\$306,436
21	149.5	\$2,050	\$306,436
22	149.5	\$2,050	\$306,436
23	149.5	\$2,255	\$337,080
24	149.5	\$2,255	\$337,080
25	149.5	\$2,255	\$337,080
26	149.5	\$2,255	\$337,080
27	149.5	\$2,255	\$337,080
28	149.5	\$2,480	\$370,788
29	149.5	\$2,480	\$370,788
30	149.5	\$2,480	\$370,788
31	149.5	\$2,480	\$370,788
32	149.5	\$2,480	\$370,788
33	149.5	\$2,728	\$407,866
34	149.5	\$2,728	\$407,866
35	149.5	\$2,728	\$407,866
36	149.5	\$2,728	\$407,866
37	149.5	\$2,728	\$407,866
38	149.5	\$3,001	\$448,653
39	149.5	\$3,001	\$448,653
40	149.5	\$3,001	\$448,653
Cumulative Total			\$12,685,716

**Totals may not sum due to rounding.*

Total Fiscal Impact

Table 5 combines the results from the calculations depicted in Tables 3 and 4 to provide an estimate of the cumulative fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County over its 40-year anticipated operational life based on a revenue share agreement. As these data indicate, that cumulative total is approximately \$14.8 million.

Table 5: Estimated Cumulative County Tax Revenue from the Proposed Riverstone Solar Project over 40 Years under a Revenue Share Agreement

County Real Estate Tax	\$2,080,000
County Revenue from Revenue Share Agreement	\$12,685,716
TOTAL Cumulative Revenue over 40 years with 10 Percent Escalator	\$14,765,716

Composite Index

Under a revenue share agreement, by statute capital investment from the project has no impact on the locality's Composite Index.

Taxation of Capital Investment

Calculation

Table 6 separately details the additional annual revenue that the proposed Riverstone Solar project would generate for Buckingham County over a 40-year period from taxes levied on capital investment, replacing the revenues generated from a revenue share agreement described above. The calculation is based on: 1) the taxable portion of capital investments pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660³³, times 2) the State Corporation Commission's 2021 utility assessment ratio of 0.955 for taxation of public utilities in Buckingham County, times 4) the State Corporation Commission's updated depreciation guidelines for solar facilities, times 5) Buckingham County's real property tax rate of \$0.52 per \$100 of assessed value pursuant to Virginia Code §58.1-2606.

As the data in Table 6 indicate, based on these calculations we estimate that the additional county revenue from taxation of capital investments associated with the proposed Riverstone Solar project would be approximately \$168,014 in the project's first year of operation, with that figure projected to decline to approximately \$18,668 in the project's 34th year of operation and thereafter, as the value of the proposed capital investments is depreciated, for a cumulative total of approximately \$4.3 million.

³³ The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW and under 150MW are subject to an 80 percent exemption from local property taxes if the interconnection request was filed after July 1, 2018 (but before January 1, 2019).

Table 6: Estimated County Revenue Generated by the Proposed Solar Investment over 40 Years from Taxation of Capital Investment

Year	Total Capital Investment subject to Exemption ³⁴	Less Exemption ³⁵	Depreciation ³⁶	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment ³⁷
1	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
2	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
3	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
4	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
5	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
6	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
7	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
8	\$187,960,000	\$35,900,360	90.0%	\$32,310,324	\$168,014
9	\$187,960,000	\$35,900,360	89.7%	\$32,199,033	\$167,435
10	\$187,960,000	\$35,900,360	88.2%	\$31,653,347	\$164,597
11	\$187,960,000	\$35,900,360	86.6%	\$31,075,352	\$161,592
12	\$187,960,000	\$35,900,360	84.9%	\$30,465,045	\$158,418
13	\$187,960,000	\$35,900,360	83.1%	\$29,818,839	\$155,058
14	\$187,960,000	\$35,900,360	81.1%	\$29,129,552	\$151,474
15	\$187,960,000	\$35,900,360	79.1%	\$28,400,775	\$147,684
16	\$187,960,000	\$35,900,360	77.0%	\$27,628,917	\$143,670
17	\$187,960,000	\$35,900,360	74.7%	\$26,810,389	\$139,414
18	\$187,960,000	\$35,900,360	72.3%	\$25,945,190	\$134,915
19	\$187,960,000	\$35,900,360	69.7%	\$25,022,551	\$130,117
20	\$187,960,000	\$35,900,360	67.0%	\$24,049,651	\$125,058

³⁴ Data Source: Apex Clean Energy, Inc.

³⁵ Calculated pursuant to Virginia Code §58.1-3660 which stipulates that solar facilities over 20MW and under 150MW are subject to an 80 percent exemption from local property taxes if the interconnection request was filed after July 1, 2018 (but before January 1, 2019). Also accounts for the State Corporation Commission's 2021 utility assessment ratio of 0.955 for taxation of public utilities in Buckingham County.

³⁶ Data Source: State Corporation Commission guidelines.

³⁷ Calculated pursuant to Virginia Code §58.1-2606 which stipulates that capital equipment owned by utilities is taxed as real property and the local tax rate on that capital equipment would be capped at Buckingham County's real property tax rate of \$0.52 per \$100 of assessed value.

Table 6: Estimated County Revenue Generated by the Proposed Solar Investment over 40 Years from Taxation of Capital Investment

Year	Total Capital Investment subject to Exemption ³⁴	Less Exemption ³⁵	Depreciation ³⁶	Depreciated Value of Taxable Capital Investment	Additional Annual County Tax Revenue Solar Investment ³⁷
21	\$187,960,000	\$35,900,360	64.1%	\$23,015,721	\$119,682
22	\$187,960,000	\$35,900,360	61.1%	\$21,920,760	\$113,988
23	\$187,960,000	\$35,900,360	57.8%	\$20,761,178	\$107,958
24	\$187,960,000	\$35,900,360	54.4%	\$19,529,796	\$101,555
25	\$187,960,000	\$35,900,360	50.8%	\$18,226,613	\$94,778
26	\$187,960,000	\$35,900,360	46.9%	\$16,840,859	\$87,572
27	\$187,960,000	\$35,900,360	42.8%	\$15,376,124	\$79,956
28	\$187,960,000	\$35,900,360	38.5%	\$13,821,639	\$71,873
29	\$187,960,000	\$35,900,360	33.9%	\$12,177,402	\$63,322
30	\$187,960,000	\$35,900,360	29.1%	\$10,429,055	\$54,231
31	\$187,960,000	\$35,900,360	23.9%	\$8,580,186	\$44,617
32	\$187,960,000	\$35,900,360	18.4%	\$6,620,026	\$34,424
33	\$187,960,000	\$35,900,360	12.7%	\$4,541,396	\$23,615
34	\$187,960,000	\$35,900,360	10.0%	\$3,590,036	\$18,668
35	\$187,960,000	\$35,900,360	10.0%	\$3,590,036	\$18,668
36	\$187,960,000	\$35,900,360	10.0%	\$3,590,036	\$18,668
37	\$187,960,000	\$35,900,360	10.0%	\$3,590,036	\$18,668
38	\$187,960,000	\$35,900,360	10.0%	\$3,590,036	\$18,668
39	\$187,960,000	\$35,900,360	10.0%	\$3,590,036	\$18,668
40	\$187,960,000	\$35,900,360	10.0%	\$3,590,036	\$18,668
Cumulative Total					\$4,251,792

Total Fiscal Impact

Table 7 combines the results from the calculations depicted in Tables 3 and 6 to provide an estimate of the cumulative fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County over its 40-year anticipated operational life based on taxation of the capital investment. As these data indicate, that cumulative total is approximately \$6.3 million.

Table 7: Estimated Cumulative County Tax Revenue from the Proposed Riverstone Solar Project over 40 Years from Taxation of Capital Investment

County Real Estate Tax	\$2,080,000
County Revenue from Taxation of Capital Investments	\$4,251,792
TOTAL Cumulative Revenue over 40 Years	\$6,331,792

Composite Index

In this portion of the section, we present an analysis of the hypothetical upper limit of the impact that the proposed Riverstone Solar project could have on Buckingham County's Composite Index, the index that the Virginia Department of Education uses to assess the locally funded portion of a locality's school budget based on "ability to pay." We include this analysis in our report because it has been a perceived issue in some localities in Virginia when proposed solar projects have been considered.

Each locality's Composite Index is based on three factors – the locality's total real property tax base, total adjusted real income, and total taxable retail sales. Of these, the total real property tax base receives the highest weight. Therefore, hypothetically, a large capital investment such as a solar facility could increase a locality's Composite Index and thereby increase the required local contribution to the county's school budget. However, there are two important issues to keep in mind when evaluating the likely impact of a solar project on a locality's Composite Index.

First, when calculating a locality's Composite Index, solar projects are treated no differently than manufacturing facilities, residential neighborhoods, or any other large capital investment. The part of the investment that is taxable is included in the real property tax base portion of the calculation. Pursuant to Virginia Code §58.1-3660, that means for solar facilities over 20MW and under 150MW the 20 percent of the investment that is taxable is considered in the Composite Index, and only that 20 percent.

Second, changes in a locality's Composite Index are driven by changes in a locality's total real property tax base (along with total adjusted real income and total taxable retail sales) relative to the changes in all Virginia localities total real property tax base (along with total adjusted real income and total taxable retail sales). As a result, for any one capital investment to have an impact on a locality's Composite Index, it would have to drive a percentage change in the locality's total real property tax base that was larger than the percentage change in the total real property tax base across all Virginia localities.

Between the Virginia Department of Education's 2018-20 and 2020-22 Composite Index calculations, the total real property tax base across all Virginia localities increased by 7.3 percent. Even after accounting for both the capital investment in the project itself and the increased property value assessments associated with rezoning the property to solar use, the proposed Riverstone Solar project would only drive a 1.9 percent increase in Buckingham County's total real property tax base. This means that, in and of itself, it is unlikely the proposed Riverstone Solar project would effect a meaningful change in Buckingham County's Composite Index.

However, consistent with reports we have produced for other Virginia localities, Table 8 provides an estimate of the hypothetical upper limit of the impact that the proposed Riverstone Solar project could have on Buckingham County's Composite Index and the county's share of its school budget over a 40-year period, holding all other changes to the county's property tax base and the property tax base of all other Virginia localities constant.

The calculation presented in Table 8 is derived by: 1) using baseline data for Buckingham County on County Taxable Real Property, Adjusted Gross Income, Taxable Retail Sales, County School Average Daily Membership (ADM), and County Population from the Virginia Department of Education's 2020-2022 Composite Index of Local Ability to Pay, 2) adjusting County Taxable Real Property in subsequent years for the estimated net increase in real estate assessments from solar use (the estimated increase in property value from solar use presented in Table 3 less the property's current assessed value), plus the "Depreciated Value of Taxable Capital Investment" figures from Table 4, and 3) applying those figures to the Virginia Department of Education's Composite Index formula to compute a revised Composite Index for Buckingham County in each subsequent year.³⁸

That revised Composite Index is then applied to Buckingham County's baseline FY 2020 locally funded school budget as reported by the Virginia Auditor of Public Accounts to derive a hypothetical upper limit of the additional local school funding that could be required in each subsequent year relative to the baseline, if one holds all other changes to the county's property tax base and the property tax base of all other Virginia localities constant.

³⁸ The Virginia Department of Education's composite index formula is: $(0.5 * (((0.66) * ((\text{County Taxable Real Property} / \text{County School ADM}) / (\text{State Taxable Real Property} / \text{State School ADM})) + ((0.33) * ((\text{County Taxable Real Property} / \text{County Population}) / (\text{State Taxable Real Property} / \text{State Population})))))) + (0.4 * (((0.66) * ((\text{County Adjusted Gross Income} / \text{County School ADM}) / (\text{State Adjusted Gross Income} / \text{State School ADM})) + ((0.33) * ((\text{County Adjusted Gross Income} / \text{County Population}) / (\text{State Adjusted Gross Income} / \text{State Population})))))) + (0.1 * (((0.66) * ((\text{County Taxable Retail Sales} / \text{County School ADM}) / (\text{State Taxable Retail Sales} / \text{State School ADM})) + ((0.33) * ((\text{County Taxable Retail Sales} / \text{County Population}) / (\text{State Taxable Retail Sales} / \text{State Population}))))))$.

Table 8: Hypothetical Upper Limit to Change in Composite Index and Required Local Contribution to School Budget from the proposed Riverstone Solar Project over 40 Years

Year	County Taxable Real Property ³⁹	Increased Property Valuation from Solar Use	Taxable Proposed Capital Investment ⁴⁰	Adj. County Taxable Real Property	Adj. Gross Income ⁴¹	Taxable Retail Sales ⁴²	County School ADM ⁴³	County Pop. ⁴⁴	Comp. Index ⁴⁵	Locally Funded School Budget ⁴⁶	Change in Locally Funded School Budget
Baseline	\$2,191,369,035				\$245,258,412	\$57,962,896	1,950	16,957	0.3422	\$7,200,133	\$0
1	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
2	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
3	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
4	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
5	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
6	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
7	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
8	\$2,191,369,035	\$8,539,609	\$32,310,324	\$2,232,218,968	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,435	\$91,302
9	\$2,191,369,035	\$8,539,609	\$32,199,033	\$2,232,107,677	\$245,258,412	\$57,962,896	1,950	16,957	0.3465	\$7,291,186	\$91,053
10	\$2,191,369,035	\$8,539,609	\$31,653,347	\$2,231,561,991	\$245,258,412	\$57,962,896	1,950	16,957	0.3464	\$7,289,966	\$89,833
11	\$2,191,369,035	\$8,539,609	\$31,075,352	\$2,230,983,996	\$245,258,412	\$57,962,896	1,950	16,957	0.3464	\$7,288,675	\$88,542
12	\$2,191,369,035	\$8,539,609	\$30,465,045	\$2,230,373,690	\$245,258,412	\$57,962,896	1,950	16,957	0.3463	\$7,287,311	\$87,178
13	\$2,191,369,035	\$8,539,609	\$29,818,839	\$2,229,727,483	\$245,258,412	\$57,962,896	1,950	16,957	0.3462	\$7,285,866	\$85,733
14	\$2,191,369,035	\$8,539,609	\$29,129,552	\$2,229,038,196	\$245,258,412	\$57,962,896	1,950	16,957	0.3462	\$7,284,326	\$84,193
15	\$2,191,369,035	\$8,539,609	\$28,400,775	\$2,228,309,419	\$245,258,412	\$57,962,896	1,950	16,957	0.3461	\$7,282,697	\$82,564
16	\$2,191,369,035	\$8,539,609	\$27,628,917	\$2,227,537,561	\$245,258,412	\$57,962,896	1,950	16,957	0.3460	\$7,280,972	\$80,839

³⁹ Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.

⁴⁰ Data Source: From Table 6.

⁴¹ Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.

⁴² Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.

⁴³ Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.

⁴⁴ Data Source: Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay.

⁴⁵ Data Source: Baseline data taken from the Virginia Department of Education, 2020-22 Composite Index of Local Ability to Pay. Subsequent annual calculations are based on the Adjusted County Taxable Real Property, Adjusted Gross Income, County School Average Daily Membership (ADM), and County Population data presented for each year.

⁴⁶ Data Source: Virginia Auditor of Public Accounts.

Table 8: Hypothetical Upper Limit to Change in Composite Index and Required Local Contribution to School Budget from the proposed Riverstone Solar Project over 40 Years

Year	County Taxable Real Property ³⁹	Increased Property Valuation from Solar Use	Taxable Proposed Capital Investment ⁴⁰	Adj. County Taxable Real Property	Adj. Gross Income ⁴¹	Taxable Retail Sales ⁴²	County School ADM ⁴³	County Pop. ⁴⁴	Comp. Index ⁴⁵	Locally Funded School Budget ⁴⁶	Change in Locally Funded School Budget
17	\$2,191,369,035	\$8,539,609	\$26,810,389	\$2,226,719,033	\$245,258,412	\$57,962,896	1,950	16,957	0.3459	\$7,279,142	\$79,009
18	\$2,191,369,035	\$8,539,609	\$25,945,190	\$2,225,853,834	\$245,258,412	\$57,962,896	1,950	16,957	0.3458	\$7,277,208	\$77,075
19	\$2,191,369,035	\$8,539,609	\$25,022,551	\$2,224,931,195	\$245,258,412	\$57,962,896	1,950	16,957	0.3457	\$7,275,146	\$75,013
20	\$2,191,369,035	\$8,539,609	\$24,049,651	\$2,223,958,295	\$245,258,412	\$57,962,896	1,950	16,957	0.3456	\$7,272,972	\$72,839
21	\$2,191,369,035	\$8,539,609	\$23,015,721	\$2,222,924,365	\$245,258,412	\$57,962,896	1,950	16,957	0.3455	\$7,270,661	\$70,528
22	\$2,191,369,035	\$8,539,609	\$21,920,760	\$2,221,829,404	\$245,258,412	\$57,962,896	1,950	16,957	0.3454	\$7,268,214	\$68,081
23	\$2,191,369,035	\$8,539,609	\$20,761,178	\$2,220,669,822	\$245,258,412	\$57,962,896	1,950	16,957	0.3453	\$7,265,622	\$65,489
24	\$2,191,369,035	\$8,539,609	\$19,529,796	\$2,219,438,440	\$245,258,412	\$57,962,896	1,950	16,957	0.3451	\$7,262,870	\$62,737
25	\$2,191,369,035	\$8,539,609	\$18,226,613	\$2,218,135,257	\$245,258,412	\$57,962,896	1,950	16,957	0.3450	\$7,259,957	\$59,824
26	\$2,191,369,035	\$8,539,609	\$16,840,859	\$2,216,749,503	\$245,258,412	\$57,962,896	1,950	16,957	0.3449	\$7,256,860	\$56,727
27	\$2,191,369,035	\$8,539,609	\$15,376,124	\$2,215,284,768	\$245,258,412	\$57,962,896	1,950	16,957	0.3447	\$7,253,586	\$53,453
28	\$2,191,369,035	\$8,539,609	\$13,821,639	\$2,213,730,283	\$245,258,412	\$57,962,896	1,950	16,957	0.3445	\$7,250,112	\$49,979
29	\$2,191,369,035	\$8,539,609	\$12,177,402	\$2,212,086,046	\$245,258,412	\$57,962,896	1,950	16,957	0.3444	\$7,246,437	\$46,304
30	\$2,191,369,035	\$8,539,609	\$10,429,055	\$2,210,337,699	\$245,258,412	\$57,962,896	1,950	16,957	0.3442	\$7,242,529	\$42,396
31	\$2,191,369,035	\$8,539,609	\$8,580,186	\$2,208,488,830	\$245,258,412	\$57,962,896	1,950	16,957	0.3440	\$7,238,397	\$38,264
32	\$2,191,369,035	\$8,539,609	\$6,620,026	\$2,206,528,670	\$245,258,412	\$57,962,896	1,950	16,957	0.3438	\$7,234,016	\$33,883
33	\$2,191,369,035	\$8,539,609	\$4,541,396	\$2,204,450,040	\$245,258,412	\$57,962,896	1,950	16,957	0.3436	\$7,229,370	\$29,237
34	\$2,191,369,035	\$8,539,609	\$3,590,036	\$2,203,498,680	\$245,258,412	\$57,962,896	1,950	16,957	0.3435	\$7,227,243	\$27,110
35	\$2,191,369,035	\$8,539,609	\$3,590,036	\$2,203,498,680	\$245,258,412	\$57,962,896	1,950	16,957	0.3435	\$7,227,243	\$27,110
36	\$2,191,369,035	\$8,539,609	\$3,590,036	\$2,203,498,680	\$245,258,412	\$57,962,896	1,950	16,957	0.3435	\$7,227,243	\$27,110
37	\$2,191,369,035	\$8,539,609	\$3,590,036	\$2,203,498,680	\$245,258,412	\$57,962,896	1,950	16,957	0.3435	\$7,227,243	\$27,110
38	\$2,191,369,035	\$8,539,609	\$3,590,036	\$2,203,498,680	\$245,258,412	\$57,962,896	1,950	16,957	0.3435	\$7,227,243	\$27,110
39	\$2,191,369,035	\$8,539,609	\$3,590,036	\$2,203,498,680	\$245,258,412	\$57,962,896	1,950	16,957	0.3435	\$7,227,243	\$27,110
40	\$2,191,369,035	\$8,539,609	\$3,590,036	\$2,203,498,680	\$245,258,412	\$57,962,896	1,950	16,957	0.3435	\$7,227,243	\$27,110
TOTAL											\$2,590,958

As shown in Table 8, based on these calculations, we estimate the hypothetical upper limit of the additional local school funding that could be required as a result of the proposed Riverstone Solar project's addition to Buckingham County's real property tax base to be approximately \$91,302 in the project's first year of operation with that figure projected to decline to approximately \$27,110 in the project's 34th year of operation and thereafter as the value of the proposed capital investments is further depreciated for a cumulative total of approximately \$2.6 million.

Table 9 combines the results from the calculations depicted in Table 7 and 8 to provide an estimate of the fiscal contribution that the proposed Riverstone Solar project would make to Buckingham County over 40 years. As these data indicate, even taking into account the hypothetical upper limit of the additional local school funding that could be required as a result of the proposed Riverstone Solar project's increase to Buckingham County's real property tax base, we estimate the cumulative net county revenue from the project to be approximately \$3.7 million over its anticipated 40-year operational life expectancy.

Table 9: Estimated County Tax Revenue Generated by the Proposed Riverstone Solar project over 40 Years, taking into account Hypothetical Upper Limit of Effect on Composite Index

Cumulative Revenue over 40 Years	\$6,331,792
Hypothetical Upper Limit of Effect on Composite Index	(\$2,590,958)
Net Revenue over 40 Years	\$3,740,834

Current Agricultural Use

In this section, we provide a benchmark for the previous estimates of the economic contribution that the proposed Riverstone Solar project would make to Buckingham County by estimating the economic and fiscal contribution that the site makes to the county in its current agricultural use. In conducting that analysis, we employ the following assumptions:

- The proposed Riverstone Solar project would be situated on an approximate 1,000-acre tract of actively managed timberland.
- Average annual revenue per acre for Buckingham County timberland is approximately \$250.24.⁴⁷
- Real property tax payments by current landowners to Buckingham County are approximately \$7,594 each year.⁴⁸

⁴⁷ Data Source: Estimated based on data from the U.S. Department of Agriculture 2017 Census and industry data from IMPLAN Group, LLC.

⁴⁸ Data Source: Derived from property card data provided by the Buckingham County Commissioner of Revenue's office. Includes value of timber.

By feeding these assumptions into the IMPLAN model, we obtain the following estimates of annual economic and fiscal impact. As shown in Table 10, in a timber production use we estimate that the proposed Riverstone Solar project site directly supports approximately: 1) 3 jobs, 2) \$171,075 in labor income, and 3) \$250,244 in economic output to Buckingham County.

Taking into account the economic ripple effects that direct impact generates, we estimate that on average, the total annually supported impact on Buckingham County is approximately: 1) 4 jobs, 2) \$203,983 in labor income, 3) \$334,500 in economic output, and 4) \$7,594 in direct real property tax payments to Buckingham County, for a cumulative total of \$303,761 over 40 years.

Table 10: Total Estimated Annual Economic Impact of the Riverstone Solar Project Site on Buckingham County – Current Agricultural Use

Economic Impact	Employment	Labor Income	Output
1st Round Direct Economic Activity	3	\$171,075	\$250,244
2nd Round Indirect and Induced Economic Activity	1	\$32,909	\$84,256
Total Economic Activity	4	\$203,983	\$334,500
Fiscal Impact			
Local Tax Revenue			\$7,594
TOTAL Cumulative Local Tax Revenue over 40 Years			\$303,761

**Totals may not sum due to rounding.*

The estimates provided in this report are based on the best information available and all reasonable care has been taken in assessing that information. However, because these estimates attempt to foresee circumstances that have not yet occurred, it is not possible to provide any assurance that they will be representative of actual events. These estimates are intended to provide a general indication of likely future outcomes and should not be construed to represent a precise measure of those outcomes.

3.10. Property Value Impact Study



Kirkland Appraisals, LLC

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August 3, 2021

Mr. Jimmy Merrick
Riverstone Solar, LLC
310 4th Street NE, Suite 300
Charlottesville, VA 22902

RE: Riverstone Solar Project – Property Value Impact Study

Mr. Merrick

At your request, I have considered the impact of a solar farm proposed to be constructed on a portion of a 1,996-acre assemblage of land off Bridgeport Road, Arvon, Buckingham County, Virginia. Specifically, I have been asked to give my professional opinion on whether the proposed solar farm will have any impact on adjoining property value 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 Virginia as well as other states, 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 Riverstone Solar, LLC, represented to me by Mr. Jimmy Merrick. My findings support the Application. The effective date of this consultation is August 3, 2021.

Conclusion

The adjoining properties are well set back from the proposed solar panels and most of the site has good existing landscaping for screening the proposed solar farm. Additional supplemental vegetation is proposed along the right of way where no vegetation is currently located.

The matched pair analysis shows no impact on home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land where the solar farm is properly screened and buffered. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all indicate that a solar farm is a compatible use for rural/residential transition areas and that it would function in a harmonious manner with this area.

Data from the university studies, broker commentary, and other appraisal studies support a finding of no impact on property value adjoining a solar farm with proper setbacks and landscaped buffers.

Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial negative effect to abutting or adjoining properties, and many of those

findings of no impact have been upheld by appellate courts. Similar solar farms have been approved with adjoining agricultural uses, schools, churches, and residential developments.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no impact on the value of adjoining or abutting properties and that the proposed use is in harmony with the area in which it is located. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is minimal traffic.

If you have any questions, please let me know.

Sincerely,



Richard C. Kirkland, Jr., MAI
NC Certified General Appraiser #A4359
VA Certified General Appraiser # 4001017291

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I. Proposed Project and Adjoining Uses

Proposed Use Description

This 149.5 MW solar farm is proposed to be constructed on a portion of a 1,996-acre assemblage of land off Bridgeport Road, Arvonnia, Buckingham County, Virginia. Adjoining land is a mix of residential and agricultural uses, which is very typical of solar farm sites.

Adjoining Properties

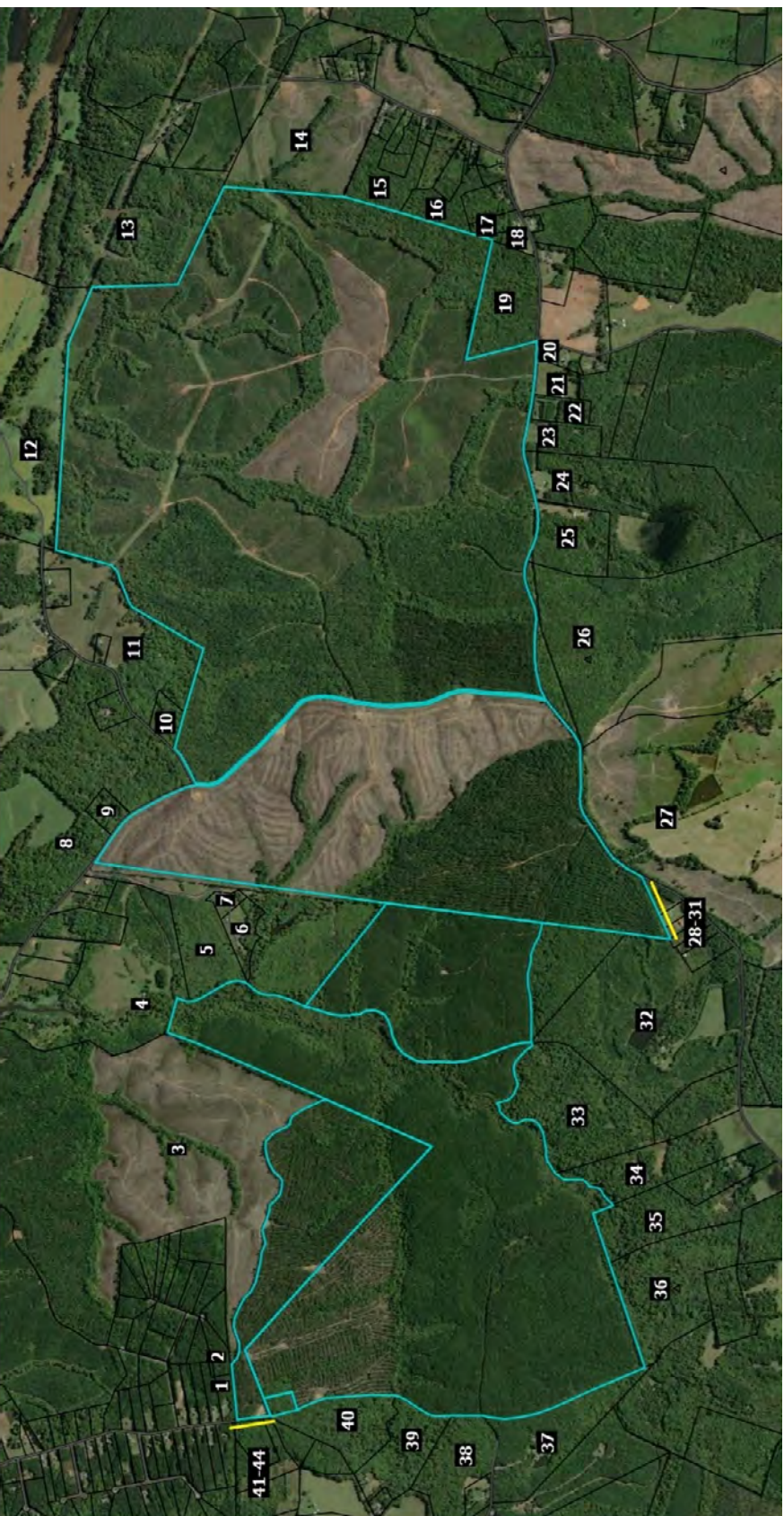
I have considered adjoining uses and included a map to identify each parcel's location. The closest adjoining home will be 355 feet from the closest solar panel and the average distance to adjoining homes will be 861 feet to the nearest solar panel. Most of these setbacks are much further than typical.

The subject property is planned to maintain existing vegetation where possible around the entire property. A planted screening will be placed along existing right of ways where vegetation does not exist.

The breakdown of those uses by acreage and number of parcels is summarized below.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	5.07%	50.00%
Agricultural	84.89%	38.64%
Agri/Res	10.04%	11.36%
Total	100.00%	100.00%



Surrounding Uses

#	MAP ID	Owner	GIS Data		Adjoin	Adjoin	Distance (ft)
			Acres	Present Use	Acres	Parcels	Home/Panel
1	17-1-33	Weidman	3.14	Residential	0.12%	2.27%	395
2	17-1-61	JT Enterprises	3.85	Residential	0.15%	2.27%	N/A
3	17-10	Foster	304.90	Agricultural	11.67%	2.27%	N/A
4	10-6-1	Payne	87.76	Agricultural	3.36%	2.27%	N/A
5	17-2-7	Moss	71.17	Agricultural	2.72%	2.27%	N/A
6	17-2-6	Franz	6.59	Residential	0.25%	2.27%	1,020
7	17-2-6B	Moss	2.50	Residential	0.10%	2.27%	355
8	10-26	Wilmoth	234.10	Agricultural	8.96%	2.27%	N/A
9	17-18C	Wilmoth	5.00	Residential	0.19%	2.27%	N/A
10	17-18D	Ludovissy	5.00	Residential	0.19%	2.27%	N/A
11	17-18	Wilmoth	212.70	Agricultural	8.14%	2.27%	N/A
12	11-2	ZunZ	165.56	Agricultural	6.34%	2.27%	N/A
13	18-1	Smith	96.20	Agricultural	3.68%	2.27%	N/A
14	18-23	BTG	108.00	Agricultural	4.13%	2.27%	N/A
15	18-19	Chambers	20.00	Residential	0.77%	2.27%	N/A
16	18-16	Harris	11.53	Residential	0.44%	2.27%	1,795
17	18-10	Hutcherson	16.91	Residential	0.65%	2.27%	1,415
18	18-10A	Hutcherson	3.00	Residential	0.11%	2.27%	1,235
19	18-7	Taggart	29.00	Agricultural	1.11%	2.27%	N/A
20	18-1-3	Moseley	2.00	Residential	0.08%	2.27%	395
21	18-1-2	Marshall	6.37	Residential	0.24%	2.27%	570
22	18-1-1	Ozmar	7.00	Residential	0.27%	2.27%	N/A
23	18-6	Parson	10.00	Residential	0.38%	2.27%	355
24	18-4	Cobb	75.60	Agri/Res	2.89%	2.27%	380
25	18-3	Dunkum	24.40	Agri/Res	0.93%	2.27%	775
26	17-16	Bolling	170.00	Agricultural	6.51%	2.27%	N/A
27	27-12	Alvis Properties	496.13	Agricultural	18.99%	2.27%	N/A
28	27-10F	Al Asset	3.01	Residential	0.12%	2.27%	N/A
29	27-10E	McCauley	2.00	Residential	0.08%	2.27%	510
30	27-10D	Ford	2.00	Residential	0.08%	2.27%	705
31	27-10C	Al Asset	2.00	Residential	0.08%	2.27%	N/A
32	27-10	Reider	104.29	Agri/Res	3.99%	2.27%	1,835
33	17-15	Cook	68.00	Agricultural	2.60%	2.27%	N/A
34	17-14	Cook	40.00	Agricultural	1.53%	2.27%	N/A
35	27-7	Cook	39.06	Agricultural	1.49%	2.27%	N/A
36	27-3	Ford	47.00	Agricultural	1.80%	2.27%	N/A
37	17-7	Secada	36.30	Agri/Res	1.39%	2.27%	645
38	16-86	Dorrier	24.90	Agricultural	0.95%	2.27%	N/A
39	17-5	Dorrier	21.70	Agri/Res	0.83%	2.27%	1,250
40	17-6A	Dorrier	23.60	Agricultural	0.90%	2.27%	N/A
41	17-3A	Dorrier	2.64	Residential	0.10%	2.27%	N/A
42	17-3B	Dorrier	8.05	Residential	0.31%	2.27%	N/A
43	17-3	Dorrier	6.00	Residential	0.23%	2.27%	1,015
44	17-1-32	Dufort	3.84	Residential	0.15%	2.27%	850
Total			2612.800		100.00%	100.00%	861

II. Methodology and Discussion of Issues

Standards and Methodology

I conducted this analysis using the standards and practices established by the Appraisal Institute and that conform to the Uniform Standards of Professional Appraisal Practice. The analyses and methodologies contained in this report are accepted by all major lending institutions, and they are used in Virginia and across the country as the industry standard by certified appraisers conducting appraisals, market analyses, or impact studies and are considered adequate to form an opinion of the impact of a land use on neighboring properties. These standards and practices have also been accepted by the courts at the trial and appellate levels and by federal courts throughout the country as adequate to reach conclusions about the likely impact a use will have on adjoining or abutting properties.

The aforementioned standards compare property uses in the same market and generally within the same calendar year so that fluctuating markets do not alter study results. Although these standards do not require a linear study that examines adjoining property values before and after a new use (e.g. a solar farm) is developed, some of these studies do in fact employ this type of analysis. Comparative studies, as used in this report, are considered an industry standard.

The type of analysis employed is a Matched Pair Analysis or Paired Sales Analysis. This methodology is outlined in **The Appraisal of Real Estate**, Twelfth Edition by the Appraisal Institute pages 438-439. It is further detailed in **Real Estate Damages**, Third Edition, pages 33-36 by Randall Bell PhD, MAI. Paired sales analysis is used to support adjustments in appraisal work for factors ranging from the impact of having a garage, golf course view, or additional bedrooms. It is an appropriate methodology for addressing the question of impact of an adjoining solar farm. The paired sales analysis is based on the theory that when two properties are in all other respects equivalent, a single difference can be measured to indicate the difference in price between them. Dr. Bell describes it as comparing a test area to control areas. In the example provided by Dr. Bell he shows five paired sales in the test area compared to 1 to 3 sales in the control areas to determine a difference. I have used 3 sales in the control areas in my analysis for each sale developed into a matched pair.

Determining what is an External Obsolescence

An external obsolescence is a use of property that, because of its characteristics, might have a negative impact on the value of adjacent or nearby properties because of identifiable impacts. Determining whether a use would be considered an external obsolescence requires a study that isolates that use, eliminates any other causing factors, and then studies the sales of nearby versus distant comparable properties. The presence of one or a combination of key factors does not mean the use will be an external obsolescence, but a combination of these factors tends to be present when market data reflects that a use is an external obsolescence.

External obsolescence is evaluated by appraisers based on several factors. These factors include but are not limited to:

- 1) Traffic. Solar Farms are not traffic generators.
- 2) Odor. Solar farms do not produce odor.
- 3) Noise. Solar farms generate no noise concerns and are silent at night.

- 4) Environmental. Solar farms do not produce toxic or hazardous waste. Grass is maintained underneath the panels so there is minimal impervious surface area.
- 5) Appearance/Viewshed. This is the one area that potentially applies to solar farms. However, solar farms are generally required to provide significant setbacks and landscaping buffers to address that concern. Furthermore, any consideration of appearance of viewshed impacts has to be considered in comparison with currently allowed uses on that site. For example if a residential subdivision is already an allowed use, the question becomes in what way does the appearance impact adjoining property owners above and beyond the appearance of that allowed subdivision or other similar allowed uses.
- 6) Other factors. I have observed and studied many solar farms and have never observed any characteristic about such facilities that prevents or impedes neighbors from fully using their homes or farms or businesses for the use intended.

Relative Solar Farm Sizes

Solar farms have been increasing in size in recent years. Much of the data collected is from existing, older solar farms of smaller size, but there are numerous examples of sales adjoining 75 to 80 MW facilities that show a similar trend as the smaller solar farms. This is understandable given that the primary concern relative to a solar farm is the appearance or view of the solar farm, which is typically addressed through setbacks and landscaping buffers. The relevance of data from smaller solar farms to larger solar farms is due to the primary question being one of appearance. If the solar farm is properly screened, then little of the solar farm would be seen from adjoining property regardless of how many acres are involved.

Larger solar farms are often set up in sections where any adjoining owner would only be able to see a small section of the project even if there were no landscaping screen. Once a landscaping screen is in place, the primary view is effectively the same whether adjoining a 5 MW, 20 MW or 100 MW facility.

I have split out the data for the matched pairs adjoining larger solar farms only to illustrate the similarities later in this report.

