NOTICE IS HEREBY GIVEN THAT
THE SURRY COUNTY BOARD OF SUPERVISORS
WILL HOLD A PUBLIC HEARING ON
THURSDAY, FEBRUARY 13, 2025 AT 6:00 P.M.
IN THE GENERAL DISTRICT COURTROOM LOCATED AT
THE SURRY COUNTY GOVERNMENT CENTER
45 SCHOOL STREET, SURRY, VIRGINIA
TO CONSIDER AND INTENDS TO TAKE ACTION ON THE FOLLOWING:

PC Conditional Use Permit No. 2024-01

The Applicant, Sycamore Cross Solar, LLC, seeks a conditional use permit for a solar generation facility in Surry County. The project will span six parcels (60-1-1, 60-9, 60-17, 61-2, 61-3, 61-4) zoned M-1, Light Industrial, within Surry County and will be located along Mill Swamp Road (SR 623), Mullet Drive (SR 684), and Beechland Road (SR 626), south of White Marsh Road (SR 617). The proposed conditional use permit is part of a solar energy generation facility project to produce 240 megawatts in Surry County and Isle of Wight County. Within Surry County, the project arrays will be developed on three parcels (60-9, 60-17, and 61-3) totaling 806 acres, of which approximately 125 acres will be fenced arrays. Parcels 60-1-1, 61-2, and 61-4 will be easement only parcels and will contain medium voltage utility corridors. The Comprehensive Plan Map indicates that the project parcels are suitable for General Industrial Use.

The public hearing will be held pursuant to § 15.2-2204 and § 15.2-2285 of The Code of Virginia (1950, as amended). A copy of the related material may be reviewed or obtained on the County's website at https://www.surrycountyva.gov/413/Public-Notices, or a copy of the related material may be examined at the Department of Planning and Community Development, Surry County Government Center, 45 School Street, Surry, Virginia. Office hours are Monday through Friday from 9:00 am to 5:00 pm.

All interested persons are invited to participate in the public hearing. If assistance or special accommodations are needed to participate in the hearing, please contact the Department of Planning & Community Development Monday – Friday from 9:00 a.m. to 5:00 p.m. at least 72 hours prior to the hearing.

Horace H. Wade III, Director
Department of Planning & Community Development
(757) 294-5210

February 3, 2025

Department of Planning & Community Development
c/o Horace H. Wade III, AICP, CZA
Director, Planning & Community Development
45 School Street
Surry, VA 23883

Re: Application Supplement Submittal for Sycamore Cross Solar Project

Dear Mr. Wade,

Please find enclosed Sycamore Cross Solar, LLC's application supplement for the Sycamore Cross Solar Project. This supplement includes the following:

1. An analysis table of the proposed amendments to the Surry County solar ordinance compared to Sycamore Cross's application and conceptual design based on existing ordinance, including staff comments and Applicant comments
2. Newly Proposed Conditions; the following two conditions have been added
    a. Condition 27
    b. Condition 28
3. Appendix A – Excerpt from PJM Study Agreement as evidence of Interconnection Application date
4. Appendix B – Soil Survey for the Project Area

We respectfully request your review of these supplemental documents along with our application submitted April 25, 2024 for the inclusion of the Project on the February 13th Board of Supervisors agenda for the Conditional Use Permit application review.

Thank you for your cooperation and guidance with the application process. The AES team is available to meet or talk at your convenience. I can be reached using the contact information provided in the signature below.

Sincerely,

Gregory S. Creswell

Greg Creswell
Senior Project Development Manager
804-334-9882
Gregory.Creswell@aes.com

Analysis Table of proposed Surry County Solar Ordinance and Sycamore Cross application

	New Surry County Solar Ordinance Requirements:	Sycamore Cross CUP Application - County Staff Comments	Sycamore Cross CUP - Applicant Response
1	Shall not exceed 7 percent of developable land within the County	Land for Sycamore Cross was rezoned in 2021, and Sycamore Cross does not contribute to the increase in the percentage of parcels of land used for utility-scale solar facilities.	The Applicant agrees with the County Staff comments. Additionally, this requirement is addressed in Applicant's Conditional Use Permit Application under Section 3, Comprehensive Plan Analysis, and more particularly in the review of Section 1, Objective 5, Strategy 2.
2	Project Narrative: 13) Applicant to submit a copy of the PJM Interconnection Application with the Conditional Use Permit Application	Surry County has not received a copy of the PJM Interconnection Application. The applicant has verbally stated the application date was in 2017. This is not a current requirement.	The PJM Interconnection application is an online process. As evidence of the online application submittal, we've submitted in Appendix A a screenshot from the PJM portal that confirms the application date and an excerpt from the PJM Study Agreement as evidence of the Interconnection Application date of March 2017.
3	Project Narrative: 9) List of materials utilized (i.e., aluminum, copper, glass, etc.) in construction of the facility and approximate percentages.	List not provided. This was not previously requested.	The Applicant has added proposed condition no. 26 to address the intent of this language. Condition no. 26 states "*As part of the site plan review, the Applicant shall provide documentation that the selected panels on-site are "Tier 1" modules, as established by the most recent "PV Module Tier 1 List" issued by Bloomberg NEF or a similar third-party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).* "
4	Project Narrative: 5) Describe the existing and proposed access roads serving the project and address construction traffic management and control.	Existing and proposed access roads are not discussed in detail. However, conditions for approval to address construction traffic management have been submitted.	Sycamore Cross will use a combination of new and existing access points and access roads. While the current plan submitted is conceptual, Sycamore Cross anticipates that Parcel 60-1 will require at least one new entrance off of Mill Swamp Road in Surry County. The Applicant anticipates all other access points can be shared with existing access points to the Cavalier facility. The location and number of entrances will be finalized and approved by the locality through final site plan approval. Additionally, the Applicant previously proposed condition no. 8 includes language which states *"Construction Traffic Management Plan including mitigation measures shall be developed by the Applicant, owner or operator and shall be submitted to the Virginia Department of Transportation (VDOT) and Zoning Administrator for review and approval. This plan shall address traffic control measures, pre-and post-construction road evaluation, and any necessary repairs to the public roads that are required as a result of any damage from Project construction and/or expansion."*

	New Surry County Solar Ordinance Requirements:	Sycamore Cross CUP Application - County Staff Comments	Sycamore Cross CUP - Applicant Response
5	Concept Development Plan: 7) Inverter Locations.	Inverter locations are not shown on the concept development plan. However, the applicant has provided recommended conditions to address inverter locations by requiring the installation of noise-dampening equipment and setbacks of 500 feet from all non-participating parcel property lines and 750 feet from all existing residential structures. Additionally, audible sound from noise-generating equipment shall not exceed 60 dBA measured from the adjacent non-participatory property line.	Inverter locations will be finalized and approved during final site plan approval. As noted in County Staff Comments, the Application includes a proposed condition no. 6 to address inverter locations and proximity to residential structures which exceeds the County's language by identifying a measurable sound level.
6	Concept Development Plan: 10) Identification of predominant soil types on the property.	Not provided. This was not previously requested.	A U.S. Department of Agricultural Natural Resources Conservation Service web soil survey report identifying soil types and percentages throughout the proposed Project are included as Appendix B.
7	Concept Development Plan: 11) Scaled elevation views and simulations of proposed vegetative buffers at planting, and over five, ten, and 20-year periods, to assess their effectiveness in reducing visual impacts as taken from adjacent public right rights-of-way and dwellings.	Simulations in application packet show plantings only within Isle of Wight County portion of the project. This was not previously required.	No simulations for planted buffers have been supplied because Sycamore Cross benefits from mature existing vegetation as a natural buffer from all public rights of way. Additionally, the Application includes a proposed condition no. 2 which states, "*Within the buffer area there shall be sufficient existing vegetation and trees to create an opaque visual barrier to screen the project area from view. If existing vegetation and trees are insufficient in providing an opaque visual barrier as reasonably determined by the Zoning Administrator to screen the project, then supplemental planting shall be implemented as approved by the Zoning Administrator.*"
8	Performance requirements: 2) Independent engineer. The applicant shall pay an independent engineer, licensed by the commonwealth, to check construction progress weekly and ensure construction is proceeding in accordance with the terms of the CUP. The engineer will resolve any construction problems by mutual agreement between the applicant, engineer, and county staff. The Board of Supervisors will decide any unresolved disputes. Construction activity may halt during the time it takes to bring the issue to the Board for resolution.	Not provided. This was not previously required.	The Applicant is seeking grandfathering from this provision. The Applicant will utilize several key team members to address any issues identified during construction in coordination with and at the direction of the County, including, but not limited to, the Construction Project Manager, the Environmental Compliance Manager, third party inspectors, and, as outlined in proposed condition no. 12, a Project Liaison.

	New Surry County Solar Ordinance Requirements:	Sycamore Cross CUP Application - County Staff Comments	Sycamore Cross CUP - Applicant Response
9	Performance requirements: 4) Erosion and sediment control. Site clearing shall not exceed 100 acres for each phase of development. Sediment control features shall receive county approval on each phase-by-phase basis before beginning any land disturbance or construction activities. Applicants to obtain a written report from either an independent engineer or the administrator determining the stabilization of each phase of construction. Once this determination is made another phase of land disturbance activities can begin.	CUP conditions address Grading Plan but the proposed conditions for Sycamore Cross do not address site clearing limitations. Not previously required.	The Applicant is seeking grandfathering from this condition. The project has an anticipated fenced area of 125 acres which will slightly exceed the 100 acre threshold identified in the proposed ordinance. If the Applicant is required to phase the construction of this project, it would unnecessarily prolong the timeline and impact to residents as well as potentially contradicting VDEQ permitting requirements.
10	Performance Requirements: 5) Visual impacts. The applicant shall demonstrate through project siting and proposed mitigation, if necessary, that the solar project minimizes impacts on view sheds, including from residential areas and areas of scenic, historical, cultural, archeological, and recreational significance. The facility shall utilize only panels that employ anti-glare technology, anti-reflective coatings, and other available mitigation techniques, all that meet or exceed industry standards, to reduce glint and glare. The applicant shall provide written certification from a qualified expert acceptable to the county that the facility's panels incorporate and utilize anti-glare technology and anti-reflective coatings, reduce glint, and glare to levels that meet or exceed industry standards.	Applicant provided a study for the project, but the information is mostly from parcels of land in Isle of Wight County. Proposed ordinance requires more details.	In accordance with the Comprehensive Plan and outlined in our application under Section 3, the project is not located within proximity of any formal place of worship or listed cemeteries; it is not located within a historic or significant viewshed as mapped in the Comprehensive Plan, and based on review of the Virginia Outdoors Plan Mapper and Virginia Department of Conservation and Recreation Natural Heritage mapping application, there are no recreational areas, scenic byways or rivers, local parks, or public access lands within or adjacent to the project area. The Project application was submitted with the intent of meeting all requirements of the Solar Energy Ordinance (2018) in place at time of application which states "*electric solar farm components must have a UL listing or equivalent and must be designed with anti-reflective coating(s).*" The Applicant intends on meeting that requirement.
11	Performance Requirements: 6) National standards. Projects shall comply with generally accepted national environmental protection and product safety standards for the use of solar panels and battery technologies for solar photovoltaic (electric energy) projects. Such existing product certifications and standards include the National Sanitation Foundation/American National Standards Institute No. 457, International Electro technical Commission No. 61215-2, Institute of Electrical and Electronics Engineers Standard 1547, and Underwriters Laboratories No. 61730-2. A site development plan shall reference the specific safety and environmental standards met.	Not provided in the proposed CUP conditions. 2018 Ordinance states, "Electric solar farm components must have a UL listing or equivalent and must be designed with anti-reflective coating(s). Building and electrical plans for the solar farm shall be submitted to the building official for review and approval to ensure compliance with all applicable building and electrical codes." Proposed CUP conditions require applicant to submit building and electrical plans to the Building Inspector for approval.	The Applicant will comply with all applicable laws and regulations.

	New Surry County Solar Ordinance Requirements:	Sycamore Cross CUP Application - County Staff Comments	Sycamore Cross CUP - Applicant Response
12	Performance Requirements: 7) Setbacks. The project area shall be set back at least 300 feet from all abutting public rights of way and main buildings on adjoining parcels and from adjacent property lines. Exceptions to these distances are possible for adjoining parcels owned or leased by the applicant. Increased setbacks over 300 feet and additional buffering may be included in the conditions for a particular permit. Access, erosion and stormwater structures, and interconnection to the electrical grid is allowable through setback areas if such are generally perpendicular to the property line or underground. A 25 foot setback shall be provided between perimeter security fencing and vegetative buffer for emergency access.	Setbacks for inverters are 500 ft by proposed CUP Conditions. Current ordinance requirements for front yard setbacks are 75 ft on a primary highway or 50 feet on a secondary highways, no side yard setbacks, and 25-foot rear yard setbacks. There is no information provided by the applicant that would indicate there is a 25-foot setback provided between the security fencing and vegetative buffer for emergency access.	The Applicant agrees with the County Staff comments and is seeking grandfathering from this provision. Based on the existing adjacent site conditions and our development experience in Virginia, the Applicant believes that the current proposed setbacks will provide adequate buffering from adjacent landowners.
13	Performance Requirements: 9) Maintenance of facility. All inoperative components of the facility shall be removed from the project parcels within six (6) months of inoperability	Not Provided. This was not previously required.	The Applicant proposes an additional condition which would mirror the language in proposed condition no. 17, related to decommissioning. Proposed condition no. 27 shall state, "*With the exception of inventory or spare parts, all in-operative components of the facility shall be removed from the project within 6 months unless owner or operator is maintaining the component(s) and making good faith efforts to reenergize the component(s).*"
14	Performance Requirements: 13) Opaque vegetative buffers. Vegetative buffers sufficient to mitigate the visual impact of the facility are required as follows: a. The buffer shall consist of a landscaping strip at least 300 feet wide, shall be located within the setbacks required, and shall circle the entire perimeter of the property. In no case shall such buffers contain stormwater holding ponds b. Within the buffer area there shall be sufficient existing vegetation and trees to create an opaque visual barrier to screen the project area from view. If no such barrier exists then the applicant shall establish this landscaped strip consisting of four rows of staggered evergreens ten feet apart and on 15-foot centers. Such trees shall be at least five feet tall at the time of planting and expected to grow to a minimum height of 20 feet within 10 years.	Proposed CUP Conditions require 50-foot vegetative buffer around the perimeter of the project area. In the areas without existing vegetation, the applicant is proposing four rows of staggered evergreens ten feet apart on 15-foot centers. The trees will be required to be at least five feet tall at the time of planting. Current ordinance allows for a 15-foot vegetative buffer and allows for trees to be planted at four feet tall at installation.	The Applicant agrees with the County Staff comments and is requesting grandfathering from provision 13a. As designed in the current conceptual site plan, it is expected that all vegetative buffers will make use of existing vegetation and as outlined in proposed condition no. 2, the Applicant will provide supplemental plantings which will meet or exceed the new ordinance requirements in County's proposed 13b. at the discretion of the Zoning Administrator.

	New Surry County Solar Ordinance Requirements:	Sycamore Cross CUP Application - County Staff Comments	Sycamore Cross CUP - Applicant Response
15	Decommissioning. The amount of the surety required shall be 100% of the estimated decommissioning costs plus 20% in administrative fees. Any solar panels, steel, aluminum, copper, fence posts, fencing, or other material removed from the facility as part of decommissioning shall be taken out of Surry County by the owner, lessee, or developer. None of the estimated salvage value of any of this material shall be used to offset the decommissioning costs.	Proposed CUP Conditions state, "Decommissioning. Surety securing the performance of decommissioning of the Project shall be provided in accordance with Va. Code §15.2-2241.2 and in a form acceptable to the Surry County Planning Director and Surry County Attorney. This surety shall have a minimum value of $500,000.00 (the "Baseline Surety"). In the event the Decommissioning Plan indicates the estimated cost of performance of decommissioning, less estimated salvage value of the project (the "Decommissioning Cost") exceeds the value of the Baseline Surety, the value of the surety shall be increased to the value of the Decommissioning Cost. The Decommissioning Plan shall be updated every five (5) years, and as necessary, the Decommissioning Surety shall be adjusted to reflect the updated Decommissioning Cost. Prior to the issuance of permits for installation of equipment, a detailed plan for decommissioning the Project in substantial compliance with §4.11 of the Ordinance and the Decommissioning Plan shall be provided to the County. The Project shall be decommissioned and removed within 6 months after the Project ceases electricity generation for a continuous 6-month period unless the owner or operator is maintaining the Project per all zoning and conditional use permit requirements and making good faith efforts to re-energize the site, in which case the Project shall not be required to be decommissioned. Decommissioning shall include removal of solar collectors, cabling, electrical components, and any other associated items to a depth of at least 36"."	The Applicant agrees with County Staff comments regarding proposed condition no. 17. The Applicant believes the proposed condition identified by County Staff sufficiently addresses decommissioning and therefore, the Applicant requests grandfathering from this provision and acceptance of this proposed condition.

Proposed Conditions

Proposed Conditional Use Permit (CUP) Conditions

The following proposed CUP conditions are the initial step in the permitting process between the Applicant and Surry County. The Applicant developed the following conditions based upon the pre-application meeting with Surry County officials, conditions imposed by the County on other approved solar projects, and an initial review of the project by Summit Design & Engineering Services provided on August 16, 2023, and Planning Commission suggested amendments to the Solar Energy Ordinance adopted on December 6, 2018 as presented in the Agenda Packet for the October 28, 2024 Planning Commission meeting.

1. The Property shall be developed in substantial conformance with the submitted conceptual site plan prepared by AES and dated December 12, 2023.

2. The landscape buffer plan proposed on the concept plan exhibit is conceptual only at this time. A 50-foot vegetative buffer area will be implemented around the perimeter of the project area. Within the buffer area there shall be sufficient existing vegetation and trees to create an opaque visual barrier to screen the project area from view. If existing vegetation and trees are insufficient in providing an opaque visual barrier as reasonably determined by the Zoning Administrator to screen the project, then supplemental planting shall be implemented as approved by the Zoning Administrator. In areas without existing vegetation, ~~then~~ the applicant shall establish this landscaped strip consisting of four rows of staggered evergreens ten feet apart and on 15-foot centers. Such trees shall be at least five feet tall at the time of planting and expected to grow to a minimum height of 20 feet within 10 years. ~~The landscape buffer design and required plantings will meet or exceed the minimum landscaping specifications as outlined in the Solar Energy Ordinance dated December 2018, Article IV, Supplementary Regulations, Section 4-607, and the Energy Project Amendment dated April 2023.~~ The landscape buffer design will be reviewed in detail for approval during the site plan review process. If at any point during the lifetime of the project the Zoning Administrator reasonably determines that the areas of retained existing vegetation and trees no longer effectively screen the project, additional plantings of Loblolly pine, or similar commercially available varieties shall be added to the exterior of the existing vegetation. This additional planting will be coordinated with and approved by the Zoning Administrator.

3. Fencing shall be placed around the solar arrays, inverters, and substation only and not the whole site, in order to provide wildlife corridors. Fenced areas of the project shall be constructed using galvanized steel and in accordance with National Electric Code and the Ordinance standards but in no case shall exceed 7 feet in height.

4. During the site plan review process, Applicant will demonstrate to the Zoning Administrator that 34.5kV lines connecting inverters to the project substation have either been placed within or adjacent to existing overhead utility corridors, within or adjacent to other solar arrays and/or underground where technically and physically practical, accounting for natural and physical obstacles, existing electrical infrastructure, wetlands, electrical interference, recommendations of state agencies, etc.

5. The Applicant will maintain applicable setbacks and screening on the Property, including side and rear yard setbacks (excluding all internal, participating parcel property lines), wildlife corridors, and existing natural vegetation providing a visual screen from adjacent properties and public roads.

6. Inverters shall be installed with noise dampening equipment ~~or~~ and inverters shall be set back a minimum of 500 feet from all non-participating parcel property lines and 750 feet from all existing residential structures. Additionally, audible sound from noise-generating equipment shall not exceed 60 dBA (A-weighted decibels), as measured at any adjacent non-participating property line. The level, however, may be exceeded during short-term exceptional circumstances, such as severe weather.

7. The Project will implement best management practices for erosion and sediment control and stormwater management in alignment with the Virginia Stormwater Management Program and Virginia Stormwater Management Handbook. Enhanced stormwater management techniques, including retaining topsoil for expedited vegetation stabilization and initial seeding prior to mechanical and electrical installation within a drainage area, will be utilized to improve stormwater runoff quantity and quality.

8. The Applicant shall submit the following Studies and Plans concurrently with the Final Site Plan. The Zoning Administrator may refer any of the studies or plans for the Project to a qualified consultant for review and comment, at the Applicant's or their Assignee's expense (as the case may be), the terms and conditions of which shall be determined in advance of the referral with the Applicant or their assignee.
   A. Construction Management Plan. The Applicant shall prepare a Construction Management Plan for each applicable Site Plan for the Project, which shall address the following:
      i. Construction Traffic Management Plan including mitigation measures shall be developed by the Applicant, owner or operator and shall be submitted to the Virginia Department of Transportation (VDOT) and Zoning Administrator for review and approval. This plan shall address traffic control measures, pre-and post-construction road evaluation, and any necessary repairs to the public roads that are required as a result of any damage from Project construction and/or expansion. VDOT permits must be received and be approved by VDOT prior to construction occurring on the area of the project served by the applicable VDOT approved entrance.
      ii. Project access planning, directing employee and delivery traffic to minimize conflicts with local traffic.
      iii. A parking and staging plan shall be submitted as a part of the Final Site Plan approval and be submitted for various stages of the construction process. All subsequent construction processes shall also adhere to submitting a parking and staging plan prior to the commencement for expansion or decommissioning.
      iv. Lighting. During construction of the Project any temporary construction lighting shall be positioned downward, inward, and shielded to eliminate glare from all adjacent properties. Lighting during operation of the Project shall be for security, repair and maintenance purposes only. Any on-site lighting provided for the operational phase of the Solar Facility shall be shielded away from adjacent properties and positioned downward to minimize light spillage onto adjacent properties.
      v. Additionally, the Construction Traffic Management Plan shall include each of the following:
         i. Third party enforcement of the approved Construction Traffic Management Plan.
         ii. Prior to the start of construction, reinforcement of shoulders, clearing of roadside drainage ways, and road improvement where permissible through

coordination with the applicable Virginia Department of Transportation (VDOT) office.

iii. Limit construction traffic on Mill Swamp Road (State Route 623).

iv. A detailed description of what types of vehicles and activities are subject to the Construction Traffic Management Plan and a definition of "material non-compliance" with the Construction Traffic Management Plan.

v. Penalties for material non-compliance with the Construction Traffic Management Plan in accordance with the following:

- First Violation: A written warning may be issued to the Applicant.
- Second Violation: A monetary penalty of $10,000 may be imposed.
- Third Violation: A monetary penalty of $20,000 may be imposed.
- Subsequent Violations: For each subsequent violation, a monetary penalty of $50,000 may be imposed.
- In no event shall monetary penalties assessed under the Transportation Plan exceed a total of $500,000.

B. Construction Mitigation Plan. The Applicant shall prepare a Construction Mitigation Plan for each applicable Site Plan for the Project to the satisfaction of the Zoning Administrator. Each plan shall address, at a minimum:

i. The effective mitigation of dust. All construction roads and construction areas shall minimize dust to the extent practicable by the use of a water truck or other method to keep sediment on the Property and not be of a general nuisance to the adjoining property owners during site construction and/or site expansion for the Project.

ii. Burning operations.

iii. Hours of construction. ~~All pile driving shall be limited to 7:00am to 7:00pm,~~ Monday through Friday 7:00am to 6:00pm and Saturdays from 7:00am to 5:00pm, except in cases of emergency. Except in cases of emergency, no construction is to occur on Sundays by any party involved with the Project. In the event of any emergency event necessitating divergence from the foregoing hours and days of operation, the Applicant shall notify the zoning administrator as soon as reasonably possible. ~~No Sunday pile driving shall occur during site construction, expansion, or operation of the Project, unless otherwise approved by the Zoning Administrator.~~ All other normal on-site construction activity is permitted Monday through ~~Sunday~~ Saturday in accordance with the provisions of the County Noise Ordinance.

iv. General construction complaints.