Steps Involved in the Analysis

The paired sales analysis employed in this report follows the following process:

1. Identify sales of property adjoining existing solar farms.
2. Compare those sales to similar property that does not adjoin an existing solar farm.
3. Confirmation of sales are noted in the analysis write ups.
4. Distances from the homes to panels are included as a measure of the setbacks.
5. Topographic differences across the solar farms themselves are likewise noted along with demographic data for comparing similar areas.

There are a number of Sale/Resale comparables included in the write ups, but most of the data shown is for sales of homes after a solar farm has been announced (where noted) or after a solar farm has been constructed.

III. Research on Solar Farms

A. *Appraisal Market Studies*

I have also considered a number of impact studies completed by other appraisers as detailed below.

CohnReznick – Property Value Impact Study: Adjacent Property Values Solar Impact Study: A Study of Eight Existing Solar Facilities

Patricia McGarr, MAI, CRE, FRICS, CRA and Andrew R. Lines, MAI with CohnReznick completed an impact study for a proposed solar farm in Cheboygan County, Michigan completed on June 10, 2020. I am familiar with this study as well as a number of similar such studies completed by CohnReznick. I have not included all of these studies but I submit this one as representative of those studies.

This study addresses impacts on value from eight different solar farms in Michigan, Minnesota, Indiana, Illinois, Virginia and North Carolina. These solar farms are 19.6 MW, 100 MW, 11.9 MW, 23 MW, 71 MW, 61 MW, 40 MW, and 19 MW for a range from 11.9 MW to 100 MW with an average of 31 MW and a median of 31.5 MW. They analyzed a total of 24 adjoining property sales in the Test Area and 81 comparable sales in the Control Area over a five-year period.

The conclusion of this study is that there is no evidence of any negative impact on adjoining property values based on sales prices, conditions of sales, overall marketability, potential for new development or rate of appreciation.

Christian P. Kaila & Associates – Property Impact Analysis – Proposed Solar Power Plant Guthrie Road, Stuarts Draft, Augusta County, Virginia

Christian P. Kaila, MAI, SRA and George J. Finley, MAI developed an impact study as referenced above dated June 16, 2020. This was for a proposed 83 MW facility on 886 acres.

Mr. Kaila interviewed appraisers who had conducted studies and reviewed university studies and discussed the comparable impacts of other development that was allowed in the area for a comparative analysis of other impacts that could impact viewshed based on existing allowed uses for the site. He also discussed in detail the various other impacts that could cause a negative impact and how solar farms do not have such characteristics.

Mr. Kaila also interviewed county planners and real estate assessors in eight different Virginia counties with none of the assessor's identifying any negative impacts observed for existing solar projects.

Mr. Kaila concludes on a finding of no impact on property values adjoining the indicated solar farm.

Fred Beck, MAI, CCIM – Impact Analysis in Lincoln County 2013

Mr. Fred Beck, MAI, CCIM completed an impact analysis in 2013 for a proposed solar farm that concluded on a negative impact on value. That report relied on a single cancelled contract for an adjoining parcel where the contracted buyers indicated that the solar farm was the reason for the cancellation. It also relied on the activities of an assessment impact that was applied in a nearby county.

Mr. Beck was interviewed as part of the Christian Kalia study noted above. From that I quote "Mr. Beck concluded on no effect on moderate priced homes, and only a 5% change in his limited research of higher priced homes. His one sale that fell through is hardly a reliable sample. It also

was misleading on Mr. Beck's part to report the lower re-assessments since the primary cause of the re-assessments were based on the County Official, who lived adjacent to the solar farm, appeal to the assessor for reductions with his own home." In that Clay County Case study the noted lack of lot sales after announcement of the solar farm also coincided with the recession in 2008/2009 and lack of lot sales effectively defined that area during that time.

I further note, that I was present at the hearing where Mr. Beck presented these findings and the predominance of his argument before the Lincoln County Board of Commissioner's was based on the one cancelled sale as well as a matched pair analysis of high-end homes adjoining a four-story call center. He hypothesized that a similar impact from that example could be compared to being adjacent solar farm without explaining the significant difference in view, setbacks, landscaping, traffic, light, and noise. Furthermore, Mr. Beck did have matched pairs adjoining a solar farm in his study that he put in the back of his report and then ignored as they showed no impact on property value.

Also noted in the Christian Kalia interview notes is a response from Mr. Beck indicating that in his opinion "the homes were higher priced homes and had full view of the solar farm." Based on a description of screening so that "the solar farm would not be in full view to adjoining property owners. Mr. Beck said in that case, he would not see any drop in property value."

NorthStar Appraisal Company – Impact Analysis for Nichomus Run Solar, Pilesgrove, NJ, September 16, 2020

Mr. William J. Sapio, MAI with NorthStar Appraisal Company considered a matched pair analysis for the potential impact on adjoining property values to this proposed 150 MW solar farm. Mr. Sapio considered sales activity in a subdivision known as Point of Woods in South Brunswick Township and identified two recent new homes that were constructed and sold adjoining a 13 MW solar farm and compared them to similar homes in that subdivision that did not adjoin the solar farm. These homes sold in the \$1,290,450 to \$1,336,613 price range and these homes were roughly 200 feet from the closest solar panel.

Based on this analysis, he concluded that the adjoining solar farm had no impact on adjoining property value.

Conclusion of Impact Studies

Of the four studies noted two included actual sales data to derive an opinion of no impact on value. The only study to conclude on a negative impact was the Fred Beck study based on no actual sales data, and he has since indicated that with landscaping screens he would not conclude on a negative impact.

I have relied on these studies as additional support for the findings in this impact analysis.

B. Articles

I have also considered a number of articles on this subject as well as conclusions and analysis as noted below.

Farm Journal Guest Editor, March 22, 2021 – Solar's Impact on Rural Property Values

Andy Ames, ASFMRA (American Society of Farm Managers and Rural Appraisers) published this article that includes a discussion of his survey of appraisers and studies on the question of property value related to solar farms. He discusses the university studies that I have cited as well as Patricia McGarr, MAI.

He also discusses the findings of Donald A. Fisher, ARA, who served six years at the Chair of the ASFMRA's National Appraisal Review Committee. He is also the Executive Vice President of the CNY Pomeroy Appraiser and has conducted several market studies on solar farms and property impact. He is quoted in the article as saying, "Most of the locations were in either suburban or rural areas, and all of those studies found either a neutral impact, or ironically, a positive impact, where values on properties after installation of solar farms went up higher than time trends."

Howard Halderman, AFM, President and CEO of Halderman Real Estate and Farm Management attended the ASFMRA solar talk hosted by the Indiana Chapter of the ASFMRA and he concludes that other rural properties would likely see no impact and farmers and landowners shown even consider possible benefits. "In some cases, farmers who rent land to a solar company will insure the viability of their farming operation for a longer time period. This makes them better long-term tenants or land buyers so one can argue that higher rents and land values will follow due to the positive impact the solar leases offer."

National Renewable Energy Laboratory – Top Five Large-Scale Solar Myths, February 3, 2016

Megan Day reports from NREL regarding a number of concerns neighbors often express. Myth #4 regarding property value impacts addresses specifically the numerous studies on wind farms that show no impact on property value and that solar farms have a significantly reduced visual impact from wind farms. She highlights that the appearance can be addressed through mitigation measures to reduce visual impacts of solar farms through vegetative screening. Such mitigations are not available to wind farms given the height of the windmills and again, those studies show no impact on value adjoining wind farms.

North Carolina State University: NC Clean Energy Technology Center White Paper: Balancing Agricultural Productivity with Ground-Based Solar Photovoltaic (PV) Development (Version 2), May 2019

Tommy Cleveland and David Sarkisian wrote a white paper for NCSU NC Clean Energy Technology Center regarding the potential impacts to agricultural productivity from a solar farm use. I have interviewed Tommy Cleveland on numerous occasions and I have also heard him speak on these issues at length as well. He addresses many of the common questions regarding how solar farms work and a detailed explanation of how solar farms do not cause significant impacts on the soils, erosion and other such concerns. This is a heavily researched paper with the references included.

North Carolina State University: NC Clean Energy Technology Center White Paper: Health and Safety Impacts of Solar Photovoltaics, May 2017

Tommy Cleveland wrote a white paper for NCSU NC Clean Energy Technology Center regarding the health and safety impacts to address common questions and concerns related to solar farms. This is a heavily researched white paper addressing questions ranging from EMFs, fire safety, as well as vegetation control and the breakdown of how a solar farm works.

C. *Broker Commentary*

In the process of working up the matched pairs used later in this report, I have collected comments from brokers who have actually sold homes adjoining solar farms indicating that the solar farm had no impact on the marketing, timing, or sales price for the adjoining homes. I have comments from 12 such brokers within this report including brokers from Kentucky, Virginia, Tennessee, and North Carolina.

I have additional commentary from other states including New Jersey and Michigan that provide the same conclusion.

IV. University Studies

I have also considered the following studies completed by four different universities related to solar farms and impacts on property values.

A. *University of Texas at Austin, May 2018* An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations

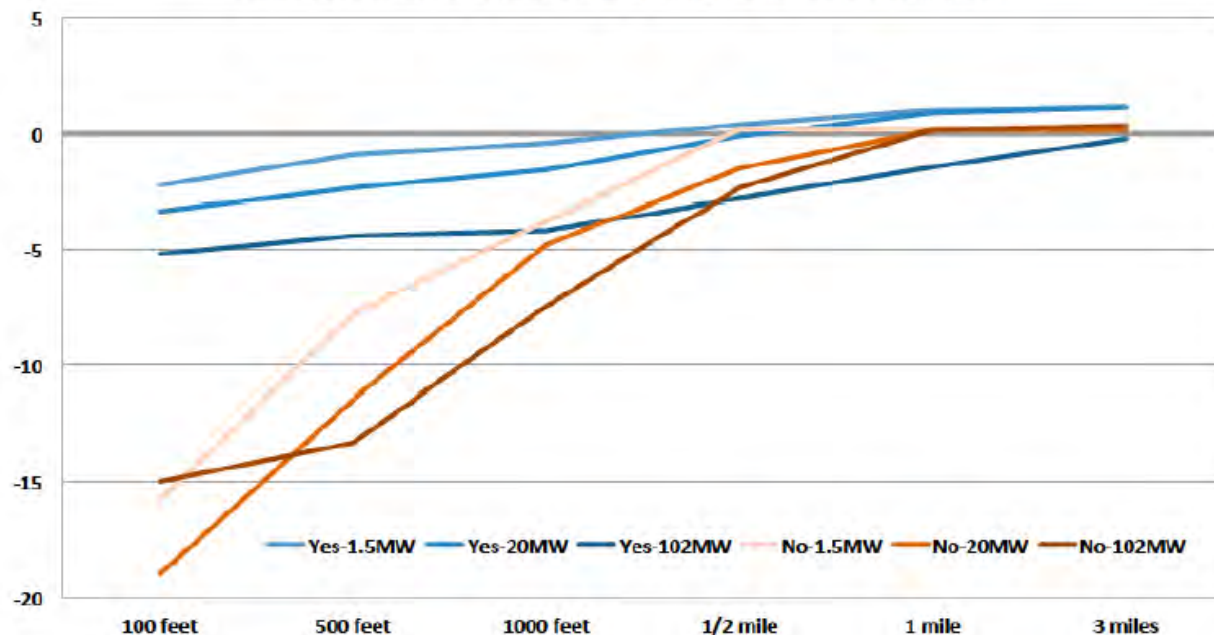
This study considers solar farms from two angles. First it looks at where solar farms are being located and concludes that they are being located primarily in low density residential areas where there are fewer homes than in urban or suburban areas.

The second part is more applicable in that they conducted a survey of appraisers/assessors on their opinions of the possible impacts of proximity to a solar farm. They consider the question in terms of size of the adjoining solar farm and how close the adjoining home is to the solar farm. I am very familiar with this part of the study as I was interviewed by the researchers multiple times as they were developing this. One very important question that they ask within the survey is very illustrative. They asked if the appraiser being surveyed had ever appraised a property next to a solar farm. There is a very noticeable divide in the answers provided by appraisers who have experience appraising property next to a solar farm versus appraisers who self-identify as having no experience or knowledge related to that use.

On Page 16 of that study they have a chart showing the responses from appraisers related to proximity to a facility and size of the facility, but they separate the answers as shown below with appraisers with experience in appraising properties next to a solar farm shown in blue and those inexperienced shown in brown. Even within 100 feet of a 102 MW facility the response from experienced appraisers were -5% at most on impact. While inexperienced appraisers came up with significantly higher impacts. This chart clearly shows that an uninformed response widely diverges from the sales data available on this subject.

Chart B.2 - Estimates of Property Value Impacts (%) by Size of Facility, Distance, & Respondent Type

Have you assessed a home near a utility-scale solar installation?



Furthermore, the question cited above does not consider any mitigating factors such as landscaping buffers or screens which would presumably reduce the minor impacts noted by experienced appraisers on this subject.

The conclusion of the researchers is shown on Page 23 indicated that “Results from our survey of residential home assessors show that the majority of respondents believe that proximity to a solar installation has either no impact or a positive impact on home values.”

This analysis supports the conclusion of this report that the data supports no impact on adjoining property values.

B. University of Rhode Island, September 2020

Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island

The University of Rhode Island published a study entitled **Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island** on September 29, 2020 with lead researchers being Vasundhara Gaur and Corey Lang. I have read that study and interviewed Mr. Corey Lang related to that study. This study is often cited by opponents of solar farms but the findings of that study have some very specific caveats according to the report itself as well as Mr. Lang from the interview.

While that study does state in the Abstract that they found depreciation of homes within 1-mile of a solar farm, that impact is limited to non-rural locations. On Pages 16-18 of that study under Section 5.3 Heterogeneity in treatment effect they indicate that the impact that they found was limited to non-rural locations with the impact in rural locations effectively being zero. For the study they defined “rural” as a municipality/township with less than 850 population per square mile.

They further tested the robustness of that finding and even in areas up to 2,000 population per square mile they found no statistically significant data to suggest a negative impact. They have not specifically defined a point at which they found negative impacts to begin, as the sensitivity study stopped checking at the 2,000-population dataset.

Where they did find negative impacts was in high population density areas that was largely a factor of running the study in Massachusetts and Rhode Island which the study specifically cites as being the 2nd and 3rd most population dense states in the USA. Mr. Lang in conversation as well as in recorded presentations has indicated that the impact in these heavily populated areas may reflect a loss in value due to the scarce greenery in those areas and not specifically related to the solar farm itself. In other words, any development of that site might have a similar impact on property value.

Based on this study I have checked the population for the District 4 of Orange County, which has a population of 11,141 population for 2020 based on SiteToDoBusiness by ESRI and a total area of 118.7 square miles. This indicates a population density of 94 people per square mile which puts this well below the threshold indicated by the Rhode Island Study. I also checked the censusreporter.org website which indicated a population of 10,889 people in 2019 with a population density of 91.7 people per square mile.

I therefore conclude that the Rhode Island Study supports the indication of no impact on adjoining properties for the proposed solar farm project.

C. ***Master's Thesis: ECU by Zachary Dickerson July 2018***

A Solar Farm in *My Backyard*? Resident Perspectives of Utility-Scale Solar in Eastern North Carolina

This study was completed as part of a Master of Science in Geography Master's Thesis by Zachary Dickerson in July 2018. This study sets out to address three questions:

1. Are there different aspects that affect resident satisfaction regarding solar farms?
2. Are there variations in satisfaction for residents among different geographic settings, e.g. neighborhoods adjacent to the solar farms or distances from the solar farms?
3. How can insight from both the utility and planning sectors, combined with knowledge gained from residents, fill gaps in communication and policy writing in regard to solar farms?

This was done through survey and interview with adjacent and nearby neighbors of existing solar farms. The positive to neutral comments regarding the solar farms were significantly higher than negative. The researcher specifically indicates on Page 46 "The results show that respondents generally do not believe the solar farms pose a threat to their property values."

The most negative comments regarding the solar farms were about the lack of information about the approval process and the solar farm project prior to construction.

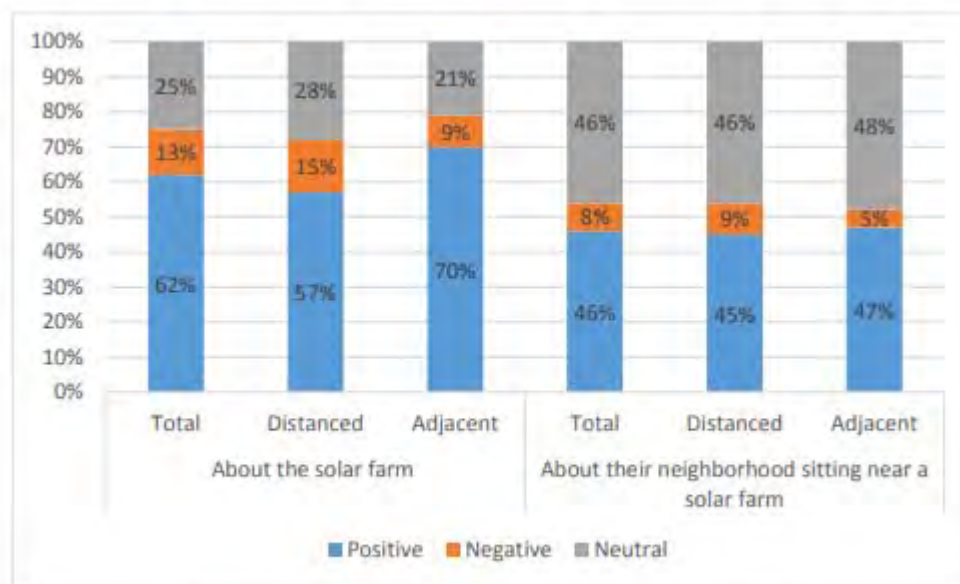


Figure 11: Residents' positive/negative word choices by geographic setting for both questions

D. Ernest Orlando Lawrence Berkeley National Laboratory, December, 2019

The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis

This study addresses wind farms and not solar farms but it is a reasonable consideration. The activity on a wind farm is significantly different in terms of the mechanics and more particularly on the appearance or viewshed as wind farms cannot be screened from adjoining property owners. This study was commissioned by the Department of Energy and not by any developer. This study examined 7,500 home sales between 1996 and 2007 in order to track sales prices both before and after a wind energy facility was announced or built. This study specifically looked into possible stigma, nuisance, and scenic vista.

On page 17 of that study they conclude “Although the analysis cannot dismiss the possibility that individual homes or small numbers of homes have been or could be negatively impacted, it finds that if these impacts do exist, they are either too small and/or too infrequent to result in any widespread, statistically observable impact.”

Given that solar farms are a similar use, but with a lower profile and therefore a lower viewshed than the wind farms, it is reasonable to translate these findings of no impact to solar farms.

V. Summary of Solar Projects In Virginia

I have researched the solar projects in Virginia. I identified the solar farms through the Solar Energy Industries Association (SEIA) Major Projects List and then excluded the roof mounted facilities. I focused on larger solar farms over 10 MW though I have included a couple of smaller solar farms as shown in the chart below

I was able to identify and research 50 solar farms in Virginia as shown below. These are primarily over 20 MW in size with adjoining homes as close as 100 feet and the mix of adjoining uses is primarily agricultural and residential.

Parcel #	Name	County	City	Output (MW)	Total Acres	Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre			
									Res	Agri	Agri/Res	Com
115	Buckingham I	Buckingham	Cumberland	19.8	481.18		N/A	N/A	8%	73%	18%	0%
121	Scott	Powhatan	Amelia Court Hou	20	898.4		1,421	730	29%	28%	44%	0%
204	Walker-Correctional	New Kent	Barhamsville	20	484.65	484.65	516	103	13%	68%	20%	0%
205	Sappony	Sussex	Stony Creek	20	322.68	322.68			2%	98%	0%	0%
216	Beetle	Southampton	Boykins	40	422.19	422.19	1,169	310	0%	10%	90%	0%
222	Grasshopper	Mecklenburg	Chase City	80	946.25	946.25			6%	87%	5%	1%
226	Belcher	Louisa	Louisa	88	1238.11	1238.11		150	19%	53%	28%	0%
228	Bluestone Farm	Mecklenburg	Chase City	4.99	332.5	332.5			0%	100%	0%	0%
257	Nokesville	Prince William	Nokesville		331.01	331.01			12%	49%	17%	23%
261	Buckingham II	Buckingham	Buckingham	19.8	460.05	460.05			6%	79%	15%	0%
262	Mount Jackson	Shenandoah	Mount Jackson	15.65	652.47	652.47			21%	51%	14%	13%
263	Gloucester	Gloucester	Gloucester	20	203.55	203.55	508	190	17%	55%	28%	0%
267	Scott II	Powhatan	Powhatan		701	701			41%	25%	34%	0%
272	Churchview	Middlesex	Church View	20	567.91	567.91			9%	64%	27%	0%
303	Turner	Henrico	Henrico	20	463.12	463.12	N/A	N/A	21%	37%	0%	42%
311	Sunnybrook Farm	Halifax	Scottsburg		527.88	527.88	N/A	N/A	15%	59%	26%	0%
312	Powell Creek	Halifax	Alton		513	513	N/A	N/A	7%	71%	22%	0%
339	Crystal Hill	Halifax	Crystal Hill		628.67	628.67	1,570	140	6%	41%	35%	18%
354	Amazon East	Accomack	Oak Hall	80	1000	1000	645	135	8%	75%	17%	0%
355	Alton Post	Halifax	Alton		501.96	501.96	749	100	2%	58%	40%	0%
364	Remington	Fauquier	Remington	20	277.2	277.2	2,755	1,280	10%	41%	31%	18%
365	Greenwood	Culpeper	Stevensburg	100	2266.58	2266.58	788	200	8%	62%	29%	0%
367	Culpeper Sr	Culpeper	Culpeper		12.53	12.53	N/A	N/A	15%	0%	86%	0%
370	Cherrydale	Northampton	Kendall Grove	20	180.17	180.17	N/A	N/A	5%	0%	92%	3%
373	Woodland,VA	Isle of Wight	Smithfield	19.7	211.12	211.12	606	190	9%	0%	91%	0%
374	Whitehouse	Louisa	Louisa	20	499.52	499.52	1,195	110	24%	55%	18%	4%
402	Cedar Park	Henrico	Richmond		13.93	13.93			57%	0%	0%	43%
407	Foxhound	Halifax	Clover	91	1311.78	1311.78	885	185	5%	61%	17%	18%
415	Stagecoach II	Halifax	Nathalie	16.625	327.87	327.87	1,073	255	5%	66%	29%	0%
484	Essex Solar Center	Essex	Center Cross	20	106.12	106.12	693	360	3%	70%	27%	0%
485	Southampton	Southampton	Newsoms	100	3243.92	3243.92	-	-	3%	78%	17%	3%
487	Augusta	Augusta	Stuarts Draft	125	3197.4	1147	588	165	16%	61%	16%	7%
490	Cartersville	Powhatan	Powhatan		2945	1358	1,467	105	6%	14%	80%	0%
495	Walnut	King and Queen	Shacklefords	110	1700	1173	641	165	14%	72%	13%	1%
497	Piney Creek	Halifax	Clover	80	776.18	422	523	195	15%	62%	24%	0%
511	UVA Puller	Middlesex	Topping	15	120	120	1,095	185	59%	32%	0%	10%
519	Fountain Creek	Greensville	Emporia	80	798.3	798.3	-	-	6%	23%	71%	0%
557	Winterpock 1	Chesterfield	Chesterfield		518	308	2,106	350	4%	78%	18%	0%
577	Windsor	Isle of Wight	Windsor	85	564.1	564.1	572	160	9%	67%	24%	0%
579	Spotsylvania	Spotsylvania	Paytes	500	6412	3500			9%	52%	11%	27%
586	Sweet Sue	King William	Aylett	77	1262	576	1,617	680	7%	68%	25%	0%
591	Warwick	Prince George	Disputanta	26.5	967.62	442.05	555	115	12%	68%	20%	0%
621	Loblolly	Surry	Spring Grove	150	2181.92	1000	1,860	110	7%	62%	31%	0%
622	Woodridge	Albemarle	Scottsville	138	2260.87	1000	1,094	170	9%	63%	28%	0%
633	Brunswick	Greensville	Emporia	150.2	2076.36	1387.3	1,091	240	4%	85%	11%	0%
642	Belcher 3	Louisa	Louisa		749.36	658.56	598	180	14%	71%	14%	1%
649	Endless Caverns	Rockingham	New Market	31.5	355	323.6	624	190	15%	27%	51%	7%
664	Watlington	Halifax	South Boston	20	240.09	137	536	215	24%	48%	28%	0%
671	Spout Spring	Appomattox	Appomattox	60	881.12	673.37	836	335	16%	30%	46%	8%
703	Lily Pond	Dinwiddie	Carson	80	2197.74	1930	723	115	13%	60%	27%	0%
Total Number of Solar Farms				50								
Average				66.76	1006.61	755.54	1003.2	253.5	13%	53%	29%	5%
Median				31.50	566.01	520.44	788.0	185.0	9%	60%	24%	0%
High				500.00	6412.00	3500.00	2755.0	1280.0	59%	100%	92%	43%
Low				4.99	12.53	12.53	508.0	100.0	0%	0%	0%	0%

On the following pages I have included summary data on the constructed solar farms indicated above. Similar information is available for the larger set of solar farms in the adjoining states in my files if requested.

115: Buckingham Solar, E. James Anderson Hwy, Buckingham, VA



This project was proposed in 2017 and located on 460 acres with the closest home proposed to be 150 feet from the closest solar panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	5.95%	71.79%
Agricultural	78.81%	20.51%
Agri/Res	15.24%	7.69%
Total	100.00%	100.00%

121: Scott Solar Project, 1580 Goodes Bridge Rd, Powhatan, VA



This project was built in 2016 and located on 165 acres out of 898 acres for a 17 MW with the closest home proposed to be 730 feet from the closest solar panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	28.83%	78.57%
Agri/Res	43.52%	3.57%
Agricultural	27.65%	17.86%
Total	100.00%	100.00%

204: Walker-Correctional Solar, Barham Road, Barhamsville, VA

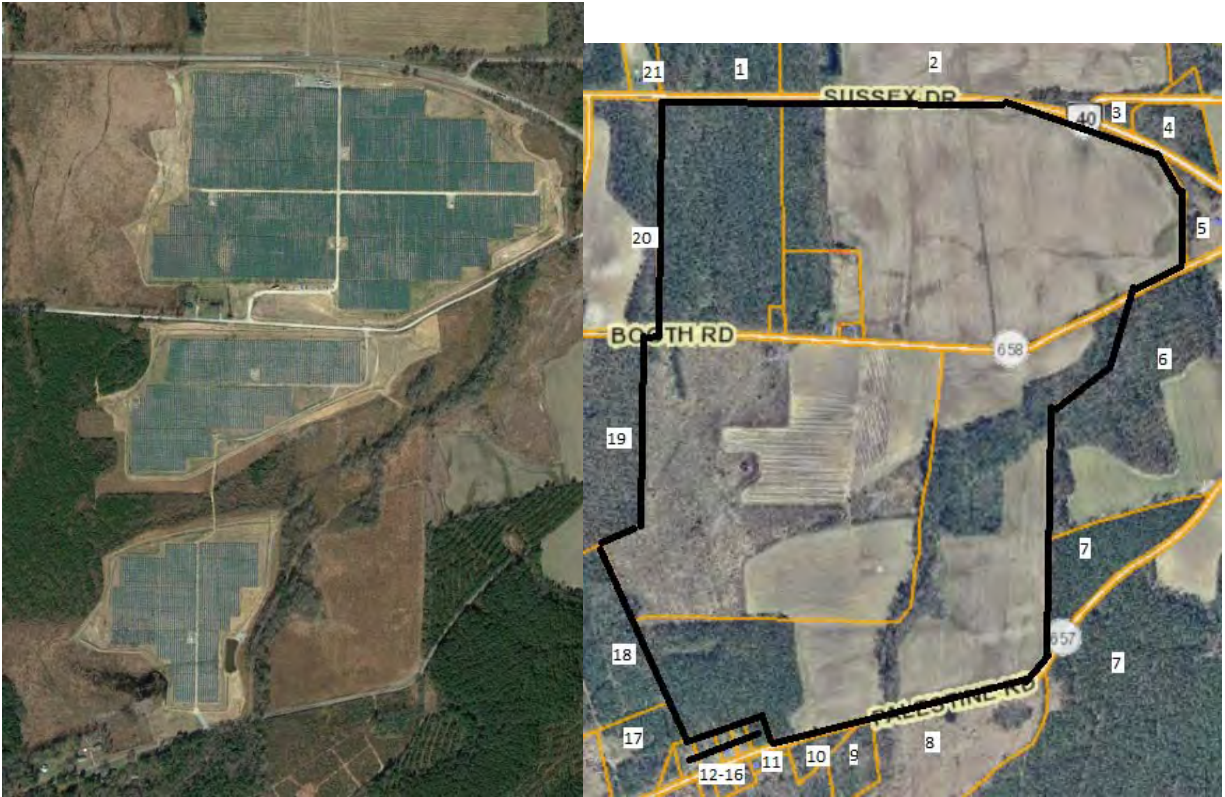


This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	12.59%	76.92%
Agricultural	67.71%	15.38%
Agri/Res	19.70%	7.69%
Total	100.00%	100.00%

205: Sappony Solar, Sussex Drive, Stony Creek, VA



This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	12.59%	76.92%
Agricultural	67.71%	15.38%
Agri/Res	19.70%	7.69%
Total	100.00%	100.00%

354: Amazon Solar project East (Eastern Shore), Accomack, VA



This project was built in 2016 for a solar project on a 1,000-acre assemblage for an 80 MW facility. The closest home is 135 feet from the closest panel.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	8.18%	63.74%
Agricultural	75.16%	30.77%
Agri/Res	16.56%	3.30%
Substation	0.08%	1.10%
Church	0.01%	1.10%
Total	100.00%	100.00%

364: Remington Solar, 12080 Lucky Hill Rd, Remington, VA



This project was built in 2017 for a solar project on a 125-acre tract for a 20 MW facility. There were some recent home sales adjoining this project, but it was difficult to do any matched pairs. One sale was an older home in very poor condition according to the broker and required crossing railroad tracks on a private road to get access to the home and located across from a large industrial building. The other sale is a renovated historic home on a large tract of land just one parcel north of the large industrial building. These sales essentially have too much static around them to isolate any impacts separate from these other factors.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	10.24%	65.38%
Agricultural	40.79%	19.23%
Agri/Res	30.87%	7.69%
Warehouse	0.82%	3.85%
Substation	17.28%	3.85%
Total	100.00%	100.00%

370: Cherrydale Solar, Seaside Road, Kendall Grove, VA



This project was built in 2017 and located on 180.17 acres for a 20 MW facility.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	5.44%	80.77%
Agricultural	92.01%	15.38%
Warehouse	2.55%	3.85%
Total	100.00%	100.00%

371: Clarke County Solar, Double Tollgate Road, White Post, VA



This project was built in 2017 and located on a portion of a 234.84-acre tract for a 20 MW facility.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	13.70%	74.19%
Agricultural	38.89%	6.45%
Agri/Res	46.07%	6.45%
Commercial	0.19%	6.45%
Warehouse	0.85%	3.23%
Substation	0.30%	3.23%
Total	100.00%	100.00%

373: Woodland Solar, Longview Drive, Smithfield, VA



This project was built in 2016 for a solar project on a 211.12-acre tract for a 19.7 MW facility. The closest single-family home is 190 feet away from the closest solar panel. The average distance is 606 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	8.85%	46.15%
Agricultural	91.08%	46.15%
Cell Tower	0.07%	7.69%
Total	100.00%	100.00%

374: Whitehouse Solar, Chalklevel Road, Louisa, VA



This project was built in 2016 for a solar project on a 499.52-acre tract for a 20 MW facility. The closest single-family home is 110 feet away from the closest solar panel. The average distance is 1,195 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	23.55%	70.27%
Agricultural	54.51%	10.81%
Agri/Res	18.22%	2.70%
Commercial	2.49%	13.51%
Industrial	1.22%	2.70%
Total	100.00%	100.00%

484: Essex Solar, Tidewater Trail, Center Cross, VA

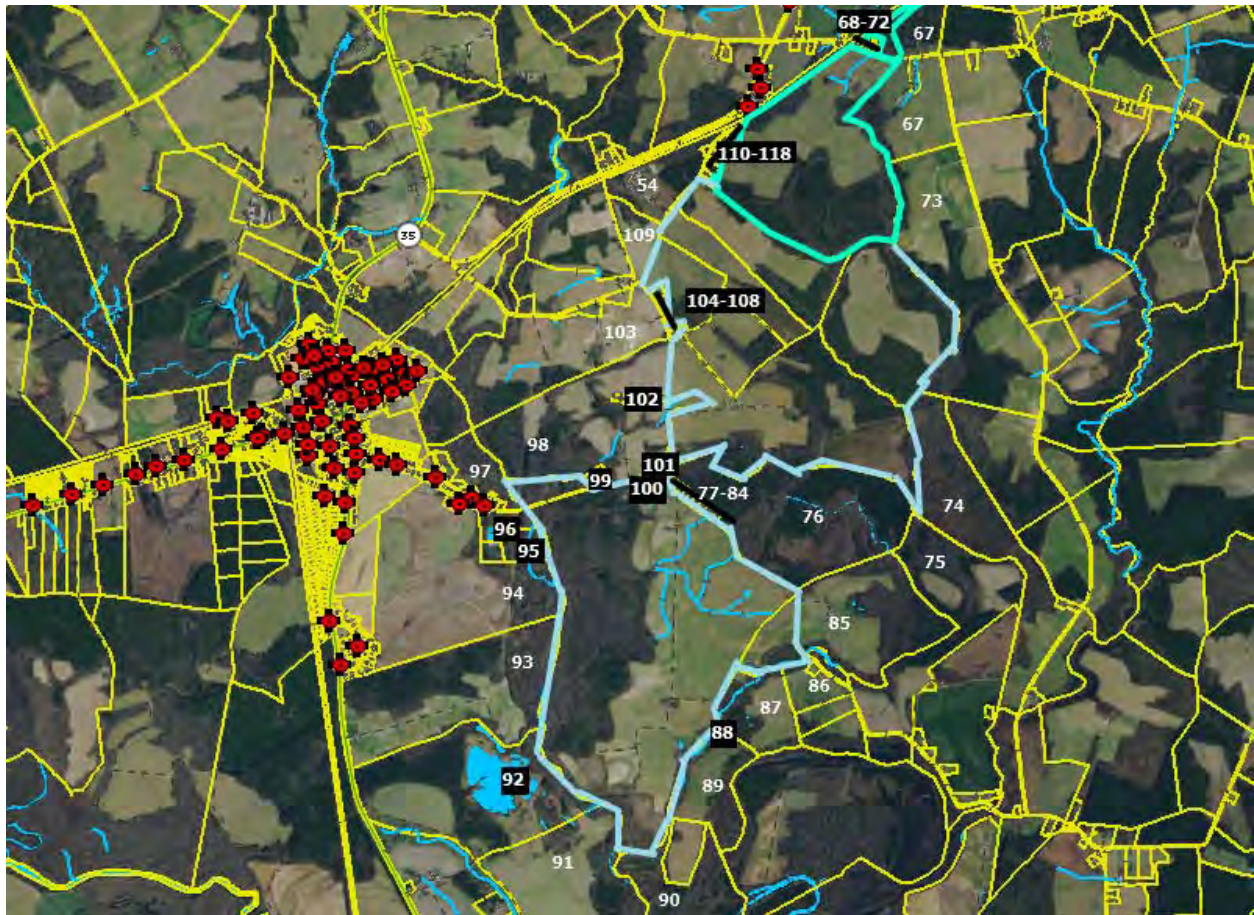
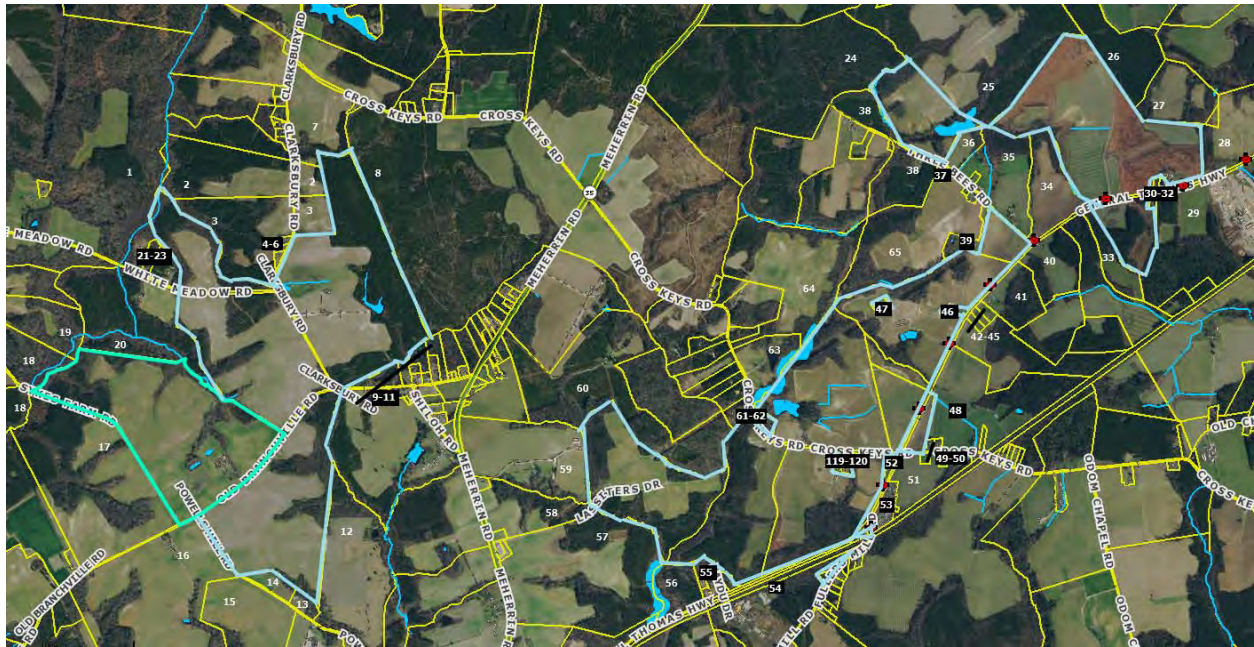


This project was built in 2017 for a solar project on a 106.12-acre tract for a 20 MW facility. The closest single-family home is 360 feet away from the closest solar panel. The average distance is 693 feet.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	3.13%	57.89%
Agricultural	69.65%	26.32%
Agri/Res	26.99%	10.53%
Religious	0.23%	5.26%
Total	100.00%	100.00%

485: Southampton Solar, General Thomas Hwy, Newsoms, VA





This project was built in 2017 for a solar project on an assemblage of 3,244 acres for a 100 MW facility.