C. Grading Plan. The Project shall be constructed in compliance with the County-approved grading plan as approved by County staff prior to the commencement of any construction activities in coordination with the Erosion and Sediment Control Plan. The applicant shall construct, maintain, and operate the project in compliance with the approved plan. An E&S bond will be posted for the construction portion of the Project. The grading plan shall:

i. Clearly show existing and proposed contours;

ii. Note the locations and estimated amount of topsoil to be removed (if any)

and the percent of the Site to be graded;

iii. Limit grading to the greatest extent practicable by avoiding slopes greater than fifteen (15) percent except where required for access roads and enhancement of natural topographic features for stormwater management;

iv. Require an earthwork balance to be achieved on-site with no import or export of soil, unless it can be demonstrated to the satisfaction of the Zoning Administrator that doing so would create more clearing and grading than by allowing the import or export of soil;

v. Require topsoil to first be stripped from areas proposed to be permanent access roads which will receive gravel or in any areas where more than a few inches of cut are required and stockpiled on-site to be later used to increase the fertility of areas intended to be seeded.

D. Solar Facility Screening and Vegetation Plan. A separate surety shall be posted for the ongoing maintenance of the project's planted vegetative buffers as shown in the Site Plan in the amount of 100% of the installation cost of all planted vegetation in the vegetative buffer for three (3) years following the Commercial Operation date.

i. Site groundcover for the solar energy facility shall include a variety of native and non-invasive groundcovers that benefit birds, and bees, and other beneficial insects.

ii. Groundcover shall be expeditiously established following the completion of construction activities to minimize erosion and loss of soil.

iii. Use of herbicides to control and maintain groundcover during and post construction shall be approved by the Zoning Administrator or their designee and administered by a licensed contractor.

E. Building and Electrical Plans: Applicant shall submit building and electrical plans to the Building Inspector for approval.

F. Professional wetland, stream, and Resource Protection Area delineations in accordance with state and federal regulations; field and/or GPS surveys of each.

G. US Army Corps of Engineers (USACE) Jurisdictional Determination, field or GPS surveyed.

H. Copies of applicable USACE and/or DEQ permits.

I. A current field run and/or aerial topographic survey on contour intervals of two feet or less, to include limits of steep (>15%) slopes.

J. A field run boundary survey to meet minimum state standards.

K. Professional T&E species and cultural and historical resources reviews and approvals as

noted in the project narrative.

L. Prior to Final Site Plan approval, the Applicant shall submit soil testing reports establishing baseline pre- installation conditions and the Applicant or their assignee shall restore the Project site to at least predevelopment soil condition or other enhanced condition to facilitate the use of the project area for agricultural or silvicultural use as part of the decommissioning process, and as evidenced by post-decommissioning soils tests. Applicant shall provide ground water monitoring as required by the Ordinance.

9. Prior to commercial operation of the Project, the Applicant shall submit a report annually to the County Administrator outlining the Project permitting and development plan progress for the Project. Once operational, the Applicant shall submit an annual operational report to the County Administrator.

10. The Applicant shall provide for construction phase third party inspections and submittal of inspection reports to the Surry County Building Official, at their expense, for the Project. These inspections and reports are itemized as follows:
    a. All inspections and reports required pursuant to the Virginia Erosion and Sediment Control Handbook,
    b. Technical and engineering inspection reports including any advanced electrical inspections required pursuant to the National Electric Code.

11. The areas shown on the Site plan within the “Limits of Disturbance” may only be utilized for the operation and maintenance of the project, to include supporting structures and infrastructure, with the exception of battery storage, or any other means of electrical storage. Small batteries associated with inverters shall not be subject to this provision and shall be considered “supporting infrastructure.” Dual use of the area within the Limits of Disturbance for agricultural and silvicultural production, as applicable, shall be permitted.

12. Upon commencement of construction, Applicant will engage a Project Liaison between citizens, construction crews, maintenance teams and the Applicant. The contact information for the Project Liaison will be posted at each access, published on the Project’s website, and provided to Surry County Staff. The Project Liaison will remain in place until completion of construction. Appropriate Project contact information will be available for the remainder of the Project life.

13. The Applicant shall submit an Emergency Response Plan with the first submission of the site plan. The plan shall include fire suppression methods that can be immediately deployed during both construction and operation of the Project. The plan shall also include a program of education and training to be provided for County emergency response staff with regards to safety for on-site emergency response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The Applicant will include plans for the installation of a Knox Box at the facility

to ensure emergency responders have access to the facility should the need arise, with the Final Site Plan.

a. In addition to the Emergency Response Plan, a laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.

14. The Applicant shall test the soil at various locations throughout the Project approved by the County to monitor soil contents within the project for metals listed in the Resource Conservation and Recovery Act (the "RCRA 8"). Testing shall be conducted prior to construction of the Project (baseline testing), once every five (5) years during operation of the Project, and once following the completion of decommissioning by an independent third-party consultant mutually acceptable to the Applicant and the County, the cost of which will be borne by the Applicant. Testing results shall be submitted to the County by Applicant. Should any post-construction sampling test results indicate increased levels of RCRA 8 contaminants relative to baseline testing, directly attributable to the Project, that exceed the EPA maximum contaminant level for the National Primary Drinking Water Regulations for the RCRA 8, then the Applicant shall coordinate with the Zoning Administrator, Virginia Department of Environmental Quality, Virginia Department of Health and/or other applicable state or federal agencies to determine necessary actions.

15. Prior to Commercial Operation of the Project, the Applicant shall host training of local first responders addressing site-specific hazards and site access. During the operation of the Project, additional training will be provided as deemed necessary by the Public Safety Coordinator.

16. The design, installation, maintenance, and repair of the Project shall be in accordance with the most current National Electrical Code (NFPA 70) and the Virginia Uniform Statewide Building Code. In the event of conflict between the code provisions cited herein, the Project will be constructed, maintained, and operated in accordance with all adopted codes under the Virginia Uniform Statewide Building Code.

17. Decommissioning. Surety securing the performance of decommissioning of the Project shall be provided in accordance with Va. Code §15.2-2241.2 and in a form acceptable to the Surry County Planning Director and Surry County Attorney. This surety shall have a minimum value of $500,000.00 (the "Baseline Surety"). In the event the Decommissioning Plan indicates the estimated cost of performance of decommissioning, less estimated salvage value of the project (the "Decommissioning Cost") exceeds the value of the Baseline Surety, the value of the surety shall be increased to the value of the Decommissioning Cost. The Decommissioning Plan shall be updated every five (5) years, and as necessary, the Decommissioning Surety shall be adjusted to reflect the updated Decommissioning Cost ~~updated estimate of cost of decommissioning~~. Prior to the issuance of permits for installation of equipment, a detailed plan for decommissioning the Project in substantial compliance with §4.11 of the

Ordinance and the Decommissioning Plan shall be provided to the County. The Project shall be decommissioned and removed within ~~12~~6 months after the Project ceases electricity generation for a continuous ~~12~~6-month period unless the owner or operator is maintaining the Project per all zoning and conditional use permit requirements and making good faith efforts to re-energize the site, in which case the Project shall not be required to be decommissioned. Decommissioning shall include removal of solar collectors, cabling, electrical components, and any other associated items to a depth of at least 36".

18. All components of the Project which are removed from service due to damage during construction and operation will be collected and stored onsite in dry waste containers and either recycled or disposed of offsite, outside of Surry County, in accordance with applicable manufacturer and the Environmental Protection Agency (EPA) regulations.

19. The Applicant shall provide the County evidence that all necessary water withdrawal permits have been obtained prior to site plan approval.

20. No signage shall be permitted on the Property other than such notices, warnings, and identification information as required by law.

21. The County may withhold land disturbance permit until evidence is provided to Surry County that required local, state, and federal permits and approvals have been obtained. Limited land disturbance permits may be issued by the Zoning Administrator that authorize certain activities within the site (timbering, etc.). The zoning administrator may also issue land disturbance permits applicable to limited areas of the Project for which all required local, state and federal permits have been obtained.

22. The approved Conditional Use Permit (CUP) shall expire after four years from the date of approval if no substantial construction has taken place in accordance with the plans for which such use was granted unless the Board grants a longer period of time for good cause shown.

23. The Conditional Use Permit (CUP) will be binding on the Applicant or any successors or assigns of the Project. Applicant or any successor or assign shall notify the County upon any transfer or assignment of the Project of such transfer or assignment providing the County with contact information for any transferee.

24. If any condition imposed by this Conditional Use Permit is determined to be invalid, void or unenforceable by any court or other governmental authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision or condition of this Conditional Use Permit.

25. Violations and Revocation.
    a. Stop Work Orders. A violation of any type of the Surry County Zoning Ordinance, this Conditional Use Permit, any Studies or Plans required by this Conditional Use Permit, or any Solar Facility

Siting Agreement may result in a Stop Work Order. Stop Work Orders may be issued 72 hours after delivery of a written notice of violation ("Pending Stop Work Order Notice") by the Zoning Administrator to applicant via email or written notice to the Liaison. Upon issuance of a Pending Stop Work Order Notice, applicant shall meet and/or communicate with the County and determine a process for remedying the violation. Implementation of the remedial process to the County's satisfaction shall result in revocation of the Pending Stop Work Order Notice, or Stop Work Order, if issued.

b. Extended Violations, CUP Revocation. Any violation of any type of the Surry County Zoning Ordinance, this CUP, any Studies or Plans required by this CUP or any Solar Facility Siting Agreement continuing for 60 days from the date a written notice of violation ("NOV") is mailed to the Applicant's point of contact, as set forth in the notice provision of the Siting Agreement, may result in revocation of this CUP if the applicant has failed to meet with the Zoning Administrator and submit a plan to address the violations cited in the NOV, or has failed to comply with such a plan. With respect to any road repairs necessitated by the applicant's use of the roads during construction, any such repairs shall be made within a reasonable period of time after obtaining approval from VDOT. Failure to comply with any and all conditions as approved by the Board of Supervisors may result in this CUP being revoked after a public hearing by the Board.

26. As part of the site plan review, the Applicant shall provide documentation that the selected panels on-site are "Tier 1" modules, as established by the most recent "PV Module Tier 1 List" issued by Bloomberg NEF or a similar third-party analysis widely accepted in the solar industry. Additionally, the make and model of the selected panels and all power-generating equipment initially installed and replaced on the site must qualify, for disposal purposes only, as non-hazardous waste under applicable U.S. Environmental Protection Agency tests (e.g. TCLP).
27. With the exception of inventory or spare parts, all in-operative components of the facility shall be removed from the project within 6 months unless owner or operator is maintaining the component(s) and making good faith efforts to reenergize the component(s).

Appendix A

Excerpt from PJM Study Agreement as evidence of Interconnection Application date

Online Submission of PJM Interconnection Application

Description | Transmission Rights | Phases & Agreements | Dates

Project/OASIS ID	Name	State	Status	Transmission Owner	Projected In Service Date	Actual In Service Date	Submitted Date	Start Date	End Date	Withdrawn Date
ac2-141	Search			Search						
AC2-141	Septa 500kV	VA	Engineering and Procurement	Dominion	4.1.2026		3.30.2017			

Showing results 1-1 of 1

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AC2-141

ATTACHMENT N

Form of

Generation Interconnection Feasibility Study Agreement

RECITALS

1. This Generation Interconnection Feasibility Study Agreement, dated as of 03/03/2017 , is entered into, by and between sPower Development Company, LLC ("Interconnection Customer") and PJM Interconnection, L.L.C. ("Transmission Provider") (individually referred to as a "Party," or collectively referred to as the "Parties") pursuant to Part IV and Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff ("PJM Tariff") (the "Agreement"). Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the PJM Tariff.

2. By submitting this Agreement and complying with Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, the Interconnection Customer has submitted an Interconnection Request. In accordance with Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, the Interconnection Customer has also submitted with this Agreement the applicable required deposit to the Transmission Provider.

3. By submitting this Agreement to the Transmission Provider, the Interconnection Customer requests interconnection to the Transmission System of a generating project with the following specifications:

    a. Location of generating unit site (include both a written description (e.g., street address, global positioning coordinates) and attach a map in PDF format depicting the property boundaries and the location of the generating unit site):

    Latitude: 37.0344800 Longitude: -76.7624560

    b. Identification of evidence of ownership interest in, or right to acquire or control, the generating site for a minimum of three years for large generation, or for a minimum of two years for small generation. Include both a written description of the evidence to be relied upon and attach a Word or PDF version copy thereof. If the evidence of ownership interest in, or right to acquire or control the generating site is not yet available, provide a detailed explanation of why such evidence is not available and provide a good faith estimated date upon which such evidence shall be submitted to the Transmission Provider. Though site control evidence may be submitted separately from this Agreement, the Interconnection Request is still subject to the overall deficiency review period and deficiency response period time constraints provided for in Section 36.1.01, 110.1, 111.1, or 112.1, as applicable, of the PJM Tariff, and shall not be assigned a Queue Position without site control evidence acceptable to the Transmission Provider.:

    c. Specification of Requested Maximum Facility Output and Requested Capacity Interconnection Rights. The requested Maximum Facility Output megawatts and requested Capacity Interconnection Rights megawatts indicated in this section may be reduced as this Interconnection Request proceeds in the Transmission Provider Interconnection Request process, but may not be increased after this Agreement is submitted to the Transmission Provider.

Appendix B
Soil Survey for the Project Area

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Surry County, Virginia

January 15, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

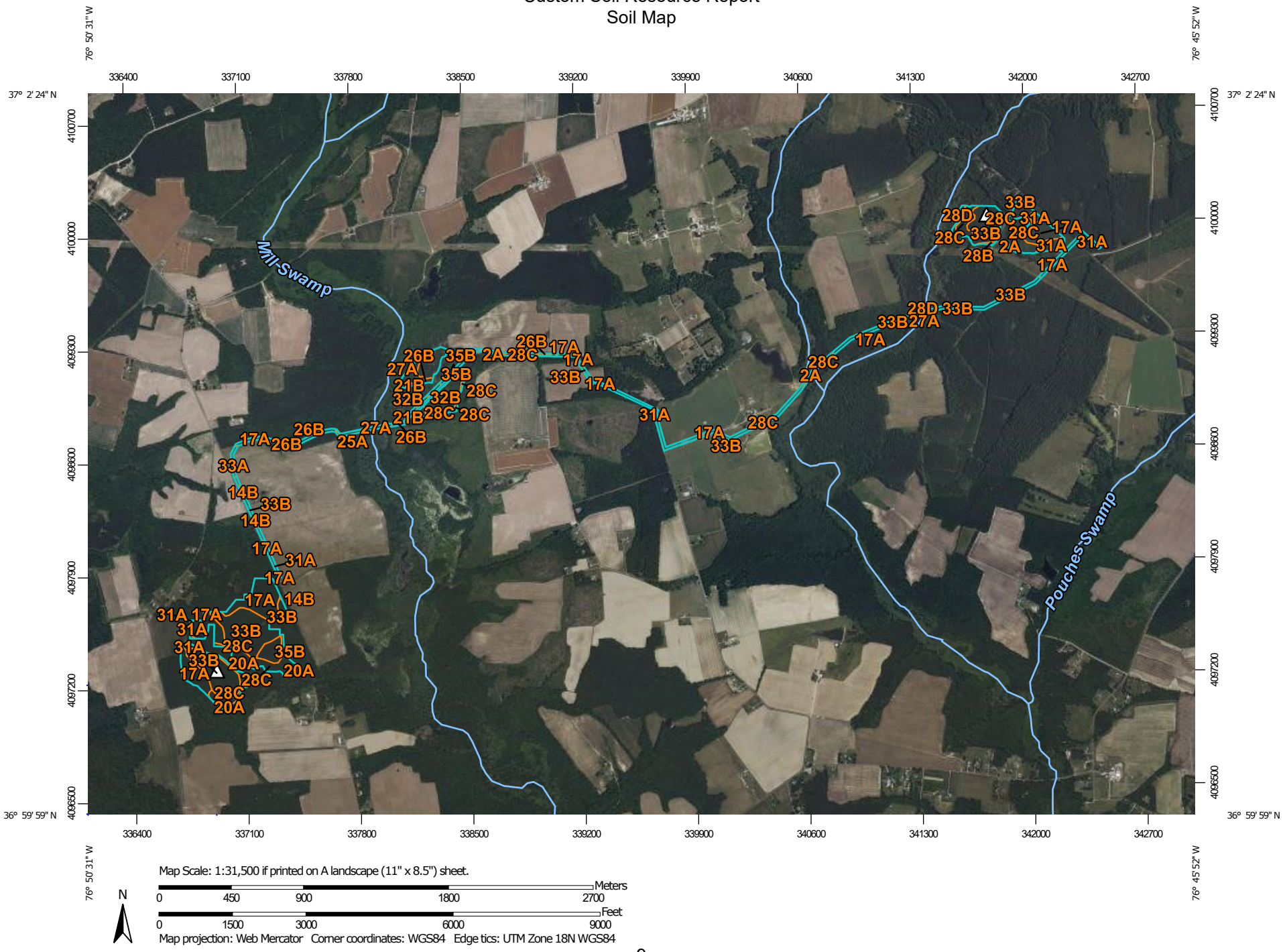
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:31,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 450 900 1800 2700

Feet: 0 1500 3000 6000 9000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Surry County, Virginia
Survey Area Data: Version 21, Aug 28, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—Jul 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2A	Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded	0.6	0.4%
14B	Emporia fine sandy loam, 2 to 6 percent slopes	0.3	0.2%
17A	Jedburg loam, 0 to 2 percent slopes	34.9	22.0%
19B	Kenansville sand, 2 to 6 percent slopes	5.3	3.4%
20A	Kinston loam, 0 to 2 percent slopes, frequently flooded	1.3	0.8%
21B	Lakeland sand, 2 to 6 percent slopes	0.8	0.5%
25A	Nahunta silt loam, 0 to 2 percent slopes	0.7	0.5%
26B	Nansemond sandy loam, 0 to 4 percent slopes	3.2	2.0%
27A	Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded	1.2	0.7%
28B	Nevarc-Remlik complex, 2 to 6 percent slopes	0.2	0.2%
28C	Nevarc-Remlik complex, 6 to 10 percent slopes	30.4	19.2%
28D	Nevarc-Remlik complex, 10 to 15 percent slopes	1.3	0.8%
31A	Rains fine sandy loam, 0 to 2 percent slopes	10.8	6.8%
32B	Rumford loamy sand, 2 to 6 percent slopes	8.7	5.5%
33A	Slagle fine sandy loam, 0 to 2 percent slopes	0.9	0.6%
33B	Slagle fine sandy loam, 2 to 6 percent slopes	50.8	32.1%
35B	Uchee loamy fine sand, 2 to 6 percent slopes	6.6	4.2%
Totals for Area of Interest		**158.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps.

The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Surry County, Virginia

2A—Bibb fine sandy loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 43fp
Elevation: 0 to 130 feet
Mean annual precipitation: 25 to 59 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Bibb and similar soils: 80 percent
Minor components: 16 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bibb

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvial sediments

Typical profile

H1 - 0 to 16 inches: fine sandy loam
H2 - 16 to 40 inches: sandy loam
H3 - 40 to 70 inches: gravelly sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Kinston

Percent of map unit: 8 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: Yes

Rains

Percent of map unit: 2 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 2 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bohicket

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Lawnes

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Levy

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mattan

Percent of map unit: 1 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

14B—Emporia fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43gz
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Emporia and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 14 inches: loamy fine sand
H3 - 14 to 18 inches: fine sandy loam
H4 - 18 to 41 inches: sandy clay loam
H5 - 41 to 54 inches: sandy clay
H6 - 54 to 72 inches: stratified sandy loam to sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F153AY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

17A—Jedburg loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43h4
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Jedburg and similar soils: 85 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Jedburg

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 57 inches: loam
H3 - 57 to 72 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Rains

Percent of map unit: 6 percent
Landform: Marine terraces

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

19B—Kenansville sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43h8
Elevation: 10 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Kenansville and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kenansville

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy marine sediments

Typical profile

H1 - 0 to 24 inches: sand
H2 - 24 to 48 inches: sandy loam
H3 - 48 to 70 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F153AY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

20A—Kinston loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 43h9
Elevation: 0 to 130 feet
Mean annual precipitation: 25 to 59 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Kinston and similar soils: 75 percent
Minor components: 21 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kinston

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvial sediments

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 52 inches: sandy clay loam
H3 - 52 to 74 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Bibb

Percent of map unit: 8 percent
Landform: Flood plains

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Rains

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nawney

Percent of map unit: 3 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bohicket

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Lawnes

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Levy

Percent of map unit: 2 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Mattan

Percent of map unit: 1 percent
Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

21B—Lakeland sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43hd
Elevation: 10 to 70 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Lakeland and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakeland

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy eolian sediments

Typical profile

H1 - 0 to 5 inches: sand
H2 - 5 to 74 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F153AY010NC - Dry Sands
Hydric soil rating: No

25A—Nahunta silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43fv
Elevation: 0 to 60 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Nahunta and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nahunta

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty alluvial sediments

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 70 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F153AY040NC - Moist Loamy Rises and Flats
Hydric soil rating: No

26B—Nansemond sandy loam, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 43hv
Elevation: 10 to 100 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Nansemond and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nansemond

Setting

Landform: Drainageways
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 52 inches: sandy loam
H3 - 52 to 70 inches: sandy loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F153AY040NC - Moist Loamy Rises and Flats
Hydric soil rating: No

27A—Nawney and Mattan soils, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 43hm
Elevation: 0 to 130 feet
Mean annual precipitation: 25 to 59 inches
Mean annual air temperature: 46 to 70 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Nawney and similar soils: 50 percent
Mattan and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nawney

Setting

Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvial sediments

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 44 inches: loam
H3 - 44 to 70 inches: loamy sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Mattan

Setting

Landform: Swamps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic and loamy alluvial sediments

Typical profile

Oa1 - 0 to 14 inches: muck
Oa2 - 14 to 40 inches: muck
H3 - 40 to 48 inches: loamy sand
H4 - 48 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Bibb

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Kinston

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bohicket

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: Yes

Lawnes

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Levy

Percent of map unit: 1 percent
Landform: Salt marshes
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

28B—Nevarc-Remlik complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43hx
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 36 percent
Remlik and similar soils: 34 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F153AY045NC - Moist Clay Rises and Flats
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F153AY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

28C—Nevarc-Remlik complex, 6 to 10 percent slopes

Map Unit Setting

National map unit symbol: 43j0
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 36 percent
Remlik and similar soils: 34 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F153AY045NC - Moist Clay Rises and Flats
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F153AY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

28D—Nevarc-Remlik complex, 10 to 15 percent slopes

Map Unit Setting

National map unit symbol: 43j1
Elevation: 10 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Nevarc and similar soils: 40 percent
Remlik and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nevarc

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Clayey alluvial and marine sediments

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 50 inches: clay loam
H3 - 50 to 74 inches: fine sandy loam

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F153AY045NC - Moist Clay Rises and Flats
Hydric soil rating: No

Description of Remlik

Setting

Landform: Marine terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy and sandy alluvial and marine sediments

Typical profile

H1 - 0 to 22 inches: loamy fine sand
H2 - 22 to 39 inches: fine sandy loam
H3 - 39 to 74 inches: sand

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 48 to 79 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F153AY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

31A—Rains fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43j8
Elevation: 70 to 110 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Rains and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rains

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 12 inches: fine sandy loam
H2 - 12 to 72 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: B/D
Ecological site: F153AY060NC - Wet Loamy Flats and Depressions
Hydric soil rating: Yes

32B—Rumford loamy sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 43jf
Elevation: 50 to 90 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Rumford and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rumford

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy and sandy marine sediments

Typical profile

H1 - 0 to 11 inches: loamy sand
H2 - 11 to 46 inches: fine sandy loam
H3 - 46 to 70 inches: sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F153AY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

33A—Slagle fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 43jg
Elevation: 60 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 80 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy marine sediments

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 41 inches: sandy clay loam
H3 - 41 to 70 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Rains

Percent of map unit: 2 percent
Landform: Marine terraces

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

33B—Slagle fine sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2sgy1
Elevation: 70 to 330 feet
Mean annual precipitation: 32 to 51 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 158 to 206 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 83 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Tread, riser, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bt - 8 to 51 inches: sandy clay loam
C - 51 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C

Ecological site: F153AY040NC - Moist Loamy Rises and Flats
Hydric soil rating: No

Minor Components

Myatt
Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F153AY060NC - Wet Loamy Flats and Depressions
Hydric soil rating: Yes

35B—Uchee loamy fine sand, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: 43jp
Elevation: 50 to 130 feet
Mean annual precipitation: 42 to 52 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Uchee and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Uchee

Setting
Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine sediments

Typical profile
H1 - 0 to 34 inches: loamy fine sand
H2 - 34 to 72 inches: sandy clay loam

Properties and qualities
Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Hydric soil rating: No

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December 13, 2024

Department of Planning & Community Development
c/o Horace H. Wade III, AICP, CZA
Director, Planning & Community Development
45 School Street
Surry, VA 23883

Re: Revised Submittal for Sycamore Cross Solar Project

Dear Mr. Wade,

Please find enclosed Sycamore Cross Solar, LLC's revised submittal of the Proposed Conditions for the Sycamore Cross Solar Project. The Proposed Conditions have been revised to incorporate aspects of the Planning Commission's suggested amendments to the Solar Energy Ordinance adopted on December 6, 2018, as presented in the Agenda Packet for the October 28, 2024 Planning Commission meeting, and additional conversations with Planning Commission at their regularly scheduled November 25, 2024 meeting.

We respectfully request your review of these revised Proposed Conditions along with our application submitted April 25, 2024 for the inclusion of the Project on the December 16th Planning Commission agenda for the Conditional Use Permit application review. The following Proposed Conditions have been amended:

1. Attachment B – Proposed Conditional Use Permit Conditions
    a. Condition 2
    b. Condition 8B
    c. Condition 17

We noted that edits in Condition 2 and Condition 8B had not been removed from the clean version of Attachment B – Proposed Conditional Use Permit Conditions submitted on October 25, 2024 and therefore are resubmitting it with this version of the Proposed Condtiions.

Thank you for your cooperation and guidance with the application process. The AES team is available to meet or talk at your convenience. I can be reached using the contact information provided in the signature below.

Sincerely,

Gregory S. Creswell

Greg Creswell
Senior Project Development Manager
804-334-9882
Gregory.Creswell@aes.com

Proposed Conditional Use Permit (CUP) Conditions

The following proposed CUP conditions are the initial step in the permitting process between the Applicant and Surry County. The Applicant developed the following conditions based upon the pre-application meeting with Surry County officials, conditions imposed by the County on other approved solar projects, and an initial review of the project by Summit Design & Engineering Services provided on August 16, 2023, and Planning Commission suggested amendments to the Solar Energy Ordinance adopted on December 6, 2018 as presented in the Agenda Packet for the October 28, 2024 Planning Commission meeting.

1. The Property shall be developed in substantial conformance with the submitted conceptual site plan prepared by AES and dated December 12, 2023.

2. The landscape buffer plan proposed on the concept plan exhibit is conceptual only at this time. A 50-foot vegetative buffer area will be implemented around the perimeter of the project area. Within the buffer area there shall be sufficient existing vegetation and trees to create an opaque visual barrier to screen the project area from view. If existing vegetation and trees are insufficient in providing an opaque visual barrier as reasonably determined by the Zoning Administrator to screen the project, then supplemental planting shall be implemented as approved by the Zoning Administrator. In areas without existing vegetation, ~~then~~ the applicant shall establish this landscaped strip consisting of four rows of staggered evergreens ten feet apart and on 15-foot centers. Such trees shall be at least five feet tall at the time of planting and expected to grow to a minimum height of 20 feet within 10 years. ~~The landscape buffer design and required plantings will meet or exceed the minimum landscaping specifications as outlined in the Solar Energy Ordinance dated December 2018, Article IV, Supplementary Regulations, Section 4-607, and the Energy Project Amendment dated April 2023.~~ The landscape buffer design will be reviewed in detail for approval during the site plan review process. If at any point during the lifetime of the project the Zoning Administrator reasonably determines that the areas of retained existing vegetation and trees no longer effectively screen the project, additional plantings of Loblolly pine, or similar commercially available varieties shall be added to the exterior of the existing vegetation. This additional planting will be coordinated with and approved by the Zoning Administrator.

3. Fencing shall be placed around the solar arrays, inverters, and substation only and not the whole site, in order to provide wildlife corridors. Fenced areas of the project shall be constructed using galvanized steel and in accordance with National Electric Code and the Ordinance standards but in no case shall exceed 7 feet in height.

4. During the site plan review process, Applicant will demonstrate to the Zoning Administrator that 34.5kV lines connecting inverters to the project substation have either been placed within or adjacent to existing overhead utility corridors, within or adjacent to other solar arrays and/or underground where technically and physically practical, accounting for natural and physical obstacles, existing electrical infrastructure, wetlands, electrical interference, recommendations of state agencies, etc.

5. The Applicant will maintain applicable setbacks and screening on the Property, including side and rear yard setbacks (excluding all internal, participating parcel property lines), wildlife corridors, and existing natural vegetation providing a visual screen from adjacent properties and public roads.

6. Inverters shall be installed with noise dampening equipment ~~or~~ and inverters shall be set back a minimum of 500 feet from all non-participating parcel property lines and 750 feet from all existing residential structures. Additionally, audible sound from noise-generating equipment shall not exceed 60 dBA (A-weighted decibels), as measured at any adjacent non-participating property line. The level, however, may be exceeded during short-term exceptional circumstances, such as severe weather.

7. The Project will implement best management practices for erosion and sediment control and stormwater management in alignment with the Virginia Stormwater Management Program and Virginia Stormwater Management Handbook. Enhanced stormwater management techniques, including retaining topsoil for expedited vegetation stabilization and initial seeding prior to mechanical and electrical installation within a drainage area, will be utilized to improve stormwater runoff quantity and quality.

8. The Applicant shall submit the following Studies and Plans concurrently with the Final Site Plan. The Zoning Administrator may refer any of the studies or plans for the Project to a qualified consultant for review and comment, at the Applicant's or their Assignee's expense (as the case may be), the terms and conditions of which shall be determined in advance of the referral with the Applicant or their assignee.
   A. Construction Management Plan. The Applicant shall prepare a Construction Management Plan for each applicable Site Plan for the Project, which shall address the following:
      i. Construction Traffic Management Plan including mitigation measures shall be developed by the Applicant, owner or operator and shall be submitted to the Virginia Department of Transportation (VDOT) and Zoning Administrator for review and approval. This plan shall address traffic control measures, pre-and post-construction road evaluation, and any necessary repairs to the public roads that are required as a result of any damage from Project construction and/or expansion. VDOT permits must be received and be approved by VDOT prior to construction occurring on the area of the project served by the applicable VDOT approved entrance.
      ii. Project access planning, directing employee and delivery traffic to minimize conflicts with local traffic.
      iii. A parking and staging plan shall be submitted as a part of the Final Site Plan approval and be submitted for various stages of the construction process. All subsequent construction processes shall also adhere to submitting a parking and staging plan prior to the commencement for expansion or decommissioning.
      iv. Lighting. During construction of the Project any temporary construction lighting shall be positioned downward, inward, and shielded to eliminate glare from all adjacent properties. Lighting during operation of the Project shall be for security, repair and maintenance purposes only. Any on-site lighting provided for the operational phase of the Solar Facility shall be shielded away from adjacent properties and positioned downward to minimize light spillage onto adjacent properties.
      v. Additionally, the Construction Traffic Management Plan shall include each of the following:
         i. Third party enforcement of the approved Construction Traffic Management Plan.
         ii. Prior to the start of construction, reinforcement of shoulders, clearing of roadside drainage ways, and road improvement where permissible through

coordination with the applicable Virginia Department of Transportation (VDOT) office.

iii. Limit construction traffic on Mill Swamp Road (State Route 623).

iv. A detailed description of what types of vehicles and activities are subject to the Construction Traffic Management Plan and a definition of "material non-compliance" with the Construction Traffic Management Plan.

v. Penalties for material non-compliance with the Construction Traffic Management Plan in accordance with the following:

- First Violation: A written warning may be issued to the Applicant.
- Second Violation: A monetary penalty of $10,000 may be imposed.
- Third Violation: A monetary penalty of $20,000 may be imposed.
- Subsequent Violations: For each subsequent violation, a monetary penalty of $50,000 may be imposed.
- In no event shall monetary penalties assessed under the Transportation Plan exceed a total of $500,000.

B. Construction Mitigation Plan. The Applicant shall prepare a Construction Mitigation Plan for each applicable Site Plan for the Project to the satisfaction of the Zoning Administrator. Each plan shall address, at a minimum:

i. The effective mitigation of dust. All construction roads and construction areas shall minimize dust to the extent practicable by the use of a water truck or other method to keep sediment on the Property and not be of a general nuisance to the adjoining property owners during site construction and/or site expansion for the Project.

ii. Burning operations.

iii. Hours of construction. ~~All pile driving shall be limited to 7:00am to 7:00pm,~~ Monday through Friday 7:00am to 6:00pm and Saturdays from 7:00am to 5:00pm, except in cases of emergency. Except in cases of emergency, no construction is to occur on Sundays by any party involved with the Project. In the event of any emergency event necessitating divergence from the foregoing hours and days of operation, the Applicant shall notify the zoning administrator as soon as reasonably possible. ~~No Sunday pile driving shall occur during site construction, expansion, or operation of the Project, unless otherwise approved by the Zoning Administrator.~~ All other normal on-site construction activity is permitted Monday through ~~Sunday~~ Saturday in accordance with the provisions of the County Noise Ordinance.

iv. General construction complaints.

C. Grading Plan. The Project shall be constructed in compliance with the County-approved grading plan as approved by County staff prior to the commencement of any construction activities in coordination with the Erosion and Sediment Control Plan. The applicant shall construct, maintain, and operate the project in compliance with the approved plan. An E&S bond will be posted for the construction portion of the Project. The grading plan shall:

i. Clearly show existing and proposed contours;

ii. Note the locations and estimated amount of topsoil to be removed (if any)

and the percent of the Site to be graded;

iii. Limit grading to the greatest extent practicable by avoiding slopes greater than fifteen (15) percent except where required for access roads and enhancement of natural topographic features for stormwater management;

iv. Require an earthwork balance to be achieved on-site with no import or export of soil, unless it can be demonstrated to the satisfaction of the Zoning Administrator that doing so would create more clearing and grading than by allowing the import or export of soil;

v. Require topsoil to first be stripped from areas proposed to be permanent access roads which will receive gravel or in any areas where more than a few inches of cut are required and stockpiled on-site to be later used to increase the fertility of areas intended to be seeded.

D. Solar Facility Screening and Vegetation Plan. A separate surety shall be posted for the ongoing maintenance of the project's planted vegetative buffers as shown in the Site Plan in the amount of 100% of the installation cost of all planted vegetation in the vegetative buffer for three (3) years following the Commercial Operation date.

i. Site groundcover for the solar energy facility shall include a variety of native and non-invasive groundcovers that benefit birds, and bees, and other beneficial insects.

ii. Groundcover shall be expeditiously established following the completion of construction activities to minimize erosion and loss of soil.

iii. Use of herbicides to control and maintain groundcover during and post construction shall be approved by the Zoning Administrator or their designee and administered by a licensed contractor.

E. Building and Electrical Plans: Applicant shall submit building and electrical plans to the Building Inspector for approval.

F. Professional wetland, stream, and Resource Protection Area delineations in accordance with state and federal regulations; field and/or GPS surveys of each.

G. US Army Corps of Engineers (USACE) Jurisdictional Determination, field or GPS surveyed.

H. Copies of applicable USACE and/or DEQ permits.

I. A current field run and/or aerial topographic survey on contour intervals of two feet or less, to include limits of steep (>15%) slopes.

J. A field run boundary survey to meet minimum state standards.

K. Professional T&E species and cultural and historical resources reviews and approvals as

noted in the project narrative.

L. Prior to Final Site Plan approval, the Applicant shall submit soil testing reports establishing baseline pre- installation conditions and the Applicant or their assignee shall restore the Project site to at least predevelopment soil condition or other enhanced condition to facilitate the use of the project area for agricultural or silvicultural use as part of the decommissioning process, and as evidenced by post-decommissioning soils tests. Applicant shall provide ground water monitoring as required by the Ordinance.

9. Prior to commercial operation of the Project, the Applicant shall submit a report annually to the County Administrator outlining the Project permitting and development plan progress for the Project. Once operational, the Applicant shall submit an annual operational report to the County Administrator.

10. The Applicant shall provide for construction phase third party inspections and submittal of inspection reports to the Surry County Building Official, at their expense, for the Project. These inspections and reports are itemized as follows:
    a. All inspections and reports required pursuant to the Virginia Erosion and Sediment Control Handbook,
    b. Technical and engineering inspection reports including any advanced electrical inspections required pursuant to the National Electric Code.

11. The areas shown on the Site plan within the “Limits of Disturbance” may only be utilized for the operation and maintenance of the project, to include supporting structures and infrastructure, with the exception of battery storage, or any other means of electrical storage. Small batteries associated with inverters shall not be subject to this provision and shall be considered “supporting infrastructure.” Dual use of the area within the Limits of Disturbance for agricultural and silvicultural production, as applicable, shall be permitted.

12. Upon commencement of construction, Applicant will engage a Project Liaison between citizens, construction crews, maintenance teams and the Applicant. The contact information for the Project Liaison will be posted at each access, published on the Project’s website, and provided to Surry County Staff. The Project Liaison will remain in place until completion of construction. Appropriate Project contact information will be available for the remainder of the Project life.

13. The Applicant shall submit an Emergency Response Plan with the first submission of the site plan. The plan shall include fire suppression methods that can be immediately deployed during both construction and operation of the Project. The plan shall also include a program of education and training to be provided for County emergency response staff with regards to safety for on-site emergency response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The Applicant will include plans for the installation of a Knox Box at the facility

to ensure emergency responders have access to the facility should the need arise, with the Final Site Plan.

a. In addition to the Emergency Response Plan, a laminated Emergency Response Poster will be mounted near the front gate. The poster will include a general site plan, evacuation routes and muster points, emergency response chain of command, directions to the closest hospital, coordinates to the closest life flight landing area, and other pertinent information associated with the facility during an emergency response.

14. The Applicant shall test the soil at various locations throughout the Project approved by the County to monitor soil contents within the project for metals listed in the Resource Conservation and Recovery Act (the "RCRA 8"). Testing shall be conducted prior to construction of the Project (baseline testing), once every five (5) years during operation of the Project, and once following the completion of decommissioning by an independent third-party consultant mutually acceptable to the Applicant and the County, the cost of which will be borne by the Applicant. Testing results shall be submitted to the County by Applicant. Should any post-construction sampling test results indicate increased levels of RCRA 8 contaminants relative to baseline testing, directly attributable to the Project, that exceed the EPA maximum contaminant level for the National Primary Drinking Water Regulations for the RCRA 8, then the Applicant shall coordinate with the Zoning Administrator, Virginia Department of Environmental Quality, Virginia Department of Health and/or other applicable state or federal agencies to determine necessary actions.

15. Prior to Commercial Operation of the Project, the Applicant shall host training of local first responders addressing site-specific hazards and site access. During the operation of the Project, additional training will be provided as deemed necessary by the Public Safety Coordinator.

16. The design, installation, maintenance, and repair of the Project shall be in accordance with the most current National Electrical Code (NFPA 70) and the Virginia Uniform Statewide Building Code. In the event of conflict between the code provisions cited herein, the Project will be constructed, maintained, and operated in accordance with all adopted codes under the Virginia Uniform Statewide Building Code.

17. Decommissioning. Surety securing the performance of decommissioning of the Project shall be provided in accordance with Va. Code §15.2-2241.2 and in a form acceptable to the Surry County Planning Director and Surry County Attorney. This surety shall have a minimum value of $500,000.00 (the "Baseline Surety"). In the event the Decommissioning Plan indicates the estimated cost of performance of decommissioning, less estimated salvage value of the project (the "Decommissioning Cost") exceeds the value of the Baseline Surety, the value of the surety shall be increased to the value of the Decommissioning Cost. The Decommissioning Plan shall be updated every five (5) years, and as necessary, the Decommissioning Surety shall be adjusted to reflect the updated Decommissioning Cost ~~updated estimate of cost of decommissioning~~. Prior to the issuance of permits for installation of equipment, a detailed plan for decommissioning the Project in substantial compliance with §4.11 of the

Ordinance and the Decommissioning Plan shall be provided to the County. The Project shall be decommissioned and removed within ~~12~~6 months after the Project ceases electricity generation for a continuous ~~12~~6-month period unless the owner or operator is maintaining the Project per all zoning and conditional use permit requirements and making good faith efforts to re-energize the site, in which case the Project shall not be required to be decommissioned. Decommissioning shall include removal of solar collectors, cabling, electrical components, and any other associated items to a depth of at least 36".

18. All components of the Project which are removed from service due to damage during construction and operation will be collected and stored onsite in dry waste containers and either recycled or disposed of offsite, outside of Surry County, in accordance with applicable manufacturer and the Environmental Protection Agency (EPA) regulations.

19. The Applicant shall provide the County evidence that all necessary water withdrawal permits have been obtained prior to site plan approval.

20. No signage shall be permitted on the Property other than such notices, warnings, and identification information as required by law.

21. The County may withhold land disturbance permit until evidence is provided to Surry County that required local, state, and federal permits and approvals have been obtained. Limited land disturbance permits may be issued by the Zoning Administrator that authorize certain activities within the site (timbering, etc.). The zoning administrator may also issue land disturbance permits applicable to limited areas of the Project for which all required local, state and federal permits have been obtained.

22. The approved Conditional Use Permit (CUP) shall expire after four years from the date of approval if no substantial construction has taken place in accordance with the plans for which such use was granted unless the Board grants a longer period of time for good cause shown.

23. The Conditional Use Permit (CUP) will be binding on the Applicant or any successors or assigns of the Project. Applicant or any successor or assign shall notify the County upon any transfer or assignment of the Project of such transfer or assignment providing the County with contact information for any transferee.

24. If any condition imposed by this Conditional Use Permit is determined to be invalid, void or unenforceable by any court or other governmental authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision or condition of this Conditional Use Permit.

25. Violations and Revocation.
    a. Stop Work Orders. A violation of any type of the Surry County Zoning Ordinance, this Conditional Use Permit, any Studies or Plans required by this Conditional Use Permit, or any Solar Facility

Siting Agreement may result in a Stop Work Order. Stop Work Orders may be issued 72 hours after delivery of a written notice of violation ("Pending Stop Work Order Notice") by the Zoning Administrator to applicant via email or written notice to the Liaison. Upon issuance of a Pending Stop Work Order Notice, applicant shall meet and/or communicate with the County and determine a process for remedying the violation. Implementation of the remedial process to the County's satisfaction shall result in revocation of the Pending Stop Work Order Notice, or Stop Work Order, if issued.

b. Extended Violations, CUP Revocation. Any violation of any type of the Surry County Zoning Ordinance, this CUP, any Studies or Plans required by this CUP or any Solar Facility Siting Agreement continuing for 60 days from the date a written notice of violation ("NOV") is mailed to the Applicant's point of contact, as set forth in the notice provision of the Siting Agreement, may result in revocation of this CUP if the applicant has failed to meet with the Zoning Administrator and submit a plan to address the violations cited in the NOV, or has failed to comply with such a plan. With respect to any road repairs necessitated by the applicant's use of the roads during construction, any such repairs shall be made within a reasonable period of time after obtaining approval from VDOT. Failure to comply with any and all conditions as approved by the Board of Supervisors may result in this CUP being revoked after a public hearing by the Board.

Sycamore Cross Solar Project

Conditional Use Permit and 2232 Review Application

Prepared by:

Sycamore Cross Solar, LLC
4200 Innslake Drive, Suite 302
Glen Allen, VA 23060

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Table of Contents

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Section 1
Cover Letter

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February 22, 2024

Department of Planning & Community Development
c/o Horace H. Wade III, AICP, CZA
Director, Planning & Community Development
45 School Street
Surry, VA 23883

Re: Conditional Use Permit and 2232 Review Application Submittal for Sycamore Cross Solar Project

Dear Mr. Wade,

Please find enclosed Sycamore Cross Solar, LLC's submittal of an application for a Conditional Use Permit and Request for 2232 Review for a photovoltaic solar generation facility of up to 240 megawatts located in Isle of Wight and Surry Counties. We are submitting this information in electronic format per your guidance. In the event hard copies are required, please contact me and we will provide them.

Thank you for your cooperation and guidance with the application process. We look forward to working with you, your staff, and consultant to answer questions and offer any needed clarity. The AES team is available to meet or talk at your convenience. I can be reached using the contact information provided in the signature below.

Sincerely,

Gregory S. Creswell

Greg Creswell
Senior Project Development Manager
804-334-9882
Gregory.Creswell@aes.com

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Section 2
Project Narrative

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Project Narrative

PROJECT OVERVIEW

Sycamore Cross Solar, LLC, a subsidiary of AES Clean Energy (AES), is proposing to build a photovoltaic (PV) solar generation facility of up to approximately 240 megawatts to be located on 2488 acres in Surry and Isle of Wight Counties, Virginia (Project).

Within Surry County, the Sycamore Cross project arrays will be developed on three parcels (parcel ID 60-9, 60-17, and 61-3) totaling 806 acres, of which approximately 125 acres will be fenced (the "Project Parcels"). Additionally, there are three parcels (parcel ID 60-1-1, 61-2, and 61-4) which will be utilized as easement only parcels (the "Easement Parcels"). The Easement Parcels will only contain medium voltage feeder lines which will connect the fenced, solar generating equipment areas to the Project substation. All six parcels are zoned M-1 and were previously approved for solar as part of the Cavalier Solar Project (CUP 2021-01 ("Cavalier Solar")). The areas of the Project Parcels to be developed for Sycamore Cross Solar were not used for Cavalier, allowing Sycamore Cross to optimize land that has already been rezoned to M-1 and designated as "Approved and Existing Solar" in the Surry County Comprehensive Plan as amended March 2023. In addition to utilizing land that Surry County has already zoned and identified in this way, the Sycamore Cross project will follow the same utility corridors as Cavalier Solar as a method to minimize potential impacts to viewshed.

The Project study area is shown on the orthoimagery and U.S. Geological Survey Project Location Maps (Figures 1 and 2). As described in Section 10-163 of the Surry County Solar Energy Ordinance (Solar Energy Ordinance), the M-1 zoning district allows for solar farms with the approval of a conditional use permit (CUP).

The proposed Project satisfies the goals and objectives of the most recent Surry County Comprehensive Plan (Plan), adopted in September 2020 and the 2023 Plan Amendment. This is further discussed in Section 3 of this application.

This CUP application package and associated fees (Attachment A) are being submitted to Surry County in accordance with Appendix A Article I Sec. 1-501 Conditional Use Permits and Article IV Division 4 Section 10-163, allowable zoning districts, applicable codes and inspections. Additionally, a list of proposed CUP conditions for the Project are included in Attachment B and further detailed throughout this document.

PROJECT APPLICANT

Sycamore Cross Solar, LLC is wholly owned by AES Clean Energy (AES; the "Applicant"). Since 1981, AES has been headquartered in the Commonwealth of Virginia. Our commitment is to provide clean and reliable energy in a way that benefits every Virginian. Currently, we operate 660 megawatts (MW) of renewable energy in Virginia, with an additional 415 MW of renewable

energy permitted and in construction. These projects bring extensive economic benefits to their respective communities through the creation of hundreds of construction jobs at each site, stimulus of the local economy when we provide employment and buy from area businesses, and substantial tax revenue generation that helps fund county services such as emergency response, public education, and the deployment of broadband.

Within Virginia, renewable energy development is critical to fulfill the promise of the Virginia Clean Economy Act of 2020 to transition the Commonwealth's electric grid to 100% clean energy by 2050. AES remains committed to working with our stakeholders to co-create and deliver the smarter, greener energy solutions that meet their needs, benefiting the local community and economy.