Adjoining Use Breakdown

	Acreage	Parcels
Residential	2.56%	53.33%
Agricultural	77.99%	36.67%
Agri/Res	16.56%	8.33%
Industrial	2.89%	1.67%
Total	100.00%	100.00%

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

I have researched hundreds of solar farms in numerous states to determine the impact of these facilities on the value of adjoining property. This research has primarily been in North Carolina, but I have also conducted market impact analyses in Virginia, South Carolina, Tennessee, Texas, Oregon, Mississippi, Maryland, New York, California, Missouri, Florida, Montana, Georgia, Louisiana, and New Jersey.

Wherever I have looked at solar farms, I have derived 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 similar to the breakdown that I've shown for the subject property on the previous page. A summary showing the results of compiling that data over hundreds of solar farms is shown later in the Scope of Research section of this report.

I also consider whether the properties adjoining a solar farm in one location have characteristics similar to the properties abutting or adjoining the proposed site so that I can make an assessment of market impact on each proposed site. Notably, in most cases solar farms are placed in areas very similar to the site in question, which is surrounded by low density residential and agricultural uses. In my over 700 studies, I have found a striking repetition of that same typical adjoining use mix in over 90% of the solar farms I have looked at. Matched pair results in multiple states are strikingly similar, and all indicate that solar farms – which generate very little traffic, and do not generate noise, dust or have other harmful effects – do not negatively impact the value of adjoining or abutting properties.

On the following pages I have considered matched pair data specific to Virginia and Kentucky.

In the next section I have considered matched pair data throughout the Southeast of the United States as being the most similar states that would most readily compare to Virginia. This includes data from Florida, Georgia, South Carolina, North Carolina, Tennessee, Virginia and Maryland. I focused on projects of 5 MW and larger though I have significant supplemental data on solar farms just smaller than that in North Carolina that show similar results. This data is available in my files.

I have additional supporting information from other states in my files that show a consistent pattern across the United States, but again, I have focused on the Southeast in this analysis.

A. *Virginia Data*

I have identified matched pairs adjoining 3 of the 27 solar farms noted above. I have also included data from a solar farm in Kentucky that does a good job of illustrating distant views of solar panels in relation to adjoining housing.

The following pages detail the matched pairs and how they were derived.

1. Matched Pair – Clarke County Solar, Clarke County, VA



This project is a 20 MW facility located on a 234-acre tract that was built in 2017.

I have considered two recent sales of Parcel 3. The home on this parcel is 1,230 feet from the closest panel as measured in the second map from Google Earth, which shows the solar farm under construction. This home sold in January 2017 for \$295,000 and again in August 2019 for \$385,000. I show each sale below and compare those to similar home sales in each time frame. The significant increase in price between 2017 and 2019 is due to a major kitchen remodel, new roof, and related upgrades as well as improvement in the market in general. The sale and later resale of the home with updates and improvements speaks to pride of ownership and increasing overall value as properties perceived as diminished are less likely to be renovated and sold for profit.

I note that 102 Tilthammer includes a number of barns that I did not attribute any value in the analysis. The market would typically give some value for those barns but even without that adjustment there is an indication of a positive impact on value due to the solar farm. The landscaping buffer from this home is considered light.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	8/18/2019	\$385,000	1979	1,392	\$276.58	3/2	Det Gar	Ranch	UnBsmt
	Not	167 Leslie	5.00	8/19/2020	\$429,000	1980	1,665	\$257.66	3/2	Det2Gar	Ranch	
	Not	2393 Old Chapel	2.47	8/10/2020	\$330,000	1974	1,500	\$220.00	3/1.5	Det Gar	Ranch	
	Not	102 Tilthammer	6.70	5/7/2019	\$372,000	1970	1,548	\$240.31	3/1.5	Det Gar	Ranch	UnBsmt

Adjoining Sales Adjusted

[illegible]

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	1/9/2017	\$295,000	1979	1,392	\$211.93	3/2	Det Gar	Ranch	UnBsmt
	Not	6801 Middle	2.00	12/12/2017	\$249,999	1981	1,584	\$157.83	3/2	Open	Ranch	
	Not	4174 Rockland	5.06	1/2/2017	\$300,000	1990	1,688	\$177.73	3/2	2 Gar	2-story	
	Not	400 Sugar Hill	1.00	6/7/2018	\$180,000	1975	1,008	\$178.57	3/1	Open	Ranch	

Adjoining Sales Adjusted

[illegible]

2. Matched Pair – Walker-Correctional Solar, Barham Road, Barhamsville, VA



This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

I considered the recent sale identified on the map above as Parcel 19, which is directly across the street and based on the map shown on the following page is 250 feet from the closest panel. A

limited buffering remains along the road with natural growth being encouraged, but currently the panels are visible from the road. Alex Uminski, SRA with MGMiller Valuations in Richmond VA confirmed this sale with the buying and selling broker. The selling broker indicated that the solar farm was not a negative influence on this sale and in fact the buyer noticed the solar farm and then discovered the listing. The privacy being afforded by the solar farm was considered a benefit by the buyer. I used a matched pair analysis with a similar sale nearby as shown below and found no negative impact on the sales price. Property actually closed for more than the asking price. The landscaping buffer is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	5241 Barham	2.65	10/18/2018	\$264,000	2007	1,660	\$159.04	3/2	Drive	Ranch	Modular
Not	17950 New Kent	5.00	9/5/2018	\$290,000	1987	1,756	\$165.15	3/2.5	3 Gar	Ranch	
Not	9252 Ordinary	4.00	6/13/2019	\$277,000	2001	1,610	\$172.05	3/2	1.5-Gar	Ranch	
Not	2416 W Miller	1.04	9/24/2018	\$299,000	1999	1,864	\$160.41	3/2.5	Gar	Ranch	

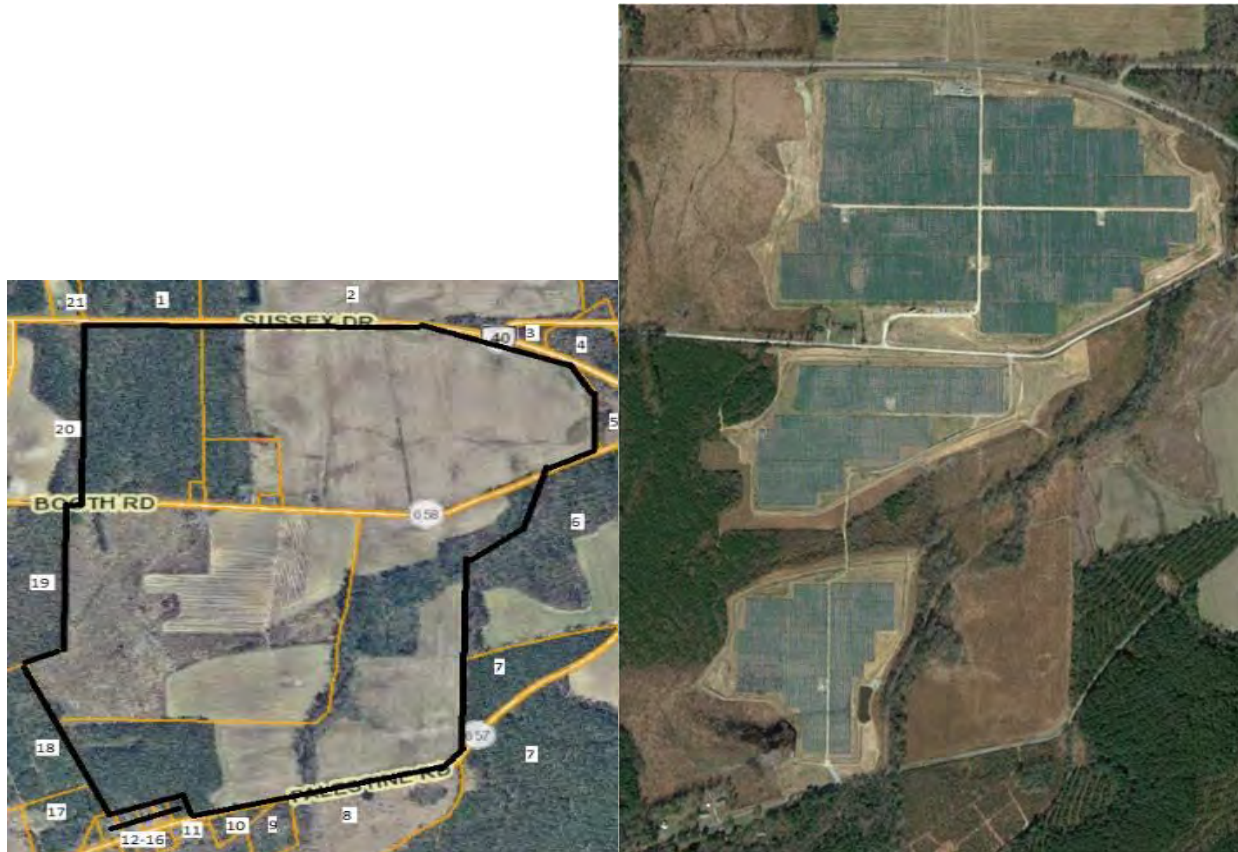
Adjoining Sales Adjusted

Solar	Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
Adjoins	5241 Barham								\$264,000		250
Not	17950 New Kent		-\$8,000	\$29,000	-\$4,756	-\$5,000	-\$20,000	-\$15,000	\$266,244	-1%	
Not	9252 Ordinary	-\$8,310	-\$8,000	\$8,310	\$2,581		-\$10,000	-\$15,000	\$246,581	7%	
Not	2416 W Miller		\$8,000	\$11,960	-\$9,817	-\$5,000	-\$10,000	-\$15,000	\$279,143	-6%	

Average Diff 0%

I also spoke with Patrick W. McCrerey of Virginia Estates who was marketing a property that sold at 5300 Barham Road adjoining the Walker-Correctional Solar Farm. He indicated that this property was unique with a home built in 1882 and heavily renovated and updated on 16.02 acres. The solar farm was through the woods and couldn't be seen by this property and it had no impact on marketing this property. This home sold on April 26, 2017 for \$358,000. I did not set up any matched pairs for this property since it is a unique property that any such comparison would be difficult to rely on. The broker's comments do support the assertion that the adjoining solar farm had no impact on value. The home in this case was 510 feet from the closest panel.

3. Matched Pair – Sappony Solar, Sussex County, VA



This project is a 30 MW facility located on a 322.68-acre tract that was built in the fourth quarter of 2017.

I have considered the 2018 sale of Parcel 17 as shown below. This was a 1,900 s.f. manufactured home on a 6.00-acre lot that sold in 2018. I have compared that to three other nearby manufactured homes as shown below. The range of impacts is within typical market variation with an average of -1%, which supports a conclusion of no impact on property value. The landscaping buffer is considered medium.

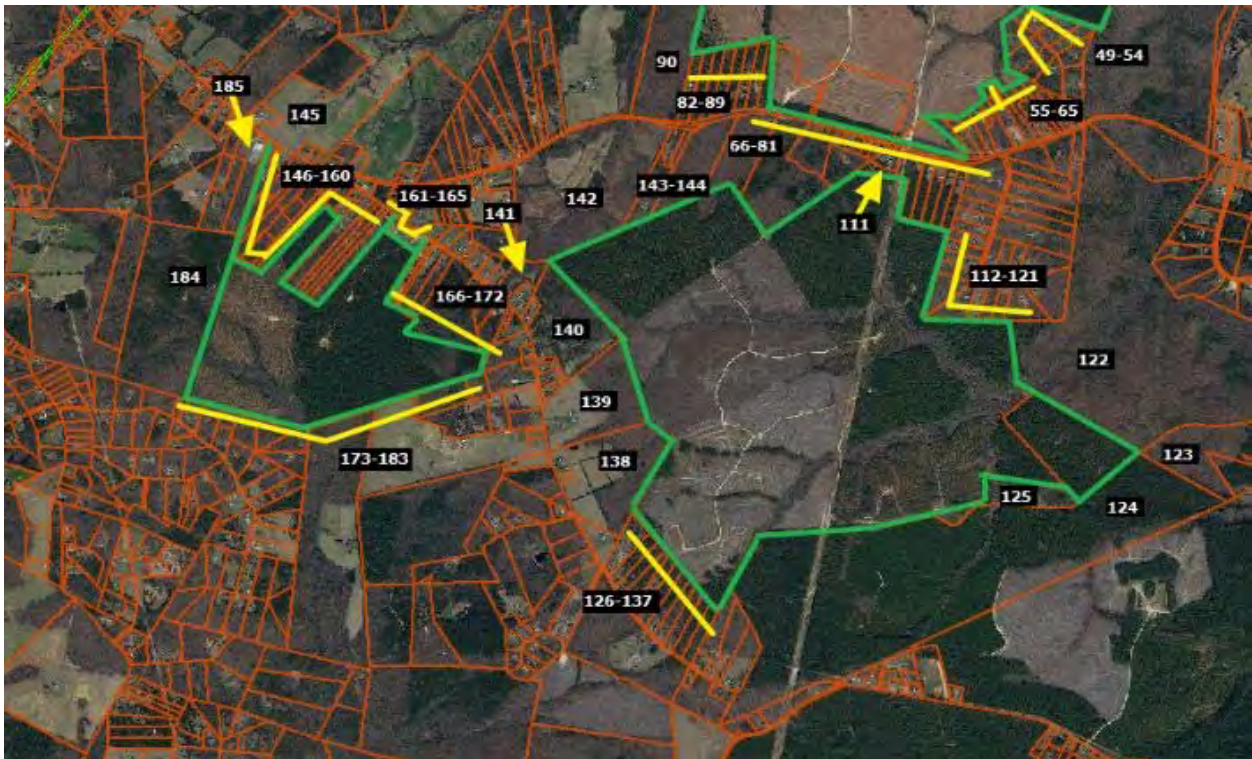
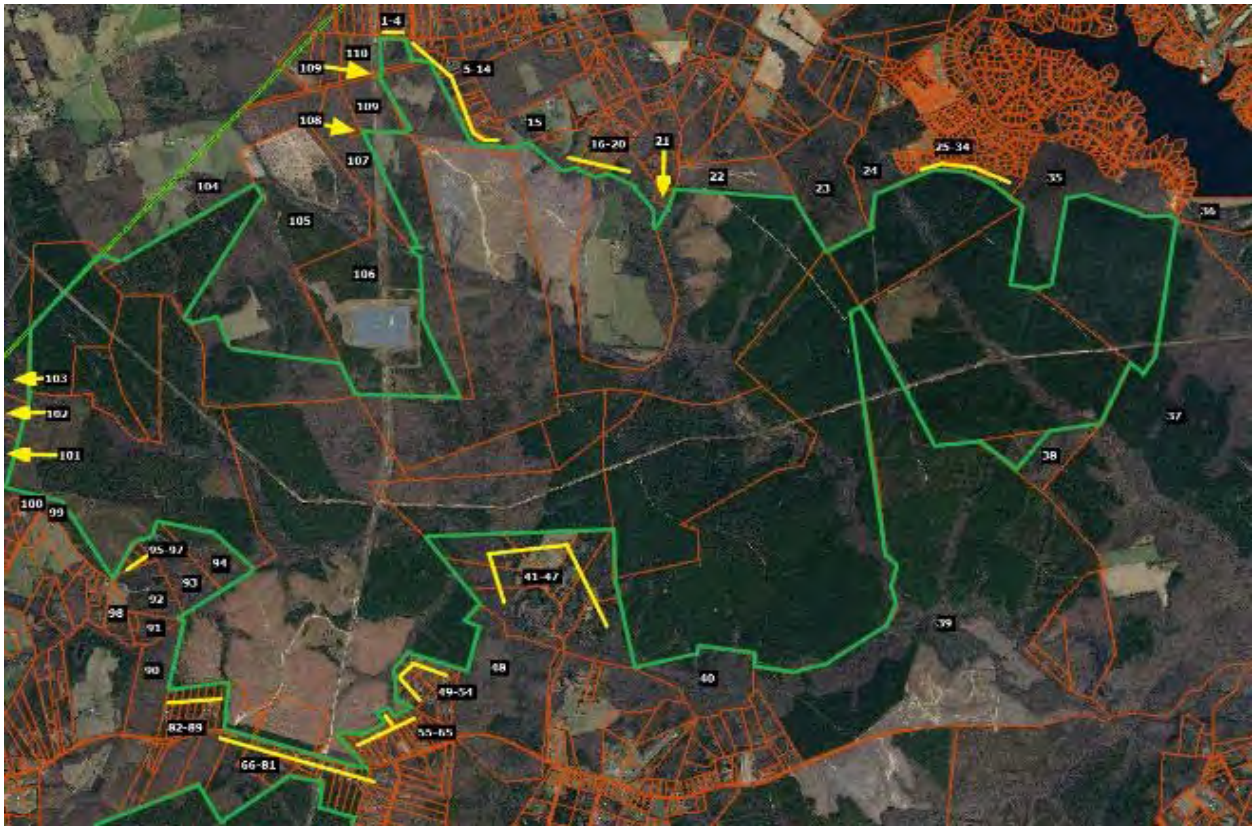
Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
	Adjoins	12511 Palestine	6.00	7/31/2018	\$128,400	2013	1,900	\$67.58	4/2.5	Open	Manuf	
	Not	15698 Concord	3.92	7/31/2018	\$150,000	2010	2,310	\$64.94	4/2	Open	Manuf	Fence
	Not	23209 Sussex	1.03	7/7/2020	\$95,000	2005	1,675	\$56.72	3/2	Det Crpt	Manuf	
	Not	6494 Rocky Br	4.07	11/8/2018	\$100,000	2004	1,405	\$71.17	3/2	Open	Manuf	

Adjoining Sales Adjusted

[illegible]

4. Matched Pair – Spotsylvania Solar, Paytes, VA



This solar farm is being built in four phases with the area known as Site C having completed construction in November 2020 after the entire project was approved in April 2019. Site C, also known as Pleinmont 1 Solar, includes 99.6 MW located in the southeast corner of the project and shown on the maps above with adjoining parcels 111 through 144. The entire Spotsylvania project totals 617 MW on 3500 acres out of a parent tract assemblage of 6,412 acres.

I have identified three adjoining home sales that occurred during construction and development of the site in 2020.

The first is located on the north side of Site A on Orange Plank Road. The second is located on Nottoway Lane just north of Caparthin Road on the south side of Site A and east of Site C. The third is located on Post Oak Road for a home that backs up to Site C that sold in September 2020 near the completion of construction for Site C.

Spotsylvania Solar Farm

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	12901 Orng Plnk	5.20	8/27/2020	\$319,900	1984	1,714	\$186.64	3/2	Drive	1.5	Un Bsmt
Not	8353 Gold Dale	3.00	1/27/2021	\$415,000	2004	2,064	\$201.07	3/2	3 Gar	Ranch	
Not	6488 Southfork	7.26	9/9/2020	\$375,000	2017	1,680	\$223.21	3/2	2 Gar	1.5	Barn/Patio
Not	12717 Flintlock	0.47	12/2/2020	\$290,000	1990	1,592	\$182.16	3/2.5	Det Gar	Ranch	

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
12901 Orng Plnk								\$319,900		1270
8353 Gold Dale	-\$5,219	\$20,000	-\$41,500	-\$56,298		-\$20,000		\$311,983	2%	
6488 Southfork	-\$401	-\$20,000	-\$61,875	\$6,071		-\$15,000		\$283,796	11%	
12717 Flintlock	-\$2,312	\$40,000	-\$8,700	\$17,779	-\$5,000	-\$5,000		\$326,767	-2%	
Average Diff									4%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	9641 Nottoway	11.00	5/12/2020	\$449,900	2004	3,186	\$141.21	4/2.5	Garage	2-Story	Un Bsmt
Not	26123 Lafayette	1.00	8/3/2020	\$390,000	2006	3,142	\$124.12	3/3.5	Gar/DtG	2-Story	
Not	11626 Forest	5.00	8/10/2020	\$489,900	2017	3,350	\$146.24	4/3.5	2 Gar	2-Story	
Not	10304 Pny Brnch	6.00	7/27/2020	\$485,000	1998	3,076	\$157.67	4/4	2Gar/Dt2	Ranch	Fn Bsmt

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
9641 Nottoway								\$449,900		1950
26123 Lafayette	-\$2,661	\$45,000	-\$3,900	\$4,369	-\$10,000	-\$5,000		\$417,809	7%	
11626 Forest	-\$3,624		-\$31,844	-\$19,187		-\$5,000		\$430,246	4%	
10304 Pny Brnch	-\$3,030		\$14,550	\$13,875	-\$15,000	-\$15,000	-\$10,000	\$470,396	-5%	
Average Diff									2%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	13353 Post Oak	5.20	9/21/2020	\$300,000	1992	2,400	\$125.00	4/3	Drive	2-Story	Fn Bsmt
Not	9609 Logan Hgt	5.86	7/4/2019	\$330,000	2004	2,352	\$140.31	3/2	2Gar	2-Story	
Not	12810 Catharpian	6.18	1/30/2020	\$280,000	2008	2,240	\$125.00	4/2.5	Drive	2-Story Bsmt/Nd Pnt	
Not	10725 Rbrt Lee	5.01	10/26/2020	\$295,000	1995	2,166	\$136.20	4/3	Gar	2-Story	Fn Bsmt

Adjoining Sales Adjusted										
Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
13353 Post Oak								\$300,000		1171
9609 Logan Hgt	\$12,070		-\$19,800	\$5,388		-\$15,000	\$15,000	\$327,658	-9%	
12810 Catharpian	\$5,408		-\$22,400	\$16,000	\$5,000		\$15,000	\$299,008	0%	
10725 Rbrt Lee	-\$849		-\$4,425	\$25,496		-\$10,000		\$305,222	-2%	
Average Diff									-4%	

All three of these homes are well set back from the solar panels at distances over 1,000 feet and are well screened from the project. All three show no indication of any impact on property value.

5. Matched Pair – Crittenden Solar, Crittenden, KY



This solar farm was built in December 2017 on a 181.70-acre tract but utilizing only 34.10 acres. This is a 2.7 MW facility with residential subdivisions to the north and south.

I have identified five home sales to the north of this solar farm on Clairborne Drive and one home sale to the south on Eagle Ridge Drive since the completion of this solar farm. The home sale on Eagle Drive is for a \$75,000 home and all of the homes along that street are similar in size and price range. According to local broker Steve Glacken with Cutler Real Estate these are the lowest price range/style home in the market. I have not analyzed that sale as it would unlikely provide significant data to other homes in the area.

Mr. Glacken is currently selling lots at the west end of Clairborne for new home construction. He indicated that the solar farm near the entrance of the development has been a complete non-factor and none of the home sales are showing any concern over the solar farm. Most of the homes are in the \$250,000 to \$280,000 price range. The vacant residential lots are being marketed for \$28,000 to \$29,000. The landscaping buffer is considered light, but the rolling terrain allows for distant views of the panels from the adjoining homes along Clairborne Drive.

The first home considered is a bit of an anomaly for this subdivision in that it is the only manufactured home that was allowed in the community. It sold on January 3, 2019. I compared that sale to three other manufactured home sales in the area making minor adjustments as shown on the next page to account for the differences. After all other factors are considered, the adjustments show a -1% to +13% impact due to the adjacency of the solar farm. The best indicator is 1250 Cason, which shows a 3% impact. A 3% impact is within the normal static of real estate transactions and therefore not considered indicative of a positive impact on the property, but it strongly supports an indication of no negative impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	250 Claiborne	0.96	1/3/2019	\$120,000	2000	2,016	\$59.52	3/2	Drive	Manuf	
	Not	1250 Cason	1.40	4/18/2018	\$95,000	1994	1,500	\$63.33	3/2	2-Det	Manuf	Carport
	Not	410 Reeves	1.02	11/27/2018	\$80,000	2000	1,456	\$54.95	3/2	Drive	Manuf	
	Not	315 N Fork	1.09	5/4/2019	\$107,000	1992	1,792	\$59.71	3/2	Drive	Manuf	

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	250 Claiborne								\$120,000			373
Not	1250 Cason	\$2,081		\$2,850	\$26,144		-\$5,000	-\$5,000	\$116,075	3%		
Not	410 Reeves	\$249		\$0	\$24,615				\$104,865	13%		
Not	315 N Fork	-\$1,091		\$4,280	\$10,700				\$120,889	-1%		
											5%	

I also looked at three other home sales on this street as shown below. These are stick-built homes and show a higher price range.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	300 Claiborne	1.08	9/20/2018	\$212,720	2003	1,568	\$135.66	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	\$229,000	2007	1,446	\$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	Ranch	Brick
	Not	215 Lexington	1.00	7/27/2018	\$231,200	2000	1,590	\$145.41	5/4	2-Car	Ranch	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	300 Claiborne								\$213,000			488
Not	460 Claiborne	-\$2,026		-\$4,580	\$15,457	\$5,000			\$242,850	-14%		
Not	2160 Sherman	-\$5,672		-\$2,650	-\$20,406				\$236,272	-11%		
Not	215 Lexington	\$1,072		\$3,468	-\$2,559	-\$5,000			\$228,180	-7%		
											-11%	

This set of matched pairs shows a minor negative impact for this property. I was unable to confirm the sales price or conditions of this sale. The best indication of value is based on 215 Lexington, which required the least adjusting and supports a -7% impact.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	350 Claiborne	1.00	7/20/2018	\$245,000	2002	1,688	\$145.14	3/3	2-Car	Ranch	Brick
	Not	460 Claiborne	0.31	1/3/2019	\$229,000	2007	1,446	\$158.37	3/2	2-Car	Ranch	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	R/FBsmnt	Brick
	Not	215 Lexington	1.00	7/27/2018	\$231,200	2000	1,590	\$145.41	5/4	2-Car	Ranch	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	350 Claiborne								\$245,000			720
Not	460 Claiborne	-\$3,223		-\$5,725	\$30,660	\$5,000			\$255,712	-4%		
Not	2160 Sherman	-\$7,057		-\$3,975	-\$5,743				\$248,225	-1%		
Not	215 Lexington	-\$136		\$2,312	\$11,400	-\$5,000			\$239,776	2%		
											-1%	

The following photograph shows the light landscaping buffer and the distant view of panels that was included as part of the marketing package for this property. The panels are visible somewhat on the left and somewhat through the trees in the center of the photograph. The first photograph is from the home, with the second photograph showing the view near the rear of the lot.



This set of matched pairs shows a no negative impact for this property. The range of adjusted impacts is -4% to +2%. The best indication is -1%, which as described above is within the typical market static and supports no impact on adjoining property value.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
	Adjoins	370 Claiborne	1.06	8/22/2019	\$273,000	2005	1,570	\$173.89	4/3	2-Car	2-Story	Brick
	Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	R/FBsmt	Brick
	Not	2290 Dry	1.53	5/2/2019	\$239,400	1988	1,400	\$171.00	3/2.5	2-Car	R/FBsmt	Brick
	Not	125 Lexington	1.20	4/17/2018	\$240,000	2001	1,569	\$152.96	3/3	2-Car	Split	Brick

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	370 Claiborne								\$273,000			930
Not	2160 Sherman	\$1,831		\$0	-\$20,161				\$246,670	10%		
Not	2290 Dry	\$2,260		\$20,349	\$23,256	\$2,500			\$287,765	-5%		
Not	125 Lexington	\$9,951		\$4,800					\$254,751	7%		
											4%	

This set of matched pairs shows a general positive impact for this property. The range of adjusted impacts is -5% to +10%. The best indication is +7%. I typically consider measurements of +/-5% to be within the typical variation in real estate transactions. This indication is higher than that and suggests a positive relationship.

The photograph from the listing shows panels visible between the home and the trampoline shown in the picture.



Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	330 Claiborne	1.00	12/10/2019	\$282,500	2003	1,768	\$159.79	3/3	2-Car	Ranch	Brick/pool
Not	895 Osborne	1.70	9/16/2019	\$249,900	2002	1,705	\$146.57	3/2	2-Car	Ranch	Brick/pool
Not	2160 Sherman	1.46	6/1/2019	\$265,000	2005	1,735	\$152.74	3/3	2-Car	R/FBsmt	Brick
Not	215 Lexington	1.00	7/27/2018	\$231,200	2000	1,590	\$145.41	5/4	2-Car	Ranch	Brick

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
Adjoins	330 Claiborne								\$282,500			665
Not	895 Osborne	\$1,790		\$1,250	\$7,387	\$5,000		\$0	\$265,327	6%		
Not	2160 Sherman	\$4,288		-\$2,650	\$4,032			\$20,000	\$290,670	-3%		
Not	215 Lexington	\$9,761		\$3,468	\$20,706	-\$5,000		\$20,000	\$280,135	1%		

1%

This set of matched pairs shows a general positive impact for this property. The range of adjusted impacts is -3% to +6%. The best indication is +6%. I typically consider measurements of +/-5% to be within the typical variation in real estate transactions. This indication is higher than that and suggests a positive relationship. The landscaping buffer on these is considered light with a fair visibility of the panels from most of these comparables and only thin landscaping buffers separating the homes from the solar panels.

The five matched pairs considered in this analysis includes two that show no impact on value, one that shows a negative impact on value, and two that show a positive impact. The negative indication supported by one matched pair is -7% and the positive impacts are +6% and +7%. The two neutral indications show impacts of -1% and +3%. The average indicated impact is +0% when all five of these indicators are blended.

Furthermore, the comments of the local real estate broker strongly support the data that shows no negative impact on value due to the proximity to the solar farm.

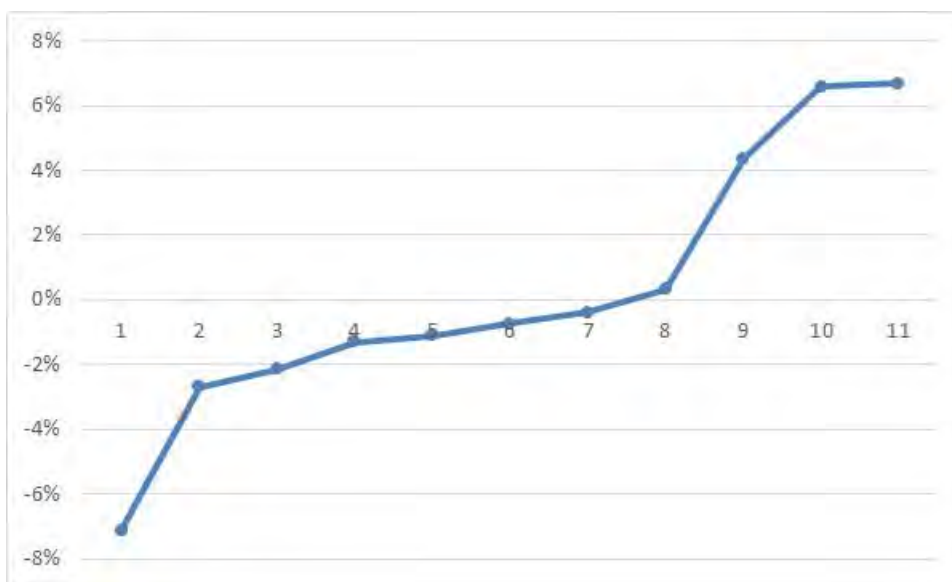
Conclusion

The solar farm matched pairs shown above have similar characteristics to each other in terms of population, but with several outliers showing solar farms in far more urban areas. The median income for the population within 1 mile of a solar farm among this subset of matched pairs is \$80,778 with a median housing unit value of \$320,076. Most of the comparables are under \$500,000 in the home price, with \$483,333 being the high end of the set, though I have matched pairs in other states over \$1,000,000 in price adjoining large solar farms. The predominate adjoining uses are residential and agricultural. These figures are in line with the larger set of solar farms that I have looked at with the predominant adjoining uses being residential and agricultural and similar to the solar farm breakdown shown for Virginia and adjoining states as well as the proposed subject property.

Based on the similarity of adjoining uses and demographic data between these sites and the subject property, I consider it reasonable to compare these sites to the subject property.

Matched Pair Summary						Adj. Uses By Acreage					1 mile Radius (2010-2020 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Population	Med. Income	Avg. Housing Unit	Veg. Buffer
1	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	\$81,022	\$374,453	Light
2	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	\$80,773	\$320,076	Light
3	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	\$51,410	\$155,208	Medium
4	Spotsylvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333	Med to Hvy
5	Crittenden	Crittenden	KY	34	2.70	40	22%	51%	27%	0%	1,419	\$60,198	\$178,643	Light
Average				915	135.94	90	17%	62%	21%	0%	470	\$78,853	\$302,343	
Median				322	20.00	70	14%	52%	20%	0%	203	\$80,773	\$320,076	
High				3,500	617.00	160	37%	98%	46%	1%	1,419	\$120,861	\$483,333	
Low				34	2.70	40	2%	39%	0%	0%	74	\$51,410	\$155,208	

On the following page is a summary of the matched pairs for all of the solar farms noted above. They show a pattern of results from -7% to +7% with an average of 0% and a median finding of +1%. As can be seen in the chart of those results below, most of the data points are between -3% and +5%. This variability is common with real estate and consistent with market "static." I therefore conclude that these results strongly support an indication of no impact on property value due to the adjacent solar farm.



Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	Area	MW	Approx		Date	Sale Price	Adj. Sale		Veg.
						Distance	Tax ID/Address			Price	% Diff	Buffer
1	Clarke Cnty	White Post	VA	Rural	20	1230	833 Nations Spr	Jan-17	\$295,000			Light
							6801 Middle	Dec-17	\$249,999	\$296,157	0%	
2	Walker	Barhamsville	VA	Rural	20	250	5241 Barham	Oct-18	\$264,000			Light
							9252 Ordinary	Jun-19	\$277,000	\$246,581	7%	
3	Clarke Cnty	White Post	VA	Rural	20	1230	833 Nations Spr	Aug-19	\$385,000			Light
							2393 Old Chapel	Aug-20	\$330,000	\$389,286	-1%	
4	Sappony	Stony Creek	VA	Rural	20	1425	12511 Palestine	Jul-18	\$128,400			Medium
							6494 Rocky Branch	Nov-18	\$100,000	\$131,842	-3%	
5	Spotsylvania	Paytes	VA	Rural	617	1270	12901 Orange Plnk	Aug-20	\$319,900			Medium
							12717 Flintlock	Dec-20	\$290,000	\$326,767	-2%	
6	Spotsylvania	Paytes	VA	Rural	617	1950	9641 Nottoway	May-20	\$449,900			Medium
							11626 Forest	Aug-20	\$489,900	\$430,246	4%	
7	Spotsylvania	Paytes	VA	Rural	617	1171	13353 Post Oak	Sep-20	\$300,000			Heavy
							12810 Catharpin	Jan-20	\$280,000	\$299,008	0%	
8	Crittenden	Crittenden	KY	Suburban	2.7	373	250 Claiborne	Jan-19	\$120,000			Light
							315 N Fork	May-19	\$107,000	\$120,889	-1%	
9	Crittenden	Crittenden	KY	Suburban	2.7	488	300 Claiborne	Sep-18	\$213,000			Light
							1795 Bay Valley	Dec-17	\$231,200	\$228,180	-7%	
10	Crittenden	Crittenden	KY	Suburban	2.7	720	350 Claiborne	Jul-18	\$245,000			Light
							2160 Sherman	Jun-19	\$265,000	\$248,225	-1%	
11	Crittenden	Crittenden	KY	Suburban	2.7	930	370 Claiborne	Aug-19	\$273,000			Light
							125 Lexington	Apr-18	\$240,000	\$254,751	7%	

	Avg.		
	MW	Distance	Indicated Impact
Average	176.53	1,003	0%
Median	20.00	1,171	-1%
High	617.00	1,950	7%
Low	2.70	250	-7%

I have further broken down these results based on the MWs, Landscaping, and distance from panel to show the following range of findings for these different categories.

This breakdown shows no homes between 100-200 homes. Solar farms up to 75 MW show homes between 201 and 500 feet with no impact on value. Most of the findings are for homes between 201 and 500 feet.

Light landscaping screens are showing no impact on value at any distances, though solar farms over 75.1 MW only show Medium and Heavy landscaping screens in the 3 examples identified.

MW Range 4.4 to 10									
Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	-4%	3%	N/A	N/A	N/A	N/A	N/A	N/A
Median	N/A	-4%	3%	N/A	N/A	N/A	N/A	N/A	N/A
High	N/A	-1%	7%	N/A	N/A	N/A	N/A	N/A	N/A
Low	N/A	-7%	-1%	N/A	N/A	N/A	N/A	N/A	N/A
10.1 to 30									
Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	7%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
Median	N/A	7%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
High	N/A	7%	0%	N/A	N/A	-3%	N/A	N/A	N/A
Low	N/A	7%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
30.1 to 75									
Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Median	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
High	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Low	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
75.1+									
Landscaping Distance	Light 100-200	Light 201-500	Light 500+	Medium 100-200	Medium 201-500	Medium 500+	Heavy 100-200	Heavy 201-500	Heavy 500+
Average	N/A	N/A	N/A	N/A	N/A	1%	N/A	N/A	N/A
Median	N/A	N/A	N/A	N/A	N/A	1%	N/A	N/A	N/A
High	N/A	N/A	N/A	N/A	N/A	4%	N/A	N/A	N/A
Low	N/A	N/A	N/A	N/A	N/A	-2%	N/A	N/A	N/A

B. Southeastern USA Data – Over 5 MW

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

This 5 MW 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 »			

The homes adjoining the solar farm are considered to have a light landscaping screen as it is a narrow row of existing pine trees supplemented with evergreen plantings.

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%

I note that 2308 Granville Drive sold again in November 2015 for \$267,500, or \$7,500 more than when it was purchased new from the builder two years earlier (Tax ID 3600195361, Owner: Leak). The neighborhood is clearly showing appreciation for homes adjoining the solar farm.

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 size 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. 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.