DESIGN

The Project will consist of solar PV modules on a single axis tracker system and associated electrical equipment and materials necessary to collect the energy produced. The system will be comprised of UL-listed components and installed according to the National Electric Code. The maximum panel height will be less than 18 feet above grade at maximum tilt in accordance with Chapter 10 Article IV Division 4 Sec. 10-157 of the Surry County Code of Ordinances (County Code). The facility will be secured by a 6-foot-tall chain link fence with three strands of barbed wire as required by Sec. 10-156 or other fencing method approved by Zoning Administrator.

Solar energy facilities generate minimal noise during operation. The Solar Energy Ordinance states that noise requirements for solar energy projects shall be no more stringent than noise requirements for other types of development in the underlying zoning district. The underlying zoning districts are M1 and M2 and include, but are not limited to, agricultural, civic, commercial, industrial, and miscellaneous use types. While there are no noise requirements specified for listed use types for M1 and M2 zoning in the County Code, the Applicant proposes a minimum 250-foot setbacks for inverters to mitigate adverse effects of noise per County Code Sec. 5-104.f. A third party consultant conducted a preliminary noise evaluation utilizing a computer aided noise abatement program and the manufacturer's specifications for anticipated inverters. Based on the manufacturer's information, the proposed inverters will emit 65 decibels (dB) within a 10-meter (32-foot) radius. At approximately 250 feet from the inverter, the anticipated decibel level would be approximately 47 dB. According to the Environmental Protection Agency (EPA) *Protective Noise Levels Condensed Version Of EPA Levels Document* published November 1978, "maintaining 55[dB] outdoors should ensure adequate protection for indoor living" and "[r]ural populations enjoy average outdoor sound levels generally lower than 50dB". This 250-foot setback, in addition to the proposed vegetative buffers, should provide adequate noise protection for adjacent landowners. However, to address one of the strategy recommendations of the Comprehensive Plan, where practicable, the Applicant will incorporate 750-foot setbacks from noise-generating equipment.

Areas under the panels will be planted with local grasses and forbs; non-panel areas will be planted with wildlife- and pollinator-friendly vegetation to the extent practicable; and wildlife corridors will be maintained as shown in the Conceptual Plan (Attachment C).

Setbacks will meet or exceed requirements within Section 10-155 of the Solar Energy Ordinance. As shown in Attachment C, the Conceptual Plan meets the setbacks for the zoning district in which the Project is located.

The Project will interconnect at the existing VEPCO Septa substation, located in Isle of Wight County. The project collector station will be on land adjacent to the VEPCO Septa Substation which is shared with the Cavalier Solar project and identified on Attachment C. The existing project collector station pad was approved by Isle of Wight County and has been built as part of the Cavalier Solar project. No additional civil work is expected to be needed to complete the project collector station for the Sycamore Cross project. Further, Sycamore Cross will share with the Cavalier Solar project a generation tie-line to interconnect to the VEPCO Septa substation. The generation tie-line improvements have been approved and built as part of the Cavalier Solar project. No additional interconnection improvements will be required by Dominion Energy.

Stormwater and grading plans will be carefully designed with potential impacts to neighboring properties in mind. Stormwater plans will be prepared and sealed by a Virginia-licensed Professional Engineer and will be submitted to Surry County for approval as part of the Site Plan Application.

The design of operations and maintenance buildings and related structures will incorporate materials, colors, textures, screening, and landscaping that will blend the facilities to the natural setting and surrounding structures in accordance with Sec 10-152 of the Solar Energy Ordinance. No signage of any type will be placed on the facility other than notices, warnings, and identification information required by law or as approved by the Zoning Administrator. Construction parking and staging signs will be clearly placed at ingress and egress points to direct traffic to the proper location. Appropriate warning signage will be placed on all towers, electrical equipment, and Project site ingress and egress points. Signs will be clearly marked at the Project site for emergency vehicle ingress and egress in accordance with Sec. 10-153 of the Solar Energy Ordinance.

INTERCONNECTION

The final interconnection service agreement identifying the transmission capacity was executed on April 3, 2023. The maximum facility output is 240 MW, which is also referred to as the “installed capacity”, and the Project has rights to inject the full 240 MW into the grid.

LAND USE AND ZONING

As noted in the Project Overview, the Project Parcels and Easement Parcels within Surry County were previously rezoned in July 2022 from Agricultural-Rural (“A-R”) to M-1 as part of the Cavalier Solar project. The M-1 zoning district allows utility-scale solar facilities with approval of a CUP.

Also noted in the Project Overview, the Project Parcels and Easement Parcels have been shown as “Approved and Existing Solar” in the Surry County Comprehensive Plan as amended March 2023 Therefore, the Project has submitted a CUP application form and will comply with the requirements and development standards outlined in the County Code and Solar Energy Ordinance. The Applicant has fulfilled the requirements of Section 10-125 of the Solar Energy Ordinance by providing a copy of the documentation showing the right to use the properties (Attachment D).

Furthermore, the proposed solar facility also preserves land which may be returned to its original agricultural use or to silviculture use after the life of the project has concluded, if desired at that time. While in use by the proposed solar facility, the land cannot be sold for development of residential or commercial use, and the quality of the soil will likely be improved over the projected 35-year life of the Project.

VISUAL IMPACT

A Visual Impact Assessment was performed by Tetra Tech and is provided in Attachment E. This analysis determined that based on the proposed mitigating measures including landscaping and screening, the Project will have little to no impact on the existing viewshed. To ensure minimal viewshed impacts, the Project has implemented setbacks from adjoining parcels and residences in accordance with the County Code; furthermore, the Project Conceptual Plan (Attachment B) includes proposed landscaping and screening to be established and maintained within these buffers, as shown in the visual simulations included in Attachment E. This screening will be maintained and supplemented as necessary throughout the life of the Project.

TRAFFIC IMPACT

Project construction is expected to begin in Q2 2025 and is forecasted to be completed by Q4 2026. Construction will take place between the hours of 7 a.m. and 7 p.m., Monday through Saturday. Construction and decommissioning of the Project may cause temporary impacts to traffic flow in the direct vicinity of the Project site but will not adversely impact traffic during the normal operation phase of the Project. Construction activities and associated construction traffic for the Cavalier Solar project are expected to be completed and end before construction starts for the Sycamore Cross Project.

To date, several roads adjacent to the Project were assessed for potential construction traffic routes and ultimately, three routes were selected for consideration. These routes were selected based on Virginia Department of Transportation (VDOT) road characterizations, bridges, road widths, road conditions, average daily traffic counts, and impacts to residential corridors. The Applicant has submitted a preferred route, which bifurcates construction traffic into 3 distinct routes for varying purposes; a delivery route, a daily employee route, and a heavy haul escorted route. The delivery route would make use of preferred roads to and from site leading to a single staging area within the site located near the intersection of Sycamore Cross Dr., Mill Swamp Rd., and Proctor’s Bridge Rd. in Isle of Wight. The daily employee route suggests preferred routing for

all daily employees travelling to and from site to a centralized parking location on Ramsey Rd. in Isle of Wight. From there, daily employees would be shuttled to areas of the project for the day. The heavy haul escorted route is used for delivery of equipment from the staging area to various arrays throughout the Project site. These routes have also been submitted to the VDOT Franklin Residency and Isle of Wight County Planning Department and Transportation Department for consideration and input.

The proposed Traffic Management Plan depicting the three routes evaluated, the preferred route, and the daily employee route is included in Attachment F. A complete traffic management plan will be submitted for review and approval prior to building permit approval.

COMMUNITY ECONOMIC IMPACT

An assessment of the impact on the immediate vicinity of the Project and the greater Surry County community was prepared by Mangum Economics (Attachment G). The Project will generate tax revenue for the County without increasing demand for public utilities or services, allowing increased investment in services and infrastructure. Depending on the tax revenue stream the County chooses to pursue, the Project may provide approximately $1.8 million in tax revenue for Surry County. Additionally, construction of the Project will create approximately 197 direct, indirect, and induced jobs during construction. Based on the IMPLAN model, these 197 jobs will provide annually $9.9 million in associated wages and benefits as well as $91.6 million in total economic output. 7 full-time jobs are estimated during the operational period of the Project annually providing $0.6 million in associated wages and benefits and $1.6 million in economic output.

ENVIRONMENTAL RESOURCES

The Project will avoid, minimize, or mitigate potential impacts to natural and cultural resources as provided below:

Water Resources

Tetra Tech performed a wetland delineation of the Project site through several field surveys October 2022 through June 2023. Impacts to wetlands and waters of the United States will be avoided through Project design, and a 50-foot buffer area around water resources, to the extent practicable, as shown in the Preliminary Conceptual Plan, Attachment B. These resources will be delineated and clearly flagged for avoidance during construction in areas where avoidance is possible. Construction of the Project may cause temporary water quality impacts in the form of increased sediment runoff during land disturbing activities; however, best management practices (BMPs) will be implemented to avoid and minimize impacts to surface water features. Ultimately, the Project will likely lead to improved water quality in the area because runoff of pesticides and other inputs to or byproducts of farming will be reduced or eliminated. Groundwater testing will be performed prior to, during, and upon completion of construction, and every five years thereafter

until the project is decommissioned; results will be provided to the County Planning Department per Article IV, Sec. 10-160.

Threatened and Endangered Species

An initial desktop assessment performed by Tetra Tech identified several protected species as having the potential to occur within the Project study area. Field surveys of the Project study area were conducted in October 2022 through April 2023. These surveys identified potential presence of six protected species – the bald eagle *(Haliaeetus leucocephalus),* red-cockaded woodpecker *(Picoides borealis),* northern long-eared bat *(Myotis septentrionalis),* Rafinesque's eastern big-eared bat *(Corynorhinus rafinesquii macrotis)*, tri-color bat *(Perimyotis subflavus)*, and the yellow lance *(Elliptio lanceolata)*. Both the bald eagle and red-cockaded woodpecker were determined to be unlikely to be adversely affected by the Project. Suitable habitat was found on site for the other four species, and agency consultation was recommended which will be enacted as part of any necessary federal and state permitting efforts. Adherence to recommendations of the state and federal agencies having jurisdiction over these species and applicable habitat will be implemented to the greatest practicable extent.

HISTORICAL AND CULTURAL RESOURCES

A Phase 1A Cultural Resource Assessment was completed by Dutton + Associates, LLC in March 2023. This analysis indicated that no National Register of Historic Places (NRHP) listed resources are present within the fenced Project area. There are three desktop mapped potential resources that are located within the fenced Project area. This report and its findings are subject to review by the Virginia Department of Historic Resources (VDHR) for concurrence on resource eligibility and recommendations for further evaluation. Any resources identified through coordination with VDHR will be avoided and/or mitigated for with setbacks that adhere to Surry County recommendations in connection with approval of this application.

BUFFERS AND LANDSCAPING

In accordance with the Solar Energy Ordinance and pursuant to the County Code Appendix A, Article IV, Supplementary Regulations, Sec. 4-607, Utility Service/major, a continuous evergreen vegetative buffer is required around the perimeter of solar facilities. Preexisting vegetation will be utilized where it provides acceptable screening. Landscaping will include a triple row of staggered evergreen and deciduous species and of varying heights at maturity where existing vegetation is not being retained. In accordance with Ch. 10 Article IV Sec. 10-158, the evergreens at time of planting shall be a minimum of four (4) feet in height and at maturity will be at least six (6) feet in height. Trees shall be planted no more than ten (10) feet on center.

DECOMMISSIONING

The operating period of the Project is anticipated to be approximately 35 years. At the end of the useful life of the Project, Sycamore Cross Solar, LLC, will be responsible for decommissioning the Project. The project will comply with all decommissioning requirements outlined in Section 10-

161 of the Solar Energy Ordinance. Prior to final site plan approval, Sycamore Cross Solar, LLC will finalize and submit to the County a decommissioning plan and associated written agreement to decommission the Project equipment, facilities, and devices. The decommissioning security amount will be determined and posted based on an estimate provided in the decommissioning plan.

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Section 3
Comprehensive Plan Analysis

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Comprehensive Plan Analysis for Sycamore Cross Solar (the "Project")

INTRODUCTION

In Virginia, pursuant to Virginia Code Section 15.2-2232, the County Planning Commission determines whether the "general or approximate location, character and extent" of certain public facilities is "substantially in accord with the adopted comprehensive plan or part thereof" unless the proposed public facility is a feature "already shown on the adopted master plan or part thereof."

The Surry County 2040 Comprehensive Plan was adopted in September of 2020 and a supplement to the Plan (a "part thereof"), the "Energy Projects Amendment" (the "Amendment"), was adopted in March of 2023 (collectively referred to as the "Comprehensive Plan"). The Amendment contains a map identifying the "Approved and Existing Solar" projects in the County. As depicted on Exhibit A - Surry County Comprehensive Plan Land Use Location, attached to this document, the Project is within the area designated as Approved and Existing Solar under the Amendment, as it will be located on parcels which were rezoned to Industrial and where the Board previously determined that a solar facility conforms with the County's Comprehensive Plan and issued a Conditional Use Permit for the construction of Cavalier Solar in 2021 (the "Project Area"). Thus, a public utility facility feature – and a solar facility in particular -- is "already shown" on the part of the Comprehensive Plan that depicts the locations of approved energy projects; as such, the Project clearly satisfies the requirement that "the general location or approximate location, character, and extent thereof" is "substantially in accord" with the Comprehensive Plan pursuant to Virginia Code Section 15.2-2232(A). Additionally, pursuant to the adoption of the Cavalier Solar Siting Agreement adopted by the Board of Supervisors in 2021, the Board of Supervisors has already determined that solar facilities in the Project Area are substantially in accord with the Comprehensive Plan. See Virginia Code Section 15.2-2316.9 (execution of a Siting Agreement by the Board of Supervisors deems a solar project to be "substantially in accord" with the comprehensive plan, satisfying the requirements of Virginia Code Section 15.2-2232).

In these circumstances, it is clear that the proposed Project's "general location or approximate location, character, and extent" is "substantially in accord" in with the Comprehensive Plan.[1] Nevertheless, we provide the following additional analysis to demonstrate more particularly for purposes of supporting the Conditional Use Permit application.

The Comprehensive Plan, particularly in the Amendment, directly addresses siting of solar facilities, identifying the following key considerations:

- Requiring facilities to be located within specific zoning districts;

[1] "Generally, 'substantially' means 'largely, but not wholly.'" *Albemarle Land Use Handbook*, E-2 (discussing the standard for "2232 review").

- Mitigating impacts related to scale of solar facilities;
- Requiring facilities to be located outside of Residential Corridors and Residential Investment Areas;
- Requiring facilities to be located adjacent or nearby to existing electric transmission lines;
- Mitigating direct and indirect impacts to sensitive resources including historic sites, places of worship, and cemeteries; and
- Mitigating impacts to habitat, soil erosion, and stormwater runoff.

The Project's general or approximate location, character and extent are consistent with all the above considerations, and therefore, is substantially in accord with the Plan, as described in further detail below.

Section 1: Specific Comprehensive Plan Guidance on Siting of Solar Facilities:

The Amendment updated Objective 5 of the Future Land Use Goals in the 2040 Comprehensive Plan and the associated "Strategies" for implementation of those objectives. Below is an analysis of how the Project relates to this objective and its associated strategies. Amendment language is in bold and italics.

Objective 5: When assessing potential energy projects, Surry County should balance the benefits of renewable energy, the interests of property owners, and the best interest of the County as a whole, including the impacts to natural, agricultural, and cultural resources.

Strategy 1: (Omitted) This strategy only applies to distributed energy projects.

Strategy 2: The County supports preserving the agricultural character of Surry and limiting the sum of all project site areas for community-scale energy facilities and utility-scale energy facilities… to no more than 10% of developable land within the County, or 15,278 acres in total.

It is our understanding that the limits for utility scale energy facilities stated above are based on total parcel acreage, rather than on project limits of disturbance within a parcel. In other words, when a project is submitted and approved, the land developed by the specific project to be counted toward the stated limit is determined by the acreage of the parcel on which the project is sited. The Project is proposed to be sited on land already zoned M-1, already designated for solar use, and already counted toward the recommended limit. Therefore, Sycamore Cross can be developed without increasing the total developed acreage, consistent with this Comprehensive Plan objective and strategy.

Furthermore, while Sycamore Cross would be developed within timberland in Surry County, its development would not require the use of any lands currently used for crop production. It is possible that after decommissioning, the land could become farmable land, in which case Surry County could realize an increase in land used for crop production based on the 125 acres of

timberland being developed for the Project. Thus Sycamore Cross not only preserves the agricultural character, but potentially increases useable crop production land after project life.

Strategy 3: The County will consider applications for new utility-scale energy facilities and community-scale energy facilities, provided that they meet the following criteria:

a. ***The project site is not located in Residential Corridors or Residential Investment Areas.***
   The project site is not located within a Residential Corridor or Residential Investment Area.
b. ***The center of the project site, defined as the centroid of energy-generating or energy storage equipment, is within 1 mile of existing high-voltage electric transmission lines.***
   The Plan also requires generating facilities to be located adjacent to or close to existing electric transmission infrastructure. The centroid of the Surry project area is likely within a 2-mile radius of the HV line but the property is already rezoned and no additional HV transmission line infrastructure will be required. Moreover, the presence of these existing transmission lines is indicative of the appropriateness of this location for a project of this scale, further confirming that the location, character and extent of this public utility is appropriate here.
c. ***No part of the project site is within 0.5 miles of historic sites.***
   The project site is not located within 0.5 miles of a listed historic site based on the map provided in the Plan
d. ***No part of the facility is in any historic or otherwise significant viewshed in the County, as determined by staff.***
   No part of the facility is in any historic or otherwise significant viewshed in the County. Additionally, vegetative buffering will be implemented to minimize any views for adjacent communities and viewshed impacts are further mitigated by the Project design and use of existing infrastructure, as discussed above in 3.b.
e. ***No part of the facility is within 750 feet of the property lines for any place of worship or cemetery.***
   The project site is not located within 750 feet of the property lines of any formal place of worship or listed cemeteries. We will continue to work with the Virginia Department of Historic Resources through the permitting process to minimize impacts to sensitive resources.
f. ***The project site incorporates contiguous, unfenced, undisturbed natural areas to serve as wildlife passage corridors.***
   Wildlife corridors are provided throughout the project and habitat fragmentation will be minimized by siting the project directly adjacent to an existing solar facility.
g. ***The project site utilizes best practices to maintain biodiversity and soil quality.***
   Topsoil will be retained on site for project stabilization. Additionally, the project operations and maintenance team will develop a plan to maintain vegetation and soil throughout the life of the project. The project will implement best practices to avoid and minimize impacts

to wetlands, streams, and federal and state-listed threatened and endangered species to the extent practicable. Any anticipated impacts will be coordinated, mitigated, and permitted through the appropriate authorities having jurisdiction.

h. The project site is screened by vegetation that will prevent the facility from being seen from residential, commercial, or mixed-use areas.

Most areas of the proposed project are setback from the road and shielded from view by existing forested and/or wetland areas that will be preserved as buffer. A 50' vegetative buffer is proposed in areas where natural vegetation may be absent. This would typically consist of 3 staggered rows of deciduous and evergreen trees, shrubs, and plants. All plantings will be native plants and pollinators will be incorporated to the extent practicable.

i. Any noise-generating equipment installed with sound dampening equipment and/or located a minimum of 750 feet away from any adjacent residential, commercial, or mixed-use parcels to eliminate noise impacts to neighboring uses.

Strategy 3i. is intended to mitigate potential nuisance from any noise generating equipment. It should be noted that the suggested mitigation strategy of setting back a prescribed distance makes no reference to the sound level of the generating equipment at its origin or the sound level at the prescribed distance.

The Project conceptual site plan is not at a point to provide exact inverter locations to confirm compliance with a 750-foot setback but we are taking into consideration minimizing noise impacts to adjacent neighboring uses. At this stage, the Project anticipates a minimum 250-foot setback from any adjacent property boundaries. Based on the proposed inverter manufacturer's information, the proposed inverters will emit 60 decibels (dB) within a 10-meter (32-foot) radius. At approximately 250 feet from the inverter, the anticipated decibel level would be approximately 45 dB. According to the Environmental Protection Agency (EPA) *Protective Noise Levels Condensed Version Of EPA Levels Document* published November 1978, "maintaining 55[dB] outdoors should ensure adequate protection for indoor living". This 250-foot setback, in addition to the proposed vegetative buffers, should provide adequate noise protection for adjacent landowners. Additionally, to align with this strategy, the Applicant will incorporate 750-foot setbacks where practicable.

j. The project site complies with or exceeds erosion and sediment control requirements.

DEQ is the lead agency for developing and implementing the Commonwealth's statewide program to protect water quality and quantity from stormwater runoff. A permits will be required to discharge stormwater from the Project's construction activities under the Virginia Stormwater Management Program (VSMP).

The Department of Environmental Quality (DEQ) issued a technical memo on March 29, 2022 stating that starting immediately, DEQ is implementing an updated post-development stormwater management policy for solar projects subject to VSMP requirements, specifically, that ground mounted solar panels shall be considered unconnected impervious surface. The DEQ published a subsequent memorandum on April 14, 2022, in which it recognized that solar projects in advanced stages of design or

implementation due to a number of fiscal, contractual and other GM 22-2012 obligations, need to be considered in the implementation timing of the March 29, 2022 memo. Specifically, the April memorandum states: ""Therefore, any solar project that does not obtain an interconnection approval by a regional transmission organization or electric utility by December 31, 2024 must comply with the requirements detailed in the Department's March 29, 2022, memorandum, which will be further clarified in an agency guidance document."

Since the Project has obtained an interconnection approval by PJM, the regional transmission organization, as of April 3, 2023, the project will abide by the VSMP requirements for erosion and sediment control, and best management practices will be utilized per those requirements. A Virginia Pollutant Discharge Elimination System (VDPES) permit will be acquired prior to the construction of the project. To obtain this permit, a Stormwater Pollution Prevention Plan, Virginia Reduction Runoff Method worksheet, and best management practices will be developed and provided to the DEQ for review and approval.

k. The project site is a minimum of 0.5 miles from any existing community-scale or utility-scale energy project sites.

It is the applicant's understanding that the intent of this strategy is to minimize density of solar throughout the county. This strategy – like the other recommended strategies is a suggestion for how to achieve Objective 5, which provides in part that "Surry County should balance the benefits of renewable energy, the interests of property owners, and the best interest of the County as a whole[.]" Therefore, while a given strategy provides useful guidance, it is not to be rigidly applied, particularly where doing so would *not* strike the desired balance described in Objective 5 nor be in the best interest of the County, Here, for example, the project site is located within 0.5 miles from an existing utility-scale energy project; however, in this case, the location is in the best interest of the County as a whole. It is located where it can use existing infrastructure corridors from a previously approved project, it eliminates the need to rezone additional areas within the County, and it maximizes the utilization of an area approved for solar facility use.

Strategy 4: The County will require conformance with the VSMP regulations.

Per the Virginia Department of Environmental Quality guidance memo 22-2012, based on the project's PJM interconnection queue position, the Project is exempt from considering panels as impervious surface for our Virginia Reduction Runoff Method calculations. The Project will conform with all applicable VSMP regulations as required for the acquisition of a VPDES permit.

Strategies 5 through 9: These strategies are County action items and not applicable to the question of whether the Project's location, character and extent complies with the Comprehensive Plan. As described above, the Project satisfies every siting consideration in the Comprehensive

Plan – considerations specifically formulated to guide the County in approving well-sited *large scale* solar farms. Accordingly, the Applicant requests the Planning Commission make the appropriate finding that the Project's general or approximate location, character and extent are in substantial accord with the Comprehensive Plan.

Section 2. General Provisions of the Comprehensive Plan Applicable to the Project

The Comprehensive Plan lays out a vision for Surry County that the Project can help achieve. The Project is consistent with the vision of the plan and will play a key role in implementing the goals contained therein. Below is a summary of the themes of the 2040 plan and our analysis of the relationship to the Project.

Plan Summary: The Comprehensive Plan sets forth four main "Land Use Principles" applicable to development in the County (p. 45):

1. Land Use Policy should be viewed foremost as a tool to induce strategic investment in the community. Policies promoting strategic community investment innately protect the rural character of the majority of the County.
    a. Analysis: . The Project's capital investment directly results in tax benefits to the County, not only in taxation on the facility but increased real estate taxes on the developed land, and potential additional revenue from a solar siting agreement. Construction, operation and maintenance jobs also benefit the local economy. Once operational, the Project will provide a steady annual revenue. Other important local economic benefits may be derived from the financial contributions that solar projects may make to the County for budgeted capital improvements, or to expand broadband, or to fulfill other community needs, including providing funds for schools, fire and rescue, or other projects that benefit the County's citizens.
2. Prosperity and rural preservation are not inherently incompatible goals.
    a. Analysis: The Project and other solar projects in the County are representative of economic development investments in rural jurisdictions that strengthen the tax base and once constructed, have little to no demand for costly County services. Revenue generated by the project both offsets pressure to raise local real estate taxes and provides funds that can be used to advance strategic economic development initiatives that support the expansion of the local economy.
3. Strongly encourage strategic concentration of new investment. Minimize diffusion of limited opportunities.
    a. Analysis: The design of this project directly corresponds to this principle; the Project will be strategically concentrated on land already approved for solar

development and will not contribute to “solar sprawl” which has concerned the County in the past.

4. Grow using existing community capacity at minimal cost.
    a. Analysis: As stated above, development of utility scale solar greatly contributes to the County’s tax base at minimal cost. This fiscal impact is realized through increase in Real Property Tax, capital investment in the Project, and potential of a Siting Agreement. Additionally, the fiscal benefit of solar development within the County comes without burden on the County resources such as first responders, growth of schools, libraries, and social services. The project clearly allows for growth using existing community capacity and at minimal cost.

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Exhibit A

Surry County Comprehensive Plan Land Use Location

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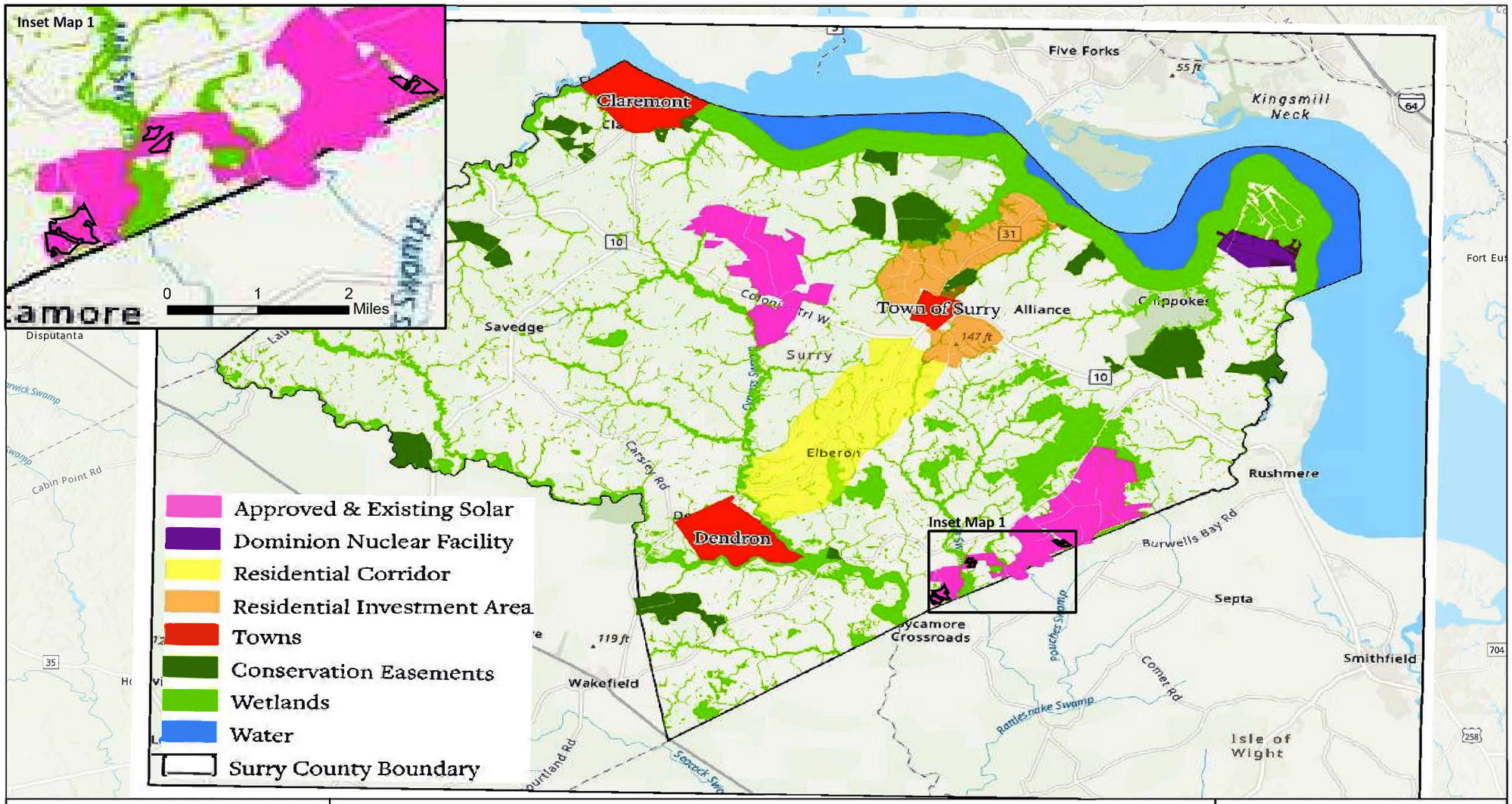

Surry County Comprehensive Plan
Land Use Location
Sycamore Cross Solar Solar Site
Surry, and Isle of Wight, VA

Prepared For: aes

Prepared By: TETRA TECH

LEGEND

— Sycamore Cross Project Boundary

N

0 2.5 5 Miles

Date: 06/2023

The Comprehensive Map was georeferenced on June 26, 2023. Map differences may occur due to data source differences

Source: ESRI 2022, Surry County Comprehensive Plan Map

Coordinate System: NAD 1983 StatePlane Virginia South FIPS (US Feet)

Not for Construction - created by JSB

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Attachment A
Conditional Use Permit Application Package

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DEPARTMENT OF PLANNING
P. O. Box 357 - 45 School Street - Surry, VA 23883
(757) 294-5210

REQUEST FOR:

_____Administrative Appeal ($300)	_____Rezoning (Conditional) ($1,000)
_____BHAR Application ($200)	_____Site Plan Review ($300 + $10 acre)
_____Comp. Plan Amendment ($500)	_____Special Exception ($300)
_____Conditional Use (Res./Ag.) ($350)	_____Variance (including Admin) ($300)
_____Conditional Use (Comm.) ($500)	_____Wetlands Permit ($300)
__X__Conditional Use (Ind.) ($1,000)	_____Zoning Text Amendment ($500)
_____Rezoning ($500)	__X__2232 Comp Plan Review ($300)

DATE 12/21/2023 APPLICATION NUMBER_____

APPLICANT Sycamore Cross Solar, LLC PHONE (804) 334 - 9882

ADDRESS 4200 Innslake Drive, Suite 302, Glen Allen, VA 23060

EMAIL gregory.creswell@aes.com

OWNER (IF DIFFERENT THAN APPLICANT): See Attached Table A - List of Project Properties

ADDRESS See Attached Table A - List of Project Properties

ADDRESS AND LOCATION OF SUBJECT PROPERTY

Street/Road See Attached Table A - List of Project Properties

Magisterial District _____ Tax Map _____ Parcel _____

LOCATION _____

APPLICATION IS HEREBY BEING MADE FOR THE PREMISES DESIGNATED AS:

Current zoning: M-1 Proposed zoning: _____

REASON FOR APPLICATION: Sycamore Cross Solar, LLC Conditional Use Permit Application for the development of a maximum 240 MWac solar energy facility

See Attachment D - Documentation of Right to Use Property

OWNER'S SIGNATURE **APPLICANT'S SIGNATURE**

ATTACH SUPPORTING MATERIAL SUCH AS SITE PLAN, TOPOGRAPHIC, DRAINAGE, UTILITY EASEMENT, OR BUILDING ELEVATION MAPS.

ADJACENT PROPERTY OWNERS

NAME	MAILING ADDRESS
See Attached Table B - List of Adjacent Properties	

Table A

Participating Parcels for the Sycamore Cross Solar, LLC Project in Surry County, VA

PARCEL ID[2]	Name	Owner Street Address	Owner City	Owner State	Owner Zip Code	Parcel Zoning[1]	Parcel Address	Parcel City	Parcel Zip
60-1-1	JEFFERY & MELANIE SEWARD	435 Bellevue Road	Elberon	VA	23846	M-1	Bellevue Road	Elberon	23846
60-9	BYRUM JOHN & JEANETTTE N	14610 Five Forks Road	Windsor	VA	23487	M-1	285 Mill Swamp Road	Elberon	23846
60-17	NEW SUSTAINABLE PROP HOLDINGS LLC	2180 South 1300 East Ste 600	Salt Lake City	UT	84106	M-1	Mullet Drive	Ivor	23866
61-2	ELTON B SEWARD, JR.	5900 Beechland Road	Elberon	VA	23846	M-1	Beechland Road	Elberon	23846
61-3	NEW SUSTAINABLE PROP HOLDINGS LLC	2181 South 1300 East Ste 600	Salt Lake City	UT	84107	M-1	Beechland Road	Elberon	23846
61-4	NEW SUSTAINABLE PROP HOLDINGS LLC	2181 South 1300 East Ste 600	Salt Lake City	UT	84107	M-1	Beechland Road	Elberon	23846

Notes:

[1] The Surry County GIS website lists parcels 60-9, 60-17, and 61-3 as being zoned A-R. However a rezoning request was considered in May 2021 at a Board of Supervisors meeting, which was approved and rezoned these parcels from A-R (Agricultural-Rural) to M-1 (Light Industrial). This was Rezoning Application No. 2021-01 which was completed as part of the Cavalier Solar A, LLC Project.

[2] Grey shading denotes easement only parcels.

Table B

Adjacent Parcels to the Sycamore Cross Solar, LLC Project in Surry County, VA

PARCEL ID	Name	Owner Street Address	Owner City	Owner State	Owner Zip Code	Parcel Zoning[1]	Parcel Address	Parcel City	Parcel Zip
53-1	HANCOCK TIMBERLAND XII INC	13950 Clarendon St-Ste 150	Charlotte	NC	28277	A-R	White Marsh Road	Elberon	23846
53-2	GWALTNEY WILL M JR & THOMAS A GWALTNEY LIVING TRUST	PO Box 343	Surry	VA	23883	A-R	White Marsh Road	Elberon	23846
53-3B	NEW SUSTAINABLE PROP HOLDINGS LLC	2180 SOUTH 1300 EAST STE 600	Salt Lake City	UT	84106	A-R	White Marsh Road	Elberon	23846
53-4	NEW SUSTAINABLE PROP HOLDINGS LLC	2180 SOUTH 1300 EAST STE 600	Salt Lake City	UT	84106	A-R	Beechland Road	Elberon	23846
53-5	NEW SUSTAINABLE PROP HOLDINGS LLC	2180 SOUTH 1300 EAST STE 600	Salt Lake City	UT	84106	A-R	White Marsh Road	Elberon	23846
53-5B	NEW SUSTAINABLE PROP HOLDINGS LLC	2180 SOUTH 1300 EAST STE 600	Salt Lake City	UT	84106	A-R	White Marsh Road	Elberon	23846
53-6	NEW SUSTAINABLE PROP HOLDINGS LLC	2180 SOUTH 1300 EAST STE 600	Salt Lake City	UT	84106	A-R	White Marsh Road	Elberon	23846
53-7	WHITE MARSH ENVIRONMENTAL LLC	PO Box 727	Colonial Heights	VA	23834	A-R	White Marsh Road	Elberon	23846
59-25	BRANTLEY LA	9770 Ivor Road	Ivor	VA	23866	A-R	Berrymans Corner	Ivor	23866
59-2-A5	LANGHORNE PERNELL JR & SCHERRELL P	6 Wade Circle	Newport News	VA	23602	A-R	Berrymans Corner Road	Ivor	23866
59-27	VIRGINIA PROPERTY INVESTMENTS LLC	113 Jericho Road	Smithfield	VA	23430	A-R	Berrymans Corner Road	Ivor	23866
59-29	DALTON PAUL R & JENNIFER L	18446 Oliver Drive	Smithfield	VA	23431	A-R	Berrymans Corner Road	Ivor	23866
59-30	GREENE REBECCA EST ETAL	9421 Elmbrook Court	Las Vegas	NV	89134	A-R	Berrymans Corner Road	Ivor	23866
59-31	BYRUM RICHARD L & JANICE F	24515 Ennis Mill Road	Windsor	VA	23487	M-1	Berrymans Corner Road	Ivor	23866
59-3-1	THOMAS BOBBY R	9100 White Marsh Road	Elberon	VA	23846	A-R	337 Berrymans Corner Road	Elberon	23846
60-7	PITTMAN CHARLES M	11119 White Marsh Road	Elberon	VA	23846	A-R	White Marsh Road	Elberon	23846
60-11	HOWELL CHRISTOPHER M & AMY N	415 Mullet Drive	Ivor	VA	23866	A-R	415 Mullet Drive	Ivor	23866
60-12	SHOEMAKER TIMOTHY PAUL & BORDERS-SHOEMAKER SAMANTHA ALLISON	184 MULLET DRIVE	Ivor	VA	23866	A-R	Mullet Drive	Ivor	23866
60-10	CORNETTE WILLIAM R	1067 Burnt Mill Road	Surry	VA	23883	A-R	Mill Swamp Road	Smithfield	23430
60-15	Little Steve	7341 MILL SWAMP ROAD	Ivor	VA	23866	A-R	Bellevue Road	Elberon	23846
60-15B	Cemetary	Needs Address	N/A	N/A	N/A	A-R	N/A	N/A	N/A
60-16	PARSON ESTELLE R LIFE ESTATE	16059 OLMSTEAD LANE	Woodbridge	VA	22191	A-R	Mullet Drive	Ivor	23866
60-20	SEWARD ELTON B JR	5900 BEECHLAND ROAD	Elberon	VA	23846	A-R	Bellevue Road	Elberon	23846
60-2-3	COLE WILLIAM C & DORIS	883 BELLEVUE ROAD	Elberon	VA	23846	A-R	Bellevue Road	Elberon	23846
60-2-4	IHLENBURG THOMAS R & ANN MARIE	957 BELLEVUE ROAD	Elberon	VA	23846	A-R	Bellevue Road	Elberon	23846
60-2-8	CHURCH GEORGE TIMOTHY	904 Bellevue Road	Elberon	VA	23846	A-R	904 Bellevue Road	Elberon	23846
60-2-9	IRVINE STEPHANIE J	1088 BELLEVUE ROAD	Elberon	VA	23846	A-R	904 Bellevue Road	Elberon	23846
60-6	PITTMAN DOROTHY C	11119 White Marsh Road	Elberon	VA	23846	A-R	9750 White Marsh Road	Elberon	23846
60-7	PITTMAN CHARLES M & PITTMAN STEVEN C	11119 White Marsh Road	Elberon	VA	23846	A-R	White Marsh Road	Elberon	23846
60-18	STRODE WALTER W & LINDA	808 Bellevue Road	Elberon	VA	23846	A-R	808 Bellevue Road	Elberon	23846
60-19	SEWARD JEFFREY A	435 BELLEVUE ROAD	Elberon	VA	23846	A-R	Bellevue Road	Elberon	23846
60-2-9	IRVINE STEPHANIE J	1088 Bellevue Road	Elberon	VA	23846	A-R	1088 Bellevue Road	Elberon	23846
60-1-2	BEALE VINCENT A	1583 BELLEVUE ROAD	Elberon	VA	23846	A-R	Bellevue Road	Elberon	23846
60-22	HOWELL MAURICE D & BONNIE L	409 MULLET DRIVE	Ivor	VA	23866	A-R	Mullet Drive	Ivor	23866
61-1	SEWARD JEFFREY A & MELANIE D	435 BELLEVUE ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-1A	BRITT ROSEMARY & ETAL & HURTT CHRISTOPH & UTE	7300 BEECHLAND ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-1C	BRITT RANDOLPH J & BRITT CHERYL S	7590 BEECHLAND ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-3A	LOWERY BROOKE E	7658 Beechland Road	Elberon	VA	23846	A-R	7658 Beechland Road	Elberon	23846
61-3B	LOWERY JAMES R & KIMBERLY G	7752 Beechland Road	Elberon	VA	23846	A-R	7752 Beechland Road	Elberon	23846
61-3C	BARHAM MARY E	7846 Beechland Road	Elberon	VA	23846	A-R	7846 Beechland Road	Elberon	23846
61-1-1	WOLFE MICHAEL C	7344 BEECHLAND ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-1-2	PRICE WYATT L & OWNEY HANNAH GRACE	7394 BEECHLAND ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-1-3	ZIEGLER PAUL E & THERESA F	7436 BEECHLAND ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-1-4	SEWARD ELTON B JR	5900 BEECHLAND ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-1-5	SEWARD ELTON B JR	5900 BEECHLAND ROAD	Elberon	VA	23846	A-R	Beechland Road	Elberon	23846
61-5	NEW SUSTAINABLE PROP HOLDINGS LLC	2180 SOUTH 1300 EAST STE 600	Salt Lake City	UT	84106	A-R	Beechland Road	Elberon	23846
66-4	BLACKWATER LAND & TIMBER LLC	14120 BALLANTYNE CORP PLACE	Charlotte	NC	28277	A-R	Aberdeen Road	Wakefield	23888

Notes:

[1] The Surry County GIS website lists parcel 59-31 as being zoned A-R. However a rezoning request was considered in May 2021 at a Board of Supervisors meeting, which was approved and rezoned this parcels from A-R (Agricultural-Rural) to M-1 (Light Industrial). This was Rezoning Application No. 2021-01 which was completed as part of the Cavalier Solar A, LLC Project.

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Attachment B
Proposed Conditional Use Permit Conditions

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Proposed Conditional Use Permit (CUP) Conditions

The following proposed CUP conditions are the initial step in the permitting process between the Applicant and Surry County. The Applicant developed the following conditions based upon the pre-application meeting with Surry County officials, conditions imposed by the County on other approved solar projects, and an initial review of the project by Summit Design & Engineering Services provided on August 16, 2023.

1. The Property shall be developed in substantial conformance with the submitted conceptual site plan prepared by AES and dated December 12, 2023.

2. The landscape buffer plan proposed on the concept plan exhibit is conceptual only at this time. The landscape buffer design and required plantings will meet or exceed the minimum landscaping specifications as outlined in the Solar Energy Ordinance dated December 2018, Article IV, Supplementary Regulations, Section 4-607, and the Energy Project Amendment dated April 2023. The landscape buffer design will be reviewed in detail for approval during the site plan review process.

3. Fencing shall be placed around the solar arrays, inverters, and substation only and not the whole site, in order to provide wildlife corridors. Fenced areas of the project shall be constructed using galvanized steel and in accordance with National Electric Code and the Ordinance standards but in no case shall exceed 7 feet in height.

4. During the site plan review process, Applicant will demonstrate to the Zoning Administrator that 34.5kV lines connecting inverters to the project substation have either been placed within or adjacent to existing overhead utility corridors, within or adjacent to other solar arrays and/or underground where technically and physically practical, accounting for natural and physical obstacles, existing electrical infrastructure, wetlands, electrical interference, recommendations of state agencies, etc.

5. The Applicant will maintain applicable setbacks and screening on the Property, including side and rear yard setbacks (excluding all internal, participating parcel property lines), wildlife corridors, and existing natural vegetation providing a visual screen from adjacent properties and public roads.

6. The location of inverters shall be set back a minimum of 250 feet from all non-participating parcel property lines to meet or exceed the minimum requirement as outlined in the Solar Energy Ordinance dated December 2018 and the current Surry County Code.

7. The Applicant shall submit the following Studies and Plans concurrently with the Final Site Plan. The Zoning Administrator may refer any of the studies or plans for the Project to a qualified consultant for review and comment, at the Applicant's or their Assignee's expense (as the case may be), the terms and conditions of which shall be determined in advance of the referral with the Applicant or their assignee.
   A. Construction Management Plan. The Applicant shall prepare a Construction Management Plan for each applicable Site Plan for the Project, which shall address the following:
      i. Construction Traffic Management Plan including mitigation measures shall be developed by the Applicant, owner or operator and shall be submitted to the Virginia

Department of Transportation (VDOT) and Zoning Administrator for review and approval. This plan shall address traffic control measures, pre-and post-construction road evaluation, and any necessary repairs to the public roads that are required as a result of any damage from Project construction and/or expansion. VDOT permits must be received and be approved by VDOT prior to construction occurring on the area of the project served by the applicable VDOT approved entrance.

ii. Project access planning, directing employee and delivery traffic to minimize conflicts with local traffic.

iii. A parking and staging plan shall be submitted as a part of the Final Site Plan approval and be submitted for various stages of the construction process. All subsequent construction processes shall also adhere to submitting a parking and staging plan prior to the commencement for expansion or decommissioning.

iv. Lighting. During construction of the Project any temporary construction lighting shall be positioned downward, inward, and shielded to eliminate glare from all adjacent properties. Lighting during operation of the Project shall be for security, repair and maintenance purposes only. Any on-site lighting provided for the operational phase of the Solar Facility shall be shielded away from adjacent properties and positioned downward to minimize light spillage onto adjacent properties.

B. Construction Mitigation Plan. The Applicant shall prepare a Construction Mitigation Plan for each applicable Site Plan for the Project to the satisfaction of the Zoning Administrator. Each plan shall address, at a minimum:

i. The effective mitigation of dust. All construction roads and construction areas shall minimize dust to the extent practicable by the use of a water truck or other method to keep sediment on the Property and not be of a general nuisance to the adjoining property owners during site construction and/or site expansion for the Project.

ii. Burning operations.

iii. Hours of construction. All pile driving shall be limited to 7:00am to 7:00pm, Monday through Saturday. No Sunday pile driving shall occur during site construction, expansion, or operation of the Project, unless otherwise approved by the Zoning Administrator. All other normal on-site construction activity is permitted Monday through Sunday in accordance with the provisions of the County Noise Ordinance.

iv. General construction complaints.

C. Grading Plan. The Project shall be constructed in compliance with the County-approved grading plan as approved by County staff prior to the commencement of any construction activities in coordination with the Erosion and Sediment Control Plan. The applicant shall construct, maintain, and operate the project in compliance with the approved plan. An E&S bond will be posted for the construction portion of the Project. The grading plan shall:

i. Clearly show existing and proposed contours;

ii. Note the locations and estimated amount of topsoil to be removed (if any)

and the percent of the Site to be graded;

iii. Limit grading to the greatest extent practicable by avoiding slopes greater than fifteen
(15) percent except where required for access roads and enhancement of natural topographic features for stormwater management;

iv. Require an earthwork balance to be achieved on-site with no import or export of soil, unless it can be demonstrated to the satisfaction of the Zoning Administrator that doing so would create more clearing and grading than by allowing the import or export of soil;

v. Require topsoil to first be stripped from areas proposed to be permanent access roads which will receive gravel or in any areas where more than a few inches of cut are required and stockpiled on-site to be later used to increase the fertility of areas intended to be seeded.

D. Solar Facility Screening and Vegetation Plan. A separate surety shall be posted for the ongoing maintenance of the project's planted vegetative buffers as shown in the Site Plan in the amount of 100% of the installation cost of all planted vegetation in the vegetative buffer for three (3) years following the Commercial Operation date.

i. Site groundcover for the solar energy facility shall include a variety of native and non-invasive groundcovers that benefit birds, and bees, and other beneficial insects.

ii. Groundcover shall be expeditiously established following the completion of construction activities to minimize erosion and loss of soil.

iii. Use of herbicides to control and maintain groundcover during and post construction shall be approved by the Zoning Administrator or their designee and administered by a licensed contractor.

E. Building and Electrical Plans: Applicant shall submit building and electrical plans to the Building Inspector for approval.

F. Professional wetland, stream, and Resource Protection Area delineations in accordance with state and federal regulations; field and/or GPS surveys of each.

G. US Army Corps of Engineers (USACE) Jurisdictional Determination, field or GPS surveyed.

H. Copies of applicable USACE and/or DEQ permits.

I. A current field run and/or aerial topographic survey on contour intervals of two feet or less, to include limits of steep (>15%) slopes.