I have also considered four more recent resales of homes in this community as shown on the following page. These comparable sales adjoin the solar farm at distances ranging from 315 to 400 feet. The matched pairs show a range from -9% to +6%. The range of the average difference is -2% to +1% with an average of 0% and a median of +0.5%. These comparable sales support a finding of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	103 Granville Pl	1.42	7/27/2018	\$265,000	2013	3,292	\$80.50	4/3.5	2-Car	2-Story		385
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	103 Granville Pl								\$265,000		-2%	
	Not	2219 Granville	\$4,382		\$1,300	\$0				\$265,682	0%		
	Not	634 Friendly	-\$8,303		-\$6,675	\$16,721	-\$10,000			\$258,744	2%		
	Not	2403 Granville	-\$6,029		-\$1,325	\$31,356				\$289,001	-9%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	104 Erin	2.24	6/19/2017	\$280,000	2014	3,549	\$78.90	5/3.5	2-Car	2-Story		315
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	104 Erin								\$280,000		0%	
	Not	2219 Granville	-\$4,448		\$2,600	\$16,238				\$274,390	2%		
	Not	634 Friendly	-\$17,370		-\$5,340	\$34,702	-\$10,000			\$268,992	4%		
	Not	2403 Granville	-\$15,029		\$0	\$48,285				\$298,256	-7%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	2312 Granville	0.75	5/1/2018	\$284,900	2013	3,453	\$82.51	5/3.5	2-Car	2-Story		400
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	2312 Granville								\$284,900		1%	
	Not	2219 Granville	\$2,476		\$1,300	\$10,173				\$273,948	4%		
	Not	634 Friendly	-\$10,260		-\$6,675	\$27,986	-\$10,000			\$268,051	6%		
	Not	2403 Granville	-\$7,972		-\$1,325	\$47,956				\$303,659	-7%		

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	2310 Granville	0.76	5/14/2019	\$280,000	2013	3,292	\$85.05	5/3.5	2-Car	2-Story		400
	Not	2219 Granville	1.15	1/8/2018	\$260,000	2012	3,292	\$78.98	4/3.5	2-Car	2-Story		
	Not	634 Friendly	0.96	7/31/2019	\$267,000	2018	3,053	\$87.45	4/4.5	2-Car	2-Story		
	Not	2403 Granville	0.69	4/23/2019	\$265,000	2014	2,816	\$94.11	5/3.5	2-Car	2-Story		
												Avg	
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	
	Adjoins	2310 Granville								\$280,000		1%	
	Not	2219 Granville	\$10,758		\$1,300	\$0				\$272,058	3%		
	Not	634 Friendly	-\$1,755		-\$6,675	\$16,721	-\$10,000			\$265,291	5%		
	Not	2403 Granville	\$469		-\$1,325	\$31,356				\$295,500	-6%		

I have also considered the original sales prices in this subdivision relative to the recent resale values as shown in the chart below. This rate of appreciation is right at 2.5% over the last 6 years. Zillow indicates that the average home value within the 27530-zip code as of January 2014 was \$101,300 and as of January 2020 that average is \$118,100. This indicates an average increase in the market of 2.37%. I conclude that the appreciation of the homes adjoining the solar farm are not impacted by the presence of the solar farm based on this data.

2. Matched Pair – Mulberry, Selmer, TN



This 16 MW solar farm was built in 2014 on 208.89 acres with the closest home being 480 feet.

This solar farm adjoins two subdivisions with Central Hills having a mix of existing and new construction homes. Lots in this development have been marketed for \$15,000 each with discounts offered for multiple lots being used for a single home site. I spoke with the agent with Rhonda Wheeler and Becky Hearnberger with United County Farm & Home Realty who noted that they have seen no impact on lot or home sales due to the solar farm in this community.

I have included a map below as well as data on recent sales activity on lots that adjoin the solar farm or are near the solar farm in this subdivision both before and after the announced plan for this solar farm facility. I note that using the same method I used to breakdown the adjoining uses at the subject property I show that the predominant adjoining uses are residential and agricultural, which is consistent with the location of most solar farms.

Adjoining Use Breakdown

	Acreage	Parcels
Commercial	3.40%	0.034
Residential	12.84%	79.31%
Agri/Res	10.39%	3.45%
Agricultural	73.37%	13.79%
Total	100.00%	100.00%

I have run a number of direct matched comparisons on the sales adjoining this solar farm as shown below. These direct matched pairs include some of those shown above as well as additional more recent sales in this community. In each of these I have compared the one sale adjoining the solar farm to multiple similar farm homes nearby that do not adjoin a solar farm to look for any potential impact from the solar farm.

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
3	Adjoins	491 Dusty	6.86	10/28/2016	\$176,000	2009	1,801	\$97.72	3/2	2-Gar	Ranch	
	Not	820 Lake Trail	1.00	6/8/2018	\$168,000	2013	1,869	\$89.89	4/2	2-Gar	Ranch	
	Not	262 Country	1.00	1/17/2018	\$145,000	2000	1,860	\$77.96	3/2	2-Gar	Ranch	
	Not	35 April	1.15	8/16/2016	\$185,000	2016	1,980	\$93.43	3/2	2-Gar	Ranch	

Adjoining Sales Adjusted												
Parcel	Solar	Address	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance	
3	Adjoins	491 Dusty							\$176,000		480	
	Not	820 Lake Trail	-\$8,324	\$12,000	-\$3,360	-\$4,890			\$163,426	7%		
	Not	262 Country	-\$5,450	\$12,000	\$6,525	-\$3,680			\$154,396	12%		
	Not	35 April	\$1,138	\$12,000	-\$6,475	-\$13,380			\$178,283	-1%		
									Average	6%		

The best matched pair is 35 April Loop, which required the least adjustment and indicates a -1% increase in value due to the solar farm adjacency.

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
12	Adjoins	57 Cooper	1.20	2/26/2019	\$163,000	2011	1,586	\$102.77	3/2	2-Gar	1.5 Story	Pool
	Not	191 Amelia	1.00	8/3/2018	\$132,000	2005	1,534	\$86.05	3/2	Drive	Ranch	
	Not	75 April	0.85	3/17/2017	\$134,000	2012	1,588	\$84.38	3/2	2-Crprt	Ranch	
	Not	345 Woodland	1.15	12/29/2016	\$131,000	2002	1,410	\$92.91	3/2	1-Gar	Ranch	

Adjoining Sales Adjusted												
Parcel	Solar	Address	Sales Price	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
12	Adjoins	57 Cooper	\$163,000							\$163,000		685
	Not	191 Amelia	\$132,000	\$2,303		\$3,960	\$2,685	\$10,000	\$5,000	\$155,947	4%	
	Not	75 April	\$134,000	\$8,029	\$4,000	-\$670	-\$135	\$5,000	\$5,000	\$155,224	5%	
	Not	345 Woodland	\$131,000	\$8,710		\$5,895	\$9,811		\$5,000	\$160,416	2%	
										Average	4%	

The best matched pair is 191 Amelia, which was most similar in time frame of sale and indicates a +4% increase in value due to the solar farm adjacency.

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
15	Adjoins	297 Country	1.00	9/30/2016	\$150,000	2002	1,596	\$93.98	3/2	4-Gar	Ranch	
	Not	185 Dusty	1.85	8/17/2015	\$126,040	2009	1,463	\$86.15	3/2	2-Gar	Ranch	
	Not	53 Glen	1.13	3/9/2017	\$126,000	1999	1,475	\$85.42	3/2	2-Gar	Ranch	Brick

Adjoining Sales Adjusted

Parcel	Solar	Address	Sales Price	Time	Site	YB	GLA	Park	Other	Total	% Diff	Distance
15	Adjoins	297 Country	\$150,000							\$150,000		650
	Not	185 Dusty	\$126,040	\$4,355		-\$4,411	\$9,167	\$10,000		\$145,150	3%	
	Not	53 Glen	\$126,000	-\$1,699		\$1,890	\$8,269	\$10,000		\$144,460	4%	
Average											3%	

The best matched pair is 53 Glen, which was most similar in time frame of sale and required less adjustment. It indicates a +4% increase in value due to the solar farm adjacency.

The average indicated impact from these three sets of matched pairs is +4%, which suggests a mild positive relationship due to adjacency to the solar farm. The landscaping buffer for this project is mostly natural tree growth that was retained as part of the development but much of the trees separating the panels from homes are actually on the lots for the homes themselves. I therefore consider the landscaping buffer to be thin to moderate for these adjoining homes.

I have also looked at several lot sales in this subdivision as shown below.

These are all lots within the same community and the highest prices paid are for lots one parcel off from the existing solar farm. These prices are fairly inconsistent, though they do suggest about a \$3,000 loss in the lots adjoining the solar farm. This is an atypical finding and additional details suggest there is more going on in these sales than the data crunching shows. First of all Parcel 4 was purchased by the owner of the adjoining home and therefore an atypical buyer seeking to expand a lot and the site is not being purchased for home development. Moreover, using the SiteToDoBusiness demographic tools, I found that the 1-mile radius around this development is expecting a total population increase over the next 5 years of 3 people. This lack of growing demand for lots is largely explained in that context. Furthermore, the fact that finished home sales as shown above are showing no sign of a negative impact on property value makes this data unreliable and inconsistent with the data shown in sales to an end user. I therefore place little weight on this outlier data.

Parcel	Solar	Address	Acres	Date Sold	Sales Price	4/18/2019	4/18/2019
						Adj for Time	Adj for Time
4	Adjoins	Shelter	2.05	10/25/2017	\$16,000	\$16,728	\$7,805
10	Adjoins	Carter	1.70	8/2/2018	\$14,000	\$14,306	\$8,235
11	Adjoins	Cooper	1.28	9/17/2018	\$12,000	\$12,215	\$9,375
	Not	75 Dusty	1.67	4/18/2019	\$20,000	\$20,000	\$11,976
	Not	Lake Trl	1.47	11/7/2018	\$13,000	\$13,177	\$8,844
	Not	Lake Trl	1.67	4/18/2019	\$20,000	\$20,000	\$11,976
		Adjoins	Per Acre	Not Adjoins	Per Acre	% DIF/Lot	% DIF/AC
Average		\$14,416	\$8,706	\$17,726	\$10,972	19%	21%
Median		\$14,306	\$8,415	\$20,000	\$11,976	28%	30%
High		\$16,728	\$9,543	\$20,000	\$11,976	16%	20%
Low		\$12,215	\$8,160	\$13,177	\$8,964	7%	9%

3. Matched Pair – Leonard Road Solar Farm, Hughesville, MD



This 5 MW solar farm is located on 47 acres and mostly adjoins agricultural and residential uses to the west, south and east as shown above. The property also adjoins retail uses and a church. I looked at a 2016 sale of an adjoining home with a positive impact on value adjoining the solar farm of 2.90%. This is within typical market friction and supports an indication of no impact on property value.

I have shown this data below. The landscaping buffer is considered heavy.

Leonardtwn Road Solar Farm, Hughesville, MD

Nearby Residential Sale After Solar Farm Construction

Address	Solar Farm	Acres	Date Sold	Sales Price*	Built	GBA	\$/GBA	Style	BR/BA	Bsmt	Park	Upgrades	Other
14595 Box Elder Ct	Adjoins	3.00	2/12/2016	\$291,000	1991	2,174	\$133.85	Colonial	5/2.5	No	2 Car Att	N/A	Deck
15313 Bassford Rd	Not	3.32	7/20/2016	\$329,800	1990	2,520	\$130.87	Colonial	3/2.5	Finished	2 Car Att	Custom	Scr Por/Patio

*\$9,000 concession deducted from sale price for Box Elder and \$10,200 deducted from Bassford

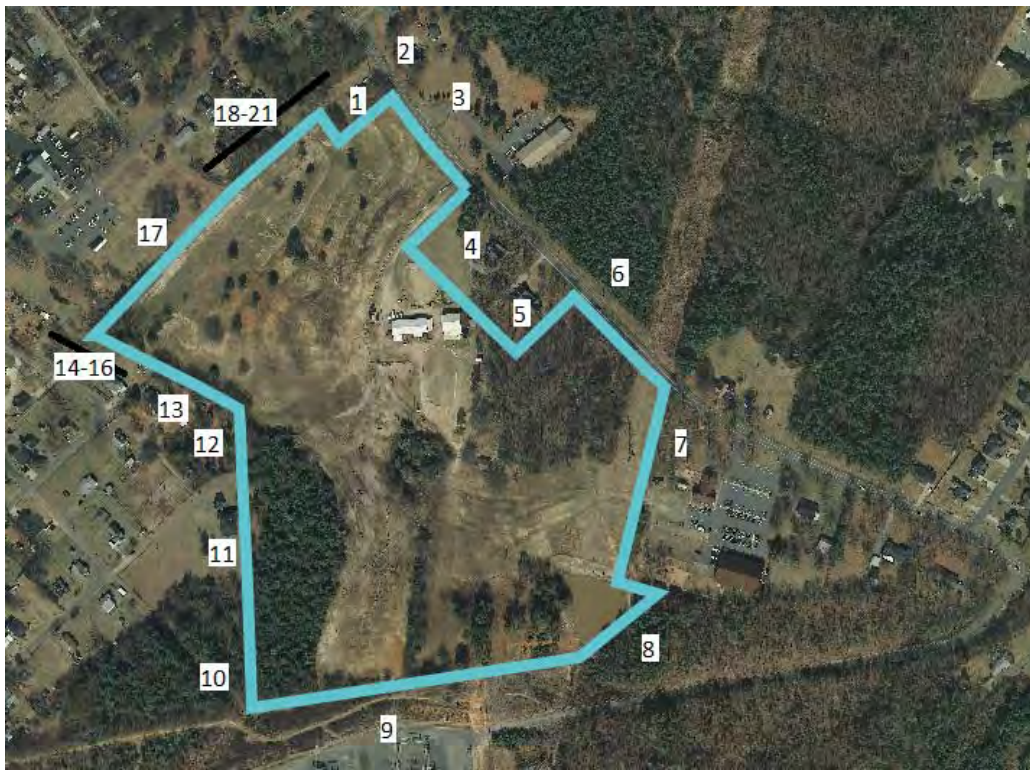
Adjoining Sales Adjusted

Address	Date Sold	Sales Price	Time	Adjustments					Total
				GLA	Bsmt	Upgrades	Other		
14595 Box Elder Ct	2/12/2016	\$291,000							\$291,000
15313 Bassford Rd	7/20/2016	\$329,800	-\$3,400	-\$13,840	-\$10,000	-\$15,000	-\$5,000		\$282,560

Difference Attributable to Location \$8,440
2.90%

This is within typical market friction and supports an indication of no impact on property value.

4. Matched Pair – Gastonia SC Solar, Gastonia, NC



This 5 MW project is located on the south side of Neal Hawkins Road just outside of Gastonia. The property identified above as Parcel 4 was listed for sale while this solar farm project was going

Adjoining Residential Sales After Solar Farm Approved

Adjoining Sales Adjusted

I also considered the newer adjoining home identified as Parcel 5 that sold later in 2017 and it likewise shows no negative impact on property value. This is also considered a light landscaping buffer.

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style
Adjoins	611 Neal Hawkins	0.78	7/6/2017	\$288,000	1991	2,256	\$127.66	5/3	2-Gar	1.5 Brick
Not	1211 Still Frst	0.51	7/30/2018	\$280,000	1989	2,249	\$124.50	3/3	2-Gar	Br Rnch
Not	2867 Colony Wds	0.52	8/14/2018	\$242,000	1990	2,006	\$120.64	3/3	2-Gar	Br Rnch
Not	1010 Strawberry	1.00	10/4/2018	\$315,000	2002	2,330	\$135.19	3/2.5	2-Gar	1.5 Brick

[illegible]

5. Matched Pair – Summit/Ranchlands Solar, Moyock, NC



This project is located at 1374 Caritoke Highway, Moyock, NC. This is an 80 MW facility on a parent tract of 2,034 acres. Parcels Number 48 and 53 as shown in the map above were sold in 2016. The project was under construction during the time period of the first of the matched pair sales and the permit was approved well prior to that in 2015.

I looked at multiple sales of adjoining and nearby homes and compared each to multiple comparables to show a range of impacts from -10% up to +11% with an average of +2% and a median of +3%. These ranges are well within typical real estate variation and supports an indication of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved													
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
48	Adjoins	129 Pinto	4.29	4/15/2016	\$170,000	1985	1,559	\$109.04	3/2	Drive	MFG		1,060
	Not	102 Timber	1.30	4/1/2016	\$175,500	2009	1,352	\$129.81	3/2	Drive	MFG		
	Not	120 Ranchland	0.99	10/1/2014	\$170,000	2002	1,501	\$113.26	3/2	Drive	MFG		
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	
	Adjoins	129 Pinto								\$170,000		-3%	
	Not	102 Timber	\$276	\$10,000	-\$29,484	\$18,809				\$175,101	-3%		
	Not	120 Ranchland	\$10,735	\$10,000	-\$20,230	\$4,598				\$175,103	-3%		

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	105 Pinto	4.99	12/16/2016	\$206,000	1978	1,484	\$138.81	3/2	Det G	Ranch	
Not	111 Spur	1.15	2/1/2016	\$193,000	1985	2,013	\$95.88	4/2	Gar	Ranch	
Not	103 Marshall	1.07	3/29/2017	\$196,000	2003	1,620	\$120.99	3/2	Drive	Ranch	
Not	127 Ranchland	0.00	6/9/2015	\$219,900	1988	1,910	\$115.13	3/2	Gar/3Det	Ranch	

Adjoining Sales Adjusted											Avg
Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
105 Pinto								\$206,000			980
111 Spur	\$6,747	\$10,000	-\$6,755	-\$25,359				\$177,633	14%		
103 Marshall	-\$2,212	\$10,000	-\$24,500	-\$8,227		\$5,000		\$176,212	14%		
127 Ranchland	\$13,399	\$10,000	-\$10,995	-\$24,523		-\$10,000		\$197,781	4%		
										11%	

Adjoining Residential Sales After Solar Farm Built													
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
15	Adjoins	318 Green View	0.44	9/15/2019	\$357,000	2005	3,460	\$103.18	4/4	2-Car	1.5 Brick		570
	Not	195 St Andrews	0.55	6/17/2018	\$314,000	2002	3,561	\$88.18	5/3	2-Car	2.0 Brick		
	Not	336 Green View	0.64	1/13/2019	\$365,000	2006	3,790	\$96.31	6/4	3-Car	2.0 Brick		
	Not	275 Green View	0.36	8/15/2019	\$312,000	2003	3,100	\$100.65	5/3	2-Car	2.0 Brick		
	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	
	Adjoins	318 Green View								\$357,000		4%	
	Not	195 St Andrews	\$12,040		\$4,710	-\$7,125	\$10,000			\$333,625	7%		
	Not	336 Green View	\$7,536		-\$1,825	-\$25,425			-\$5,000	\$340,286	5%		
	Not	275 Green View	\$815		\$3,120	\$28,986	\$10,000			\$354,921	1%		

Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
29	Adjoins	164 Ranchland	1.01	4/30/2019	\$169,000	1999	2,052	\$82.36	4/2	Gar	MFG		440
	Not	150 Pinto	0.94	3/27/2018	\$168,000	2017	1,920	\$87.50	4/2	Drive	MFG		
	Not	105 Longhorn	1.90	10/10/2017	\$184,500	2002	1,944	\$94.91	3/2	Drive	MFG		
	Not	112 Pinto	1.00	7/27/2018	\$180,000	2002	1,836	\$98.04	3/2	Drive	MFG	Fenced	
												Avg	
	Adjoins	164 Ranchland										% Diff	-10%
	Not	150 Pinto	\$5,649		-\$21,168	\$8,085				\$5,000	\$165,566	2%	
	Not	105 Longhorn	\$8,816	-\$10,000	-\$3,875	\$7,175				\$5,000	\$191,616	-13%	
	Not	112 Pinto	\$4,202		-\$3,780	\$14,824				\$5,000	\$200,245	-18%	

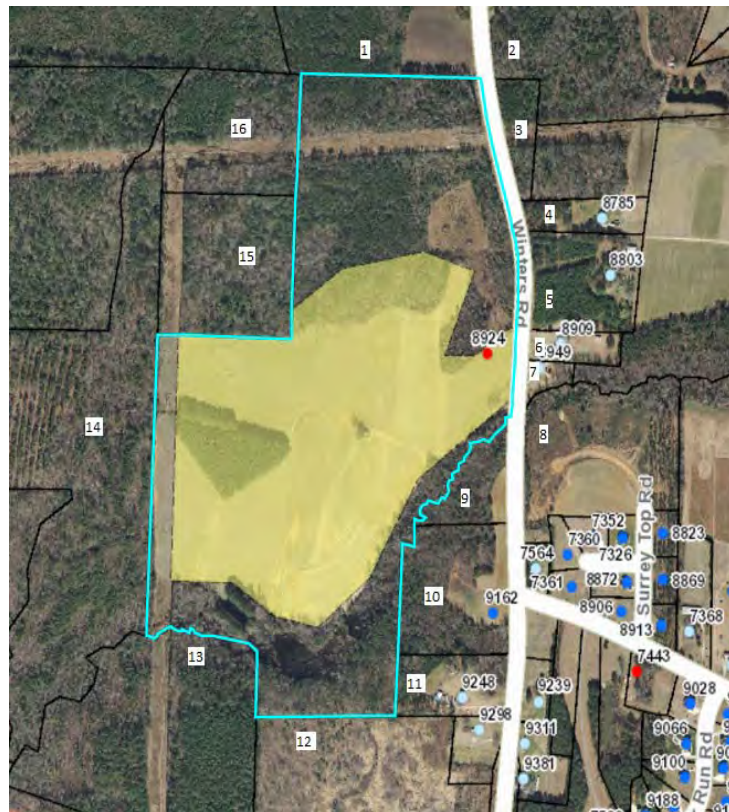
Adjoining Residential Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Adjoins	358 Oxford	10.03	9/16/2019	\$478,000	2008	2,726	\$175.35	3/3	2 Gar	Ranch		635
	Not	276 Summit	10.01	12/20/2017	\$355,000	2006	1,985	\$178.84	3/2	2 Gar	Ranch		
	Not	176 Providence	6.19	5/6/2019	\$425,000	1990	2,549	\$166.73	3/3	4 Gar	Ranch	Brick	
	Not	1601 B Caratoke	12.20	9/26/2019	\$440,000	2016	3,100	\$141.94	4/3.5	5 Gar	Ranch	Pool	
												Avg	
	Adjoins	358 Oxford										% Diff	5%
	Not	276 Summit	\$18,996		\$3,550	\$106,017	\$10,000				\$493,564	-3%	
	Not	176 Providence	\$4,763		\$38,250	\$23,609		-\$10,000	-\$25,000		\$456,623	4%	
	Not	1601 B Caratoke	-\$371	\$50,000	-\$17,600	-\$42,467	-\$5,000	-\$10,000			\$414,562	13%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
	Nearby	343 Oxford	10.01	3/9/2017	\$490,000	2016	3,753	\$130.56	3/3	2 Gar	1.5 Story	Pool	970
	Not	287 Oxford	10.01	9/4/2017	\$600,000	2013	4,341	\$138.22	5/4.5	8-Gar	1.5 Story	Pool	
	Not	301 Oxford	10.00	4/23/2018	\$434,000	2013	3,393	\$127.91	5/3	2 Gar	1.5 Story		
	Not	218 Oxford	10.01	4/4/2017	\$525,000	2006	4,215	\$124.56	4/3	4 Gar	1.5 Story	VG Barn	
												Avg	
	Adjoins	343 Oxford										% Diff	3%
	Not	287 Oxford	-\$9,051		\$9,000	-\$65,017	-\$15,000	-\$25,000			\$494,932	-1%	
	Not	301 Oxford	-\$14,995	-\$10,000	\$6,510	\$36,838					\$452,353	8%	
	Not	218 Oxford	-\$1,150		\$26,250	-\$46,036		-\$10,000	-\$10,000		\$484,064	1%	

6. Matched Pair – Tracy Solar, Bailey, NC



This project is located in rural Nash County on Winters Road with a 5 MW facility that was built in 2016 on 50 acres. A local builder acquired parcels 9 and 10 following construction as shown below

at rates comparable to other tracts in the area. They then built a custom home for an owner and sold that at a price similar to other nearby homes as shown in the matched pair data below. The retained woods provide a heavy landscaped buffer for this homesite.

Adjoining Land Sales After Solar Farm Completed

#	Solar Farm	TAX ID	Grantor	Grantee	Address	Acres	Date Sold	Sales Price	\$/AC	Other
9 & 10	Adjoins	316003 & 316004	Cozart	Kingsmill	9162 Winters	13.22	7/21/2016	\$70,000	\$5,295	
	Not	6056	Billingsly		427 Young	41	10/21/2016	\$164,000	\$4,000	
	Not	33211	Fulcher	Weikel	10533 Cone	23.46	7/18/2017	\$137,000	\$5,840	Doublewide, structures
	Not	106807	Perry	Gardner	Claude Lewis	11.22	8/10/2017	\$79,000	\$7,041	Gravel drive for sub, cleared
	Not	3437	Vaughan	N/A	11354 Old Lewis Sch	18.73	Listing	\$79,900	\$4,266	Small cemetery, wooded

Adjoining Sales Adjusted

Time	Acres	Location	Other	Adj \$/Ac	% Diff
				\$5,295	
\$0	\$400	\$0	\$0	\$4,400	17%
-\$292	\$292	\$0	-\$500	\$5,340	-1%
-\$352	\$0	\$0	-\$1,000	\$5,689	-7%
-\$213	\$0	\$0	\$213	\$4,266	19%
Average					7%

Adjoining Residential Sales After Solar Farm Completed

#	Solar Farm	n	Address	Acres	Date Sold	Sales Price	Built	GLA	\$/GLA	BR/BA	Style	Other
9 & 10	Adjoins	9	9162 Winters	13.22	1/5/2017	\$255,000	2016	1,616	\$157.80	3/2	Ranch	1296 sf wrkshp
	Not	10	7352 Red Fox	0.93	6/30/2016	\$176,000	2010	1,529	\$115.11	3/2	2-story	

Adjoining Sales Adjusted

Time	Acres	YB	GLA	Style	Other	Total	% Diff
						\$255,000	
\$0	\$44,000	\$7,392	\$5,007	\$5,000	\$15,000	\$252,399	1%

The comparables for the land show either a significant positive relationship or a mild negative relationship to having an adjoining solar farm, but when averaged together they show no negative impact. The wide divergence is due to the difficulty in comparing this tract of land and the wide variety of comparables used. The two comparables that show mild negative influences include a property that was partly developed as a residential subdivision and the other included a doublewide with some value and accessory agricultural structures. The tax assessed value on the improvements were valued at \$60,000. So both of those comparables have some limitations for comparison. The two that show significant enhancement due to adjacency include a property with a cemetery located in the middle and the other is a tract almost twice as large. Still that larger tract after adjustment provides the best matched pair as it required the least adjustment. I therefore conclude that there is no negative impact due to adjacency to the solar farm shown by this matched pair.

The dwelling that was built on the site was a build-to-suit and was compared to a nearby homesale of a property on a smaller parcel of land. I adjusted for that difference based on a \$25,000 value for a 1-acre home site versus the \$70,000 purchase price of the larger subject tract. The other adjustments are typical and show no impact due to the adjacency to the solar farm.

The closest solar panel to the home is 780 feet away.

I note that the representative for Kingsmill Homes indicated that the solar farm was never a concern in purchasing the land or selling the home. He also indicated that they had built a number of nearby homes across the street and it had never come up as an issue.

7. Matched Pair – Manatee Solar Farm, Parrish, FL



This solar farm is located near Seminole Trail, Parrish, FL. The solar farm has a 74.50 MW output and is located on a 1,180.38-acre tract and was built in 2016. The tract is owned by Florida Power & Light Company.

I have considered the recent sale of 13670 Highland Road, Wimauma, Florida. This one-story, concrete block home is located just north of the solar farm and separated from the solar farm by a railroad corridor. This home is a 3 BR, 3 BA 1,512 s.f. home with a carport and workshop. The property includes new custom cabinets, granite counter tops, brand-new stainless-steel appliances, updated bathrooms and new carpet in the bedrooms. The home is sitting on 5 acres. The home was built in 1997.

I have compared this sale to several nearby homesales as part of this matched pair analysis as shown below. The landscaping separating the home from the solar farm is considered heavy.

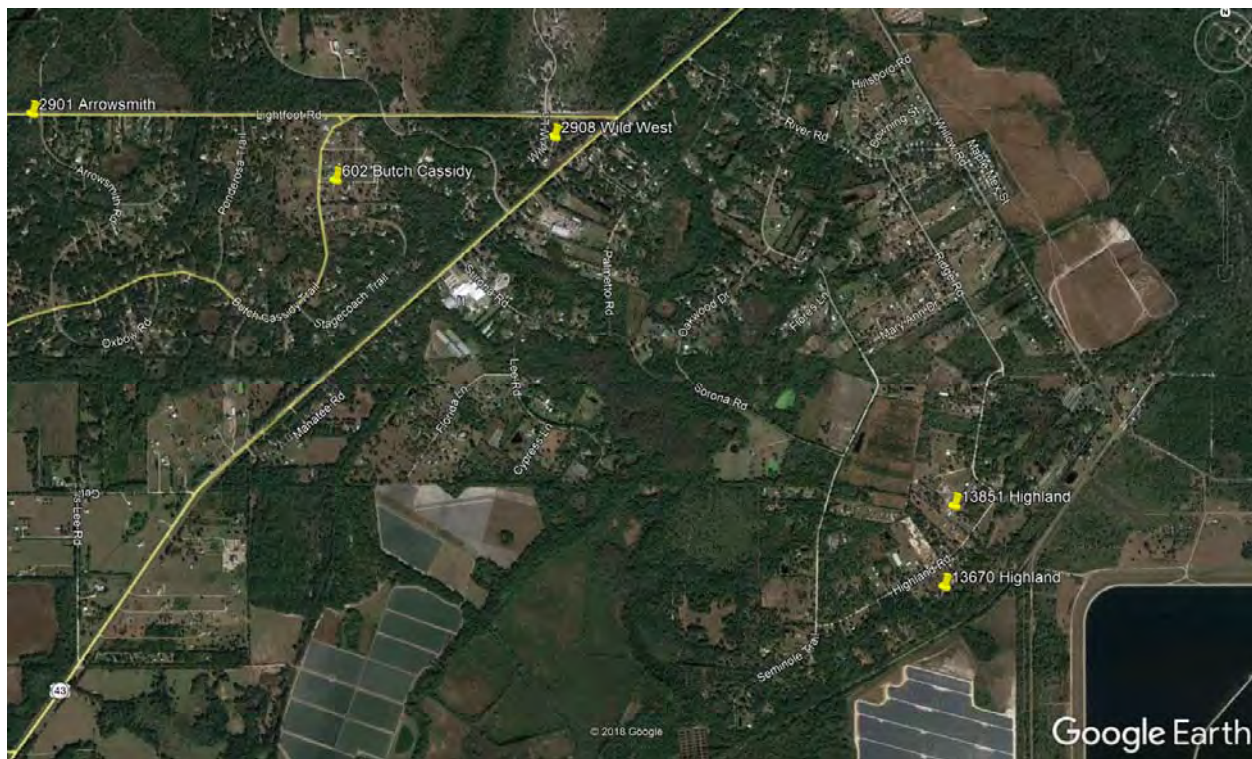
Solar	TAX ID/Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Note
Adjoins	13670 Highland	5.00	8/21/2017	\$255,000	1997	1,512	\$168.65	3/3	Carport/Wrkshp	Ranch	Renov.
Not	2901 Arrowsmith	1.91	1/31/2018	\$225,000	1979	1,636	\$137.53	3/2	2 Garage/Wrkshp	Ranch	
Not	602 Butch Cassidy	1.00	5/5/2017	\$220,000	2001	1,560	\$141.03	3/2	N/A	Ranch	Renov.
Not	2908 Wild West	1.23	7/12/2017	\$254,000	2003	1,554	\$163.45	3/2	2 Garage/Wrkshp	Ranch	Renov.
Not	13851 Highland	5.00	9/13/2017	\$240,000	1978	1,636	\$146.70	4/2	3 Garage	Ranch	Renov.

Adjoining Sales Adjusted										
Solar	TAX ID/Address	Time	Acres	YB	GLA	BR/BA	Park	Note	Total	% Diff
Adjoins	13670 Highland								\$255,000	
Not	2901 Arrowsmith	\$2,250	\$10,000	\$28,350	-\$8,527	\$5,000	-\$10,000	\$10,000	\$262,073	-3%
Not	602 Butch Cassidy	-\$2,200	\$10,000	-\$6,160	-\$3,385	\$5,000	\$2,000		\$225,255	12%
Not	2908 Wild West	\$0	\$10,000	-\$10,668	-\$3,432	\$5,000	-\$10,000		\$244,900	4%
Not	13851 Highland	\$0	\$0	\$31,920	-\$9,095	\$3,000	-\$10,000		\$255,825	0%
Average										3%

The sales prices of the comparables before adjustments range from \$220,000 to \$254,000. After adjustments they range from \$225,255 to \$262,073. The comparables range from no impact to a strong positive impact. The comparables showing -3% and +4% impact on value is considered within a typical range of value and therefore not indicative of any impact on property value.

This set of matched pair data falls in line with the data seen in other states. The closest solar panel to the home at 13670 Highland is 1,180 feet. There is a wooded buffer between these two properties.

I have included a map showing the relative location of these properties below.



8. Matched Pair – McBride Place Solar Farm, Midland, NC



This project is located on Mount Pleasant Road, Midland, North Carolina. The property is on 627 acres on an assemblage of 974.59 acres. The solar farm was approved in early 2017 for a 74.9 MW facility.

I have considered the sale of 4380 Joyner Road which adjoins the proposed solar farm near the northwest section. This property was appraised in April of 2017 for a value of \$317,000 with no consideration of any impact due to the solar farm in that figure. The property sold in November

2018 for \$325,000 with the buyer fully aware of the proposed solar farm. The landscaping buffer relative to Joyner Road, Hayden Way, Chanel Court and Kristi Lane is considered medium, while the landscaping for the home at the north end of Chanel Court is considered very light.

I have considered the following matched pairs to the subject property.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	4380 Joyner	12.00	11/22/2017	\$325,000	1979	1,598	\$203.38	3/2	2xGar	Ranch	Outbldg
Not	3870 Elkwood	5.50	8/24/2016	\$250,000	1986	1,551	\$161.19	3/2.5	Det 2xGar	Craft	
Not	8121 Lower Rocky	18.00	2/8/2017	\$355,000	1977	1,274	\$278.65	2/2	2xCarprrt	Ranch	Eq. Fac.
Not	13531 Cabarrus	7.89	5/20/2016	\$267,750	1981	2,300	\$116.41	3/2	2xGar	Ranch	

Adjoining Sales Adjusted

Time	Acres	YB	Condition	GLA	BR/BA	Park	Other	Total	% Diff
								\$325,000	
\$7,500	\$52,000	-\$12,250	\$10,000	\$2,273	-\$2,000	\$2,500	\$7,500	\$317,523	2%
■ \$7,100	-\$48,000	\$4,970		\$23,156	\$0	\$3,000	-\$15,000	\$330,226	-2%
\$8,033	\$33,000	-\$3,749	\$20,000	-\$35,832	\$0	\$0	\$7,500	\$296,702	9%
Average									3%

The home at 4380 Joyner Road is 275 feet from the closest solar panel.

I also considered the recent sale of a lot at 5800 Kristi Lane that is on the east side of the proposed solar farm. This 4.22-acre lot sold in December 2017 for \$94,000. A home was built on this lot in 2019 with the closest point from home to panel at 689 feet. The home site is heavily wooded and their remains a wooded buffer between the solar panels and the home. I spoke with the broker, Margaret Dabbs, who indicated that the solar farm was considered a positive by both buyer and seller as it ensures no subdivision will be happening in that area. Buyers in this market are looking for privacy and seclusion.

The breakdown of recent lot sales on Kristi are shown below with the lowest price paid for the lot with no solar farm exposure, though that lot has exposure to Mt Pleasant Road South. Still the older lot sales have exposure to the solar farm and sold for higher prices than the front lot and adjusting for time would only increase that difference.

Adjoining Lot Sales After Solar Farm Built

Parcel	Solar	Address	Acres	Date Sold	Sales Price	\$/AC	\$/Lot
	Adjoins	5811 Kristi	3.74	5/1/2018	\$100,000	\$26,738	\$100,000
	Adjoins	5800 Kristi	4.22	12/1/2017	\$94,000	\$22,275	\$94,000
	Not	5822 Kristi	3.43	2/24/2020	\$90,000	\$26,239	\$90,000

The lot at 5811 Kristi Lane sold in May 2018 for \$100,000 for a 3.74-acre lot. The home that was built later in 2018 is 505 feet to the closest solar panel. This home then sold to a homeowner for \$530,000 in April 2020. I have compared this home sale to other properties in the area as shown below.

Adjoining Residential Sales After Solar Farm Built

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	5811 Kristi	3.74	3/31/2020	\$530,000	2018	3,858	\$137.38	5/3.5	2 Gar	2-story	Cement Ext
Not	3915 Tania	1.68	12/9/2019	\$495,000	2007	3,919	\$126.31	3/3.5	2 Gar	2-story	3Det Gar
Not	6782 Manatee	1.33	3/8/2020	\$460,000	1998	3,776	\$121.82	4/2/2h	2 Gar	2-story	Water
Not	314 Old Hickory	1.24	9/20/2019	\$492,500	2017	3,903	\$126.18	6/4.5	2 Gar	2-story	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	5811 Kristi								\$530,000		5%
Not	3915 Tania	\$6,285		\$27,225	-\$3,852		-\$20,000		\$504,657	5%	
Not	6782 Manatee	\$1,189		\$46,000	\$4,995	\$5,000			\$517,183	2%	
Not	314 Old Hickory	\$10,680		\$2,463	-\$2,839	-\$10,000			\$492,803	7%	

After adjusting the comparables, I found that the average adjusted value shows a slight increase in value for the subject property adjoining a solar farm. As in the other cases, this is a mild positive impact on value but within the typical range of real estate transactions.

I also looked at 5833 Kristi Lane that sold on 9/14/2020 for \$625,000. This home is 470 feet from the closest panel.

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Nearby	5833 Kristi	4.05	9/14/2020	\$625,000	2008	4,373	\$142.92	5/4	3-Car	2-Brick	
Not	4055 Dakeita	4.90	12/30/2020	\$629,000	2005	4,427	\$142.08	4/4	4-Car	2-Brick	4DetGar/Stable
Not	9615 Bales	2.16	6/30/2020	\$620,000	2007	4,139	\$149.79	4/5	3-Car	2-Stone	2DetGar
Not	9522 Bales	1.47	6/18/2020	\$600,000	2007	4,014	\$149.48	4/4.5	3-Car	2-Stone	

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
5833 Kristi								\$625,000			470
4055 Dakeita	-\$9,220		\$5,661	-\$6,138		-\$25,000		\$594,303	5%		
9615 Bales	\$6,455		\$1,860	\$28,042	-\$10,000	-\$15,000		\$631,356	-1%		
9522 Bales	\$7,233		\$1,800	\$42,930	-\$5,000			\$646,963	-4%		
										0%	

The average difference is 0% impact and the differences are all within a close range with this set of comparables and supports a finding of no impact on property value.

I have also looked at 4504 Chanel Court. This home sold on January 1, 2020 for \$393,500 for this 3,010 square foot home built in 2004 with 3 bedrooms, 3.5 bathrooms, and a 3-car garage. This home includes a full partially finished basement that significantly complicates comparing this to other sales. This home previously sold on January 23, 2017 for \$399,000. This was during the time that the solar farm was a known factor as the solar farm was approved in early 2017 and public discussions had already commenced. I spoke with Rachelle Killman with Real Estate Realty, LLC the buyer's agent for this transaction and she indicated that the solar farm was not a factor or consideration for the buyer. She noted that you could see the panels sort of through the trees, but it wasn't a concern for the buyer. She was not familiar with the earlier 2017 sale, but indicated that it was likely too high. This again goes back to the partially finished basement issue. The basement has a fireplace, and an installed 3/4 bathroom but otherwise bare studs and concrete floors with different buyers assigning varying value to that partly finished space. I also reached out to Don Gomez with Don Anthony Realty, LLC as he was the listing agent.

I also looked at the recent sale of 4599 Chanel Court. This home is within 310 feet of solar panels but notably does not have a good landscaping screen in place as shown in the photo below. The plantings appear to be less than 3-feet in height and only a narrow, limited screen of existing hardwoods were kept. The photograph is from the listing.

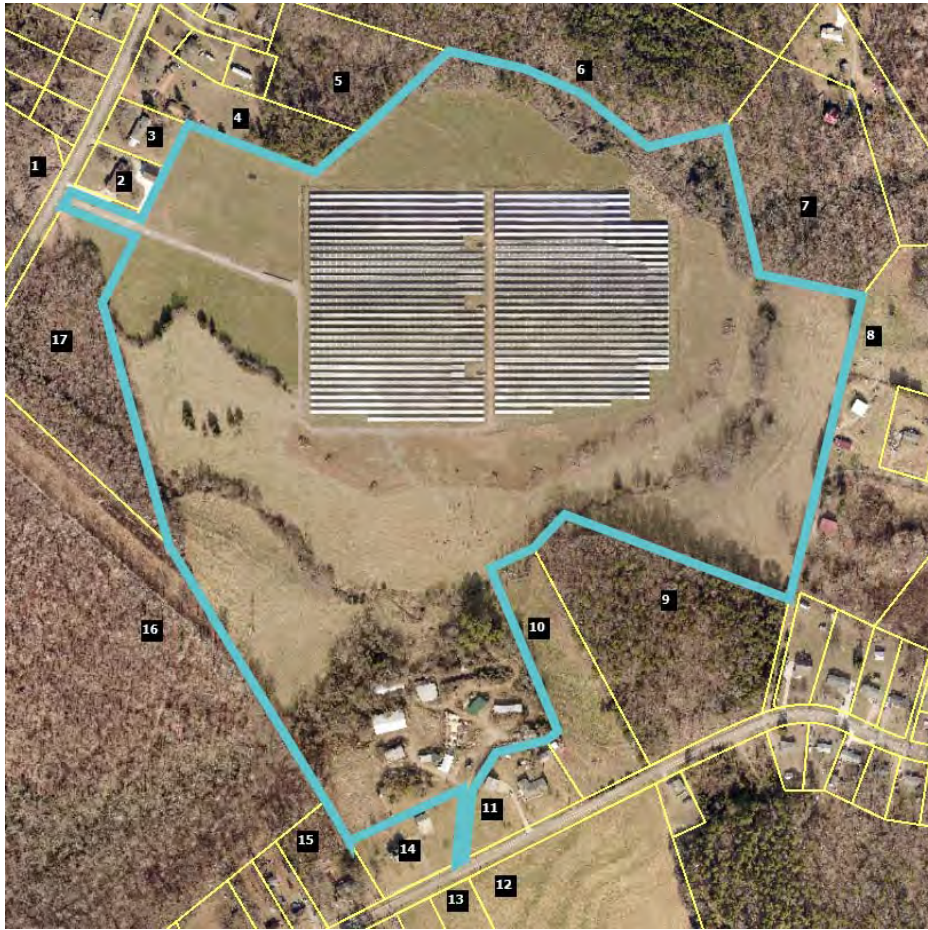
According to Scott David with Better Homes and Gardens Paracle Realty, this property was under contract for \$550,000 contingent on the buyer being able to sell their former home. The former home was apparently overpriced and did not sell and the contract stretched out over 2.5 months.

The seller was in a bind as they had a home they were trying to buy contingent on this closing and were about to lose that opportunity. A cash buyer offered them a quick close at \$500,000 and the seller accepted that offer in order to not lose the home they were trying to buy. According to Mr. David, the original contracted buyer and the actual cash buyer never considered the solar farm as a negative. In fact Mr. David noted that the actual buyer saw it as a great opportunity to purchase a home where a new subdivision could not be built behind his house. I therefore conclude that this property supports a finding of no impact on adjoining property, even where the landscaping screen still requires time to grow in for a year-round screen.

I also considered a sale/resale analysis on this property. This same home sold on September 15, 2015 for \$462,000. Adjusting this upward by 5% per year for the five years between these sales dates suggests a value of \$577,500. Comparing that to the \$550,000 contract that suggests a 5% downward impact, which is within a typical market variation. Given that the broker noted no negative impact from the solar farm and the analysis above, I conclude this sale supports a finding of no impact on value.



9. Matched Pair – Mariposa Solar, Gaston County, NC



This project is a 5 MW facility located on 35.80 acres out of a parent tract of 87.61 acres at 517 Blacksnake Road, Stanley that was built in 2016.

I have considered a number of recent sales around this facility as shown below.

The first is identified in the map above as Parcel 1, which is 215 Mariposa Road. This is an older dwelling on large acreage with only one bathroom. I've compared it to similar nearby homes as shown below. The landscaping buffer for this home is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
Adjoins	215 Mariposa	17.74	12/12/2017	\$249,000	1958	1,551	\$160.54	3/1	Garage	Br/Rnch
Not	249 Mariposa	0.48	3/1/2019	\$153,000	1974	1,792	\$85.38	4/2	Garage	Br/Rnch
Not	110 Airport	0.83	5/10/2016	\$166,000	1962	2,165	\$76.67	3/2	Crprt	Br/Rnch
Not	1249 Blacksnake	5.01	9/20/2018	\$242,500	1980	2,156	\$112.48	3/2	Drive	1.5
Not	1201 Abernathy	27.00	5/3/2018	\$390,000	1970	2,190	\$178.08	3/2	Crprt	Br/Rnch

Adjoining Residential Sales After Solar Farm Approved					Adjoining Sales Adjusted								
Solar	Address	Acres	Date Sold	Sales Price	Time	YB	Acres	GLA	BR/BA	Park	Other	Total	% Diff
Adjoins	215 Mariposa	17.74	12/12/2017	\$249,000								\$249,000	
Not	249 Mariposa	0.48	3/1/2019	\$153,000	-\$5,583	-\$17,136	\$129,450	-\$20,576	-\$10,000			\$229,154	8%
Not	110 Airport	0.83	5/10/2016	\$166,000	\$7,927	-\$4,648	\$126,825	-\$47,078	-\$10,000			\$239,026	4%
Not	1249 Blacksnake	5.01	9/20/2018	\$242,500	-\$5,621	-\$37,345	\$95,475	-\$68,048	-\$10,000	\$5,000		\$221,961	11%
Not	1201 Abernathy	27.00	5/3/2018	\$390,000	-\$4,552	-\$32,760	-\$69,450	-\$60,705	-\$10,000			\$212,533	15%
Average													9%

The average difference after adjusting for all factors is +9% on average, which suggests an enhancement due to the solar farm across the street. Given the large adjustments for acreage and size, I will focus on the low end of the adjusted range at 4%, which is within the typical deviation and therefore suggests no impact on value.

I have also considered Parcel 4 that sold after the solar farm was approved but before it had been constructed in 2016. The landscaping buffer for this parcel is considered light.

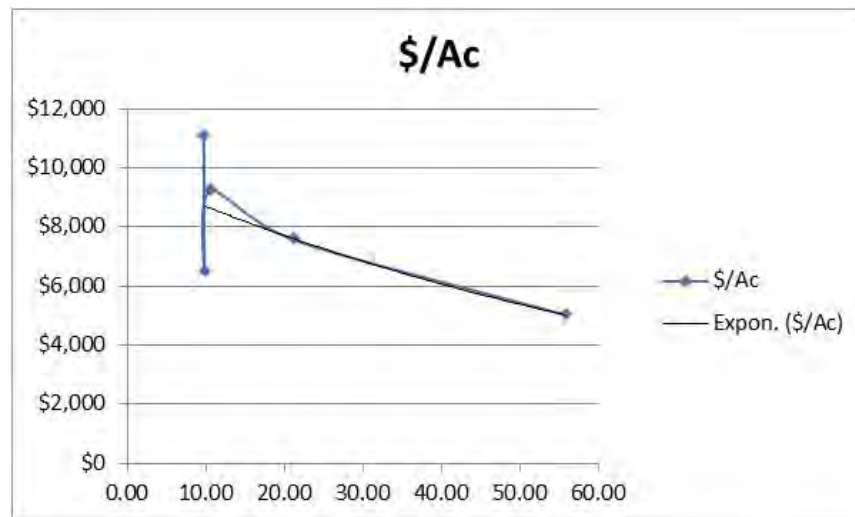
Adjoining Residential Sales After Solar Farm Approved												
Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	
Adjoins	242 Mariposa	2.91	9/21/2015	\$180,000	1962	1,880	\$95.74	3/2	Carport	Br/Rnch	Det Wrkshop	
Not	249 Mariposa	0.48	3/1/2019	\$153,000	1974	1,792	\$85.38	4/2	Garage	Br/Rnch		
Not	110 Airport	0.83	5/10/2016	\$166,000	1962	2,165	\$76.67	3/2	Crprt	Br/Rnch		
Not	1249 Blacksnake	5.01	9/20/2018	\$242,500	1980	2,156	\$112.48	3/2	Drive	1.5		

Adjoining Residential Sales After Solar Farm Approved					Adjoining Sales Adjusted								
Solar	Address	Acres	Date Sold	Sales Price	Time	YB	Acres	GLA	BR/BA	Park	Other	Total	% Diff
Adjoins	242 Mariposa	2.91	9/21/2015	\$180,000								\$180,000	
Not	249 Mariposa	0.48	3/1/2019	\$153,000	-\$15,807	-\$12,852	\$18,468	\$7,513		-\$3,000	\$25,000	\$172,322	4%
Not	110 Airport	0.83	5/10/2016	\$166,000	-\$3,165	\$0	\$15,808	-\$28,600			\$25,000	\$175,043	3%
Not	1249 Blacksnake	5.01	9/20/2018	\$242,500	-\$21,825	-\$30,555	-\$15,960	-\$40,942		\$2,000	\$25,000	\$160,218	11%
Average													6%

The average difference after adjusting for all factors is +6%, which is again suggests a mild increase in value due to the adjoining solar farm use. The median is a 4% adjustment, which is within a standard deviation and suggests no impact on property value.

I have also considered the recent sale of Parcel 13 that is located on Blacksnake Road south of the project. I was unable to find good land sales in the same 20-acre range, so I have considered sales of larger and smaller acreage. I adjusted each of those land sales for time. I then applied the price per acre to a trendline to show where the expected price per acre would be for 20 acres. As can be seen in the chart below, this lines up exactly with the purchase of the subject property. I therefore conclude that there is no impact on Parcel 13 due to proximity to the solar farm.

Adjoining Residential Land Sales After Solar Farm Approved						Adjoining Sales Adjusted	
Solar	Tax/Street	Acres	Date Sold	Sales Price	\$/Ac	Time	\$/Ac
Adjoins	174339/Blacksnake	21.15	6/29/2018	\$160,000	\$7,565		\$7,565
Not	227852/Abernathy	10.57	5/9/2018	\$97,000	\$9,177	\$38	\$9,215
Not	17443/Legion	9.87	9/7/2018	\$64,000	\$6,484	-\$37	\$6,447
Not	164243/Alexis	9.75	2/1/2019	\$110,000	\$11,282	-\$201	\$11,081
Not	176884/Bowden	55.77	6/13/2018	\$280,000	\$5,021	\$7	\$5,027

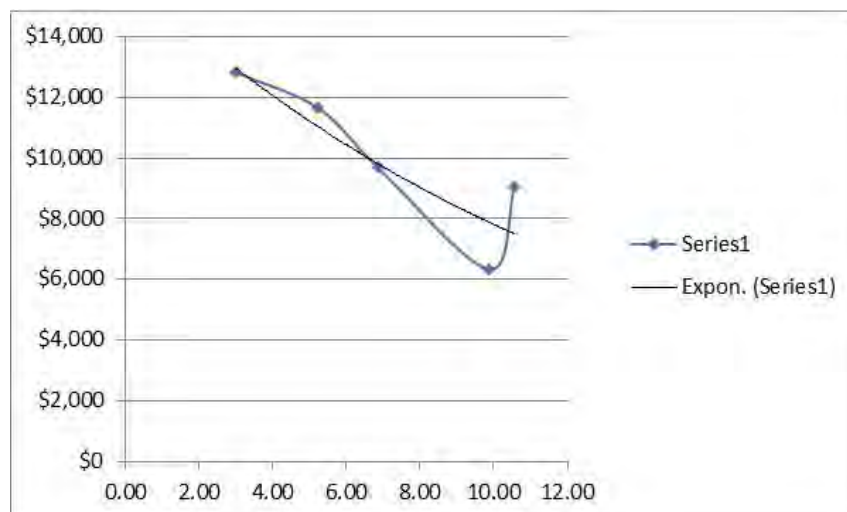


Finally, I have considered the recent sale of Parcel 17 that sold as vacant land. I was unable to find good land sales in the same 7-acre range, so I have considered sales of larger and smaller acreage. I adjusted each of those land sales for time. I then applied the price per acre to a trendline to show where the expected price per acre would be for 7 acres. As can be seen in the chart below, this lines up with the trendline running right through the purchase price for the subject property. I therefore conclude that there is no impact on Parcel 13 due to proximity to the solar farm. I note that this property was improved with a 3,196 square foot ranch built in 2018 following the land purchase, which shows that development near the solar farm was unimpeded.

Adjoining Residential Land Sales After Solar Farm Approved

Adjoining Sales Adjusted

Solar	Tax/Street	Acres	Date Sold	Sales Price	\$/Ac	Time	Location	\$/Ac
Adjoins	227039/Mariposa	6.86	12/6/2017	\$66,500	\$9,694			\$9,694
Not	227852/Abernathy	10.57	5/9/2018	\$97,000	\$9,177	-\$116		\$9,061
Not	17443/Legion	9.87	9/7/2018	\$64,000	\$6,484	-\$147		\$6,338
Not	177322/Robinson	5.23	5/12/2017	\$66,500	\$12,715	\$217	-\$1,272	\$11,661
Not	203386/Carousel	2.99	7/13/2018	\$43,500	\$14,548	-\$262	-\$1,455	\$12,832



10. Matched Pair – Clarke County Solar, Clarke County, VA



This project is a 20 MW facility located on a 234-acre tract that was built in 2017.

I have considered two recent sales of Parcel 3. The home on this parcel is 1,230 feet from the closest panel as measured in the second map from Google Earth, which shows the solar farm under construction. This home sold in January 2017 for \$295,000 and again in August 2019 for \$385,000. I show each sale below and compare those to similar home sales in each time frame. The significant increase in price between 2017 and 2019 is due to a major kitchen remodel, new roof, and related upgrades as well as improvement in the market in general. The sale and later resale of the home with updates and improvements speaks to pride of ownership and increasing overall value as properties perceived as diminished are less likely to be renovated and sold for profit.

I note that 102 Tilthammer includes a number of barns that I did not attribute any value in the analysis. The market would typically give some value for those barns but even without that adjustment there is an indication of a positive impact on value due to the solar farm. The landscaping buffer from this home is considered light.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	8/18/2019	\$385,000	1979	1,392	\$276.58	3/2	Det Gar	Ranch	UnBsmt
	Not	167 Leslie	5.00	8/19/2020	\$429,000	1980	1,665	\$257.66	3/2	Det2Gar	Ranch	
	Not	2393 Old Chapel	2.47	8/10/2020	\$330,000	1974	1,500	\$220.00	3/1.5	Det Gar	Ranch	
	Not	102 Tilthammer	6.70	5/7/2019	\$372,000	1970	1,548	\$240.31	3/1.5	Det Gar	Ranch	UnBsmt

Adjoining Sales Adjusted

[illegible]

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
3	Adjoins	833 Nations Spr	5.13	1/9/2017	\$295,000	1979	1,392	\$211.93	3/2	Det Gar	Ranch	UnBsmnt
	Not	6801 Middle	2.00	12/12/2017	\$249,999	1981	1,584	\$157.83	3/2	Open	Ranch	
	Not	4174 Rockland	5.06	1/2/2017	\$300,000	1990	1,688	\$177.73	3/2	2 Gar	2-story	
	Not	400 Sugar Hill	1.00	6/7/2018	\$180,000	1975	1,008	\$178.57	3/1	Open	Ranch	

Adjoining Sales Adjusted

[illegible]

11. Matched Pair – Simon Solar, Social Circle, GA



This 30 MW solar farm is located off Hawkins Academy Road and Social Circle Fairplay Road. I identified three adjoining sales to this tract after development of the solar farm. However, one of those is shown as Parcel 12 in the map above and includes a powerline easement encumbering over a third of the 5 acres and adjoins a large substation as well. It would be difficult to isolate those impacts from any potential solar farm impact and therefore I have excluded that sale. I also excluded the recent sale of Parcel 17, which is a farm with conservation restrictions on it that similarly would require a detailed examination of those conservation restrictions in order to see if there was any impact related to the solar farm. I therefore focused on the recent sale of Parcel 7 and the adjoining parcel to the south of that. They are technically not adjoining due to the access road for the flag-shaped lot to the east. Furthermore, there is an apparent access easement serving the two rear lots that encumber these two parcels which is a further limitation on these sales. This analysis assumes that the access easement does not negatively impact the subject property, though it may.

The landscaping buffer relative to this parcel is considered medium.

Adjoining Land Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	\$/AC	Type	Other
7+	Adjoins	4514 Hawkins	36.86	3/31/2016	\$180,000	\$4,883	Pasture	Esmts
	Not	HD Atha	69.95	12/20/2016	\$357,500	\$5,111	Wooded	N/A
	Not	Pannell	66.94	11/8/2016	\$322,851	\$4,823	Mixed	*
	Not	1402 Roy	123.36	9/29/2016	\$479,302	\$3,885	Mixed	**

* Adjoining 1 acre purchased by same buyer in same deed. Allocation assigned on the County Tax Record.

** Dwelling built in 1996 with a 2016 tax assessed value of \$75,800 deducted from sales price to reflect land value

Adjoining Sales Adjusted

Time	Size	Type	Other	Total/Ac	% Diff	Avg % Diff
				\$4,883		
\$89	\$256			\$5,455	-12%	
-\$90	\$241			\$4,974	-2%	
-\$60	\$389			\$4,214	14%	
						0%

The range of impact identified by these matched pairs are -12% to +14%, with an average of 0% impact due to the solar farm. The best matched pair with the least adjustment supports a -2% impact due to the solar farm. I note again that this analysis considers no impact for the existing access easements that meander through this property and it may be having an impact. Still at -2% impact as the best indication for the solar farm, I consider that to be no impact given that market fluctuations support +/- 5%.

12. Matched Pair – Candace Solar, Princeton, NC



This 5 MW solar farm is located at 4839 US 70 Highway just east of Herring Road. This solar farm was completed on October 25, 2016.

I identified three adjoining sales to this tract after development of the solar farm with frontage on US 70. I did not attempt to analyze those sales as they have exposure to an adjacent highway and railroad track. Those homes are therefore problematic for a matched pair analysis unless I have similar homes fronting on a similar corridor.

I did consider a land sale and a home sale on adjoining parcels without those complications.

The lot at 499 Herring Road sold to Paradise Homes of Johnston County of NC, Inc. for \$30,000 in May 2017 and a modular home was placed there and sold to Karen and Jason Toole on September 29, 2017. I considered the lot sale first as shown below and then the home sale that followed. The landscaping buffer relative to this parcel is considered medium.

Adjoining Land Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Other	Time	Site	Other	Total	% Diff
16	Adjoins	499 Herring	2.03	5/1/2017	\$30,000					\$30,000	
	Not	37 Becky	0.87	7/23/2019	\$24,500	Sub/Pwr	-\$1,679	\$4,900		\$27,721	8%
	Not	5858 Bizzell	0.88	8/17/2016	\$18,000		\$390	\$3,600		\$21,990	27%
	Not	488 Herring	2.13	12/20/2016	\$35,000		\$389			\$35,389	-18%

Average 5%

Following the land purchase, the modular home was placed on the site and sold. I have compared this modular home to the following sales to determine if the solar farm had any impact on the purchase price.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
16	Adjoins	499 Herring	2.03	9/27/2017	\$215,000	2017	2,356	\$91.26	4/3	Drive	Modular	
	Not	678 WC	6.32	3/8/2019	\$226,000	1995	1,848	\$122.29	3/2.5	Det Gar	Mobile	Ag bldgs
	Not	1810 Bay V	8.70	3/26/2018	\$170,000	2003	2,356	\$72.16	3/2	Drive	Mobile	Ag bldgs
	Not	1795 Bay V	1.78	12/1/2017	\$194,000	2017	1,982	\$97.88	4/3	Drive	Modular	

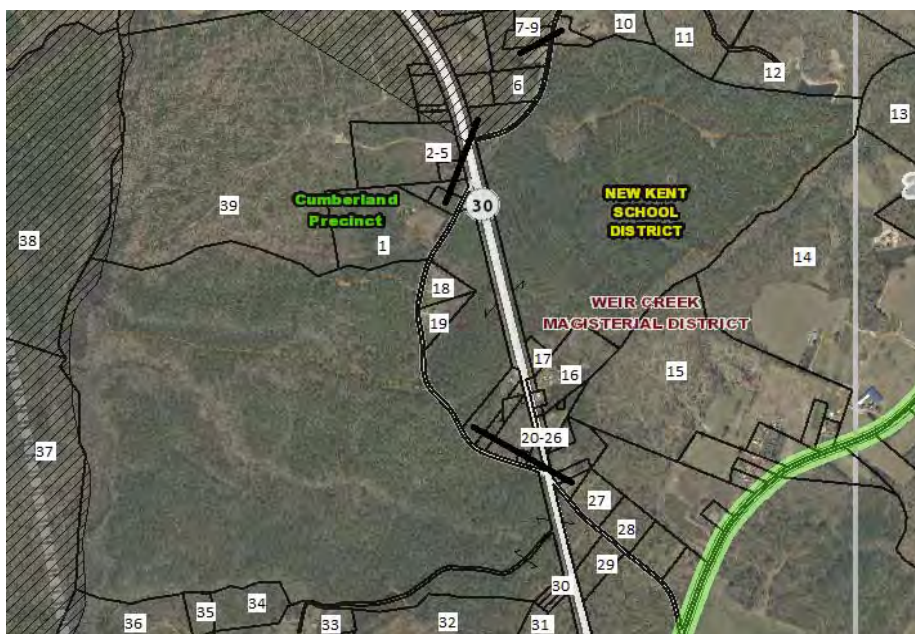
Adjoining Residential Sales Af Adjoining Sales Adjusted

Parcel	Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
16	Adjoins	499 Herring								\$215,000			488
	Not	678 WC	-\$10,037	-\$25,000	\$24,860	\$37,275	-\$5,000	-\$7,500	-\$20,000	\$220,599	-3%		
	Not	1810 Bay V	-\$2,579	-\$20,000	\$11,900	\$0				\$159,321	26%		
	Not	1795 Bay V	-\$1,063		\$0	\$21,964				\$214,902	0%		
												8%	

The best comparable is 1795 Bay Valley as it required the least adjustment and was therefore most similar, which shows a 0% impact. This signifies no impact related to the solar farm.

The range of impact identified by these matched pairs ranges are therefore -3% to +26% with an average of +8% for the home and an average of +4% for the lot, though the best indicator for the lot shows a \$5,000 difference in the lot value due to the proximity to the solar farm or a -12% impact.

13. Matched Pair – Walker-Correctional Solar, Barham Road, Barhamsville, VA



This project was built in 2017 and located on 484.65 acres for a 20 MW with the closest home at 110 feet from the closest solar panel with an average distance of 500 feet.

I considered the recent sale identified on the map above as Parcel 19, which is directly across the street and based on the map shown on the following page is 250 feet from the closest panel. A

limited buffering remains along the road with natural growth being encouraged, but currently the panels are visible from the road. Alex Uminski, SRA with MGMiller Valuations in Richmond VA confirmed this sale with the buying and selling broker. The selling broker indicated that the solar farm was not a negative influence on this sale and in fact the buyer noticed the solar farm and then discovered the listing. The privacy being afforded by the solar farm was considered a benefit by the buyer. I used a matched pair analysis with a similar sale nearby as shown below and found no negative impact on the sales price. Property actually closed for more than the asking price. The landscaping buffer is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	5241 Barham	2.65	10/18/2018	\$264,000	2007	1,660	\$159.04	3/2	Drive	Ranch	Modular
Not	17950 New Kent	5.00	9/5/2018	\$290,000	1987	1,756	\$165.15	3/2.5	3 Gar	Ranch	
Not	9252 Ordinary	4.00	6/13/2019	\$277,000	2001	1,610	\$172.05	3/2	1.5-Gar	Ranch	
Not	2416 W Miller	1.04	9/24/2018	\$299,000	1999	1,864	\$160.41	3/2.5	Gar	Ranch	

Adjoining Sales Adjusted

Solar	Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
Adjoins	5241 Barham								\$264,000		250
Not	17950 New Kent		-\$8,000	\$29,000	-\$4,756	-\$5,000	-\$20,000	-\$15,000	\$266,244	-1%	
Not	9252 Ordinary	-\$8,310	-\$8,000	\$8,310	\$2,581		-\$10,000	-\$15,000	\$246,581	7%	
Not	2416 W Miller		\$8,000	\$11,960	-\$9,817	-\$5,000	-\$10,000	-\$15,000	\$279,143	-6%	

Average Diff 0%

I also spoke with Patrick W. McCrerey of Virginia Estates who was marketing a property that sold at 5300 Barham Road adjoining the Walker-Correctional Solar Farm. He indicated that this property was unique with a home built in 1882 and heavily renovated and updated on 16.02 acres. The solar farm was through the woods and couldn't be seen by this property and it had no impact on marketing this property. This home sold on April 26, 2017 for \$358,000. I did not set up any matched pairs for this property since it is a unique property that any such comparison would be difficult to rely on. The broker's comments do support the assertion that the adjoining solar farm had no impact on value. The home in this case was 510 feet from the closest panel.

14. Matched Pair – Innovative Solar 46, Roslin Farm Rd, Hope Mills, NC



This project was built in 2016 and located on 532 acres for a 78.5 MW solar farm with the closest home at 125 feet from the closest solar panel with an average distance of 423 feet.

I considered the recent sale of a home on Roslin Farm Road just north of Running Fox Road as shown below. This sale supports an indication of no impact on property value. The landscaping buffer is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	6849 Roslin Farm	1.00	2/18/2019	\$155,000	1967	1,610	\$96.27	3/3	Drive	Ranch	Brick	435
Not	6592 Sim Canady	2.43	9/5/2017	\$185,000	1974	2,195	\$84.28	3/2	Gar	Ranch	Brick	
Not	1614 Joe Hall	1.63	9/3/2019	\$145,000	1974	1,674	\$86.62	3/2	Det Gar	Ranch	Brick	
Not	109 Bledsoe	0.68	1/17/2019	\$150,000	1973	1,663	\$90.20	3/2	Gar	Ranch	Brick	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	6849 Roslin Farm								\$155,000		5%
Not	6592 Sim Canady	\$8,278		-\$6,475	-\$39,444	\$10,000	-\$5,000		\$152,359	2%	
Not	1614 Joe Hall	-\$2,407		-\$5,075	-\$3,881	\$10,000	-\$2,500		\$141,137	9%	
Not	109 Bledsoe	\$404	\$10,000	-\$4,500	-\$3,346		-\$5,000		\$147,558	5%	

15. Matched Pair – Innovative Solar 42, County Line Rd, Fayetteville, NC



This project was built in 2017 and located on 413.99 acres for a 71 MW with the closest home at 135 feet from the closest solar panel with an average distance of 375 feet.

I considered the recent sales identified on the map above as Parcels 2 and 3, which is directly across the street these homes are 330 and 340 feet away. Parcel 2 includes an older home built in 1976, while Parcel 3 is a new home built in 2019. So the presence of the solar farm had no impact on new construction in the area.

The matched pairs for each of these are shown below. The landscaping buffer relative to these parcels is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	2923 County Ln	8.98	2/28/2019	\$385,000	1976	2,905	\$132.53	3/3	2-Car	Ranch	Brick/Pond	340
Not	1928 Shaw Mill	17.00	7/3/2019	\$290,000	1977	3,001	\$96.63	4/4	2-Car	Ranch	Brick/Pond/Rental	
Not	2109 John McM.	7.78	4/25/2018	\$320,000	1978	2,474	\$129.35	3/2	Det Gar	Ranch	Vinyl/Pool,Stable	

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2923 County Ln								\$385,000		3%
Not	1928 Shaw Mill	-\$3,055	\$100,000	-\$1,450	-\$7,422	-\$10,000			\$368,074	4%	
Not	2109 John McM.	\$8,333		-\$3,200	\$39,023	\$10,000		\$5,000	\$379,156	2%	

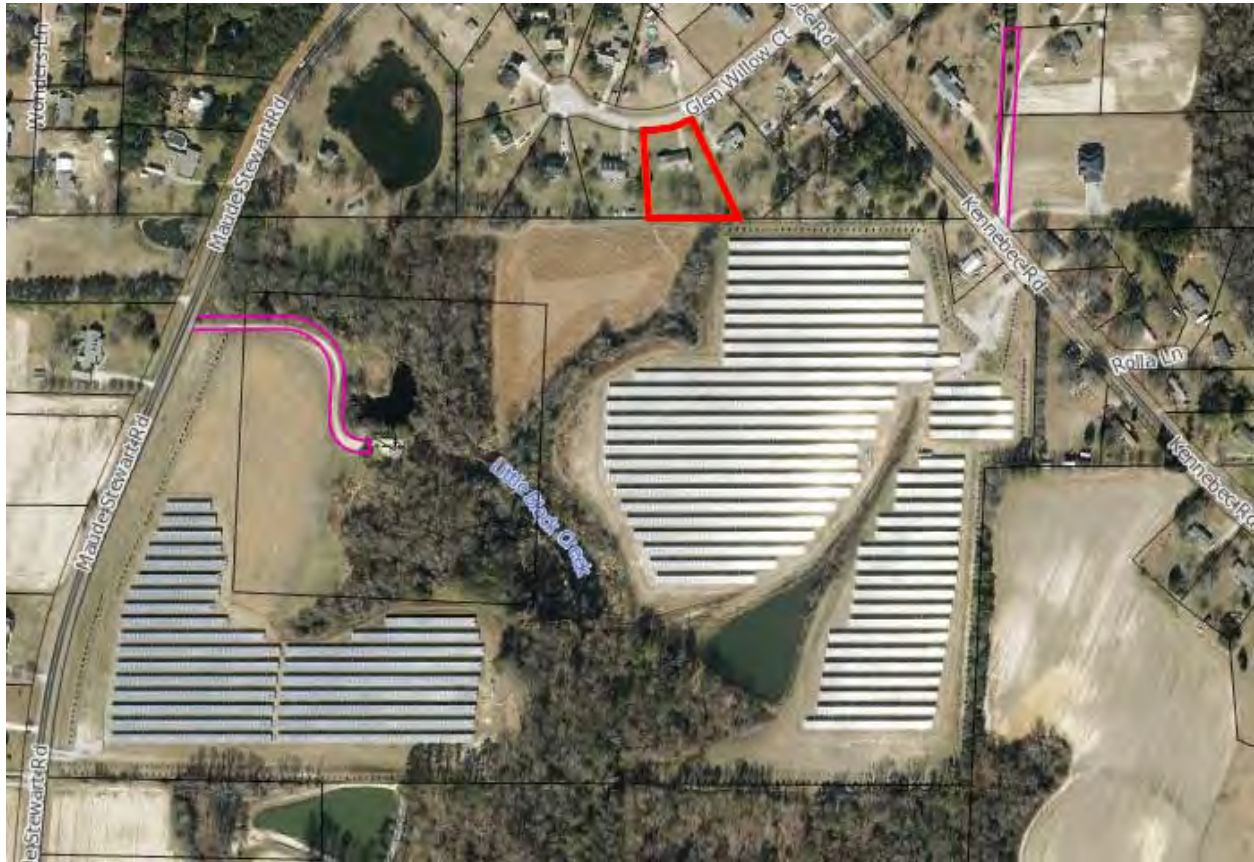
Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other	Distance
Adjoins	2935 County Ln	1.19	6/18/2019	\$266,000	2019	2,401	\$110.79	4/3	Gar	2-Story		330
Not	3005 Hemingway	1.17	5/16/2019	\$269,000	2018	2,601	\$103.42	4/3	Gar	2-Story		
Not	7031 Glynn Mill	0.60	5/8/2018	\$255,000	2017	2,423	\$105.24	4/3	Gar	2-Story		
Not	5213 Bree Brdg	0.92	5/7/2019	\$260,000	2018	2,400	\$108.33	4/3	3-Gar	2-Story		

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff
Adjoins	2935 County Ln								\$266,000		3%
Not	3005 Hemingway	\$748		\$1,345	-\$16,547				\$254,546	4%	
Not	7031 Glynn Mill	\$8,724		\$2,550	-\$1,852				\$264,422	1%	
Not	5213 Bree Brdg	\$920		\$1,300	\$76			-\$10,000	\$252,296	5%	

Both of these matched pairs adjust to an average of +3% on impact for the adjoining solar farm, meaning there is a slight positive impact due to proximity to the solar farm. This is within the standard +/- of typical real estate transactions, which strongly suggests no impact on property value. I noted specifically that for 2923 County Line Road, the best comparable is 2109 John McMillan as it does not have the additional rental unit on it. I made no adjustment to the other sale for the value of that rental unit, which would have pushed the impact on that comparable downward – meaning there would have been a more significant positive impact.

16. Matched Pair – Sunfish Farm, Keenebec Rd, Willow Spring, NC



This project was built in 2015 and located on 49.6 acres (with an inset 11.25-acre parcel) for a 6.4 MW project with the closest home at 135 feet with an average distance of 105 feet.

I considered the 2017 sale identified on the map above, which is 205 feet away from the closest panel. The matched pairs for each of these are shown below followed by a more recent map showing the panels at this site. The average difference in the three comparables and the subject property is +3% after adjusting for differences in the sales date, year built, gross living area, and other minor differences. This data is supported by the comments from the broker Brian Schroepfer with Keller Williams that the solar farm had no impact on the purchase price. The landscaping screen is considered light.

Adjoining Residential Sales After Solar Farm Approved

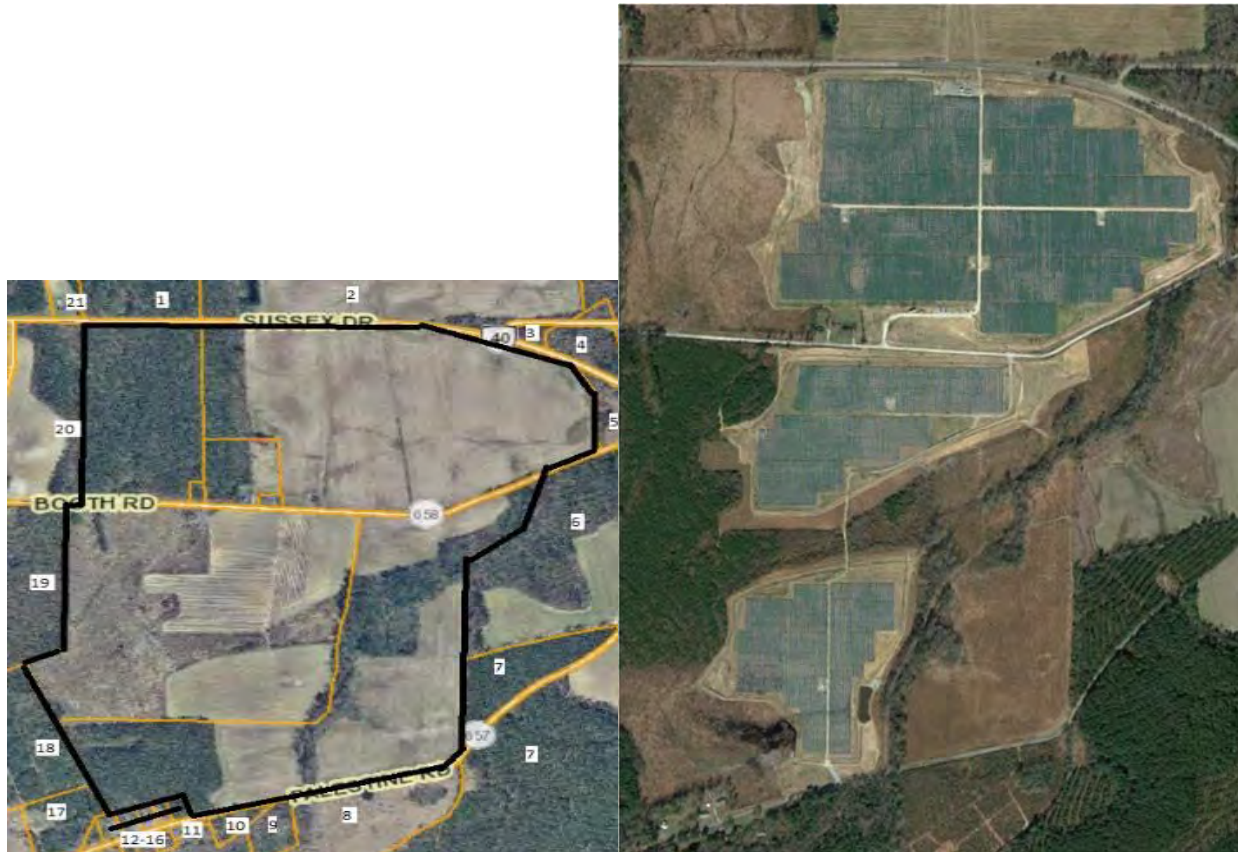
Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style
	Adjoins	7513 Glen Willow	0.79	9/1/2017	\$185,000	1989	1,492	\$123.99	3/2	Gar	BR/Rnch
	Not	2968 Tram	0.69	7/17/2017	\$155,000	1984	1,323	\$117.16	3/2	Drive	BR/Rnch
	Not	205 Pine Burr	0.97	12/29/2017	\$191,000	1991	1,593	\$119.90	3/2.5	Drive	BR/Rnch
	Not	1217 Old Honeycutt	1.00	12/15/2017	\$176,000	1978	1,558	\$112.97	3/2.5	2Carprt	VY/Rnch

Adjustments

Solar	Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff
Adjoins	7513 Glen Willow								\$185,000		
Not	2968 Tram	\$601		\$3,875	\$15,840		\$10,000		\$185,316	0%	
Not	205 Pine Burr	-\$1,915		-\$1,910	-\$9,688	-\$5,000			\$172,487	7%	
Not	1217 Old Honeycut	-\$1,557		\$9,680	-\$5,965	-\$5,000		\$5,280	\$178,438	4%	

3%

17. Matched Pair – Sappony Solar, Sussex County, VA



This project is a 30 MW facility located on a 322.68-acre tract that was built in the fourth quarter of 2017.