J. A field run boundary survey to meet minimum state standards.

K. Professional T&E species and cultural and historical resources reviews and approvals as noted in the project narrative.

L. Prior to Final Site Plan approval, the Applicant shall submit soil testing reports establishing baseline pre- installation conditions and the Applicant or their assignee shall restore the Project site to at least predevelopment soil condition or other enhanced condition to facilitate the use of the project area for agricultural or silvicultural use as part of the decommissioning process, and as evidenced by post-decommissioning soils tests. Applicant shall provide ground water monitoring as required by the Ordinance.

8. Prior to commercial operation of the Project, the Applicant shall submit a report annually to the County Administrator outlining the Project permitting and development plan progress for the Project. Once operational, the Applicant shall submit an annual operational report to the County Administrator.

9. The Applicant shall provide for construction phase third party inspections and submittal of inspection reports to the Surry County Building Official, at their expense, for the Project. These inspections and reports are itemized as follows:
    a. All inspections and reports required pursuant to the Virginia Erosion and Sediment Control Handbook,
    b. Technical and engineering inspection reports including any advanced electrical inspections required pursuant to the National Electric Code.

10. The areas shown on the Site plan within the “Limits of Disturbance” may only be utilized for the operation and maintenance of the project, to include supporting structures and infrastructure, with the exception of battery storage, or any other means of electrical storage. Small batteries associated with inverters shall not be subject to this provision and shall be considered “supporting infrastructure.” Dual use of the area within the Limits of Disturbance for agricultural and silvicultural production, as applicable, shall be permitted.

11. Upon commencement of construction, Applicant will engage a Project Liaison between citizens, construction crews, maintenance teams and the Applicant. The contact information for the Project Liaison will be posted at each access, published on the Project’s website, and provided to Surry County Staff. The Project Liaison will remain in place until completion of construction. Appropriate Project contact information will be available for the remainder of the Project life.

12. The Applicant shall submit an Emergency Response Plan with the first submission of the site plan. The plan shall include fire suppression methods that can be immediately deployed during both construction and operation of the Project. The plan shall also include a program of education and training to be provided for County emergency response staff with regards to safety for on-site emergency response. Initiation and frequency of training will be coordinated between the Department of Emergency Services

and the facility operator. The Applicant will include plans for the installation of a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise, with the Final Site Plan.

13. The Applicant shall test the soil at various locations throughout the Project approved by the County to monitor soil contents within the project for metals listed in the Resource Conservation and Recovery Act (the "RCRA 8"). Testing shall be conducted prior to construction of the Project (baseline testing), once every five (5) years during operation of the Project, and once following the completion of decommissioning by an independent third-party consultant mutually acceptable to the Applicant and the County, the cost of which will be borne by the Applicant. Testing results shall be submitted to the County by Applicant. Should any post-construction sampling test results indicate increased levels of RCRA 8 contaminants relative to to baseline testing, directly attributable to the Project, that exceed the EPA maximum contaminant level for the National Primary Drinking Water Regulations for the RCRA 8, then the Applicant shall coordinate with the Zoning Administrator, Virginia Department of Environmental Quality, Virginia Department of Health and/or other applicable state or federal agencies to determine necessary actions.

14. Prior to Commercial Operation of the Project, the Applicant shall host training of local first responders addressing site-specific hazards and site access. During the operation of the Project, additional training will be provided as deemed necessary by the Public Safety Coordinator.

15. The design, installation, maintenance, and repair of the Project shall be in accordance with the most current National Electrical Code (NFPA 70) and the Virginia Uniform Statewide Building Code. In the event of conflict between the code provisions cited herein, the Project will be constructed, maintained, and operated in accordance with all adopted codes under the Virginia Uniform Statewide Building Code.

16. Decommissioning. Surety securing the performance of decommissioning of the Project shall be provided in accordance with Va. Code §15.2-2241.2 and in a form acceptable to the Surry County Planning Director and Surry County Attorney. The Decommissioning Plan shall be updated every five (5) years, and as necessary, the Decommissioning Surety shall be adjusted to reflect the updated estimate of cost of decommissioning.

    Prior to the issuance of permits for installation of equipment, a detailed plan for decommissioning the Project in substantial compliance with §4.11 of the Ordinance and the Decommissioning Plan shall be provided to the County. The Project shall be decommissioned and removed within 12 months after the Project ceases electricity generation for a continuous 12-month period. Decommissioning shall include removal of solar collectors, cabling, electrical components, and any other associated items to a depth of at least 36".

17. All components of the Project which are removed from service due to damage during construction and operation will be collected and stored onsite in dry waste containers and either recycled or disposed of offsite in accordance with applicable manufacturer and the Environmental Protection Agency (EPA) regulations.

18. The Applicant shall provide the County evidence that all necessary water withdrawal permits have been obtained prior to site plan approval.

19. No signage shall be permitted on the Property other than such notices, warnings, and identification information as required by law.

20. The County may withhold land disturbance permit until evidence is provided to Surry County that required local, state, and federal permits and approvals have been obtained. Limited land disturbance permits may be issued by the Zoning Administrator that authorize certain activities within the site (timbering, etc.). The zoning administrator may also issue land disturbance permits applicable to limited areas of the Project for which all required local, state and federal permits have been obtained.

21. The approved Conditional Use Permit (CUP) shall expire after four years from the date of approval if no substantial construction has taken place in accordance with the plans for which such use was granted unless the Board grants a longer period of time for good cause shown.

22. The Conditional Use Permit (CUP) will be binding on the Applicant or any successors or assigns of the Project. Applicant or any successor or assign shall notify the County upon any transfer or assignment of the Project of such transfer or assignment providing the County with contact information for any transferee.

23. If any condition imposed by this Conditional Use Permit is determined to be invalid, void or unenforceable by any court or other governmental authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision or condition of this Conditional Use Permit.

24. Violations and Revocation.
    a. Stop Work Orders. A violation of any type of the Surry County Zoning Ordinance, this Conditional Use Permit, any Studies or Plans required by this Conditional Use Permit, or any Solar Facility Siting Agreement may result in a Stop Work Order. Stop Work Orders may be issued 72 hours after delivery of a written notice of violation ("Pending Stop Work Order Notice") by the Zoning Administrator to applicant via email or written notice to the Liaison. Upon issuance of a Pending Stop Work Order Notice, applicant shall meet and/or communicate with the County and determine a process for remedying the violation. Implementation of the remedial process to the County's satisfaction shall result in revocation of the Pending Stop Work Order Notice, or Stop Work Order, if issued.

b. Extended Violations, CUP Revocation. Any violation of any type of the Surry County Zoning Ordinance, this CUP, any Studies or Plans required by this CUP or any Solar Facility Siting Agreement continuing for 60 days from the date a written notice of violation ("NOV") is mailed to the Applicant's point of contact, as set forth in the notice provision of the Siting Agreement, may result in revocation of this CUP if the applicant has failed to meet with the Zoning Administrator and submit a plan to address the violations cited in the NOV, or has failed to comply with such a plan. With respect to any road repairs necessitated by the applicant's use of the roads during construction, any such repairs shall be made within a reasonable period of time after obtaining approval from VDOT. Failure to comply with any and all conditions as approved by the Board of Supervisors may result in this CUP being revoked after a public hearing by the Board.

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Attachment C
Conceptual Plan

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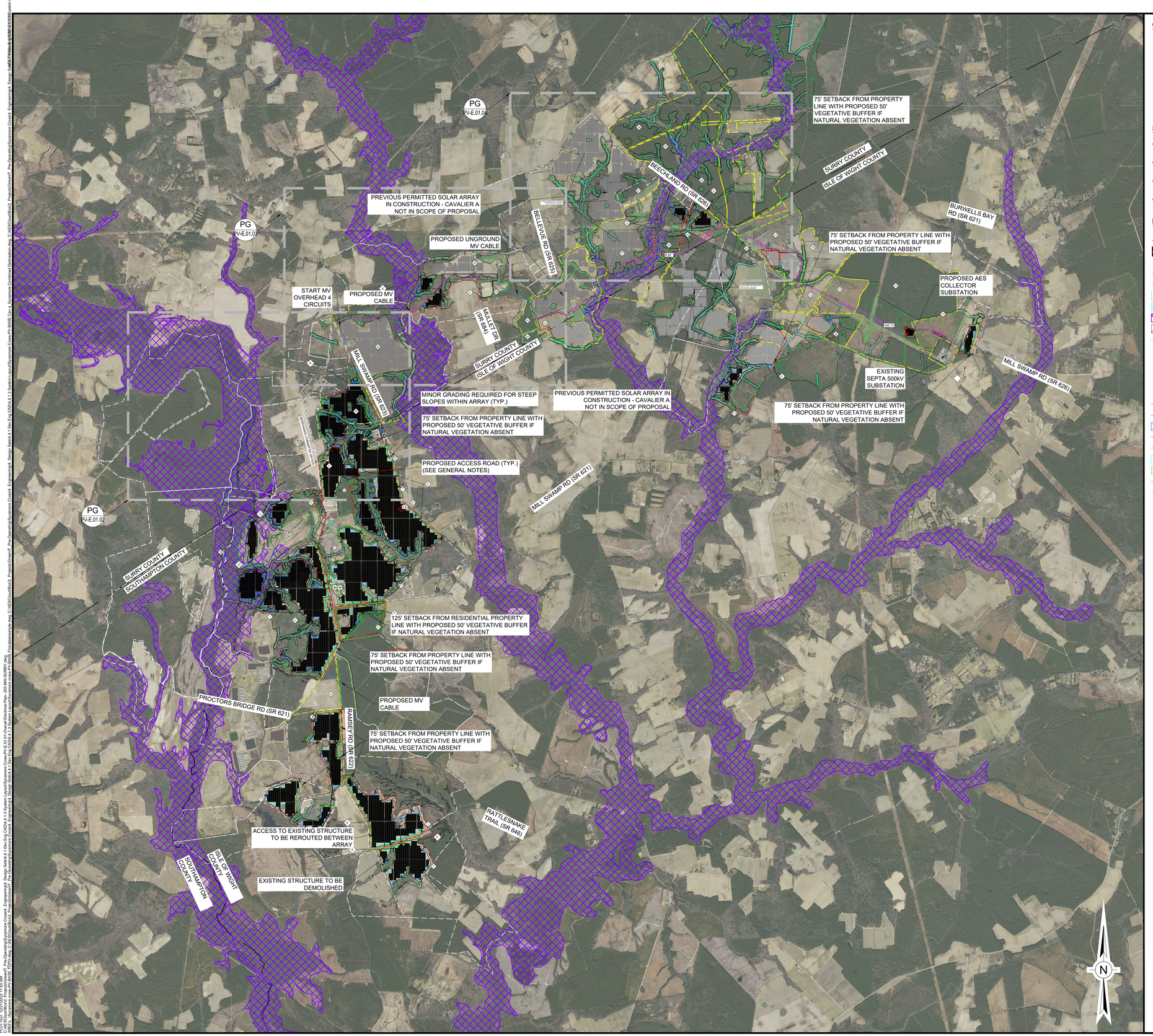

GENERAL NOTES

1. THIS DRAWING IS PRELIMINARY AND FOR ESTIMATING PURPOSES ONLY. IT IS NOT FOR CONSTRUCTION.
2. LOCATION OF ALL EXISTING ITEMS IS APPROXIMATE AND MUST BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.
3. ALL SPECIFIED EQUIPMENT IS PRELIMINARY. FINAL EQUIPMENT SELECTION SHALL BE APPROVED BY OWNER.
4. 75' EQUIPMENT SETBACK FROM ALL PROPERTY LINES
5. 125' EQUIPMENT SETBACK FROM ALL RESIDENTIAL PARCELS
6. EXISTING WOOD LINE, EASEMENTS, ROW'S TO BE PROVIDED ONCE ALTA SURVEY COMPLETED.
7. ALL SITE ENTRANCES SHALL BE 20' WIDE AND TAPER TO 16' INTERNAL ACCESS ROADS

SHEET NOTES

- E — SITE ENTRANCE
- S — SURRY COUNTY PARCELS
- C — WILDLIFE CORRIDOR
- # — PARCEL ID

LEGEND

EXISTING

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT PROPERTY LINE
- MAJOR PUBLIC ROAD
- ROAD RIGHT-OF-WAY
- APPROXIMATE WETLAND
- WASH / DRAINAGE
- 100 YEAR FLOOD PLAIN
- SLOPE KEEPOUT AREAS
- CAVALIER SITE FENCE
- CAVALIER SITE PV PANELS

PROPOSED

- MERGED SETBACK
- FENCE
- PROVISIONS FOR 2' DEEP WATER QUALITY MANAGEMENT
- OH-500 OH-500 EXISTING 500kV GEN-TIE
- OH-MV OH-MV 34.5KV OVERHEAD MV COLLECTION LINE
- LAYDOWN/ PARKING AREA
- PROPOSED VEGETATIVE BUFFER
- MV MV MV MV UNDERGROUND LINE
- 60' MV LINE EASEMENT
- SYCAMORE CROSS PV PANELS

PARCELS WITHIN PROJECT BOUNDARIES

SHEET NOTE NUMBER	PARCEL TYPE	PARCEL ID	OWNER NAME
24	Easement Only	60-1-1	JEFFERY & MELANIE SEWARD
25	Project	60-9	BYRUM JOHN & JEANETTTEN
26	Project	60-17	NEW SUSTAINABLE PROP HOLDINGS LLC
27	Easement Only	61-2	ELTON B SEWARD, JR.
28	Project	61-3	NEW SUSTAINABLE PROP HOLDINGS LLC
29	Easement Only	61-4	NEW SUSTAINABLE PROP HOLDINGS LLC

PRELIMINARY
NOT FOR CONSTRUCTION

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

PE STAMP:

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	12/28/2022	INITIAL 5% LAYOUT
8	07/24/2023	REVISED 5% LAYOUT
9	12/12/2023	REVISED 5% LAYOUT
3	4/6/2023	REVISED 5% LAYOUT
4	4/17/2023	REVISED 5% LAYOUT
5	4/28/2023	REVISED 5% LAYOUT
6	5/25/2023	REVISED DC:AC RATIO
7	6/23/2023	ADDITIONAL PARCEL INVESTIGATION

PROJECT TITLE:

SYCAMORE CROSS

PROJECT LOCATION:

MILL SWAMP ROAD,
SMITHFIELD, VA 23430
37.0180,-76.7358

SHEET TITLE & DESCRIPTION:

OVERALL ELECTRICAL PLAN

UP TO 240 MW AC

PROJ NUM:	
DES:	A. PEÑAS
DWN:	F. MIRANDA
CHK:	C. SANCHEZ
APV:	
DATE:	12/28/2022

SCALE AT 24" x 36":
0 1,000' 2,000' 3,000' 4,000'
1" = 2,000'

SHEET NO: PV-E.01.01
REV: 9

PLOTTED: 10/21/2023 11:50 AM
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PARCELS WITHIN PROJECT BOUNDARIES			
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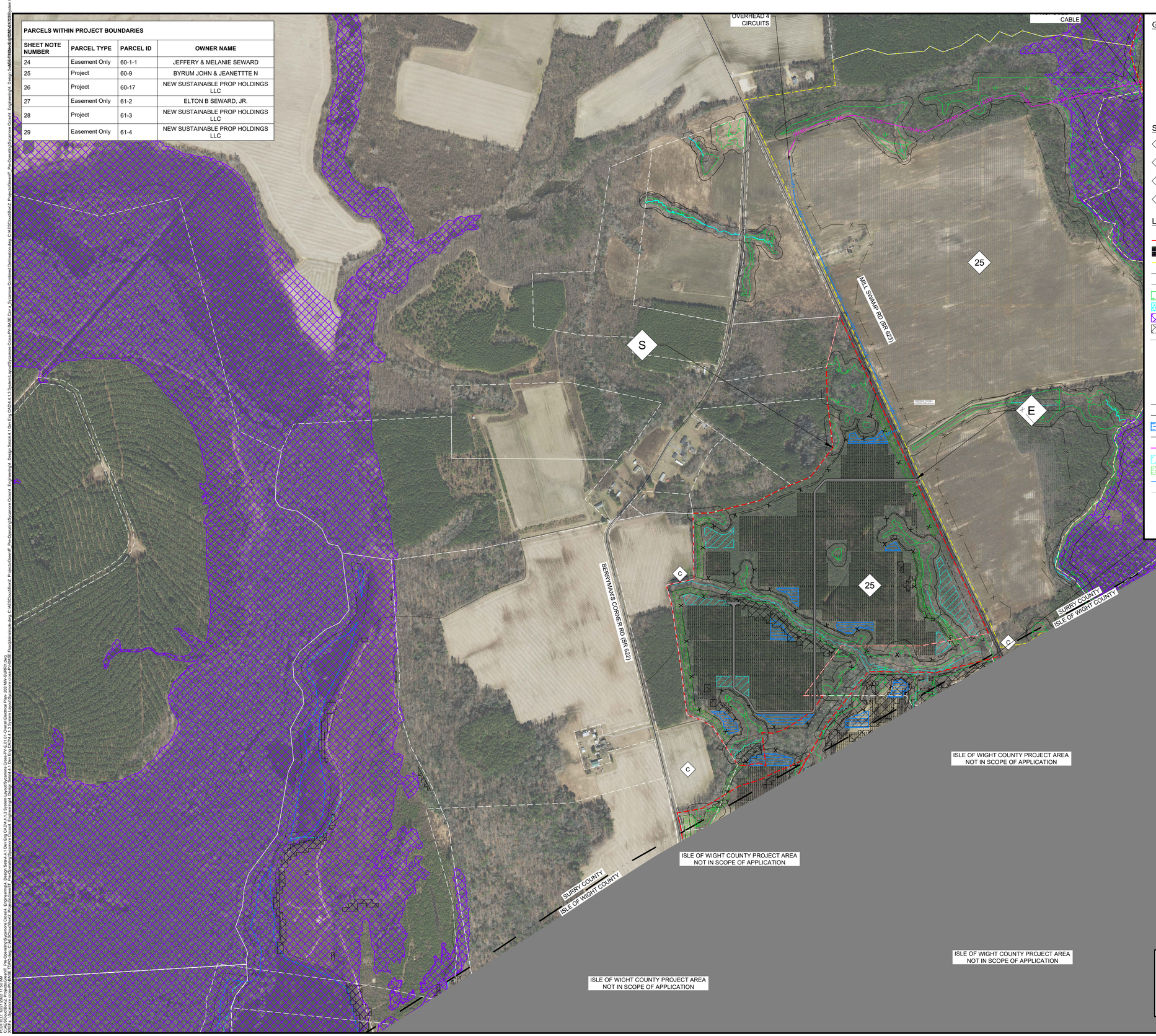
28	Project	61-3	NEW SUSTAINABLE PROP HOLDINGS LLC
29	Easement Only	61-4	NEW SUSTAINABLE PROP HOLDINGS LLC



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5. 125' EQUIPMENT SETBACK FROM ALL RESIDENTIAL PARCELS
6. EXISTING WOOD LINE, EASEMENTS, ROW'S TO BE PROVIDED ONCE ALTA SURVEY COMPLETED.
7. ALL SITE ENTRANCES SHALL BE 20' WIDE AND TAPER TO 16' INTERNAL ACCESS ROADS

SHEET NOTES

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- S — SURRY COUNTY PARCELS
- C — WILDLIFE CORRIDOR
- # — PARCEL ID

LEGEND

EXISTING

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- EASEMENT PROPERTY LINE
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- APPROXIMATE WETLAND
- WASH / DRAINAGE
- 100 YEAR FLOOD PLAIN
- SLOPE KEEPOUT AREAS
- CAVALIER SITE FENCE
- CAVALIER SITE PV PANELS

PROPOSED

- MERGED SETBACK
- FENCE
- PROVISIONS FOR 2' DEEP WATER QUALITY MANAGEMENT
- OH-500 / OH-500 — EXISTING 500kV GEN-TIE
- OH-MV / OH-MV — 34.5kV OVERHEAD MV COLLECTION LINE
- LAYDOWN/ PARKING AREA
- PROPOSED VEGETATIVE BUFFER
- MV / MV / MV — MV UNDERGROUND LINE
- 60' MV LINE EASEMENT
- SYCAMORE CROSS PV PANELS

PRELIMINARY
NOT FOR CONSTRUCTION

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

PE STAMP:

KEY PLAN:

REVISIONS:

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9	12/12/2023	REVISED 5% LAYOUT
3	4/6/2023	REVISED 5% LAYOUT
4	4/17/2023	REVISED 5% LAYOUT
5	4/28/2023	REVISED 5% LAYOUT
6	5/25/2023	REVISED DC:AC RATIO
7	6/23/2023	ADDITIONAL PARCEL INVESTIGATION

PROJECT TITLE:

SYCAMORE CROSS

PROJECT LOCATION:

MILL SWAMP ROAD,
SMITHFIELD, VA 23430
37.0180,-76.7358

SHEET TITLE & DESCRIPTION:

OVERALL ELECTRICAL PLAN

UP TO 240 MW AC

PROJ NUM:	
DES:	A. PEÑAS
DWN:	F. MIRANDA
CHK:	C. SANCHEZ
APV:	
DATE:	12/28/2022

SCALE AT 24" x 36":
0 400' 800' 1,200' 1,600'
1" = 800'

SHEET NO: PV-E.01.02
REV: 9

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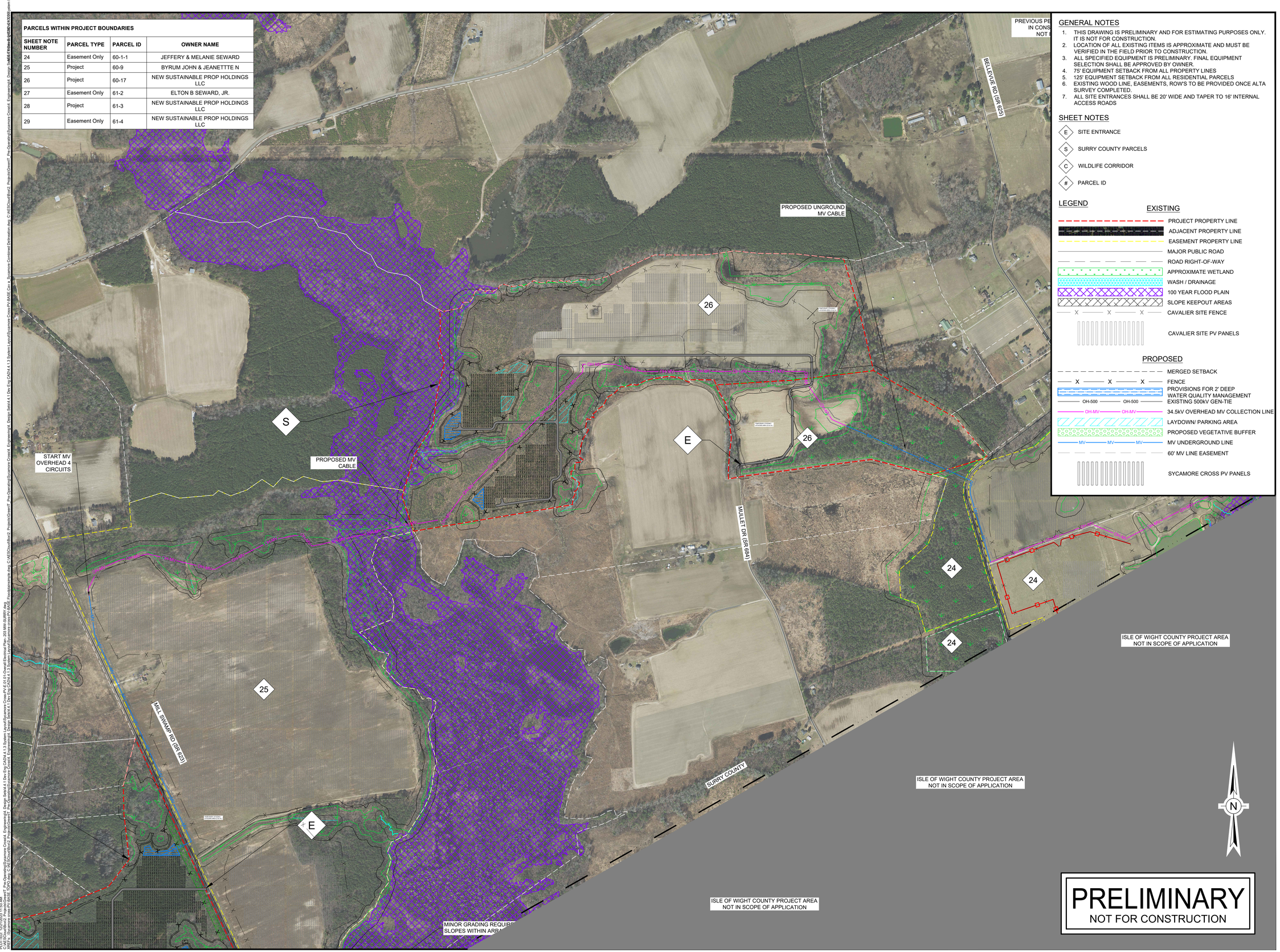
PARCELS WITHIN PROJECT BOUNDARIES