I have considered the 2018 sale of Parcel 17 as shown below. This was a 1,900 s.f. manufactured home on a 6.00-acre lot that sold in 2018. I have compared that to three other nearby manufactured homes as shown below. The range of impacts is within typical market variation with an average of -1%, which supports a conclusion of no impact on property value. The landscaping buffer is considered medium.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
	Adjoins	12511 Palestine	6.00	7/31/2018	\$128,400	2013	1,900	\$67.58	4/2.5	Open	Manuf	
	Not	15698 Concord	3.92	7/31/2018	\$150,000	2010	2,310	\$64.94	4/2	Open	Manuf	Fence
	Not	23209 Sussex	1.03	7/7/2020	\$95,000	2005	1,675	\$56.72	3/2	Det Crpt	Manuf	
	Not	6494 Rocky Br	4.07	11/8/2018	\$100,000	2004	1,405	\$71.17	3/2	Open	Manuf	

Adjoining Sales Adjusted

[illegible]

18. Matched Pair – Camden Dam, Camden, NC



This 5 MW project was built in 2019 and located on a portion of 49.83 acres.

Parcel 1 noted above along with the home on the adjoining parcel to the north of that parcel sold in late 2018 after this solar farm was approved but prior to construction being completed in 2019. I have considered this sale as shown below. The landscaping screen is considered light.

The comparable at 548 Trotman is the most similar and required the least adjustment shows no impact on property value. The other two comparables were adjusted consistently with one showing significant enhancement and another as showing a mild negative. The best indication is the one requiring the least adjustment. The other two sales required significant site adjustments which make them less reliable. The best comparable and the average of these comparables support a finding of no impact on property value.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	122 N Mill Dam	12.19	11/29/2018	\$350,000	2005	2,334	\$149.96	3/3.5	3-Gar	Ranch	
Not	548 Trotman	12.10	5/31/2018	\$309,000	2007	1,960	\$157.65	4/2	Det2G	Ranch	Wrkshp
Not	198 Sand Hills	2.00	12/22/2017	\$235,000	2007	2,324	\$101.12	4/3	Open	Ranch	
Not	140 Sleepy Hlwr	2.05	8/12/2019	\$330,000	2010	2,643	\$124.86	4/3	1-Gar	1.5 Story	

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
122 N Mill Dam								\$350,000			342
548 Trotman	\$6,163		-\$3,090	\$35,377	\$5,000			\$352,450	-1%		
198 Sand Hills	\$8,808	\$45,000	-\$2,350	\$607		\$30,000		\$317,064	9%		
140 Sleepy Hlwr	-\$9,258	\$45,000	-\$8,250	-\$23,149	\$5,000	\$30,000		\$369,343	-6%		

1%

19. Matched Pair – Grandy Solar, Grandy, NC



This 20 MW project was built in 2019 and located on a portion of 121 acres.

Parcels 40 and 50 have sold since construction began on this solar farm. I have considered both in matched pair analysis below. I note that the marketing for Parcel 40 (120 Par Four) identified the lack of homes behind the house as a feature in the listing. The marketing for Parcel 50 (269 Grandy) identified the property as “very private.” Landscaping for both of these parcels is considered light.

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	120 Par Four	0.92	8/17/2019	\$315,000	2006	2,188	\$143.97	4/3	2-Gar	1.5 Story	Pool
Not	102 Teague	0.69	1/5/2020	\$300,000	2005	2,177	\$137.80	3/2	Det 3G	Ranch	
Not	112 Meadow Lk	0.92	2/28/2019	\$265,000	1992	2,301	\$115.17	3/2	Gar	1.5 Story	
Not	116 Barefoot	0.78	9/29/2020	\$290,000	2004	2,192	\$132.30	4/3	2-Gar	2 Story	

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
120 Par Four								\$315,000			405
102 Teague	-\$4,636		\$1,500	\$910	\$10,000		\$20,000	\$327,774	-4%		
112 Meadow Lk	\$4,937		\$18,550	-\$7,808	\$10,000	\$10,000	\$20,000	\$320,679	-2%		
116 Barefoot	-\$12,998		\$2,900	-\$318			\$20,000	\$299,584	5%		

0%

Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
Adjoins	269 Grandy	0.78	5/7/2019	\$275,000	2019	1,535	\$179.15	3/2.5	2-Gar	Ranch	
Not	307 Grandy	1.04	10/8/2018	\$240,000	2002	1,634	\$146.88	3/2	Gar	1.5 Story	
Not	103 Branch	0.95	4/22/2020	\$230,000	2000	1,532	\$150.13	4/2	2-Gar	1.5 Story	
Not	103 Spring Lf	1.07	8/14/2018	\$270,000	2002	1,635	\$165.14	3/2	2-Gar	Ranch	Pool

Adjoining Sales Adjusted

Address	Time	Site	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
269 Grandy								\$275,000			477
307 Grandy	\$5,550		\$20,400	-\$8,725	\$5,000	\$10,000		\$272,225	1%		
103 Branch	-\$8,847		\$21,850	\$270				\$243,273	12%		
103 Spring Lf	\$7,871		\$22,950	-\$9,908	\$5,000		-\$20,000	\$275,912	0%		
										4%	

Both of these matched pairs support a finding of no impact on value. This is reinforced by the listings for both properties identifying the privacy due to no housing in the rear of the property as part of the marketing for these homes.

20. Matched Pair – Champion Solar, Lexington County, SC



This project is a 10 MW facility located on a 366.04-acre tract that was built in 2017.

I have considered the 2020 sale of an adjoining home located off 517 Old Charleston Road. Landscaping is considered light.

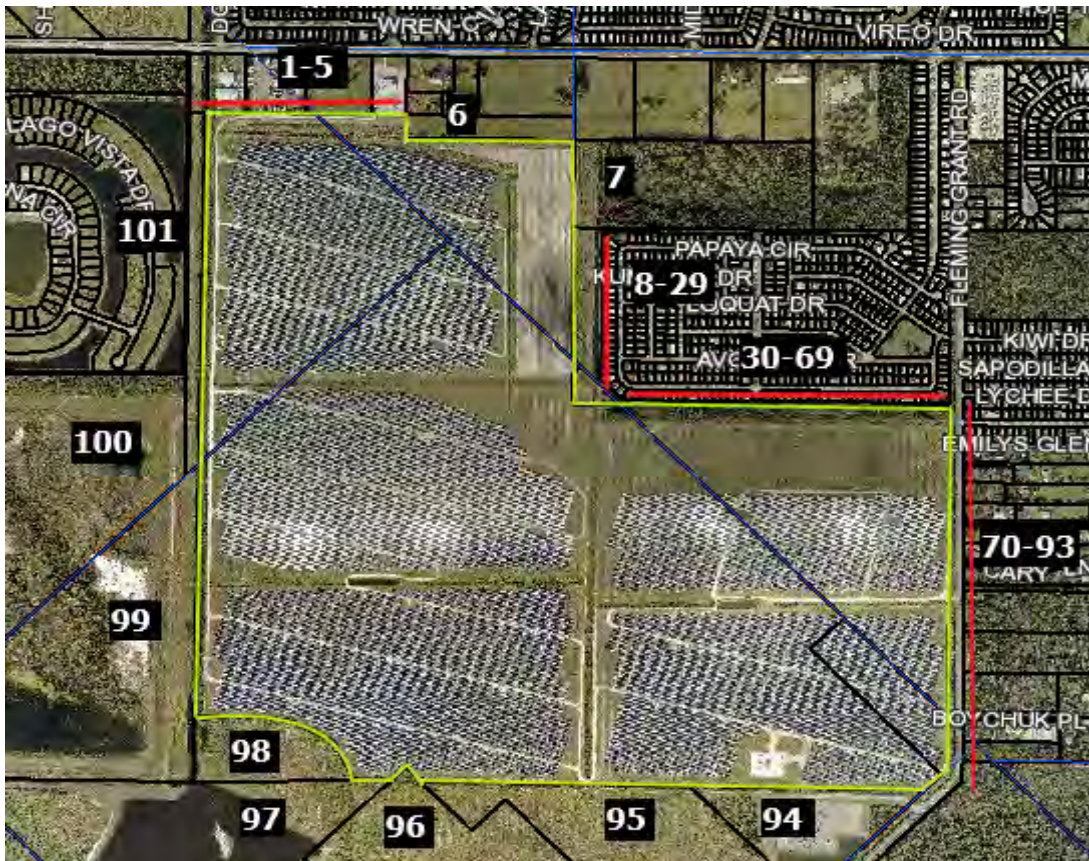
Adjoining Residential Sales After Solar Farm Approved

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	517 Old Charleston	11.05	8/25/2020	\$110,000	1962	925	\$118.92	3/1	Crport	Br Rnch	
Not	133 Buena Vista	2.65	6/21/2020	\$115,000	1979	1,104	\$104.17	2/2	Crport	Br Rnch	
Not	214 Crystal Spr	2.13	6/10/2019	\$102,500	1970	1,025	\$100.00	3/2	Crport	Rnch	
Not	1429 Laurel	2.10	2/21/2019	\$126,000	1960	1,250	\$100.80	2/1.5	Open	Br Rnch	3 Gar/Brn

Adjoining Sales Adjusted

[illegible]

21. Matched Pair – Barefoot Bay Solar Farm, Barefoot Bay, FL



This project is located on 504 acres for a 704.5 MW facility. Most of the adjoining uses are medium density residential with some lower density agricultural uses to the southwest. This project was built in 2018. There is a new subdivision under development to the west.

I have considered a number of recent home sales from the Barefoot Bay Golf Course in the Barefoot Bay Recreation District. There are a number of sales of these mobile/manufactured homes along the eastern boundary and the lower northern boundary. I have compared those home sales to other similar homes in the same community but without the exposure to the solar farm. Staying within the same community keeps location and amenity impacts consistent. I did avoid any comparison with home sales with golf course or lakefront views as that would introduce another variable.

The six manufactured/double wide homes shown below were each compared to three similar homes in the same community and are consistently showing no impact on the adjoining property values. Based on the photos from the listings, there is limited but some visibility of the solar farm to the east, but the canal and landscaping between are providing a good visual buffer and actually are commanding a premium over the non-canal homes.

Landscaping for these adjoining homes is considered light, though photographs from the listings show that those homes on Papaya that adjoin the solar farm from east/west have no visibility of the solar farm and is effectively medium density due to the height differential. The homes that adjoin the solar farm from north/south along Papaya have some filtered view of the solar farm through the trees.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
48	Adjoins	343 Papaya	0.09	12/17/2019	\$145,000	1986	1,508	\$96.15	3/2	Crprt	Manuf	Gn/Fc/Upd
	Not	865 Tamarind	0.12	2/4/2019	\$133,900	1995	1,368	\$97.88	2/2	Crprt	Manuf	Green
	Not	515 Papaya	0.09	3/22/2018	\$145,000	2005	1,376	\$105.38	3/2	Crprt	Manuf	Green
	Not	849 Tamarind	0.15	6/26/2019	\$155,000	1997	1,716	\$90.33	3/2	Crprt	Manuf	Grn/Fnce

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
343 Papaya							\$145,000			690
865 Tamarind	\$3,566	-\$6,026	\$10,963				\$142,403	2%		
515 Papaya	\$7,759	-\$13,775	\$11,128				\$150,112	-4%		
849 Tamarind	\$2,273	-\$8,525	-\$15,030			\$5,000	\$138,717	4%		
									1%	

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
52	Nearby	335 Papaya	0.09	4/17/2018	\$110,000	1987	1,180	\$93.22	2/2	Crprt	Manuf	Green
	Not	865 Tamarind	0.12	2/4/2019	\$133,900	1995	1,368	\$97.88	2/2	Crprt	Manuf	Green
	Not	501 Papaya	0.10	6/15/2018	\$109,000	1986	1,234	\$88.33	2/2	Crprt	Manuf	
	Not	604 Puffin	0.09	10/23/2018	\$110,000	1988	1,320	\$83.33	2/2	Crprt	Manuf	

Adjoining Sales Adjusted

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	Avg % Diff	Distance
335 Papaya							\$110,000			710
865 Tamarind	-\$3,306	-\$5,356	-\$14,721			\$0	\$110,517	0%		
501 Papaya	-\$542	\$545	-\$3,816			\$5,000	\$110,187	0%		
604 Puffin	-\$1,752	-\$550	-\$9,333			\$5,000	\$103,365	6%		
									2%	

I also identified a new subdivision being developed just to the west of this solar farm called The Lakes at Sebastian Preserve. These are all canal-lot homes that are being built with homes starting at \$271,000 based on the website and closed sales showing up to \$342,000. According to Monique, the onsite broker with Holiday Builders, the solar farm is difficult to see from the lots that back up to that area and she does not anticipate any difficulty in selling those future homes or lots or any impact on the sales price. The closest home that will be built in this development will be approximately 340 feet from the nearest panel.

Based on the closed home prices in Barefoot Bay as well as the broker comments and activity at The Lakes at Sebastian Preserve, the data around this solar farm strongly indicates no negative impact on property value.

22. Matched Pair – Miami-Dade Solar Farm, Miami, FL



This project is located on 346.80 acres for a 74.5 MW facility. All of the adjoining uses are agricultural and residential. This project was built in 2019.

I considered the recent sale of Parcel 26 to the south that sold for over \$1.6 million dollars. This home is located on 4.2 acres with additional value in the palm trees according to the listing. The comparables include similar homes nearby that are all actually on larger lots and several include avocado or palm tree income as well. All of the comparables are in similar proximity to the subject and all have similar proximity to the Miami-Dade Executive airport that is located 2.5 miles to the east.

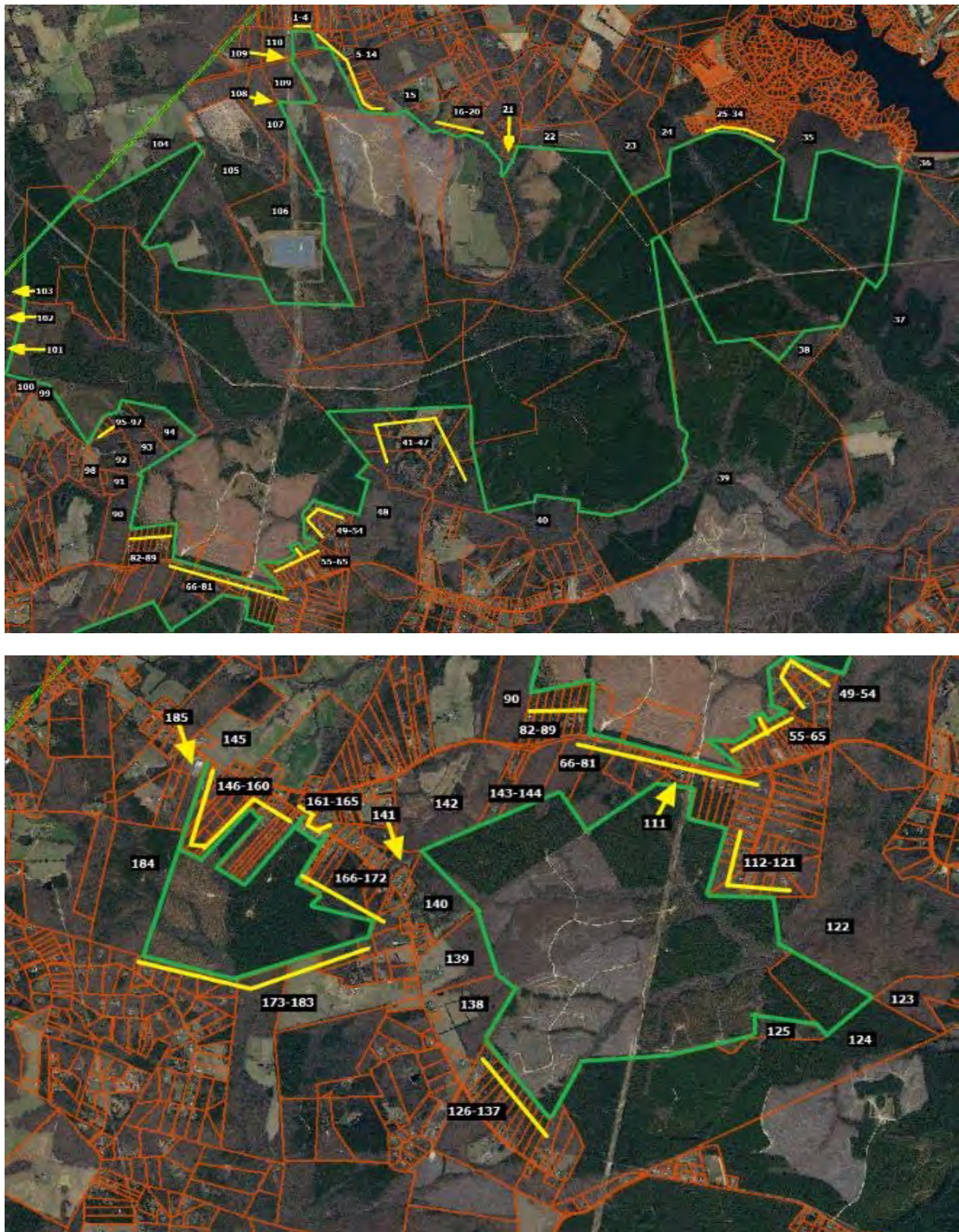
These sales are showing no impact on the value of the property from the adjoining solar farm. The landscaping is considered light.

Adjoining Residential Sales After Solar Farm Approved

Parcel	Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style	Other
26	Adjoins	13600 SW 182nd	4.20	11/5/2020	\$1,684,000	2008	6,427	\$262.02	5/5.5	3 Gar	CBS Rnch	Pl/Guest
	Not	18090 SW 158th	5.73	10/8/2020	\$1,050,000	1997	3,792	\$276.90	5/4	3 Gar	CBS Rnch	
	Not	14311 SW 187th	4.70	10/22/2020	\$1,100,000	2005	3,821	\$287.88	6/5	3 Gar	CBS Rnch	Pool
	Not	17950 SW 158th	6.21	10/22/2020	\$1,730,000	2000	6,917	\$250.11	6/5.5	2 Gar	CBS Rnch	Pool

Adjoining Sales Adjusted

[illegible]

23. Matched Pair – Spotsylvania Solar, Paytes, VA

This solar farm is being built in four phases with the area known as Site C having completed construction in November 2020 after the entire project was approved in April 2019. Site C, also known as Pleinmont 1 Solar, includes 99.6 MW located in the southeast corner of the project and shown on the maps above with adjoining parcels 111 through 144. The entire Spotsylvania project totals 617 MW on 3500 acres out of a parent tract assemblage of 6,412 acres.

I have identified three adjoining home sales that occurred during construction and development of the site in 2020.

The first is located on the north side of Site A on Orange Plank Road. The second is located on Nottoway Lane just north of Caparthin Road on the south side of Site A and east of Site C. The third is located on Post Oak Road for a home that backs up to Site C that sold in September 2020 near the completion of construction for Site C.

Spotsylvania Solar Farm

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	12901 Orng Plnk	5.20	8/27/2020	\$319,900	1984	1,714	\$186.64	3/2	Drive	1.5	Un Bsmt
Not	8353 Gold Dale	3.00	1/27/2021	\$415,000	2004	2,064	\$201.07	3/2	3 Gar	Ranch	
Not	6488 Southfork	7.26	9/9/2020	\$375,000	2017	1,680	\$223.21	3/2	2 Gar	1.5	Barn/Patio
Not	12717 Flintlock	0.47	12/2/2020	\$290,000	1990	1,592	\$182.16	3/2.5	Det Gar	Ranch	

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
12901 Orng Plnk								\$319,900		1270
8353 Gold Dale	-\$5,219	\$20,000	-\$41,500	-\$56,298		-\$20,000		\$311,983	2%	
6488 Southfork	-\$401	-\$20,000	-\$61,875	\$6,071		-\$15,000		\$283,796	11%	
12717 Flintlock	-\$2,312	\$40,000	-\$8,700	\$17,779	-\$5,000	-\$5,000		\$326,767	-2%	
Average Diff									4%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	9641 Nottoway	11.00	5/12/2020	\$449,900	2004	3,186	\$141.21	4/2.5	Garage	2-Story	Un Bsmt
Not	26123 Lafayette	1.00	8/3/2020	\$390,000	2006	3,142	\$124.12	3/3.5	Gar/DtG	2-Story	
Not	11626 Forest	5.00	8/10/2020	\$489,900	2017	3,350	\$146.24	4/3.5	2 Gar	2-Story	
Not	10304 Pny Brnch	6.00	7/27/2020	\$485,000	1998	3,076	\$157.67	4/4	2Gar/Dt2	Ranch	Fn Bsmt

Adjoining Sales Adjusted

Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
9641 Nottoway								\$449,900		1950
26123 Lafayette	-\$2,661	\$45,000	-\$3,900	\$4,369	-\$10,000	-\$5,000		\$417,809	7%	
11626 Forest	-\$3,624		-\$31,844	-\$19,187		-\$5,000		\$430,246	4%	
10304 Pny Brnch	-\$3,030		\$14,550	\$13,875	-\$15,000	-\$15,000	-\$10,000	\$470,396	-5%	
Average Diff									2%	

Solar	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GBA	BR/BA	Park	Style	Other
Adjoins	13353 Post Oak	5.20	9/21/2020	\$300,000	1992	2,400	\$125.00	4/3	Drive	2-Story	Fn Bsmt
Not	9609 Logan Hgt	5.86	7/4/2019	\$330,000	2004	2,352	\$140.31	3/2	2Gar	2-Story	
Not	12810 Catharpian	6.18	1/30/2020	\$280,000	2008	2,240	\$125.00	4/2.5	Drive	2-Story Bsmt/Nd Pnt	
Not	10725 Rbrt Lee	5.01	10/26/2020	\$295,000	1995	2,166	\$136.20	4/3	Gar	2-Story	Fn Bsmt

Adjoining Sales Adjusted										
Address	Time	Ac/Loc	YB	GLA	BR/BA	Park	Other	Total	% Diff	Dist
13353 Post Oak								\$300,000		1171
9609 Logan Hgt	\$12,070		-\$19,800	\$5,388		-\$15,000	\$15,000	\$327,658	-9%	
12810 Catharpian	\$5,408		-\$22,400	\$16,000	\$5,000		\$15,000	\$299,008	0%	
10725 Rbrt Lee	-\$849		-\$4,425	\$25,496		-\$10,000		\$305,222	-2%	
Average Diff									-4%	

All three of these homes are well set back from the solar panels at distances over 1,000 feet and are well screened from the project. All three show no indication of any impact on property value.

Conclusion – SouthEast Over 5 MW

Southeast USA Over 5 MW Matched Pair Summary

Matched Pair Summary					Adj. Uses By Acreage						1 mile Radius (2010-2020 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Pop.	Med. Income	Avg. Housing Unit	Veg. Buffer
1	AM Best	Goldsboro	NC	38	5.00	2	38%	0%	23%	39%	1,523	\$37,358	\$148,375	Light
2	Mulberry	Selmer	TN	160	5.00	60	13%	73%	10%	3%	467	\$40,936	\$171,746	Lt to Med
3	Leonard	Hughesville	MD	47	5.00	20	18%	75%	0%	6%	525	\$106,550	\$350,000	Light
4	Gastonia SC	Gastonia	NC	35	5.00	48	33%	0%	23%	44%	4,689	\$35,057	\$126,562	Light
5	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	\$79,114	\$281,731	Light
6	Tracy	Bailey	NC	50	5.00	10	29%	0%	71%	0%	312	\$43,940	\$99,219	Heavy
7	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	\$75,000	\$291,667	Heavy
8	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	\$63,678	\$256,306	Lt to Med
9	Mariposa	Stanley	NC	36	5.00	96	48%	0%	52%	0%	1,716	\$36,439	\$137,884	Light
10	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	\$81,022	\$374,453	Light
11	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	\$76,155	\$269,922	Medium
12	Candace	Princeton	NC	54	5.00	22	76%	24%	0%	0%	448	\$51,002	\$107,171	Medium
13	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	\$80,773	\$320,076	Light
14	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	\$58,688	\$183,435	Light
15	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	\$60,037	\$276,347	Light
16	Sunfish	Willow Spring	NC	50	6.40	30	35%	35%	30%	0%	1,515	\$63,652	\$253,138	Light
17	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	\$51,410	\$155,208	Light
18	Camden Dam	Camden	NC	50	5.00	0	17%	72%	11%	0%	403	\$84,426	\$230,288	Light
19	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	\$50,355	\$231,408	Light
20	Champion	Pelion	SC	100	10.00	N/A	4%	70%	8%	18%	1,336	\$46,867	\$171,939	Light
21	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	\$36,737	\$143,320	Lt to Med
22	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	\$90,909	\$403,571	Light
23	Spotsylvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333	Md to Hvy
Average				485	57.04	38	24%	48%	22%	6%	923	\$63,955	\$237,700	
Median				234	20.00	20	17%	59%	11%	0%	467	\$60,037	\$231,408	
High				3,500	617.00	160	76%	98%	94%	44%	4,689	\$120,861	\$483,333	
Low				35	5.00	0	1%	0%	0%	0%	48	\$35,057	\$99,219	

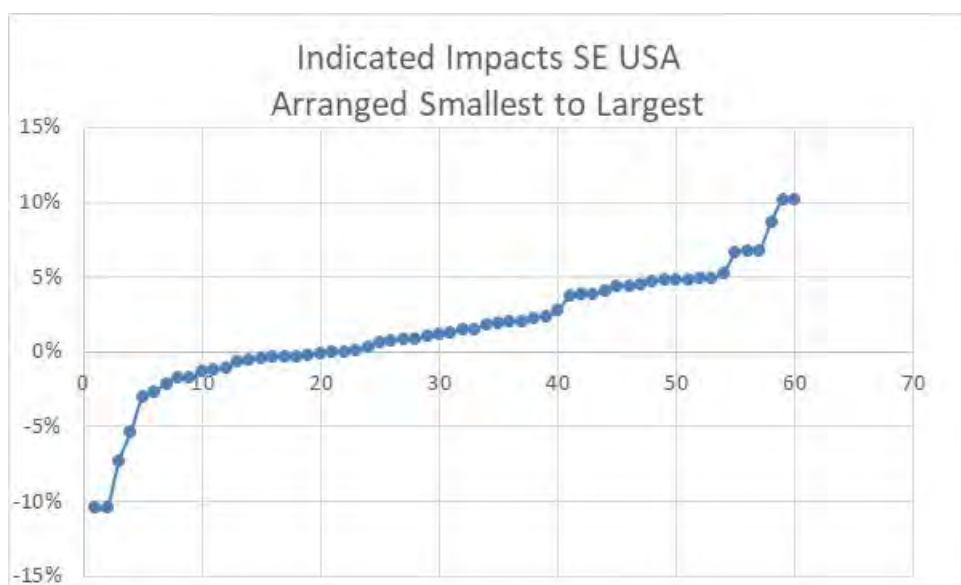
The solar farm matched pairs shown above have similar characteristics to each other in terms of population, but with several outliers showing solar farms in farm more urban areas. The median income for the population within 1 mile of a solar farm is \$60,037 with a median housing unit value of \$231,408. Most of the comparables are under \$300,000 in the home price, with \$483,333 being the high end of the set, though I have matched pairs in multiple states over \$1,000,000 adjoining solar farms. The adjoining uses show that residential and agricultural uses are the predominant adjoining uses. These figures are in line with the larger set of solar farms that I have looked at with the predominant adjoining uses being residential and agricultural and similar to the solar farm breakdown shown for Virginia and adjoining states as well as the proposed subject property.

Based on the similarity of adjoining uses and demographic data between these sites and the subject property, I consider it reasonable to compare these sites to the subject property.

I have pulled 56 matched pairs from the above referenced solar farms to provide the following summary of home sale matched pairs and land sales next to solar farms. The summary shows that the range of differences is from -10% to +10% with an average of +1% and median of +1%. This means that the average and median impact is for a slight positive impact due to adjacency to a solar farm. However, this +1 to rate is within the typical variability I would expect from real estate. I therefore conclude that this data shows no negative or positive impact due to adjacency to a solar farm.

While the range is seemingly wide, the graph below clearly shows that the vast majority of the data falls between -5% and +5% and most of those are clearly in the 0 to +5% range. This data strongly supports an indication of no impact on adjoining residential uses to a solar farm.

I therefore conclude that these matched pairs support a finding of no impact on value at the subject property for the proposed project, which as proposed will include a landscaped buffer to screen adjoining residential properties.



Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	MW	Approx Distance	Tax ID/Address	Date	Sale Price	Adj. Sale Price	% Diff	Veg. Buffer
1	AM Best	Goldsboro	NC	5	280	3600195570	Sep-13	\$250,000			Light
						3600198928	Mar-14	\$250,000	\$250,000	0%	
2	AM Best	Goldsboro	NC	5	280	3600195361	Sep-13	\$260,000			Light
						3600194813	Apr-14	\$258,000	\$258,000	1%	
3	AM Best	Goldsboro	NC	5	280	3600199891	Jul-14	\$250,000			Light
						3600198928	Mar-14	\$250,000	\$250,000	0%	
4	AM Best	Goldsboro	NC	5	280	3600198632	Aug-14	\$253,000			Light
						3600193710	Oct-13	\$248,000	\$248,000	2%	
5	AM Best	Goldsboro	NC	5	280	3600196656	Dec-13	\$255,000			Light
						3601105180	Dec-13	\$253,000	\$253,000	1%	
6	AM Best	Goldsboro	NC	5	280	3600182511	Feb-13	\$247,000			Light
						3600183905	Dec-12	\$240,000	\$245,000	1%	
7	AM Best	Goldsboro	NC	5	280	3600182784	Apr-13	\$245,000			Light
						3600193710	Oct-13	\$248,000	\$248,000	-1%	
8	AM Best	Goldsboro	NC	5	280	3600195361	Nov-15	\$267,500			Light
						3600195361	Sep-13	\$260,000	\$267,800	0%	
9	Mulberry	Selmer	TN	5	400	0900A011	Jul-14	\$130,000			Light
						099CA043	Feb-15	\$148,900	\$136,988	-5%	
10	Mulberry	Selmer	TN	5	400	099CA002	Jul-15	\$130,000			Light
						0990NA040	Mar-15	\$120,000	\$121,200	7%	
11	Mulberry	Selmer	TN	5	480	491 Dusty	Oct-16	\$176,000			Light
						35 April	Aug-16	\$185,000	\$178,283	-1%	
12	Mulberry	Selmer	TN	5	650	297 Country	Sep-16	\$150,000			Medium
						53 Glen	Mar-17	\$126,000	\$144,460	4%	
13	Mulberry	Selmer	TN	5	685	57 Cooper	Feb-19	\$163,000			Medium
						191 Amelia	Aug-18	\$132,000	\$155,947	4%	
14	Leonard Rd	Hughesville	MD	5.5	230	14595 Box Elder	Feb-16	\$291,000			Light
						15313 Bassford Rd	Jul-16	\$329,800	\$292,760	-1%	
15	Neal Hawkins	Gastonia	NC	5	225	609 Neal Hawkins	Mar-17	\$270,000			Light
						1418 N Modena	Apr-18	\$225,000	\$242,520	10%	
16	Summit	Moyock	NC	80	1,060	129 Pinto	Apr-16	\$170,000			Light
						102 Timber	Apr-16	\$175,500	\$175,101	-3%	
17	Summit	Moyock	NC	80	980	105 Pinto	Dec-16	\$206,000			Light
						127 Ranchland	Jun-15	\$219,900	\$198,120	4%	
18	Tracy	Bailey	NC	5	780	9162 Winters	Jan-17	\$255,000			Heavy
						7352 Red Fox	Jun-16	\$176,000	\$252,399	1%	
19	Manatee	Parrish	FL	75	1180	13670 Highland	Aug-18	\$255,000			Heavy
						13851 Highland	Sep-18	\$240,000	\$255,825	0%	
20	McBride Place	Midland	NC	75	275	4380 Joyner	Nov-17	\$325,000			Medium
						3870 Elkwood	Aug-16	\$250,000	\$317,523	2%	
21	McBride Place	Midland	NC	75	505	5811 Kristi	Mar-20	\$530,000			Medium
						3915 Tania	Dec-19	\$495,000	\$504,657	5%	
22	Mariposa	Stanley	NC	5	1155	215 Mariposa	Dec-17	\$249,000			Light
						110 Airport	May-16	\$166,000	\$239,026	4%	
23	Mariposa	Stanley	NC	5	570	242 Mariposa	Sep-15	\$180,000			Light
						110 Airport	Apr-16	\$166,000	\$175,043	3%	
24	Clarke Cnty	White Post	VA	20	1230	833 Nations Spr	Jan-17	\$295,000			Light
						6801 Middle	Dec-17	\$249,999	\$296,157	0%	
25	Candace	Princeton	NC	5	488	499 Herring	Sep-17	\$215,000			Medium
						1795 Bay Valley	Dec-17	\$194,000	\$214,902	0%	
26	Walker	Barhamsville	VA	20	250	5241 Barham	Oct-18	\$264,000			Light
						9252 Ordinary	Jun-19	\$277,000	\$246,581	7%	
27	AM Best	Goldsboro	NC	5	385	103 Granville Pl	Jul-18	\$265,000			Light
						2219 Granville	Jan-18	\$260,000	\$265,682	0%	
28	AM Best	Goldsboro	NC	5	315	104 Erin	Jun-17	\$280,000			Light
						2219 Granville	Jan-18	\$265,000	\$274,390	2%	
29	AM Best	Goldsboro	NC	5	400	2312 Granville	May-18	\$284,900			Light
						2219 Granville	Jan-18	\$265,000	\$273,948	4%	

Residential Dwelling Matched Pairs Adjoining Solar Farms

Pair	Solar Farm	City	State	MW	Approx		Date	Adj. Sale		Veg.
					Distance	Tax ID/Address		Sale Price	Price	% Diff Buffer
30	AM Best	Goldsboro	NC	5	400	2310 Granville	May-19	\$280,000		Light
						634 Friendly	Jul-19	\$267,000	\$265,291	5%
31	Summit	Moyock	NC	80	570	318 Green View	Sep-19	\$357,000		Light
						336 Green View	Jan-19	\$365,000	\$340,286	5%
32	Summit	Moyock	NC	80	440	164 Ranchland	Apr-19	\$169,000		Light
						105 Longhorn	Oct-17	\$184,500	\$186,616	-10%
33	Summit	Moyock	NC	80	635	358 Oxford	Sep-19	\$478,000		Light
						176 Providence	Sep-19	\$425,000	\$456,623	4%
34	Summit	Moyock	NC	80	970	343 Oxford	Mar-17	\$490,000		Light
						218 Oxford	Apr-17	\$525,000	\$484,064	1%
35	Innov 46	Hope Mills	NC	78.5	435	6849 Roslin Farm	Feb-19	\$155,000		Light
						109 Bledsoe	Jan-19	\$150,000	\$147,558	5%
36	Innov 42	Fayetteville	NC	71	340	2923 County Line	Feb-19	\$385,000		Light
						2109 John McMillan	Apr-18	\$320,000	\$379,156	2%
37	Innov 42	Fayetteville	NC	71	330	2935 County Line	Jun-19	\$266,000		Light
						7031 Glynn Mill	May-18	\$255,000	\$264,422	1%
38	Sunfish	Willow Sprng	NC	6.4	205	7513 Glen Willow	Sep-17	\$185,000		Light
						205 Pine Burr	Dec-17	\$191,000	\$172,487	7%
39	Neal Hawkins	Gastonia	NC	5	145	611 Neal Hawkins	Jun-17	\$288,000		Light
						1211 Still Forrest	Jul-18	\$280,000	\$274,319	5%
40	Clarke Cnty	White Post	VA	20	1230	833 Nations Spr	Aug-19	\$385,000		Light
						2393 Old Chapel	Aug-20	\$330,000	\$389,286	-1%
41	Sappony	Stony Creek	VA	20	1425	12511 Palestine	Jul-18	\$128,400		Medium
						6494 Rocky Branch	Nov-18	\$100,000	\$131,842	-3%
42	Camden Dam	Camden	NC	5	342	122 N Mill Dam	Nov-18	\$350,000		Light
						548 Trotman	May-18	\$309,000	\$352,450	-1%
43	Grandy	Grandy	NC	20	405	120 Par Four	Aug-19	\$315,000		Light
						116 Barefoot	Sep-20	\$290,000	\$299,584	5%
44	Grandy	Grandy	NC	20	477	269 Grandy	May-19	\$275,000		Light
						103 Spring Leaf	Aug-18	\$270,000	\$275,912	0%
45	Champion	Pelion	SC	10	505	517 Old Charleston	Aug-20	\$110,000		Light
						1429 Laurel	Feb-19	\$126,000	\$107,856	2%
46	Barefoot Bay	Barefoot Bay	FL	74.5	765	465 Papaya	Jul-19	\$155,000		Medium
						1132 Waterway	Jul-20	\$129,000	\$141,618	9%
47	Barefoot Bay	Barefoot Bay	FL	74.5	750	455 Papaya	Sep-20	\$183,500		Medium
						904 Fir	Sep-20	\$192,500	\$186,697	-2%
48	Barefoot Bay	Barefoot Bay	FL	74.5	690	419 Papaya	Jul-19	\$127,500		Medium
						865 Tamarind	Feb-19	\$133,900	\$124,613	2%
49	Barefoot Bay	Barefoot Bay	FL	74.5	690	413 Papaya	Jul-20	\$130,000		Medium
						1367 Barefoot	Jan-21	\$130,500	\$139,507	-7%
50	Barefoot Bay	Barefoot Bay	FL	74.5	690	343 Papaya	Dec-19	\$145,000		Light
						865 Tamarind	Feb-19	\$133,900	\$142,403	2%
51	Barefoot Bay	Barefoot Bay	FL	74.5	710	335 Papaya	Apr-18	\$110,000		Light
						865 Tamarind	Feb-19	\$133,900	\$110,517	0%
52	Miami-Dade	Miami	FL	74.5	1390	13600 SW 182nd	Nov-20	\$1,684,000		Light
						17950 SW 158th	Oct-20	\$1,730,000	\$1,713,199	-2%
53	Spotsylvania	Paytes	VA	617	1270	12901 Orange Plnk	Aug-20	\$319,900		Medium
						12717 Flintlock	Dec-20	\$290,000	\$326,767	-2%
54	Spotsylvania	Paytes	VA	617	1950	9641 Nottoway	May-20	\$449,900		Medium
						11626 Forest	Aug-20	\$489,900	\$430,246	4%
55	Spotsylvania	Paytes	VA	617	1171	13353 Post Oak	Sep-20	\$300,000		Heavy
						12810 Catharpin	Jan-20	\$280,000	\$299,008	0%
56	McBride Place	Midland	NC	75	470	5833 Kristi	Sep-20	\$625,000		Light
						4055 Dakeita	Dec-20	\$600,000	\$594,303	5%

Avg.		Indicated	
MW	Distance	Average	Impact
64.91	612		1%
20.00	479	Median	1%
617.00	1,950	High	10%
5.00	145	Low	-10%

I have further broken down these results based on the MWs, Landscaping, and distance from panel to show the following range of findings for these different categories.