SHEET NOTE NUMBER	PARCEL TYPE	PARCEL ID	OWNER NAME
24	Easement Only	60-1-1	JEFFERY & MELANIE SEWARD
25	Project	60-9	BYRUM JOHN & JEANETTE N
26	Project	60-17	NEW SUSTAINABLE PROP HOLDINGS LLC
27	Easement Only	61-2	ELTON B SEWARD, JR.
28	Project	61-3	NEW SUSTAINABLE PROP HOLDINGS LLC
29	Easement Only	61-4	NEW SUSTAINABLE PROP HOLDINGS LLC



GENERAL NOTES

1. THIS DRAWING IS PRELIMINARY AND FOR ESTIMATING PURPOSES ONLY. IT IS NOT FOR CONSTRUCTION.
2. LOCATION OF ALL EXISTING ITEMS IS APPROXIMATE AND MUST BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.
3. ALL SPECIFIED EQUIPMENT IS PRELIMINARY. FINAL EQUIPMENT SELECTION SHALL BE APPROVED BY OWNER.
4. 75' EQUIPMENT SETBACK FROM ALL PROPERTY LINES
5. 125' EQUIPMENT SETBACK FROM ALL RESIDENTIAL PARCELS
6. EXISTING WOOD LINE, EASEMENTS, ROW'S TO BE PROVIDED ONCE ALTA SURVEY COMPLETED.
7. ALL SITE ENTRANCES SHALL BE 20' WIDE AND TAPER TO 16' INTERNAL ACCESS ROADS

SHEET NOTES

- E — SITE ENTRANCE
- S — SURRY COUNTY PARCELS
- C — WILDLIFE CORRIDOR
- # — PARCEL ID

LEGEND

EXISTING

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT PROPERTY LINE
- MAJOR PUBLIC ROAD
- ROAD RIGHT-OF-WAY
- APPROXIMATE WETLAND
- WASH / DRAINAGE
- 100 YEAR FLOOD PLAIN
- SLOPE KEEPOUT AREAS
- CAVALIER SITE FENCE
- CAVALIER SITE PV PANELS

PROPOSED

- MERGED SETBACK
- FENCE
- PROVISIONS FOR 2' DEEP WATER QUALITY MANAGEMENT
- OH-500 — OH-500 — EXISTING 500kV GEN-TIE
- OH-MV — OH-MV — 34.5kV OVERHEAD MV COLLECTION LINE
- LAYDOWN/ PARKING AREA
- PROPOSED VEGETATIVE BUFFER
- MV — MV — MV — MV UNDERGROUND LINE
- 60' MV LINE EASEMENT
- SYCAMORE CROSS PV PANELS

PRELIMINARY
NOT FOR CONSTRUCTION

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

PE STAMP:

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	12/28/2022	INITIAL 5% LAYOUT
8	07/24/2023	REVISED 5% LAYOUT
9	12/12/2023	REVISED 5% LAYOUT
3	4/6/2023	REVISED 5% LAYOUT
4	4/17/2023	REVISED 5% LAYOUT
5	4/28/2023	REVISED 5% LAYOUT
6	5/25/2023	REVISED DC:AC RATIO
7	6/23/2023	ADDITIONAL PARCEL INVESTIGATION

PROJECT TITLE:

SYCAMORE CROSS

PROJECT LOCATION:

MILL SWAMP ROAD,
SMITHFIELD, VA 23430
37.0180,-76.7358

SHEET TITLE & DESCRIPTION:

OVERALL ELECTRICAL PLAN

UP TO 240 MW AC

PROJ NUM:	
DES:	A. PEÑAS
DWN:	F. MIRANDA
CHK:	C. SANCHEZ
APV:	
DATE:	12/28/2022

SCALE AT 24" x 36":
0 400' 800' 1,200' 1,600'
1" = 800'

SHEET NO:	REV:
PV-E.01.03	9

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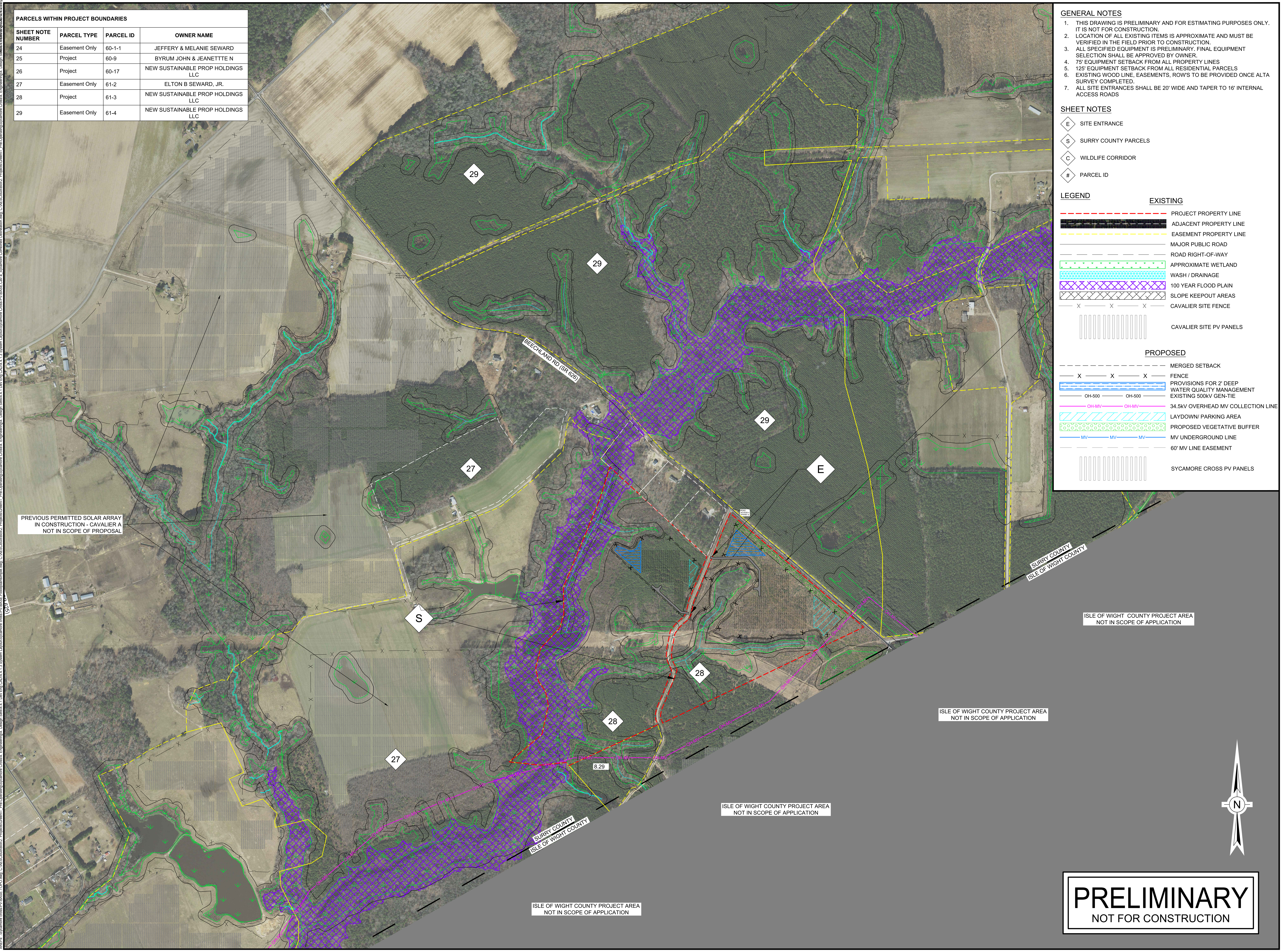
PARCELS WITHIN PROJECT BOUNDARIES

SHEET NOTE NUMBER	PARCEL TYPE	PARCEL ID	OWNER NAME
24	Easement Only	60-1-1	JEFFERY & MELANIE SEWARD
25	Project	60-9	BYRUM JOHN & JEANETTTE N
26	Project	60-17	NEW SUSTAINABLE PROP HOLDINGS LLC
27	Easement Only	61-2	ELTON B SEWARD, JR.
28	Project	61-3	NEW SUSTAINABLE PROP HOLDINGS LLC
29	Easement Only	61-4	NEW SUSTAINABLE PROP HOLDINGS LLC



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SHEET NOTES

- E — SITE ENTRANCE
- S — SURRY COUNTY PARCELS
- C — WILDLIFE CORRIDOR
- # — PARCEL ID

LEGEND

EXISTING

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT PROPERTY LINE
- MAJOR PUBLIC ROAD
- ROAD RIGHT-OF-WAY
- APPROXIMATE WETLAND
- WASH / DRAINAGE
- 100 YEAR FLOOD PLAIN
- SLOPE KEEPOUT AREAS
- CAVALIER SITE FENCE
- CAVALIER SITE PV PANELS

PROPOSED

- MERGED SETBACK
- FENCE
- PROVISIONS FOR 2' DEEP WATER QUALITY MANAGEMENT
- OH-500 — EXISTING 500kV GEN-TIE
- OH-MV — 34.5kV OVERHEAD MV COLLECTION LINE
- LAYDOWN/ PARKING AREA
- PROPOSED VEGETATIVE BUFFER
- MV — MV UNDERGROUND LINE
- 60' MV LINE EASEMENT
- SYCAMORE CROSS PV PANELS

PRELIMINARY
NOT FOR CONSTRUCTION

aes
2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

PE STAMP:

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION
0	12/28/2022	INITIAL 5% LAYOUT
8	07/24/2023	REVISED 5% LAYOUT
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7	6/23/2023	ADDITIONAL PARCEL INVESTIGATION

PROJECT TITLE:

SYCAMORE CROSS

PROJECT LOCATION:

MILL SWAMP ROAD,
SMITHFIELD, VA 23430
37.0180,-76.7358

SHEET TITLE & DESCRIPTION:

OVERALL ELECTRICAL PLAN

UP TO 240 MW AC

PROJ NUM:	
DES:	A. PEÑAS
DWN:	F. MIRANDA
CHK:	C. SANCHEZ
APV:	
DATE:	12/28/2022

SCALE AT 24" x 36":
0 400' 800' 1,200' 1,600'
1" = 800'

SHEET NO:	REV:
PV-E.01.04	9

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Attachment D
Documentation of Right to Use Property

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Tax Parcel ID:
60-17 and 61-3

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Surry County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Ben Saunders, or another representative, agent or contractor of AES as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Surry County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regard to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 23rd day of June, 2023.

NEW SUSTAINABLE PROPERTY HOLDINGS, LLC,
a Delaware limited liability company

By: Michael L Warwick
Name: Michael L. Warwick
Title: Authorized Representative

COMMONWEALTH OF VIRGINIA
COUNTY OF HENRICO, to wit:

I, Mary Hall, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Michael L. Warwick, whose name is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid on behalf of the entity stated above.

Witness my hand and notarial seal this 23rd day of June, 2023

Notary Public

My Commission expires: 12.31.24. [SEAL]

MARY LEON HALL
NOTARY PUBLIC
REGISTRATION # 7858674
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
DECEMBER 31, 2024

EXHIBIT A

Property Description

Parcel ID	Address	County
60-17	Mullet Drive	Surry
61-3	Beechland Road	Surry

Tax Parcel ID:
60-9

Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "CAVALIER SOLAR B, LLC", CHANGING ITS NAME FROM "CAVALIER SOLAR B, LLC" TO "SYCAMORE CROSS SOLAR, LLC", FILED IN THIS OFFICE ON THE THIRD DAY OF JANUARY, A.D. 2023, AT 9:28 O`CLOCK A.M.

Jeffrey W. Bullock, Secretary of State

6242419 8100
SR# 20230006127

Authentication: 202404349
Date: 01-03-23

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 09:28 AM 01/03/2023
FILED 09:28 AM 01/03/2023
SR 20230006127 - File Number 6242419

CERTIFICATE OF AMENDMENT
TO
CERTIFICATE OF FORMATION
OF
CAVALIER SOLAR B, LLC

CAVALIER SOLAR B, LLC (the **"Company"**), a limited liability company organized and existing under the Delaware Limited Liability Act, hereby certifies as follows:.

1. The Certificate of Formation of the Company is hereby amended by striking article 1 thereof and replacing such article with the following new article 1:

   1. **Name.** The name of the limited liability company is:

      Sycamore Cross Solar, LLC

IN WITNESS WHEREOF, the undersigned, an authorized person of the Company, has caused this Certificate of Amendment to be duly executed on January 3, 2023.

By: _____
Sean McBride
General Counsel & Secretary

Recording requested by and
when recorded mail to:

Cavalier Solar B, LLC
Attention: Land Manager
2180 South 1300 East, Suite 600
Salt Lake City, Utah 84106

Tax Map #60-9
Consideration paid to date under this Agreement: $3,000*
*Option Agreements are otherwise exempt from Recordation Tax beyond actual consideration paid within the meaning of §58.1-807, by virtue of Tax Commissioner Ruling 84-178, Reg. 630-14-807 (Jan 1, 1984).

(space above this line for recorder's use)

MEMORANDUM OF LAND LEASE OPTION AGREEMENT

THIS MEMORANDUM OF LAND LEASE OPTION AGREEMENT (this "Memorandum") is made, dated and effective as of April 21, 2022 (the "Effective Date"), between **JEANETTE N. BYRUM,** a single woman as to one-half undivided interest and **RICHARD L. BYRUM** and **JANICE F. BYRUM**, husband and wife, as tenants by the entirety with right of survivorship as at common law as to an undivided one-half interest ("Landowner"), and **CAVALIER SOLAR B, LLC**, a Delaware limited liability company ("Optionee"), in light of the following facts and circumstances:

RECITALS:

WHEREAS, Landowner and Optionee have entered a Land Lease Option Agreement dated as of the Effective Date with respect to property more specifically described herein (as heretofore or hereinafter amended, restated, or supplemented from time to time, the "Option Agreement"); and

WHEREAS, Landowner and Optionee desire to set forth certain terms and conditions of the Option Agreement in a manner suitable for recording in the Official Records of Surry County, Virginia in order to provide record notice of the Option Agreement and Optionee's rights in and to the land subject to the Option Agreement, as provided herein.

NOW, THEREFORE, in consideration of the mutual covenants contained in the Option Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree and stipulate as follows:

1. Description of Property. The land subject to the Option Agreement is described on Exhibit A attached hereto, and by this reference made a part hereof (the "Property").

2. Grant of Option. Landowner hereby grants to Optionee, pursuant to the Option Agreement, an exclusive and irrevocable option (the "Option") to lease approximately one hundred fifteen (+/-115) acres of real property within the Property on the terms and conditions set forth in the

Option Agreement. The entire Option Agreement is hereby incorporated into this Memorandum by reference. Notwithstanding anything to the contrary contained herein, the provisions of this Memorandum do not in any way alter, amend, supplement, change, or affect the terms, covenants, or conditions of the Option Agreement, all of which terms, covenants, and conditions shall remain in full force and effect. In the event of any conflict between the terms of this Memorandum and the Option Agreement, the terms of the Option Agreement shall prevail.

3. Term of Option Agreement. Unless extended or earlier terminated, as provided in the Option Agreement, the term of the Option shall be for a twenty-four (24) month period beginning on the Effective Date. Closing of the transaction contemplated by the Option Agreement shall occur within ninety (90) days following Optionee's exercise of the Option, in accordance with the Option Agreement, or as the parties may otherwise mutually agree.

4. Names and Addresses of Parties. The names and addresses of the parties to the Option Agreement are as follows:

Landowner:

24515 Ennis Mill Road
Windsor, VA 23487
Phone: (757) 242-4132
Email: jfbyrum@yahoo.com

With copy to:
14610 Five Forks Road
Windsor, VA 23487
Phone: (757) 242-4136
Email: jnbyrum@gmail.com

Optionee:

Cavalier Solar B, LLC
Attention: Land Manager
2180 South 1300 East, Suite 600
Salt Lake City, Utah 84106
Phone: (801) 679-3500

With copy to:
Cavalier Solar B, LLC
Attention: Legal Department
2180 South 1300 East, Suite 600
Salt Lake City, Utah 84106
Phone: (801) 679-3500
Email: landlegalnotices@aes.com

5. Successors and Assigns. The terms of this Memorandum and the Option Agreement are covenants running with the land and inure to the benefit of, and are binding upon, the parties and their respective successors and assigns, including all subsequent owners of all or any portion of the Property. References to Landowner and Optionee include their respective successors and assigns. References to the Option Agreement includes any amendments thereto.

6. Miscellaneous. This Memorandum is executed for the purpose of recording in the Official Records of Surry County, Virginia, in order to provide public record notice of the Option Agreement and Optionee's rights in and to the land subject to the Option Agreement. All persons are hereby put on notice of and shall have a duty to inquire regarding the Option Agreement and all of the provisions thereof and the rights, title, interests, and claims of Optionee in and to the Property. Any right, estate, claim, or interest in the Property first attaching to the Property and recorded from and after the Effective Date shall be subordinate to the terms of the Option Agreement. This instrument may for convenience be executed in any number of original counterparts, each of which shall be an original and all of which taken together shall constitute one instrument.

[*The remainder of this page is intentionally left blank.*]

IN WITNESS WHEREOF, Landowner and Optionee, acting through their duly authorized representatives, have made and entered into this Memorandum as of the Effective Date.

LANDOWNER:

Jeanette N. Byrum

Jeanette N. Byrum, a single woman

Richard L Byrum

Richard L. Byrum, a married man

Janice F Byrum

Janice F. Byrum, a married woman

ACKNOWLEDGEMENT OF LANDOWNER

STATE OF Virginia }
} S.S
COUNTY OF Isle of Wight }

On April 19, 2022 before me, JoAnne Faircloth Joyner, Notary Public, personally appeared, Jeanette N. Byrum, Richard L. Byrum, and Janice F. Byrum, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Virginia that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: JoAnne Faircloth Joyner

JOANNE FAIRCLOTH JOYNER
NOTARY PUBLIC
REG # 337547
COMMISSION EXPIRES 07/31/2023
COMMONWEALTH OF VIRGINIA

(Notary Seal)

OPTIONEE:

CAVALIER SOLAR B, LLC,
a Delaware limited liability company

By: _____
Name: Sean McBride
Title: Secretary & General Counsel

ACKNOWLEDGEMENT OF OPTIONEE

STATE OF UTAH }
} *S.S*
COUNTY OF SALT LAKE }

On April 21, 2022 before me, Wendy Quintana, Notary Public, personally appeared, Sean McBride, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of Utah that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

WENDY LEE QUINTANA
Notary Public State of Utah
My Commission Expires on:
February 07, 2026
Comm. Number: 722943

Signature: _____

(Notary Seal)

EXHIBIT A

LEGAL DESCRIPTION

All that certain portion of PIN 60-9 located west of Route 623 (aka Mill Swamp Road) in Surry County, Virginia, being more specifically described below.

All of that certain portion located west of Route 623 (aka Mill Swamp Road) of those lots or parcels of land located in Surry County, Virginia, and more particularly described as follows:

All of those three (3) contiguous tracts, pieces or parcels of land together having an aggregate acreage of 473 acres, more or less, Conveyance in gross and not by the acre, situate, lying and being in the County of Surry, State of Virginia, and generally known and described as the real estate of which William P. Gwaltney died seized and possessed, which lies on both sides of the secondary road, Route 623, leading from Mill Swamp Church to Runnymede, and which as one tract or parcel of land is generally described as being bounded on the North by the Thomas and Simmons lands, on the East by the Gwaltney mill pond, and on the South by the lands formerly belonging to Oscar Drew and the lands of Earnest Wells and on the West by the lands of Earnest Lane. It being the same real estate of which the late William P. Gwaltney died seized and possessed and which by his last will and testament bearing date the 11"., day of September 1906, and duly probated and recorded in the Clerk's Office of the County of Surry, State of Virginia, on May 18, 1917, in Will Book 14, at page 272, he devised to his wife, Leonetta Madeline Gwaltney for and during her natural life, and who is now deceased, and at her death to be divided equally between his children therein named, namely, Ann Snow, Stanley L., Mary L., Madge H., and Taylor W., and the children of his late son, W. Ashton, and the said Stanley L. Gwaltney having acquired the fee simple title to all of said real estate by virtue of the will aforesaid of his late father, a certain deed from Taylor W. Gwaltney, et ux., dated December 12, 1922, and of record in the last mentioned Clerk's Office in Deed Book 37, at page 746, and by another certain deed dated March 30, 1944, and of record in the last mentioned Clerk's Office in Deed Book 46, at page 328, from Ann Gwaltney Ramsey, nee Ann Snow Gwaltney, et als.

LESS AND EXCEPT 101 acre tract of land conveyed to Shaw Land and Timber Company, an Iowa corporation Grantee, from W. Perry Gwaltney and Lee M. Gwaltney, his wife, Grantors, by General Warranty Deed dated September 20, 1907 and recorded September 28, 1907 in the Office of the Clerk of the Circuit Court in and for Surry County, Virginia, in Deed Book 31, at page 666.

INSTRUMENT 220046697
RECORDED IN THE CLERK'S OFFICE OF
SURRY CIRCUIT COURT ON
MAY 4, 2022 AT 11:54 AM
GAIL P. CLAYTON, CLERK
RECORDED BY: NKB

Tax Parcel ID:
60-1-1

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Surry County, Virginia, and Isle of Wight County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Ben Saunders, or another representative, agent or contractor of AES as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Isle of Wight County and/or Surry County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regard to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 24th day of October, 2023.

Print Name: Jeffrey A. Seward

Print Name: Melanie D. Seward

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF ISLE OF WIGHT, to wit:

I, William H. Riddick, III, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Jeffrey A. Seward and Melanie D. Seward, whose names as such are signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid.

Witness my hand and notarial seal this 24th day of October, 2023.

Notary Public

My Commission expires: 3-31-2025. [SEAL]

WILLIAM H. RIDDICK, III NOTARY PUBLIC MY COMMISSION NUMBER 150494 COMMONWEALTH OF VIRGINIA

EXHIBIT A

Property Description

Parcel ID	Address	County
60-1-1	Bellevue Road	Surry County and Isle of Wight County

Tax Parcel ID:
61-2

Prepared By and After Recording Return to:

Sycamore Cross Solar, LLC
c/o AES Clean Energy
2180 South 1300 East, Ste 500
Salt Lake City, Utah 84106

Tax Map No. 61-2

Consideration: $10,000.00*
[*Option Agreements are exempt from Recordation Tax beyond actual consideration received. §58.1-807, by virtue of Tax Commissioner Ruling 84-178, Reg. 630-14-807 (Jan. 1, 1984)]

MEMORANDUM OF ACCESS AND UTILITY EASEMENT OPTION AGREEMENT

THIS MEMORANDUM OF ACCESS AND UTILITY EASEMENT OPTION AGREEMENT (this "Memorandum") is made and entered into as of July 26, 2023 ("Effective Date"), by and between ELTON B. SEWARD, JR. ("Optionor") and SYCAMORE CROSS SOLAR, LLC, a Delaware limited liability company ("Optionee"), with an address of c/o AES Clean Energy, 2180 South 1300 East, Ste 500, Salt Lake City, Utah 84106.