Most of the findings are for homes between 201 and 500 feet. Most of the findings are for Light landscaping screens.

Light landscaping screens are showing no impact on value at any distances, including for solar farms over 75.1 MW.

MW Range									
4.4 to 10									
Landscaping	Light	Light	Light	Medium	Medium	Medium	Heavy	Heavy	Heavy
Distance	100-200	201-500	500+	100-200	201-500	500+	100-200	201-500	500+
#	1	19	2	0	1	2	0	0	1
Average	5%	2%	3%	N/A	0%	4%	N/A	N/A	1%
Median	5%	1%	3%	N/A	0%	4%	N/A	N/A	1%
High	5%	10%	4%	N/A	0%	4%	N/A	N/A	1%
Low	5%	-5%	3%	N/A	0%	4%	N/A	N/A	1%
10.1 to 30									
Landscaping	Light	Light	Light	Medium	Medium	Medium	Heavy	Heavy	Heavy
Distance	100-200	201-500	500+	100-200	201-500	500+	100-200	201-500	500+
#	0	3	2	0	0	1	0	0	0
Average	N/A	4%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
Median	N/A	5%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
High	N/A	7%	0%	N/A	N/A	-3%	N/A	N/A	N/A
Low	N/A	0%	-1%	N/A	N/A	-3%	N/A	N/A	N/A
30.1 to 75									
Landscaping	Light	Light	Light	Medium	Medium	Medium	Heavy	Heavy	Heavy
Distance	100-200	201-500	500+	100-200	201-500	500+	100-200	201-500	500+
#	0	2	3	0	0	4	0	0	0
Average	N/A	1%	0%	N/A	N/A	0%	N/A	N/A	N/A
Median	N/A	1%	0%	N/A	N/A	0%	N/A	N/A	N/A
High	N/A	2%	2%	N/A	N/A	9%	N/A	N/A	N/A
Low	N/A	1%	-2%	N/A	N/A	-7%	N/A	N/A	N/A
75.1+									
Landscaping	Light	Light	Light	Medium	Medium	Medium	Heavy	Heavy	Heavy
Distance	100-200	201-500	500+	100-200	201-500	500+	100-200	201-500	500+
#	0	2	5	0	0	2	0	0	1
Average	N/A	-3%	2%	N/A	N/A	1%	N/A	N/A	0%
Median	N/A	-3%	4%	N/A	N/A	1%	N/A	N/A	0%
High	N/A	5%	5%	N/A	N/A	4%	N/A	N/A	0%
Low	N/A	-10%	-3%	N/A	N/A	-2%	N/A	N/A	0%

C. Summary of National Data on Solar Farms

I have worked in 19 states related to solar farms and I have been tracking matched pairs in most of those states. On the following pages I provide a brief summary of those findings showing 37 solar farms over 5 MW studied with each one providing matched pair data supporting the findings of this report.

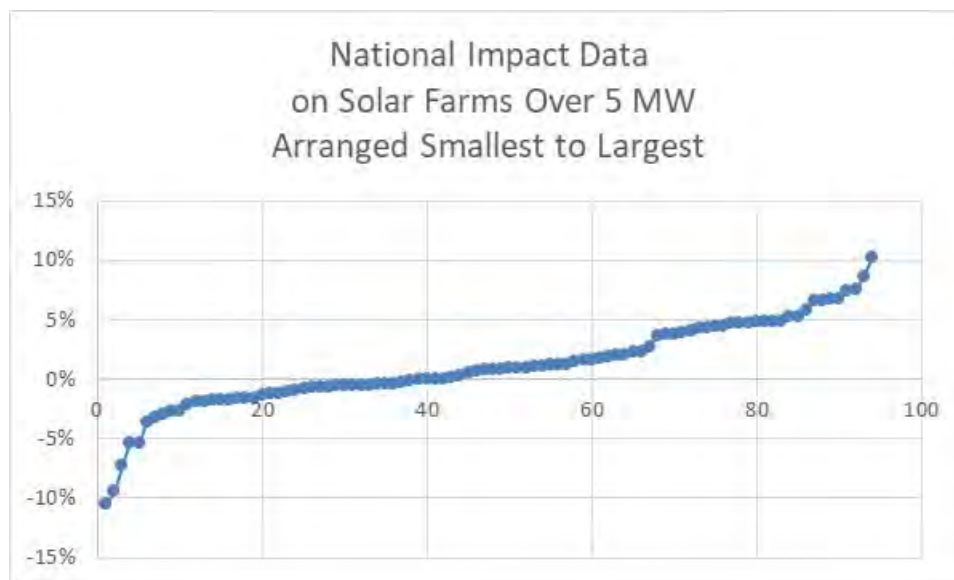
The solar farms summary is shown below with a summary of the matched pair data shown on the following page.

Matched Pair Summary						Adj. Uses By Acreage					1 mile Radius (2010-2020 Data)				
	Name	City	State	Acres	MW	Topo						Med.		Avg. Housing	
						Shift	Res	Ag	Ag/Res	Com/Ind	Popl.	Income	Unit	Veg. Buffer	
1	AM Best	Goldsboro	NC	38	5.00	2	38%	0%	23%	39%	1,523	\$37,358	\$148,375	Light	
2	Mulberry	Selmer	TN	160	5.00	60	13%	73%	10%	3%	467	\$40,936	\$171,746	Lt to Med	
3	Leonard	Hughesville	MD	47	5.00	20	18%	75%	0%	6%	525	\$106,550	\$350,000	Light	
4	Gastonia SC	Gastonia	NC	35	5.00	48	33%	0%	23%	44%	4,689	\$35,057	\$126,562	Light	
5	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	\$79,114	\$281,731	Light	
7	Tracy	Bailey	NC	50	5.00	10	29%	0%	71%	0%	312	\$43,940	\$99,219	Heavy	
8	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	\$75,000	\$291,667	Heavy	
9	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	\$63,678	\$256,306	Lt to Med	
10	Grand Ridge	Streator	IL	160	20.00	1	8%	87%	5%	0%	96	\$70,158	\$187,037	Light	
11	Dominion	Indianapolis	IN	134	8.60	20	3%	97%	0%	0%	3,774	\$61,115	\$167,515	Light	
12	Mariposa	Stanley	NC	36	5.00	96	48%	0%	52%	0%	1,716	\$36,439	\$137,884	Light	
13	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	\$81,022	\$374,453	Light	
14	Flemington	Flemington	NJ	120	9.36	N/A	13%	50%	28%	8%	3,477	\$105,714	\$444,696	Lt to Med	
15	Frenchtown	Frenchtown	NJ	139	7.90	N/A	37%	35%	29%	0%	457	\$111,562	\$515,399	Light	
16	McGraw	East Windsor	NJ	95	14.00	N/A	27%	44%	0%	29%	7,684	\$78,417	\$362,428	Light	
17	Tinton Falls	Tinton Falls	NJ	100	16.00	N/A	98%	0%	0%	2%	4,667	\$92,346	\$343,492	Light	
18	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	\$76,155	\$269,922	Medium	
19	Candace	Princeton	NC	54	5.00	22	76%	24%	0%	0%	448	\$51,002	\$107,171	Medium	
20	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	\$80,773	\$320,076	Light	
21	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	\$58,688	\$183,435	Light	
22	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	\$60,037	\$276,347	Light	
23	Demille	Lapeer	MI	160	28.40	10	10%	68%	0%	22%	2,010	\$47,208	\$187,214	Light	
24	Turrill	Lapeer	MI	230	19.60	10	75%	59%	0%	25%	2,390	\$46,839	\$110,361	Light	
25	Sunfish	Willow Spring	NC	50	6.40	30	35%	35%	30%	0%	1,515	\$63,652	\$253,138	Light	
26	Picture Rocks	Tucson	AZ	182	20.00	N/A	6%	88%	6%	0%	102	\$81,081	\$280,172	None	
27	Avra Valley	Tucson	AZ	246	25.00	N/A	3%	94%	3%	0%	85	\$80,997	\$292,308	None	
28	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	\$51,410	\$155,208	Medium	
29	Camden Dam	Camden	NC	50	5.00	0	17%	72%	11%	0%	403	\$84,426	\$230,288	Light	
30	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	\$50,355	\$231,408	Light	
31	Champion	Pelion	SC	100	10.00	N/A	4%	70%	8%	18%	1,336	\$46,867	\$171,939	Light	
32	Eddy II	Eddy	TX	93	10.00	N/A	15%	25%	58%	2%	551	\$59,627	\$139,088	Light	
33	Somerset	Somerset	TX	128	10.60	N/A	5%	95%	0%	0%	1,293	\$41,574	\$135,490	Light	
34	DG Amp Piqua	Piqua	OH	86	12.60	2	26%	16%	58%	0%	6,735	\$38,919	\$96,555	Light	
45	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	\$36,737	\$143,320	Lt to Med	
36	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	\$90,909	\$403,571	Light	
37	Spotsylvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333	Med to Hvy	
Average				362	42.05	32	24%	52%	19%	6%	1,515	\$66,292	\$242,468		
Median				150	17.80	10	16%	59%	7%	0%	560	\$62,384	\$230,848		
High				3,500	617.00	160	98%	98%	94%	44%	7,684	\$120,861	\$515,399		
Low				35	5.00	0	1%	0%	0%	0%	48	\$35,057	\$96,555		

From these 37 solar farms, I have derived 94 matched pairs. The matched pairs show no negative impact at distances as close as 105 feet between a solar panel and the nearest point on a home. The range of impacts is -10% to +10% with an average and median of +1%.

	MW	Avg. Distance		Indicated Impact
Average	44.80	569	Average	1%
Median	14.00	400	Median	1%
High	617.00	1,950	High	10%
Low	5.00	145	Low	-10%

While the range is broad, the two charts below show the data points in range from lowest to highest. There is only 3 data points out of 94 that show a negative impact. The rest support either a finding of no impact or 9 of the data points suggest a positive impact due to adjacency to a solar farm. As discussed earlier in this report, I consider this data to strongly support a finding of no impact on value as most of the findings are within typical market variation and even within that, most are mildly positive findings.



D. Larger Solar Farms

I have also considered larger solar farms to address impacts related to larger projects. Projects have been increasing in size and most of the projects between 100 and 1000 MW are newer with little time for adjoining sales. I have included a breakdown of solar farms with 20 MW to 80 MW facilities with one 617 MW facility.

Matched Pair Summary - @20 MW And Larger						Adj. Uses By Acreage					1 mile Radius (2010-2019 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Popl.	Med. Income	Avg. Housing Unit	Veg. Buffer
1	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	\$79,114	\$281,731	Light
2	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	\$75,000	\$291,667	Heavy
3	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	\$63,678	\$256,306	Lt to Med
4	Grand Ridge	Streator	IL	160	20.00	1	8%	87%	5%	0%	96	\$70,158	\$187,037	Light
5	Clarke Cnty	White Post	VA	234	20.00	70	14%	39%	46%	1%	578	\$81,022	\$374,453	Light
6	Simon	Social Circle	GA	237	30.00	71	1%	63%	36%	0%	203	\$76,155	\$269,922	Medium
7	Walker	Barhamsville	VA	485	20.00	N/A	12%	68%	20%	0%	203	\$80,773	\$320,076	Light
8	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	\$58,688	\$183,435	Light
9	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	\$60,037	\$276,347	Light
10	Demille	Lapeer	MI	160	28.40	10	10%	68%	0%	22%	2,010	\$47,208	\$187,214	Light
11	Turrill	Lapeer	MI	230	19.60	10	75%	59%	0%	25%	2,390	\$46,839	\$110,361	Light
12	Picture Rocks	Tucson	AZ	182	20.00	N/A	6%	88%	6%	0%	102	\$81,081	\$280,172	Light
13	Avra Valley	Tucson	AZ	246	25.00	N/A	3%	94%	3%	0%	85	\$80,997	\$292,308	None
14	Sappony	Stony Crk	VA	322	20.00	N/A	2%	98%	0%	0%	74	\$51,410	\$155,208	None
15	Grandy	Grandy	NC	121	20.00	10	55%	24%	0%	21%	949	\$50,355	\$231,408	Medium
16	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	\$36,737	\$143,320	Lt to Med
17	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	\$90,909	\$403,571	Light
18	Spotyslvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333	Med to Hvy
Average				640	76.03		19%	64%	17%	4%	721	\$69,501	\$262,659	
Median				335	29.20		12%	68%	2%	0%	293	\$72,579	\$273,135	
High				3,500	617.00		75%	98%	94%	25%	2,446	\$120,861	\$483,333	
Low				121	19.60		1%	0%	0%	0%	48	\$36,737	\$110,361	

The breakdown of adjoining uses, population density, median income and housing prices for these projects are very similar to those of the larger set. The matched pairs for each of these were considered earlier and support a finding of no negative impact on the adjoining home values.

I have included a breakdown of solar farms with 50 MW to 617 MW facilities adjoining.

Matched Pair Summary - @50 MW And Larger						Adj. Uses By Acreage					1 mile Radius (2010-2019 Data)			
	Name	City	State	Acres	MW	Topo Shift	Res	Ag	Ag/Res	Com/Ind	Popl.	Med. Income	Avg. Housing Unit	Veg. Buffer
1	Summit	Moyock	NC	2,034	80.00	4	4%	0%	94%	2%	382	\$79,114	\$281,731	Light
2	Manatee	Parrish	FL	1,180	75.00	20	2%	97%	1%	0%	48	\$75,000	\$291,667	Heavy
3	McBride	Midland	NC	627	75.00	140	12%	10%	78%	0%	398	\$63,678	\$256,306	Lt to Med
4	Innov 46	Hope Mills	NC	532	78.50	0	17%	83%	0%	0%	2,247	\$58,688	\$183,435	Light
5	Innov 42	Fayetteville	NC	414	71.00	0	41%	59%	0%	0%	568	\$60,037	\$276,347	Light
6	Barefoot Bay	Barefoot Bay	FL	504	74.50	0	11%	87%	0%	3%	2,446	\$36,737	\$143,320	Lt to Med
7	Miami-Dade	Miami	FL	347	74.50	0	26%	74%	0%	0%	127	\$90,909	\$403,571	Light
8	Spotyslvania	Paytes	VA	3,500	617.00	160	37%	52%	11%	0%	74	\$120,861	\$483,333	Med to Hvy
Average				1,142	143.19		19%	58%	23%	1%	786	\$73,128	\$289,964	
Median				580	75.00		15%	67%	0%	0%	390	\$69,339	\$279,039	
High				3,500	617.00		41%	97%	94%	3%	2,446	\$120,861	\$483,333	
Low				347	71.00		2%	0%	0%	0%	48	\$36,737	\$143,320	

The breakdown of adjoining uses, population density, median income and housing prices for these projects are very similar to those of the larger set. The matched pairs for each of these were considered earlier and support a finding of no negative impact on the adjoining home values.

The data for these larger solar farms is shown in the SE USA and the National data breakdowns with similar landscaping, setbacks and range of impacts that fall mostly in the +/-5% range as can be seen earlier in this report.

On the following page I show 81 projects ranging in size from 50 MW up to 1,000 MW with an average size of 111.80 MW and a median of 80 MW. The average closest distance for an adjoining home is 263 feet, while the median distance is 188 feet. The closest distance is 57 feet. The mix of adjoining uses is similar with most of the adjoining uses remaining residential or agricultural in nature. This is the list of solar farms that I have researched for possible matched pairs and not a complete list of larger solar farms in those states.

Parcel #	State	City	Name	Output Total (MW)	Acres	Used Acres	Avg. Dist to home	Closest Home	Dist Res	Closest Agri	Adjoining Use Ag/R	Use by Acres Com
78	NC	Moyock	Summit/Ranchland	80	2034		674	360	4%	94%	0%	2%
133	MS	Hattiesburg	Hattiesburg	50	1129	479.6	650	315	35%	65%	0%	0%
179	SC	Ridgeland	Jasper	140	1600	1000	461	108	2%	85%	13%	0%
211	NC	Enfield	Chestnut	75	1428.1		1,429	210	4%	96%	0%	0%
222	VA	Chase City	Grasshopper	80	946.25				6%	87%	5%	1%
226	VA	Louisa	Belcher	88	1238.1			150	19%	53%	28%	0%
305	FL	Dade City	Mountain View	55	347.12		510	175	32%	39%	21%	8%
319	FL	Jasper	Hamilton	74.9	1268.9	537	3,596	240	5%	67%	28%	0%
336	FL	Parrish	Manatee	74.5	1180.4		1,079	625	2%	50%	1%	47%
337	FL	Arcadia	Citrus	74.5	640				0%	0%	100%	0%
338	FL	Port Charlotte	Babcock	74.5	422.61				0%	0%	100%	0%
353	VA	Oak Hall	Amazon East(ern sh	80	1000		645	135	8%	75%	17%	0%
364	VA	Stevensburg	Greenwood	100	2266.6	1800	788	200	8%	62%	29%	0%
368	NC	Warsaw	Warsaw	87.5	585.97	499	526	130	11%	66%	21%	3%
390	NC	Ellerbe	Innovative Solar 34	50	385.24	226	N/A	N/A	1%	99%	0%	0%
399	NC	Midland	McBride	74.9	974.59	627	1,425	140	12%	78%	9%	0%
400	FL	Mulberry	Alafia	51	420.35		490	105	7%	90%	3%	0%
406	VA	Clover	Foxhound	91	1311.8		885	185	5%	61%	17%	18%
410	FL	Trenton	Trenton	74.5	480		2,193	775	0%	26%	55%	19%
411	NC	Battleboro	Fern	100	1235.4	960.71	1,494	220	5%	76%	19%	0%
412	MD	Goldsboro	Cherrywood	202	1722.9	1073.7	429	200	10%	76%	13%	0%
434	NC	Conetoe	Conetoe	80	1389.9	910.6	1,152	120	5%	78%	17%	0%
440	FL	Debary	Debary	74.5	844.63		654	190	3%	27%	0%	70%
441	FL	Hawthorne	Horizon	74.5	684				3%	81%	16%	0%
484	VA	Newsoms	Southampton	100	3243.9		-	-	3%	78%	17%	3%
486	VA	Stuarts Draft	Augusta	125	3197.4	1147	588	165	16%	61%	16%	7%
491	NC	Misenheimer	Misenheimer 2018	80	740.2	687.2	504	130	11%	40%	22%	27%
494	VA	Shackelfords	Walnut	110	1700	1173	641	165	14%	72%	13%	1%
496	VA	Clover	Piney Creek	80	776.18	422	523	195	15%	62%	24%	0%
511	NC	Scotland Neck	American Beech	160	3255.2	1807.8	1,262	205	2%	58%	38%	3%
514	NC	Reidsville	Williamsburg	80	802.6	507	734	200	25%	12%	63%	0%
517	VA	Luray	Cape	100	566.53	461	519	110	42%	12%	46%	0%
518	VA	Emporia	Fountain Creek	80	798.3	595	862	300	6%	23%	71%	0%
525	NC	Plymouth	Macadamia	484	5578.7	4813.5	1,513	275	1%	90%	9%	0%
526	NC	Mooresboro	Broad River	50	759.8	365	419	70	29%	55%	16%	0%
555	FL	Mulberry	Durrance	74.5	463.57	324.65	438	140	3%	97%	0%	0%
560	NC	Yadkinville	Sugar	60	477	357	382	65	19%	39%	20%	22%
561	NC	Enfield	Halifax 80mw 2019	80	1007.6	1007.6	672	190	8%	73%	19%	0%
577	VA	Windsor	Windsor	85	564.1	564.1	572	160	9%	67%	24%	0%
579	VA	Paytes	Spotsylvania	500	6412	3500			9%	52%	11%	27%
582	NC	Salisbury	China Grove	65	428.66	324.26	438	85	58%	4%	38%	0%
583	NC	Walnut Cove	Lick Creek	50	1424	185.11	410	65	20%	64%	11%	5%
584	NC	Enfield	Sweetleaf	94	1956.3	1250	968	160	5%	63%	32%	0%
586	VA	Aylett	Sweet Sue	77	1262	576	1,617	680	7%	68%	25%	0%
593	NC	Windsor	Sumac	120	3360.6	1257.9	876	160	4%	90%	6%	0%
599	TN	Somerville	Yum Yum	147	4000	1500	1,862	330	3%	32%	64%	1%
602	GA	Waynesboro	White Oak	76.5	516.7	516.7	2,995	1,790	1%	34%	65%	0%
603	GA	Butler	Butler GA	103	2395.1	2395.1	1,534	255	2%	73%	23%	2%
604	GA	Butler	White Pine	101.2	505.94	505.94	1,044	100	1%	51%	48%	1%
605	GA	Metter	Live Oak	51	417.84	417.84	910	235	4%	72%	23%	0%
606	GA	Hazelhurst	Hazelhurst II	52.5	947.15	490.42	2,114	105	9%	64%	27%	0%
607	GA	Bainbridge	Decatur Parkway	80	781.5	781.5	1,123	450	2%	27%	22%	49%
608	GA	Leslie-DeSoto	Americus	1000	9661.2	4437	5,210	510	1%	63%	36%	0%
616	FL	Fort White	Fort White	74.5	570.5	457.2	828	220	12%	71%	17%	0%
621	VA	Spring Grove	Loblolly	150	2181.9	1000	1,860	110	7%	62%	31%	0%
622	VA	Scottsville	Woodridge	138	2260.9	1000	1,094	170	9%	63%	28%	0%
625	NC	Middlesex	Phobos	80	754.52	734	356	57	14%	75%	10%	0%
628	MI	Deerfield	Carroll Road	200	1694.8	1694.8	343	190	12%	86%	0%	2%
633	VA	Emporia	Brunswick	150.2	2076.4	1387.3	1,091	240	4%	85%	11%	0%
634	NC	Elkin	Partin	50	429.4	257.64	945	155	30%	25%	15%	30%

Parcel #	State	City	Name	Output Total		Used Acres	Avg. Dist to home	Closest Home	Adjoining Use by Acre			
				(MW)	Acres				Res	Agri	Ag/R	Com
638	GA	Dry Branch	Twiggs	200	2132.7	2132.7	-	-	10%	55%	35%	0%
639	NC	Hope Mills	Innovative Solar 46	78.5	531.87	531.87	423	125	17%	83%	0%	0%
640	NC	Hope Mills	Innovative Solar 42	71	413.99	413.99	375	135	41%	59%	0%	0%
645	NC	Stanley	Hornet	75	1499.5	858.4	663	110	30%	40%	23%	6%
650	NC	Grifton	Grifton 2	56	681.59	297.6	363	235	1%	99%	0%	0%
651	NC	Grifton	Buckleberry	52.1	367.67	361.67	913	180	5%	54%	41%	0%
657	KY	Greensburg	Horseshoe Bend	60	585.65	395	1,394	63	3%	36%	61%	0%
658	KY	Campbellsville	Flat Run	55	429.76	429.76	408	115	13%	52%	35%	0%
666	FL	Archer	Archer	74.9	636.94	636.94	638	200	43%	57%	0%	0%
667	FL	New Smyrna Beach	Pioneer Trail	74.5	1202.8	900	1,162	225	14%	61%	21%	4%
668	FL	Lake City	Sunshine Gateway	74.5	904.29	472	1,233	890	11%	80%	8%	0%
669	FL	Florahome	Coral Farms	74.5	666.54	580	1,614	765	19%	75%	7%	0%
672	VA	Appomattox	Spout Spring	60	881.12	673.37	836	335	16%	30%	46%	8%
676	TX	Stamford	Alamo 7	106.4	1663.1	1050	-	-	6%	83%	0%	11%
677	TX	Fort Stockton	RE Roserock	160	1738.2	1500	-	-	0%	100%	0%	0%
678	TX	Lamesa	Lamesa	102	914.5	655	921	170	4%	41%	11%	44%
679	TX	Lamesa	Ivory	50	706	570	716	460	0%	87%	2%	12%
680	TX	Uvalde	Alamo 5	95	830.35	800	925	740	1%	93%	6%	0%
684	NC	Waco	Brookcliff	50	671.03	671.03	560	150	7%	21%	15%	57%
689	AZ	Arlington	Mesquite	320.8	3774.5	2617	1,670	525	8%	92%	0%	0%
692	AZ	Tucson	Avalon	51	479.21	352	-	-	0%	100%	0%	0%
81												
Average				111.80	1422.4	968.4	1031	263	10%	62%	22%	6%
Median				80.00	914.5	646.0	836	188	7%	64%	17%	0%
High				1000.00	9661.2	4813.5	5210	1790	58%	100%	100%	70%
Low				50.00	347.1	185.1	343	57	0%	0%	0%	0%

VII. Distance Between Homes and Panels

I have measured distances at matched pairs as close as 105 feet between panel and home to show no impact on value. This measurement goes from the closest point on the home to the closest solar panel. This is a strong indication that at this distance there is no impact on adjoining homes.

However, in tracking other approved solar farms across Virginia, North Carolina and other states, I have found that it is common for there to be homes within 100 to 150 feet of solar panels. Given the visual barriers in the form of privacy fencing or landscaping, there is no sign of negative impact.

I have also tracked a number of locations where solar panels are between 50 and 100 feet of single-family homes. In these cases the landscaping is typically a double row of more mature evergreens at time of planting. There are many examples of solar farms with one or two homes closer than 100-feet, but most of the adjoining homes are further than that distance.

VIII. Topography

As shown on the summary charts for the solar farms, I have been identifying the topographic shifts across the solar farms considered. Differences in topography can impact visibility of the panels, though typically this results in distant views of panels as opposed to up close views. The topography noted for solar farms showing no impact on adjoining home values range from as much as 160-foot shifts across the project. Given that appearance is the only factor of concern and that distance plus landscape buffering typically addresses up close views, this leaves a number of potentially distant views of panels. I specifically note that in Crittenden in KY there are distant views of panels from the adjoining homes that showed no impact on value.

General rolling terrain with some distant solar panel views are showing no impact on adjoining property value.

IX. Potential Impacts During Construction

Any development of a site will have a certain amount of construction, whether it is for a commercial agricultural use such as large-scale poultry operations or a new residential subdivision. Construction will be temporary and consistent with other development uses of the land and in fact dust from the construction will likely be less than most other construction projects given the minimal grading. I would not anticipate any impacts on property value due to construction on the site.

I note that in the matched pairs that I have included there have been a number of home sales that happened after a solar farm was approved but before the solar farm was built showing no impact on property value. Therefore the anticipated construction had no impact as shown by that data.

X. Scope of Research

I have researched over 750 solar farms and sites on which solar farms are existing and proposed in Virginia, Illinois, Tennessee, North Carolina, Kentucky as well as other states to determine what uses are typically found in proximity with a solar farm. The data I have collected and provide in this report strongly supports the assertion that solar farms are having no negative consequences on adjoining agricultural and residential values.

Beyond these 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 or abutting uses by total acreage.

Percentage By Adjoining Acreage									
	Res	Ag	Res/AG	Comm	Ind	Avg Home	Closest Home	All Res Uses	All Comm Uses
Average	19%	53%	20%	2%	6%	887	344	91%	8%
Median	11%	56%	11%	0%	0%	708	218	100%	0%
High	100%	100%	100%	93%	98%	5,210	4,670	100%	98%
Low	0%	0%	0%	0%	0%	90	25	0%	0%

Res = Residential, Ag = Agriculture, Com = Commercial

Total Solar Farms Considered: 705

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

Percentage By Number of Parcels Adjoining									
	Res	Ag	Res/AG	Comm	Ind	Avg Home	Closest Home	All Res Uses	All Comm Uses
Average	61%	24%	9%	2%	4%	887	344	93%	6%
Median	65%	19%	5%	0%	0%	708	218	100%	0%
High	100%	100%	100%	60%	78%	5,210	4,670	105%	78%
Low	0%	0%	0%	0%	0%	90	25	0%	0%

Res = Residential, Ag = Agriculture, Com = Commercial

Total Solar Farms Considered: 705

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 or residential/agricultural use.

XI. Specific Factors Related To Impacts on Value

I have completed a number of Impact Studies related to a variety of uses and I have found that the most common areas for impact on adjoining values typically follow a hierarchy with descending levels of potential impact. I will discuss each of these categories and how they relate to a solar farm.

1. Hazardous material
2. Odor
3. Noise
4. Traffic
5. Stigma
6. Appearance

1. Hazardous material

A 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 and even most agricultural uses.

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

2. Odor

The various solar farms that I have inspected produced no odor.

3. Noise

Whether discussing passive fixed solar panels, or single-axis trackers, there is no negative impact associated with noise from a solar farm. The transformer reportedly has a hum similar to an HVAC that can only be heard in close proximity to this transformer and the buffers on the property are sufficient to make emitted sounds inaudible from the adjoining properties. No sound is emitted from the facility at night.

The various solar farms that I have inspected were inaudible from the roadways.

4. Traffic

The solar farm will have no onsite employee's or staff. The site requires only minimal maintenance. Relative to other potential uses of the site (such as a residential subdivision), the additional traffic generated by a solar farm use on this site is insignificant.

5. Stigma

There is no stigma associated with solar farms and solar farms and people generally respond favorably towards such a use. While an individual may express concerns about proximity to a solar farm, there is no specific stigma associated with a solar farm. Stigma generally refers to things such as adult establishments, prisons, rehabilitation facilities, and so forth.

Solar panels have no associated stigma and in smaller collections are found in yards and roofs in many residential communities. Solar farms are adjoining elementary, middle and high schools as well as churches and subdivisions. I note that one of the solar farms in this report not only adjoins a church, but is actually located on land owned by the church. Solar panels on a roof are often cited as an enhancement to the property in marketing brochures.

I see no basis for an impact from stigma due to a solar farm.

6. Appearance

I note that larger solar farms using fixed or tracking panels are a passive use of the land that is 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 solar panels are all less than 15 feet high, which means that the visual impact of the solar panels will be similar in height to a typical greenhouse and lower than a single-story residential dwelling. Were the subject property developed with single family housing, that development would have a much greater visual impact on the surrounding area given that a two-story home with attic could be three to four times as high as these proposed panels.

Whenever you consider the impact of a proposed project on viewshed or what the adjoining owners may see from their property it is important to distinguish whether or not they have a protected viewshed or not. Enhancements for scenic vistas are often measured when considering properties that adjoin preserved open space and parks. However, adjoining land with a preferred view today conveys no guarantee that the property will continue in the current use. Any consideration of the impact of the appearance requires a consideration of the wide variety of other uses a property already has the right to be put to, which for solar farms often includes subdivision development, agricultural business buildings such as poultry, or large greenhouses and the like.

Dr. Randall Bell, MAI, PhD, and author of the book **Real Estate Damages**, Third Edition, on Page 146 “Views of bodies of water, city lights, natural settings, parks, golf courses, and other amenities are considered desirable features, particularly for residential properties.” Dr. Bell continues on Page 147 that “View amenities may or may not be protected by law or regulation. It is sometimes argued that views have value only if they are protected by a view easement, a zoning ordinance, or covenants, conditions, and restrictions (CC&Rs), although such protections are relatively

uncommon as a practical matter. The market often assigns significant value to desirable views irrespective of whether or not such views are protected by law.”

Dr. Bell concludes that a view enhances adjacent property, even if the adjacent property has no legal right to that view. He then discusses a “borrowed” view where a home may enjoy a good view of vacant land or property beyond with a reasonable expectation that the view might be partly or completely obstructed upon development of the adjoining land. He follows that with “This same concept applies to potentially undesirable views of a new development when the development conforms to applicable zoning and other regulations. Arguing value diminution in such cases is difficult, since the possible development of the offending property should have been known.” In other words, if there is an allowable development on the site then arguing value diminution with such a development would be difficult. This further extends to developing the site with alternative uses that are less impactful on the view than currently allowed uses.

This gets back to the point that if a property has development rights and could currently be developed in such a way that removes the viewshed such as a residential subdivision, then a less intrusive use such as a solar farm that is easily screened by landscaping would not have a greater impact on the viewshed of any perceived value adjoining properties claim for viewshed. Essentially, if there are more impactful uses currently allowed, then how can you claim damages for a less impactful use.

7. Conclusion

On the basis of the factors described above, it is my professional opinion that the proposed solar farm will not negatively impact adjoining property values. The only category of impact of note is appearance, which is addressed through setbacks and landscaping buffers. The matched pair data supports that conclusion.

XII. Conclusion

The matched pair analysis shows no negative impact in home values due to abutting or adjoining a solar farm as well as no impact to abutting or adjacent vacant residential or agricultural land. The criteria that typically correlates with downward adjustments on property values such as noise, odor, and traffic all support a finding of no impact on property value.

Very similar solar farms in very similar areas have been found by hundreds of towns and counties not to have a substantial injury to abutting or adjoining properties, and many of those findings of no impact have been upheld by appellate courts. Similar solar farms have been approved adjoining agricultural uses, schools, churches, and residential developments.

I have found no difference in the mix of adjoining uses or proximity to adjoining homes based on the size of a solar farm and I have found no significant difference in the matched pair data adjoining larger solar farms versus smaller solar farms. The data in the Southeast is consistent with the larger set of data that I have nationally, as is the more specific data located in and around Virginia.

Based on the data and analysis in this report, it is my professional opinion that the solar farm proposed at the subject property will have no negative impact on the value of adjoining or abutting property. I note that some of the positive implications of a solar farm that have been expressed by people living next to solar farms include protection from future development of residential developments or other more intrusive uses, reduced dust, odor and chemicals from former farming operations, protection from light pollution at night, it's quiet, and there is no traffic.



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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
VA State Certified General Appraiser # 4001017291	
SC State Certified General Appraiser # 6209	
FL State Certified General Appraiser # RZ3950	
IL State Certified General Appraiser # 553.002633	
KY State Certified General Appraiser # 5522	

Education

Bachelor of Arts in English , University of North Carolina, Chapel Hill	1993
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Continuing Education

Florida Appraisal Laws and Regulations	2020
Michigan Appraisal Law	2020
Uniform Standards of Professional Appraisal Practice Update	2020
Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book)	2019
The Cost Approach	2019
Income Approach Case Studies for Commercial Appraisers	2018
Introduction to Expert Witness Testimony for Appraisers	2018
Appraising Small Apartment Properties	2018
Florida Appraisal Laws and Regulations	2018
Uniform Standards of Professional Appraisal Practice Update	2018
Appraisal of REO and Foreclosure Properties	2017
Appraisal of Self Storage Facilities	2017
Land and Site Valuation	2017
NCDOT Appraisal Principles and Procedures	2017
Uniform Standards of Professional Appraisal Practice Update	2016
Forecasting Revenue	2015
Wind Turbine Effect on Value	2015
Supervisor/Trainee Class	2015
Business Practices and Ethics	2014
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

3.11. Traffic Statement



Riverstone Solar, LLC Construction Traffic Statement

Buckingham County, Virginia

7/26/2021

Attn: Jimmy Merrick

Riverstone Solar, LLC

Apex Clean Energy, Inc.

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Project Overview

Riverstone Solar, LLC (the “Applicant” or “Riverstone”) is proposing a 149.5 MW AC solar energy facility in northern Buckingham County on 1,996 acres (the “Property”). The site is located off Paynes Pond Rd, North of Bridgeport Rd, East of Route 20, and West of Hardware Rd (See Figure 1 below). The site currently consists of a commercially managed timber operation. To limit stream crossings of internal access roads, the project is proposing three (3) construction and Operations and Maintenance (O&M) entrances off Route 652 (Bridgeport Rd) and two (2) construction and O&M entrances off Route 679 (Paynes Pond Rd). The project also proposes one (1) O&M entrance off Georgia Creek Rd and one (1) O&M entrance of Quail Run Ln, however, use of Georgia Creek Rd and Quail Run Ln entrances during construction of the facility will be prohibited. Please see Exhibit 3 for locations of the proposed entrances. The remainder of this document will focus on the traffic generated from construction of the facility.

Proposed Construction Traffic Routes

Anticipated construction traffic routes to the project site include Route 20 (S Constitution Route) to the west and US-15 (N James Madison Hwy) to the east. Traffic will travel from Route 20 or US-15 onto Bridgeport Rd to the project site. A portion of construction traffic will also utilize Paynes Pond Rd via Bridgeport Rd. Construction traffic will be restricted from utilizing the surrounding roads of Georgia Creek Rd, Quail Run Ln, and the Northern entrance of Paynes Pond Rd. Please see Figure 2 and Figure 3 below for anticipated traffic routes.

Construction Traffic Control

Temporary traffic control signs will be installed as required by Virginia Department Of Transportation (VDOT). At a minimum, temporary traffic control signs will be installed for both eastbound and westbound traffic on Bridgeport Rd as well on Paynes Pond Rd warning of trucks entering and leaving and warning of an increase in construction traffic.

Project Intersections

Two key intersections for construction site access are Route 20 and Bridgeport Rd and US-15 and Bridgeport Rd. Both intersections are stop controlled on Bridgeport Rd only and do not require any improvements to handle the proposed construction traffic.

Transit

Public transit is not provided in the vicinity of the solar facility; therefore, no conflicts are anticipated.

Project Schedule

It is anticipated that construction will be begin in Q42022 and will last 12 months. A breakdown of expected construction activities is as follows:

- 3-4 months of site grading and site preparation including installation of erosion control and stormwater devices and construction of site access roads
- 4-6 months of solar panel and electrical wire installation
- 1-2 months of site commissioning and clean-up activities

Construction Traffic Estimates

Construction traffic will consist of component deliveries (i.e. solar panels, racking, piles, inverters, etc.) and passenger vehicles (pick-up trucks) carrying personnel, tools and minor equipment to and around the construction site.

The following assumptions were used in calculating a truck count estimate for the proposed site:

- 15 Cubic yards capacity for dump trucks carrying gravel
- Estimated 8.5 miles of interior gravel roads at 14 feet wide will be constructed
- Approximately 660 panels per truck
- Approximately 560 trucks for racking and foundations will be required
- Approximately 65 trucks for electrical wire and equipment will be required

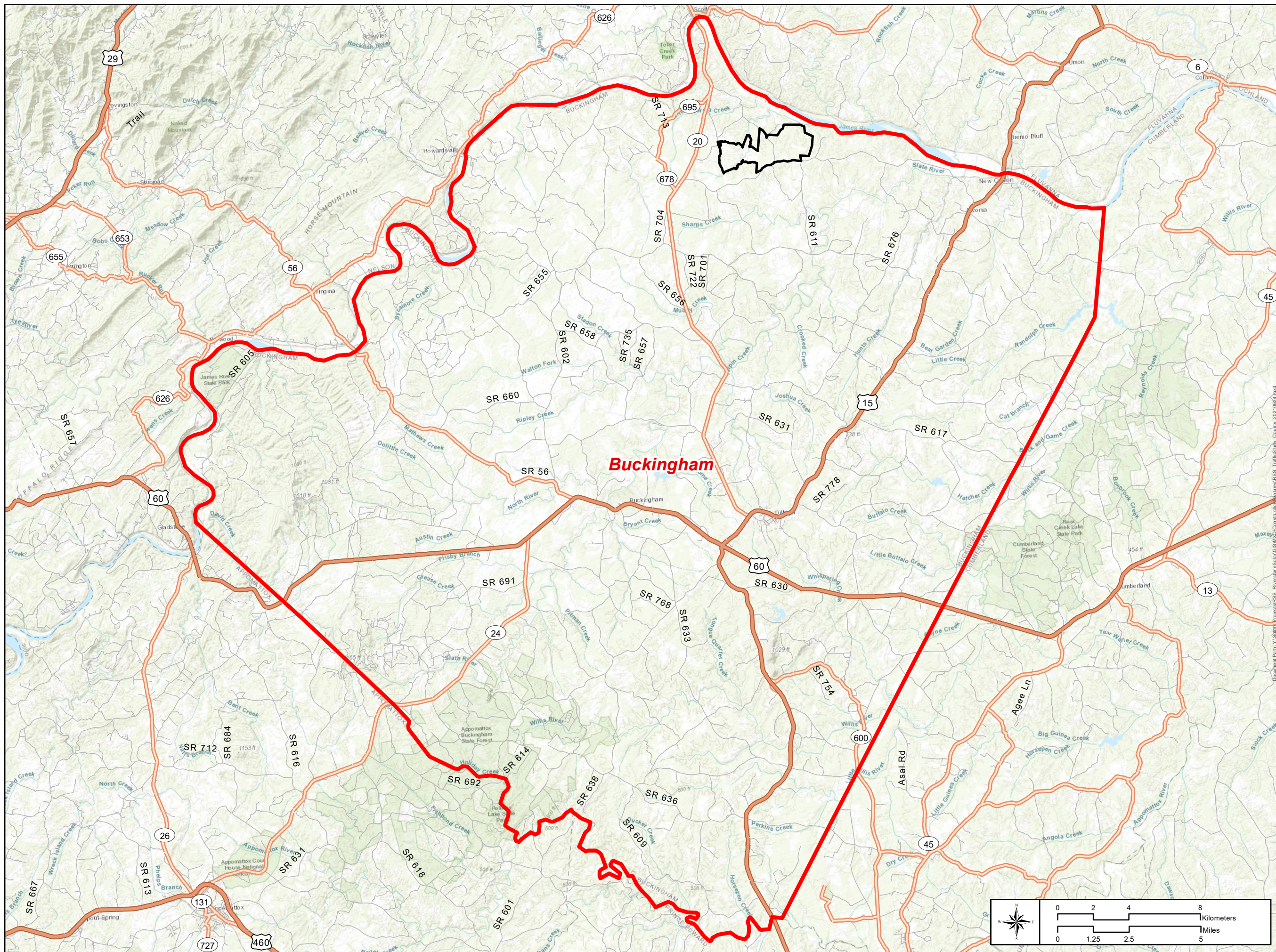
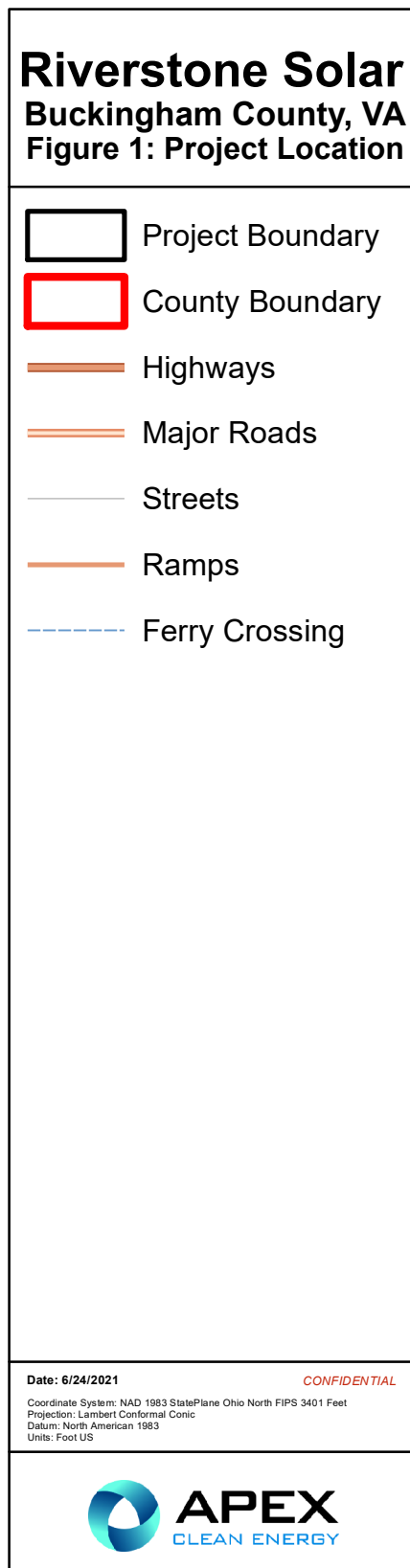
Based on the above information it is estimated the site will generate approximately 2,700 truck trips during the construction. The largest number of deliveries will be in the form of dump trucks loaded with gravel for the interior site access roads and temporary laydown and staging areas, followed by deliveries of the solar panels themselves.

Once the total number of trucks trips is separated out across site preparation (50% of site-generated traffic), solar panel and electrical installation (40% of site generated traffic) and site commissioning and clean up (10% of site generated traffic), it is estimated the site will generate approximately 23 truck trips per day during site preparation, 13 truck trips per day during panel and electrical installation, and 10 truck trips per day during site commissioning.

All project deliveries will be delivered via standard tractor trailers (WB-50 or WB-62 with an 80,000 lb. weight limit) or standard dump trucks with the exception of one delivery carrying the main power transformer to be installed in the project substation. This will be delivered via a flatbed semi-truck with a total weight exceeding 80,000 lbs. However, the trailer is equipped with additional axles to distribute the additional load on the roadway. All necessary permits will be received by VDOT prior to the start of construction.

Construction employees will consist of laborers, electricians, supervisory personnel, support personnel, and construction management personnel. It is anticipated that there will be an average of 150 workers on site with shorter, peak periods of up to 482 workers on site during panel installation. Construction will generally be performed during daylight hours starting from the earlier of sunrise or 8:00 a.m. to the later of 6:00 p.m. or sunset, Monday through Sunday. All pile driving activity shall be limited to Monday through Saturday. The Applicant may request permission from the Zoning Administrator to conduct construction activities on Sunday, but such permission will be granted or denied at the sole discretion of the Zoning Administrator.

Due to the rural nature of the site, and with existing State and US highways within proximity to the project site, it is not expected that the surrounding roadways will be significantly impacted by construction traffic. The truck traffic during construction will be similar to that of when the site is being logged, which is its current land use. After construction, traffic to the site will have a negligible impact consisting of 1-2 trips a month for maintenance, typically with pick-up trucks for landscaping activities. If traffic issues arise during the construction of the site, the Applicant shall develop, with input from Buckingham County and VDOT, appropriate mitigation measures.

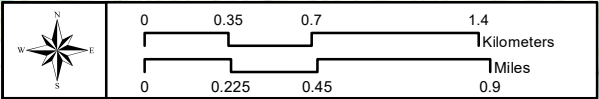
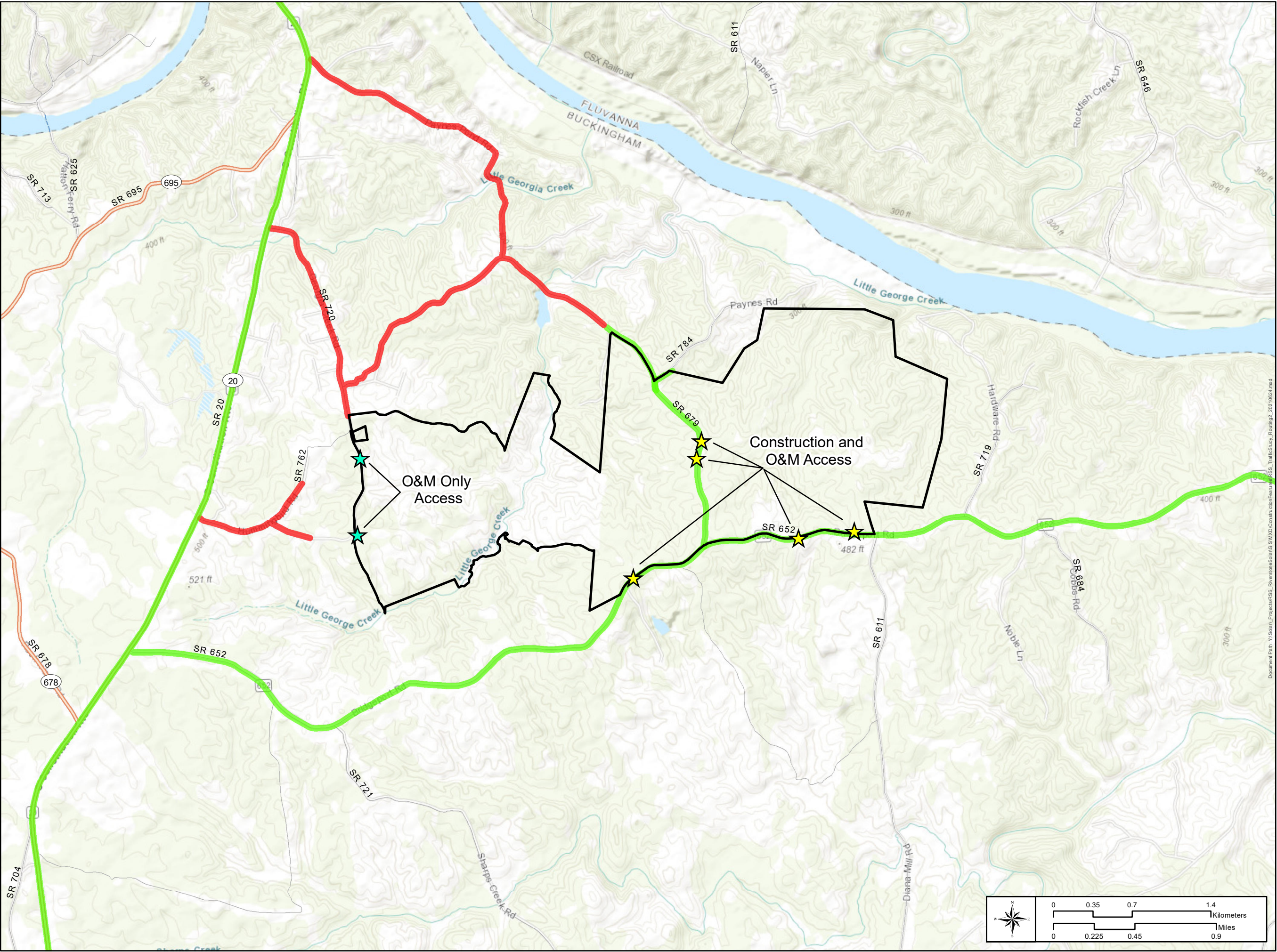




Riverstone Solar
Buckingham County, VA
Figure 3: Anticipated Traffic
Routes & Access Points

- Project Boundary
- Proposed Construction Traffic Routing
- Prohibited Routes for Construction Traffic
- Major Roads
- Streets
- Ferry Crossing

Date: 7/23/2021 CONFIDENTIAL
Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US



Document Path: Y:\Start\Projects\BSS_RiverstoneSolar\GIS\MXD\ConstructionFeas\BSS_TrafficStudy_Routing2_20210624.mxd

3.12. Sample Decommissioning Plan

Carvers Creek LLC

Decommissioning Plan

October 2020



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Issue and revision record


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			DES/DRFT BY:		10/20/20
			ENGINEERED BY: EGM		
			CHECKED BY: NBF		
			EGM	NF	EGM
0		Draft to Client 10/20/20	EGM	NBF	EGM
REV.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
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Executive Summary

This Decommissioning and Restoration Plan ("Plan") for the Carvers Creek Solar Project ("Project") was prepared by the Timmons Group and Carvers Creek LLC ("the Project Owner"). The Plan has been prepared to address the requirements of Code of Ordinances of the Gloucester County, Virginia and provides for the decommissioning of the Project and restoration of the Project site at the end of the Project's useful life or in the unlikely case of its abandonment. The Plan provides an overview of all activities related to the removal of the solar energy system, its equipment and panels, and any appurtenant structures and for restoration of the site to its previous condition as much as reasonably practicable.

The facility has an engineered design life of thirty-five (35) years and may be reasonably expected to economically produce beyond its designed life. This Plan, however, assumes that decommissioning activities will be completed at the end of the economic useful life of the Project

During decommissioning all of the Project's facilities will be dismantled and removed. During restoration, the Project site will be returned to its previous condition. If it is agreed upon with the County, and the landowner, some or all the Project access roads may be kept in place for continued use.

The Project Owner will meet with the County prior to ceasing operations, to review its plans to decommission the Project and restore the premises. Within twelve (12) months of initiating the decommissioning, the Project Owner will remove the relevant components from the land and restore the site as described below.

The decommissioning of the Project and restoration of the site will comply with any applicable municipal, state and federal regulations. As with the construction, a manager responsible for safety will be present on site for the duration of the work.

The Project Owner will ensure that the decommissioning and restoration of the proposed facility is carried out in accordance with Gloucester County's requirements and the measures and practices described in this Plan. This will include but not be limited to:

- Providing notification regarding the plans to continue or cease the operation of the Project.
- Providing a schedule for the start and completion of the decommissioning and restoration activities.
- Providing site restoration measures that will ensure that the nutrient content of the soil is restored, if necessary, to its prior condition.
- Providing restoration of the site, as practicable, to its pre-construction state as

timberland and pastureland.

- Providing a decommissioning and restoration cost estimate as well as the methods for ensuring that the funds will be available for decommissioning and site restoration.

1. Introduction and Project Description

The Carvers Creek Solar Project is being planned by Carvers Creek LLC. This Decommissioning and Restoration Plan is being submitted to Gloucester County.

Carvers Creek LLC proposes to develop this project with a maximum nameplate capacity of 150 MW AC as described in the conditional use permit application.

The following Plan is based on today's known technologies, means, and methods. These may change over the life of the Project and in accordance with the Code of Ordinances (Sec 9-28 (f)) will be updated every five (5) years along with the cost estimate and corresponding financial instrument to adjust for inflation and any other necessary changes.

2. Methodology

This Plan provides an overview of all activities during the decommissioning phase of the Project, as well as all activities related to the restoration of the Project site and the management of excess materials and waste.

3. Decommissioning Plan Overview

The facility has an engineered design life of thirty-five (35) years and may be reasonably expected to economically produce beyond its designed life. This Plan, however, assumes that decommissioning activities will be completed at the end of the economic useful life of the project.

Project Owner will meet with the County prior to ceasing operations, to review its plans and schedule for decommissioning the Project and restoring the premises.

During decommissioning all of the Project's facilities will be dismantled and removed, including the perimeter fences, concrete foundations (to a depth of 3 ft below grade), steel piles, mounting racks, trackers, Photovoltaic ("PV") modules, above-ground and underground cables (to a depth of 3 ft below grade), transformers, inverters, fans, switch boxes, fixtures, combiner boxes and project substation (as identified in the Site Plan package submitted by Timmons Group September 28, 2020). All above ground structures including circuit breakers, chain link fencing, main power transformer and control buildings will be removed. All electrical equipment will be removed for reuse or disposal and will carry a significant salvage value. All fill and gravel will be removed, and the site will be graded to restore terrain profiles to the extent practicable.

Within twelve (12) months of initiating the decommissioning, Project facilities will be removed from the leased land and restoration will be completed.

3.1 Decommissioning During Construction (Abandonment of the Project)

In the unlikely event that the construction of the project ceases prior to completion, the installed components and all materials on the Project site will be removed and recycled or properly disposed of and the site restored in accordance with applicable regulations and the process described below.

3.2 Decommissioning After Ceasing Operation

In the event that the operation of the solar farm ceases prior to the end of its useful economic life, the installed components will be removed and recycled, and the site restored in accordance with applicable regulations and the procedures described below.

4. Decommissioning of the Renewable Energy Generation Facility

4.1 Equipment Dismantling and Removal

Many of the Project's components are largely composed of recyclable materials, including glass semiconductor material, steel and wiring. When the project reaches the end of its operational life, reusable and recyclable parts will be dismantled, removed from the site and transported to reuse or recycling facilities. All waste resulting from the decommissioning of the facility will be transported by a certified and licensed contractor and taken to a landfill facility.

4.1.1 Above-ground Structure Decommissioning

In the event that the project requires decommissioning, the following sequence for the removal of the components will be used:

Solar Panel Arrays and Project Substation:

- De-energize and disconnect the Project from the utility power grid;
- Disconnect all above ground wirings, cables, fuses and electrical and protection components and reuse or recycle off-site by an approved facility;
- Remove concrete foundations of inverter and transformer pads to a depth of 3 ft below grade;
- Remove PV modules and metallic structures and ship to reuse or recycling facilities for aftermarket use or recycling and material reuse;

- Remove all waste;
- Remove the perimeter fence and recycle off-site by an approved metal recycler.
- Remove inverters, transformers, meters, fans, lighting fixture and other electrical components and recycle off-site by an approved recycler;

Access Roads:

- Facility access roads will be used for decommissioning purposes, after which removal of roads will be discussed with the Landowner and the County to determine if any access roads may be left in place for their continued use.
- If access road is deemed unnecessary, remove access road and restore access road location as practicable to its previous condition with native soils and seeding. Should the landowner decide to keep the roads in place they will not be removed. The plan assumes for cost estimation purposes that the roads will be removed.

Project Substation

- De-energize and disconnect the project substation from the utility power grid.
- Disconnect all above ground wirings, cables, fuses and electrical and protection components and recycle off site by an approved recycling facility.
- Remove concrete foundations to a depth of 3 ft.
- Remove main power transformer, switchgear, bus bar support insulator and steel structures and ship to reuse or recycling facilities for aftermarket use or recycling and material reuse.
- Remove all waste.
- Remove the perimeter fence and recycle off-site by an approved metal recycler.
- Disconnect all electrical equipment.

4.1.2 Below-ground Structure Decommissioning

- Disconnect all underground cables, conduits and transmission lines up to 36" and remove and recycle off-site by an approved recycling facility.

- Remove all PV panel racking below and above ground, including the steel pile foundations.

This Plan is based on current best industry practices and procedures. These practices may be subject to revision based on the development of new and improved decommissioning practices in the future.

4.2 Site Restoration

The Project Owner will develop a comprehensive restoration plan designed to restore the site so it can be returned to its previous use as pasturelands and timberlands. Restoration will include the following:

- Topsoil will be redistributed as necessary to provide essentially the same ground cover as was present prior to the site disturbance.
- Access roads and other areas that become compacted during Project operation will be decompacted to their previous conditions.

Where Project infrastructure has been removed, disturbed areas will be seeded with quick growing native species to prevent topsoil erosion. Erosion and control measures will be installed at ditches and will be left in place until ground cover is fully established.

4.2.1 Watercourses

The project was designed to avoid any waterbodies and the renewable energy facility does not release emissions which could pollute the air and water bodies, no impact to aquatic environment is expected. As a result, no restoration of waterbodies, either during construction or decommissioning is planned. Wetlands will be avoided in the design and construction process.

4.2.2 Agricultural Lands

Once all Project facilities are removed, agricultural and silvicultural lands compacted during project operation (such as access roads) will be decompacted via tilling, plowing or subsoiling and affected areas will be seeded with native grass species.

Similar to the construction phase, soil erosion and sedimentation control measures will be re-implemented during the decommissioning period and until the site is stabilized in order to mitigate erosion and silt/sediment runoff.

Access roads will be left based on agreement with the County and Landowner or graded to restore terrain profiles (to the extent practicable) and vegetated. If removed, filter fabric will be bundled and disposed of in accordance with all applicable regulations. As necessary, these areas will be backfilled and restored

to meet existing grade. This material may come from existing long-term berm or stockpile.

The decommissioning of the site will include returning the site to allow the total runoff from the site to be similar to pre-construction conditions.

4.3 Managing Excess Materials and Waste

During the decommissioning phase, waste materials will be removed in accordance with applicable local regulations. This will include but not be limited to obtaining all required permits and doing all soil testing as deemed necessary either by permit or additionally by third party professionals to insure there is no contamination of the site after removal has occurred. It is the goal of the Project Owner to reuse and recycle materials to the extent practicable and to work with local subcontractors and waste firms to segregate material to be recycled. As an example, since the mounting racks are made up of manufactured metal, it is anticipated that nearly 100% of the above grade metal is salvageable based on current industry practices and trends.

Many components of the Project are reusable or recyclable and have salvage value. The Project Owner will manage decommissioning to minimize, to the extent practicable, the volume of project components and materials discarded as waste. Table 4.1 below outlines the anticipated disposition methods of the different project components.

Table 4.1

Anticipated Project Decommissioning Disposition Methods

Component	Disposition Method
Concrete Foundations	Crush and recycle
Solar Panels	Reuse or recycle
Metal racks and mounts	Salvage/recycle
Steel piles and rack foundations	Salvage/recycle
Wiring and cabling	Recycle/salvage
Inverters, transformers, and breakers	Salvage/recycle/reuse
Granular material	Reuse/dispose
Main power transformer	Reuse/sell

High voltage circuit breakers	Reuse/sell
Project Substation steel and switches	Reuse/salvage/recycle
Fence steel	Salvage/recycle
Project Substation Controls	Dispose/reuse

Major pieces of equipment such as transformers and breakers are recyclable and reusable and will have significant market value. The solar panels are expected to retain over 85% of their generation capability after 35 years of operation so their market value as a reusable item is very high.

Existing solar panel manufacturers have programs to buy and salvage panels.

These programs extract the raw materials in the panels to make new panels at a significant discount from new material costs. Recycled materials include the semiconductor and glass.

Other components such as electrical cable have a high salvage-market value due to their copper and aluminum content. The same is true for the steel and aluminum racks and foundations that support the solar panels.

As the great majority of the facility will consist of reusable and recyclable items, only a small percentage of the project components and materials will be disposed of in landfills. Any items or materials that are landfilled will be nontoxic. The Project Owner will assume the responsibility for removing this material from the site and properly disposing of it.

5. Decommissioning Costs and Salvage

The following table below lists the estimated decommissioning costs to remove the project components and restore the site to its previous condition.

Table 5-1 – Detailed Decommissioning Costs

Carver's Creek Solar Project

Detailed Decommissioning Cost Estimate

Item	Qty	Cost/Unit	Total Cost
455/460 W Solar Panels	402,038	\$5/unit	\$2,010,190
Solar Panel Support Steel Piles	20,370	\$15/unit	\$305,550
Solar Panel Racks	4074	\$50/unit	\$203,700
4.995 kVA Inverters	126	\$500/unit	\$63,000
3.8 KVA Transformers	44	\$3,000/unit	\$120,000
Fence Removal	100,424 ft	\$1/ft	\$100,424
Conductor Removal	1,080,308 ft	\$0.50/ft	\$540,154
Substation Transformer	1	\$30,000	\$30,000
34.5 kV Circuit Breakers	6	\$7,500	\$30,000
115 kV Circuit Breaker	1	\$7,500	\$7,500
Substation Steel	1	\$300,000	\$300,000
Substation Foundations	1	\$100,000	\$100,000
Substation Control House*	1	\$10,000	\$10,000
Site Remediation	851.81 ac	\$2,500/acre	\$2,129,525
Permitting and Engineering			\$500,000
Total			\$6,450,043

Project Size: 150 MW ac (184 MW dc)

Project land area: 1,198.90 acres

Disturbed land area: 851.81 acres

*Final project design may not include these facilities

The Project components will have a salvage value at the end of their useful life. Table 5-2 below shows those values based on information known today about the assets.

Table 5-2 Estimated Salvage Value of Project Components

Project Component			Qty	Estimated New Cost/Unit	Estimated New Cost	Total	Estimated Salvage Value*
455/460 W Solar**	Panels		402,038	\$0.33/W	\$60,630,900		\$6,063,090
3800	KVA	transformers	44	\$50,000	\$2,200,000		\$220,000
Conductor			1,080,308 ft	\$1.00/ft	\$1,080,308		\$108,031
Substation Transformer			1	\$800,000	\$800,000		\$80,000
35 kV Circuit Breakers			4	\$35,000	\$140,000		\$14,000
115 kV Circuit Breaker			1	\$150,000	\$150,000		\$15,000
Fence Posts (Gal)			@7020	\$120.00	\$842,400		\$210,600
***Module Racks (Al)			10,211,949 lbs				\$408,478
***Steel piles			5,345,368 lbs				\$574,627
Fence steel			1,215,097 lbs				\$130,622
(assumes commercial fencing 8' high, 1.30 lbs per square foot)							
Total Salvage Value							\$7,824,448

*Estimated salvage values are 10% of original cost except where noted.

** Salvage value of these components for after-market use is estimated to be 10% of original cost. After 35 years of use, solar panels are expected to generate electricity at approximately 85% of their original capacity.

*** Used present market scrap price per Capital Scrap Metal schedule 10/20/2020. The salvage prices are \$0.04/lbs. for aluminum and \$215/ton. for steel.

As noted in Table 5-2, the total estimated decommissioning costs will be **\$6,450,043** and the total estimated salvage value of Project components will be **\$7,824,448**

6. Decommissioning Assumptions

To develop a cost estimate for the decommissioning of the Carvers Creek Solar Project, Timmons Group made the following assumptions and costs were estimated based on current pricing, technology, and regulatory requirements. The assumptions are listed in order from top to bottom of the estimate spreadsheet. We developed time and materials-based estimates considering composition of work crews. When materials have a salvage value at the end of the project life, the construction activity costs and from the hauling/freight cost are separated from the disposal costs or salvage value to make revisions to salvage values more transparent.

1. Decommissioning year is based on a 5-year initial period for the financial security. The projected life of the project is 35 years.
2. This Cost Estimate is based on the Timmons Group Site Plans dated September 28, 2020.
3. Common labor will be used for the majority of the tasks except for heavy equipment operation. Pricing is based on local southeast US labor rates.
4. Permit applications required include the preparation of a Stormwater Pollution Protection Plan (SWPPP) and a Spill Prevention Control and Countermeasure (SPCC) Plan.
5. Road gravel removal was estimated on a time and material basis using a 16-foot width and an 8-inch thickness for the access roads. Substation aggregate is included in the substation quantities. Since the material will not remain on site, a hauling cost is added to the removal cost. Road aggregate can often be disposed of by giving to landowners for use on driveways and parking areas.
6. Fence removal includes loading, hauling, and recycling or disposal. Fence and posts weigh approximately 10 pounds per foot.
7. Array support posts are generally lightweight "I" beam sections installed with a piece of specialized tracked equipment. Crew productivity is approximately 240 posts per day, and the same crew and equipment should have a similar productivity removing the posts, resulting in a per post cost of approximately \$13.00. We assume a cost of \$15.00 per post to include hauling fees and contingencies.
8. A metal recycling facility (Middlesex Metals Inc.) is located in Urbanna, VA and is twelve miles from the project site. Pricing was acquired from www.scrapmonster.com. The posts weigh approximately 150 pounds each, and we estimate the hauling costs at approximately \$0.29 per ton mile.
9. Hauling the steel to Urbanna, Virginia at \$0.29 per ton mile costs about \$3.48 per ton.
10. The solar panels rated at 460 watts and can easily be disconnected, removed,



- and packed by a three-person crew at a rate we estimate at 12 panels per hour.
11. No topsoil is planned to be removed from the site during decommissioning and most of the site will not have been compacted by heavy truck or equipment traffic so the site turf establishment cost is based on RS Means unit prices for applying lime, fertilizer, and seed at the price of per acre plus an allowance for some areas to be decompacted.
 12. The steel posts are priced based on 75 percent of the HMS (high melt steel) 80/20 the price listed on www.scrapmonster.com on June 22, 2020. (\$215 per ton)
 13. There is an active market for reselling and recycling electrical transformers and inverters with several national companies specializing in recycling. We have assumed a 25% recovery of these units based on field experience with used transformers as opposed to trying to break them down into raw material components.
 14. The underground collection lines are assumed to be aluminum conductor. The collection lines will be buried deep enough so that they do not have to be removed.
 15. Care to prevent damage and breakage of equipment, PV modules, inverters, capacitors, and SCADA must be exercised, but removal assumes unskilled common labor under supervision

The estimated salvage values are derived from years of experience decommissioning and uprating electric substations, overhead transmission and distribution hardware and underground distribution hardware that would include but not be limited to substation and pad mounted transformers, overhead and underground conductors, poles, fencing, ground grid conductors, control housings, circuit breakers (high and medium voltage), protective relaying, and other hardware items. These individual items have high salvage value either as stand-alone components to be reused or recycled and sold as used items. These items also have a relatively high salvage value as pure scrap for steel, copper and other commodities.

For all medium voltage transformers, breakers and other items, Southeastern Transformer Company in Dunn, NC provides complete repair, upgrading and recycling and resale for all items mentioned above. Their website is: <https://www.setransformer.com>.

For any and all recycling and upgrading, Solomon Corporation offers the same set of services for transformer repair and recycling and complete substation decommissioning services. With seven different locations, Solomon is one of several vendors that can decommission and recycle the components as noted above. Their website is: <https://www.solomoncorp.com/>. Solomon Corporation is only one of many transmission and distribution recycle and decommissioning shops that do this mainly to harvest the components.

For recycling conductor, General Cable and Southwire both utilize extensive scrap procurement programs to reuse copper and aluminum conductor harvested from projects such as this one to supplement and reduce their raw material costs. Here is the link to the General Cable program which only increases the salvage values found in this Plan: General Cable Recycling:

<https://es.generalcable.com/na/us-can/socialresponsibility/sustainability/recycling>

As for solar panels, they are in demand as salvageable items either in whole or for their raw material. According to the International Renewable Energy Agency (IRENA), more than 90% of all the materials are high grade silicon, aluminum and glass and are typically harvested to produce new panels. This is far less expensive than buying unprocessed raw materials for production.

The base industry assumption is that since solar panels are expected to retain about 85% of their production capability after 35 years of use, a salvage value of 10% of original cost is a low estimate of their expected value and as we note in assumption. This considers possible technology improvements and undervalues the anticipated salvage value of the panel's raw materials. The Solar Energy Industries Association (SEIA) has an approved set of PV recycling vendors that specialize in doing this today and they can be found at: <https://www.seia.org/initiatives/seia-national-pv-recycling-program>.

First Solar, which has been active in the solar industry since its inception, takes solar modules and recycles 90% of the semiconductor material which is then reused in new modules. 90% of the glass product can be reused as new glass products, including panels and fiber optic cable. We can conclude that realistically the estimated 10% salvage value is low and reflects a conservative figure. Information about First Solar's recycling program is at: <http://www.firstsolar.com/en/Modules/Recycling>.

For raw material recycling (steel and aluminum in this case) we used the scrap metal pricing supplied by Capital Scrap Metal LLC, a major scrap metal vendor with scrap metal sites in Pompano Beach, Deerfield, West Palm Beach and Stuart, Florida. They serve major industries, municipalities manufacturers, and also do Corporate Recovery programs domestically and internationally, largely in the Caribbean basin and Latin America. Their website for pricing is as follows: <https://www.capital scrap metal.com/prices/>.

7. Decommissioning Notification

At least 30 days prior to commencing decommissioning of the Project and restoration of the site, the Project Owner shall notify Gloucester County of its scheduled start and completion dates of project decommissioning and site restoration.

No later than 12 months after the abandonment or closure of the Project and within 30 days of completing decommissioning and site restoration, the Project Owner shall provide

written documentation acceptable to the County demonstrating that the Project has been decommissioned, that the Project site has been restored and that the solar panels and related equipment were properly disposed of in accordance with local, state and federal regulation.

8. Decommissioning Bond

The decommissioning surety, if required, will be in place prior to obtaining the Land Disturbance Permit for the Project per the Code of Ordinances. The financial mechanism is subject to the evaluation and approval of the County as to the creditworthiness and financial capabilities of the counterparty. Every five (5) years, over the life of the Project, an updated estimate of decommissioning costs will be prepared to adjust for inflation and any other necessary changes. The Project Owner shall provide the revised cost estimate to the County for approval, and execute an adjustment to the financial guarantee mechanism, if required.

35 Building Permits were issued in the amount of \$5935.97 for the month of July 2021

Permit No.	District	Name	Purpose	Cost of Construction	Cost of Permit
18546	Marshall	Moore Construction	Residenital Addittion	\$45,000.00	\$178.29
18582	Curdsville	Eicher and Sons Constuction	Residenital Addittion	\$83,000.00	\$194.42
18583	James River	Marsha Verber	Remodel-Residential	\$0.00	\$296.53
18584	Curdsville	TK Homes LLC	New Dwelling Stickbuilt	\$320,789.00	\$919.19
18585	Maysville	Matha Holman	Electrical	\$0.00	\$25.50
18586	Marshall	Oakwood Homes	Mobile Home Doublewide	\$158,000.00	\$431.62
18587	Slate River	Bruce Ward	Electrical	\$1,500.00	\$25.50
18588	James River	Bruce Ward	Electrical	\$4,000.00	\$25.50
18589	Marshall	Marc Jones Construction LLC	Residenital Addittion	\$46,000.00	\$51.00
18590	Maysville	Bryan Davis	Detached Garage	\$100,000.00	\$422.97
18592	Marshall	David Christian	Demolition	\$5,000.00	\$25.50
18593	Marshall	Thomas Hughes	Residenital Addittion	\$8,000.00	\$25.50
18594	Slate River	Sigora Solar	Residenital Addittion	\$6,179.00	\$51.00
18595	Marshall	Clayton Homes	Mobile Home Doublewide	\$132,221.00	\$452.29
18596	Francisco	Oakwood Homes	Mobile Home Doublewide	\$121,000.00	\$385.80
18598	Maysville	Chad Perkins	Farm Building Exempt	\$20,000.00	\$10.00
18599	Marshall	US Cellular Corp.	Commerical Addittion	\$15,000.00	\$51.00
18600	Maysville	Goolsby Apperson Dawn Jacqueline	Electrical	\$5,000.00	\$25.50
18601	Marshall	Bransford Hill LLC	Electrical	\$4,000.00	\$25.50
18602	Marshall	Lacey Wood	Farm Building Exempt	\$30,000.00	\$10.00
18603	Maysville	Ricky Davis	Residenital Addittion	\$7,100.00	\$25.50
18604	Curdsville	Dean Snoddy	Mobile Home Doublewide	\$118,000.00	\$355.80
18606	Curdsville	Leif Martin	Residenital Addittion	\$21,700.00	\$51.00
18607	Town of Dillwyn	Tripp Maxey Construction	Demolition	\$0.00	\$25.50
18608	James River	Anna Par	Electrical	\$9,600.00	\$25.50
18609	Francisco	Clayton Homes	Modular Unit	\$239,855.00	\$501.08
18610	Marshall	Michael and Sons Services	Mechanical	\$750.00	\$25.50
18611	Marshall	Gloria Carrington	Electrical	\$0.00	\$25.50
18613	Marshall	Walter Lithicum	Mechanical	\$7,500.00	\$25.50
18614	Marshall	Walter Lithicum	Electrical	\$7,500.00	\$25.50
18616	Slate River	Shenandoah Cable Television	Commerical Addittion	\$30,000.00	\$102.00
18618	Maysville	Rock River	New Dwelling Stickbuilt	\$303,000.00	\$581.40
18619	James River	Ralph Fish	Electrical	\$500.00	\$25.50
18620	Curdsville	Fred and Meghan Allen	Modular Unit	\$165,800.00	\$378.07
18622	Francisco	Lyn Hill	Shed	\$4,000.00	\$80.01
		Jes Construction	Re-Inspection Fee		\$50.00
Cost of permit is calculated based on square footage of structure				\$2,019,994.00	\$5,935.97