WITNESSETH:

WHEREAS, Optionor is the sole owner of that certain real property in Surry County, Virginia identified by tax parcel number 61-2 (the "Property"), more particularly described on Exhibit A attached hereto;

WHEREAS, Optionor and Optionee entered into that certain Access and Utility Easement Option Agreement dated July 26, 2023 (the "Option Agreement") whereby Optionor granted Optionee an option to acquire an easement on the Property on the terms and conditions set forth in the Option Agreement (the "Option");

WHEREAS, Optionor and Optionee desire to evidence the Option Agreement in the official records maintained by the Clerk's Office of the Circuit Court of Surry County, Virginia by this Memorandum.

NOW, THEREFORE, for good and sufficient consideration acknowledged in the Option Agreement, Optionor has granted Optionee an option to acquire an easement for purposes of ingress and egress, and for installing, operating and maintaining electrical transmission and telecommunication facilities on the Property, with more particular details surrounding the option being as follows:

Section 1. **Term**. The initial term of the Option Agreement commenced on the Effective Date and expires at 11:59 PM Eastern Time on the twenty-four (24) month anniversary of the Effective Date (the "Option Term"). If Optionee exercises the Option during the Option Term, at any time thereafter, Optionee shall deliver the Deed of Easement Agreement to Optionor, which shall be executed by Optionor and Optionee and recorded in the land records of the county in which the Property is located, and upon such recordation this Memorandum shall automatically terminate and be released from the land records without any further action from Optionor or Optionee,

Section 2. **Option Agreement Incorporation; Purpose of Memorandum**. This Memorandum is subject to all conditions, terms and provisions of the Option Agreement, which agreement is hereby adopted and made a part hereof by reference to the same, in the same manner as if all the provisions thereof were set forth herein in full. This Memorandum has been executed for the purpose of recordation in order to give notice of all of the terms, provisions and conditions of the Option Agreement, and is not intended, and shall not be construed, to define, limit, or modify the Option Agreement. This Memorandum is not a complete summary of the Option Agreement, nor shall any provisions of this Memorandum be used in interpreting the provisions of the Option Agreement.

Section 3. **Conflict.** In the event of a conflict between the terms of the Option Agreement and this Memorandum, the Option Agreement shall prevail. Reference should be made to the Option Agreement for a more detailed description of all matters contained in this Memorandum.

Section 4. **Counterparts.** This Memorandum may be executed in as many counterparts as may be deemed necessary and convenient, and by the different parties hereto on separate counterparts, each of which, when so executed; shall be deemed an original, but all such counterparts shall constitute one and the same instrument.

Section 5. **Defined Terms**. Initially capitalized terms used but not defined herein shall have the meanings set forth in the Option Agreement.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the undersigned hereby executes this Memorandum under seal the day and year in the acknowledgment below.

OPTIONOR:

Elton B. Seward, Jr.

STATE/COMMONWEALTH OF VIRGINIA

COUNTY OF Isle of Wight

The foregoing instrument was acknowledged before me this 26th day of July, 2023 by Elton B. Seward, Jr.

Notary Public

Print Name:

(Official Seal)

WILLIAM H. RIDDICK III NOTARY PUBLIC MY COMMISSION NUMBER 150494 COMMONWEALTH OF VIRGINIA

My Commission Expires: 3-31-2025

IN WITNESS WHEREOF, the undersigned hereby executes this Memorandum under seal the day and year first above written.

OPTIONEE:

SYCAMORE CROSS SOLAR, LLC, a Delaware limited liability company

By: _____

Name: Sean McBride
Secretary & General Counsel

Title: _____

STATE OF UTAH

COUNTY OF SALT LAKE

The foregoing instrument was acknowledged before me this 10th day of August, 2023 by Sean McBride (name of authorized person) of SYCAMORE CROSS SOLAR, LLC a Delaware limited liability company, on behalf of said company.

_____
Notary Public

Print Name:

(Official Seal)

My Commission Expires: 2/7/2026

WENDY LEE QUINTANA
Notary Public State of Utah
My Commission Expires on:
February 07, 2026
Comm. Number: 722943

EXHIBIT A

LEGAL DESCRIPTION OF THE PROPERTY

"All of that certain piece, parcel of tract of land situate, lying and being in Blackwater Magisterial District, Surry County, Virginia, shown on the Surry County tax map as Parcel 61-2, said to contain 188 acres, more or less, known as the 'Ben Gwaltney' farm, and bounded by the lands now or formerly owned by T. J. Gwaltney, J. McNurney, Surry Lumber Company, Mrs. A.J. Little and E. Baxter Seward.

Tax Parcel ID:
61-4

OWNER'S AUTHORITY LETTER
Limited Special Power of Attorney

The undersigned, who is the sole owner of property located in Surry County, Virginia, as described on **Exhibit A** attached to this Letter (the "Property"), does hereby make, constitute, and appoint Ben Saunders, or another representative, agent or contractor of AES as my true and lawful attorney-in-fact and in my name, place and stead with full power and authority to file all applications with Surry County for any and all governmental approvals needed or desired to install and/or construct a solar energy facility ("SEF") on the Property and to do and perform all acts and make any and all representations necessary during the zoning, special use, site plan, and building permitting process with regard to such approvals.

This Limited Power of Attorney shall not terminate until the last to occur of the following: (a) such SEF is approved and constructed; (b) it is revoked, rescinded, or modified by the Owner; or (c) five (5) years have elapsed from the date set forth below.

In witness whereof, I have set my hand and seal this 23rd day of June, 2023.

NEW SUSTAINABLE PROPERTY HOLDINGS, LLC,
a Delaware limited liability company

By: Michael L Warwick
Name: Michael L. Warwick
Title: Authorized Representative

COMMONWEALTH OF VIRGINIA
COUNTY OF HENRICO, to wit:

I, Mary Hall, a Notary Public in and for the jurisdiction aforesaid, do hereby certify that Michael L. Warwick, whose name is signed to the writing above, has acknowledged the same before me in the jurisdiction aforesaid on behalf of the entity stated above.

Witness my hand and notarial seal this 23rd day of June, 2023

Notary Public

My Commission expires: 12.31.24. [SEAL]

MARY LEON HALL
NOTARY PUBLIC
REGISTRATION # 7858674
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
DECEMBER 31, 2024

EXHIBIT A

Property Description

Parcel ID	Address	County
60-17	Mullet Drive	Surry
61-3	Beechland Road	Surry
61-4	Beechland Road	Surry

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Attachment E
Visual Impact Assessment

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Visual Resources Assessment

Sycamore Cross Solar Project
Isle of Wight and Surry Counties, Virginia

April 2023

Prepared for

AES Clean Energy Development, LLC
4200 Innslake Drive
Glen Allen, Virginia 23060

Prepared by

TETRA TECH
4104 Cox Road, Suite 120
Glen Allen, Virginia 23060

Table of Contents

List of Tables

Attachments

1.0 INTRODUCTION

Tetra Tech was retained by Sycamore Cross Solar, LLC, a subsidiary of AES Clean Energy, LLC (AES) to prepare a Visual Resource Assessment study (Study) as part of a local permit approval for the proposed Sycamore Cross Solar Project (Project). The scope of this Study is to review the Project setting for potentially sensitive visual or scenic resources and evaluate views of the Project from the surrounding area for visual impacts.

1.1 Regulatory Framework

The Project would be located in both Isle of Wight and Surry Counties, Virginia. Following Conditional Use Permit application requirements, Tetra Tech, Inc., on behalf of AES, prepared this Visual Impact Assessment to support the permit application process. Specifically, the following local code sections address visual impacts:

- **Isle of Wight: Appendix B. Zoning: Article V. Supplemental Use Regulations § 5-5003 Part 4a (ii).**

  A visual impact analysis demonstrating through project siting and proposed mitigation, if necessary, that the solar project minimizes impacts on the visual character of a scenic landscape, vista, or scenic corridor;

- **Surry County: Part I General Ordinance: Chapter 10-Environment: Article IV-Solar Energy Ordinance: Division 4. – Site Development Requirements: Section 10-152- Visual Impact**

  The applicant shall demonstrate through project siting and proposed mitigation, if necessary, that the solar project minimizes impacts on the visual character of features including but not limited to a scenic landscape, state scenic river, state rural historic district, scenic vista, or scenic corridor as identified in the comprehensive plan, schools, churches and structures with documented historic significance. (Ord. No. 2018-08, 12-6-2018)

2.0 PROJECT SETTING

The setting in which the Project is located establishes the existing visual character with which the Project must be compatible and influences how visible it may be from adjacent areas. It also determines in what context the Project is viewed by those who would see it as they carry out their activities.

The Project site is located in the southeast quarter of Virginia, approximately 7 miles west of Smithfield (Figure 1)FIGU. Isle of Wight and Surry Counties are each located within the mid-Atlantic flatwoods ecoregion, which encompasses a small inland area from the upper Burwell Bay southward into North Carolina. Consistent with this regional setting, the landscape surrounding the Project site is characterized by broad plains of terraces, sandy ridges, and broad but shallow valleys. The elevation within the Project site averages around 80 feet, and local relief is less than 30 feet. Mixed forest vegetation covers most undeveloped or non-agricultural areas, often limiting views to the immediate foreground (i.e., within half a mile of the viewer). Dominant canopy vegetation includes hickory, pine, and oak (Woods and others, EPA 1999). Dominant cultivated crops include corn, soy, and winter wheat. Views from the roads along which the Project site is located are dominated by a regular mosaic of open, flat fields enclosed by dense mixed trees arranged in hedgerows or extended forested

parcels. Roadways themselves adjacent to the Project site are narrow, unstriped, and characterized by jointed sections of straightaways through the landscape.

Land uses surrounding the Project site are predominantly agriculture and rural residential. Views surrounding the Project Area are dominated by cultivated open agricultural fields, dense woodlands, and scattered residences and agricultural buildings. The population of Isle of Wight County was 39,278 in 2020, while the population of Surry County was 6,530 in the same period (US Census 2020).

3.0 PROJECT DESCRIPTION

The Project is located on 1,195 acres of currently privately-owned lands and is anticipated to generate up to approximately 240 megawatts alternating current (MWac) of solar power. The Project will be comprised of bifacial photovoltaic (PV) solar panels, mounted on a single axis tracking system collection cable, inverters, medium voltage transformers, circuit breakers and disconnect switches, a substation, and other balance of plant equipment. These Project facilities are described in more detail below.

3.1 Photovoltaic Solar Panels

The preliminary design assumes the Project will use BYD MLTK-36-540W bifacial solar panels and SMA 4200 UP-US inverters; however, the exact model and quantity of PV solar panels and inverters will be finalized during the detailed engineering phase.

The solar panels are arranged in arrays that run from east to west and are grouped in blocks. Panels are clustered into modules and fixed to the ground on a racking system which includes steel pile foundations. A motor is affixed to a central pile that provides power so the panels can track the movement of the sun.

3.2 Inverters and Transformers

Inverters and transformers will be located adjacent to solar array blocks. Each transformer and inverter pair will have a footprint that measures approximately 20 by 8 feet and will not exceed 10 feet in height.

3.3 Collection System and Project Substation

Collection cables from the inverters will converge at the corners of each of the parcels of solar array blocks and will lead underground to the proposed Project substation. Feeder cables will enter the substation via conduit and route to the feeder breakers. The substation will require power transformers, overhead buses, feeder breakers with revenue-grade meters, and miscellaneous supporting equipment. High accuracy metering will be installed in overhead medium voltage buses upstream of all breakers. Metering and control equipment will be installed in the substation control house, and underground fiber optic communication cables will run between the control house and the solar inverters.

4.0 METHODOLOGY

The Project Visual Study Area (VSA) was defined conservatively as the area within 2 miles of the Project boundary. This radius correlates with locations from which the Project components could be noticeable to the casual observer from sensitive or typical viewpoints in the surrounding landscape. The "casual observer" (a common term used in visual analyses) is considered one who is not actively looking or searching for the Project facilities, but who is engaged in activities such as recreating outdoors or driving along a road at locations with potential views of the Project. If the Project components are not noticeable to the casual observer, visual impacts can be considered minor to negligible.

Within the 2-mile study area, a visual resource inventory was conducted to identify sensitive resources and their potential for views of the Project. The inventory included (but was not limited to) federal, state, and local public recreation areas, local community resources (e.g., schools, libraries, places of worship), designated scenic sites, and high use public areas, such as primary transportation routes. Identified resources helped inform the locations of candidate key observation points (KOPs) selected for evaluation during the fieldwork conducted for this study. Significant scenic and other resources identified by the inventory are summarized in Table 1 and mapped on Figure 2.

Table 1. Historic and Scenic Resources Identified within the Study Area

ISLE OF WIGHT COUNTY			
Resource ID No. Keyed to Figure 2	**Resource Name**	**Distance to Nearest Project (miles unless noted otherwise)**	**Project Potentially Visible? Y/N**
Properties Listed in the National Register of Historic Places			
1	Poplar Hill	3.1	N
2	Wolftrap Farm	2.6	N
Virginia SHPO Designated sites			
5	Arthur Stott House Ruins	2.1	N
6	Ivor Municipal Building (Current), Old Ivor School (Historic)	4.94	N
7	Old Ivor School (Historic)	4.93	N
8	Rawls Grocery (Historic/Current)	4.71	N
9	Gus' House (Historic/Current), Tenant House, Proctor's Bridge Road (Function/Location)	1.26	N
10	Ivor Baptist Church (Historic/Current)	4.95	N
11	Store, 8288 Main Street (Function/Location)	4.72	N
13	Fortune House (Descriptive)	4.22	N
14	Grays' Brick House (Historic/Current)	0	Y
Designated Wild and Scenic Rivers			
17	Blackwater River	0.15 and greater	N
State or Federally Designated Trails			
18	On-Road Trail	0.0	Y: Interconnection overhead line
19	James River Heritage Trail	0.0	Y:

ISLE OF WIGHT COUNTY			
Resource ID No. Keyed to Figure 2	Resource Name	Distance to Nearest Project (miles unless noted otherwise)	Project Potentially Visible? Y/N
			Interconnection overhead line
State Nature and Historic Preserve Areas			
20	Blackwater Sandhills DCR - state natural area preserve	0.62	N
Properties Listed in the National Register of Historic Places			
3	Rich Neck Farm	3.36	N
4	Old Brick Church	2.61	N
Virginia SHPO Designated Sites			
12	Oak Shade (Historic/Current), Rogers Farm (Current), Wilson-Bailey Farm (Historic)	4.0	N
15	Ellis House (Historic/Current)	2.24	N
State Parks			
16	Chippokes Plantation State Park	1.0	N
Designated Wild and Scenic Rivers			
17	Blackwater River	0.15 and greater	N

Based on the resource inventory and assessment of sensitive locations with potential views toward the Project, three preliminary and representative key observation points (KOPs) were selected to develop photographic simulations from the 11 total field-visited candidate viewpoints. It is anticipated that none of the designated resources listed in Table 1 would have direct views of the Project, due to distance, screening vegetation, and/or topography. However, this assessment is still ongoing and will be updated. The selected viewpoints developed into simulations represent views from primary roadways directly adjacent to solar arrays, to illustrate typical foreground views of the Project seen by residents and travelers along White River Trail, Sycamore Cross Drive, and Rattlesnake Trail (Appendix A). The representative viewpoints selected for simulations include:

- KOP 1: White Hill Trail
- KOP 2: Sycamore Cross Drive
- KOP 5: Rattlesnake Trail

5.0 VISUAL ANALYSIS

Based on the results of the visual resource inventory, fieldwork, and visual simulations, certain conclusions can be drawn regarding the potential for impacts to scenic sites or areas from the Project. As of this writing, there is no evidence National Register-listed properties would have views of the Project, nor would the Black River.

The Project would, however, be visible from public roadways. As shown in the visual simulations, the Project would be seen briefly by residents and travelers as they move along certain roadways located adjacent to areas where the solar arrays will be installed. Specifically, these roadways include:

- White Hill Trail (Co. Road 623)

- Sycamore Cross Drive (Co. Road 622)
- Mill Swamp Road (Co. Road 621)
- Rattlesnake Trail (Co. Road 646)
- Beechland Road (Co. Road 626)

From these roadways, viewers would see the orderly rows of dark-colored solar arrays, foundation posts, six-foot tall perimeter chain link fencing, and dispersed inverters. Because the existing visual character within the visual study area is dominated by agriculture and woodlands, the solar arrays would introduce minor to moderate visual contrast - that is, the form, line, color, and texture of the Project elements would differ from that of the existing landscape.

The solar arrays would be installed in both existing cultivated and open fields, as well as within areas currently covered by pine timber lands which would be cleared for the Project. Therefore, tree removal would be a noticeable effect of the Project, in addition to direct views of Project components. Large-scale silviculture harvest is assumed to be a frequent occurrence in the area, and viewers are assumed to be familiar with the changes to views resulting from a timber stand being cleared.

Resulting visual effects would vary depending on several factors, such as the distance of the viewer from the Project Area and whether views toward the Project are unobstructed and static or dynamic. Viewers nearest the Project Area, assumed to be residents, would have generally unobstructed views from White Hill Trail and Sycamore Cross Drive, where viewers are adjacent to the Project. Views of Project components from adjacent residences would be of moderate to long duration, depending on the viewers' activity. Travelers and motorists passing through on adjacent roadways, noted above, would experience partial and brief views of Project components, but such views would be dynamic (in motion) and mitigated somewhat by screening vegetation.

From the limited locations where Project facilities are visible in the immediate foreground, the panel arrays are noticeable and dominant; they would result in visual contrast from these locations. Based on the photo simulations, however, the low profile, strongly horizonal lines, and uniformity of the solar arrays somewhat mitigates their overall visual contrast. In addition, when the arrays are tilted at lower angles as they track the sun through the day, visual effects to adjacent viewpoints would be reduced. With slightly increased viewing distance between the viewer and the Project Area, it is anticipated that the landscape would fully absorb the low-profile arrays and make them unnoticeable to fully blocked from view.

In summary, no visual impacts would occur to identified designated scenic resources, and although the Sycamore Cross Solar facility would introduce new views of solar infrastructure from public roadways and a small number of private residents immediately adjacent to the Project site, visual effects are not expected to occur from viewpoints away from the immediate Project Area.

5.1 Mitigation

Although no visual impacts were found to scenic resources, the Sycamore Cross Solar, LLC, acknowledges that the Project will introduce visual change to residents and visitors immediately adjacent to the Project site, and visual mitigation measures are required by the local jurisdiction to address views of utility-scale solar facilities.

To address these requirements, the Project will install landscape buffers (buffer yards) consisting of densely spaced trees and shrubs along rights of way and abutting residential parcels, per the Isle of Wight zoning code Section B. Article V. § 5-5003 Part 4e. Representative landscape screening of evergreen trees planted in three offset rows outside the Project perimeter fence line has been included in the simulations developed for this study to illustrate the developer's conceptual intention to meet the landscape screening requirements. As shown in the simulations depicting the representative landscaping, views of the Project from public roads (and similarly at private residences) will be fully screened as the landscape plantings grow to provide a total visual screen.

6.0 REFERENCES

Woods, Omernik, and Brown. US Environmental Protection Agency. 1999. Level III and IV Ecoregions of Delaware, Maryland, Pennsylvania, Virginia, And West Virginia. Available online here: https://www.epa.gov/eco-research/ecoregion-download-files-state-region-3#pane-36

US Census Bureau. 2020. Isle of Wight County, Virginia. Available online here: https://www.census.gov/quickfacts/fact/table/isleofwightcountyvirginia/PST045221#PST045221

US Census Bureau. 2020. Surry County, Virginia. Available online here: https://www.census.gov/quickfacts/fact/table/surrycountyvirginia,isleofwightcountyvirginia/PST045221

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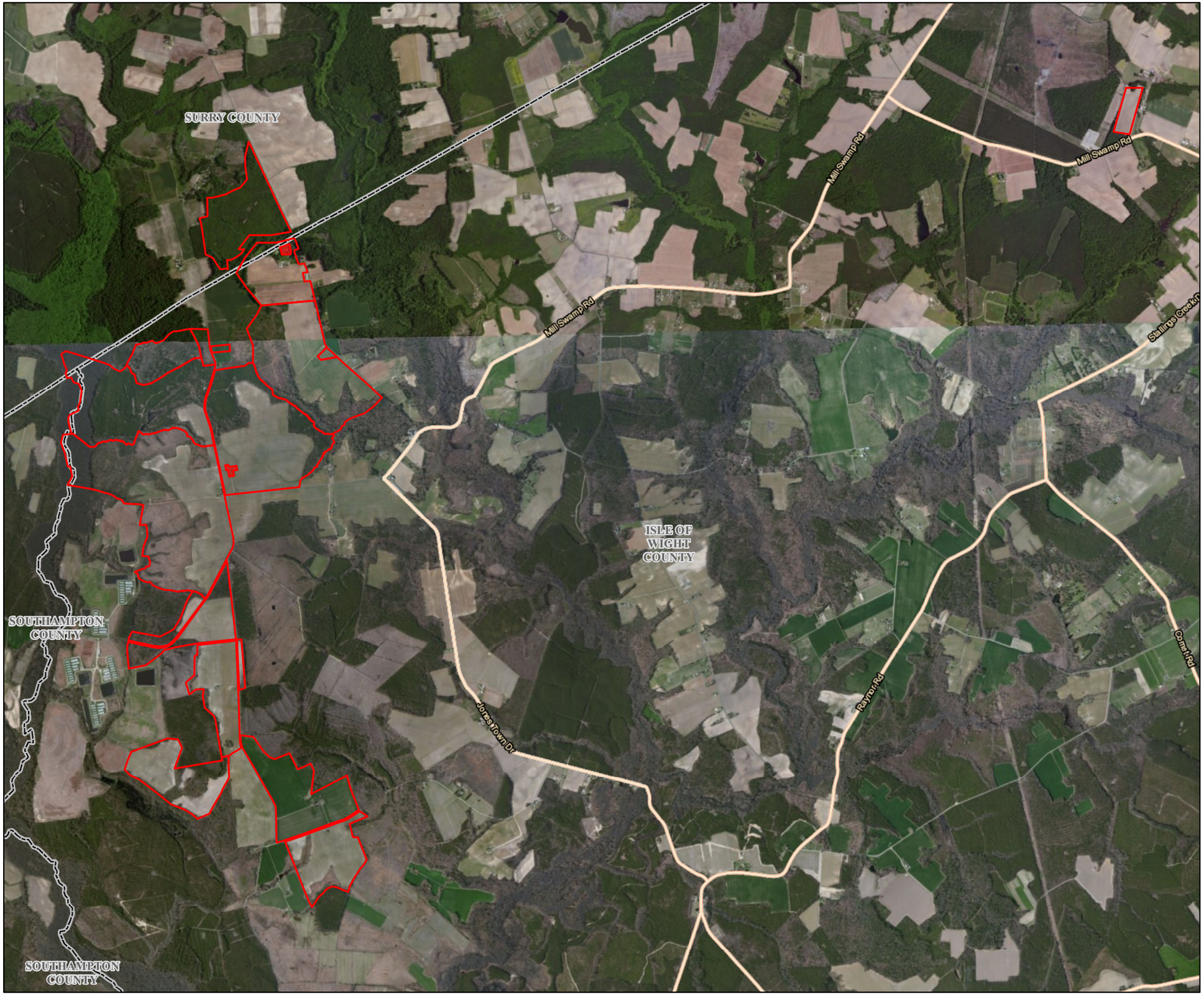
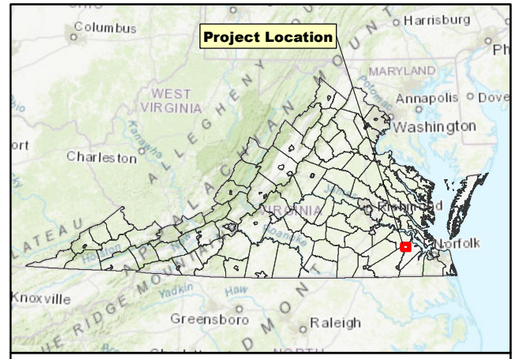




Legend

- Project Study Area
- Outside Project Study Area
- County Boundary

N
W E
S

0 0.25 0.5 1 Miles

Figure 1
Orthoimagery Project Location Map
Sycamore Cross Solar Project
Surry and Isle of Wight Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

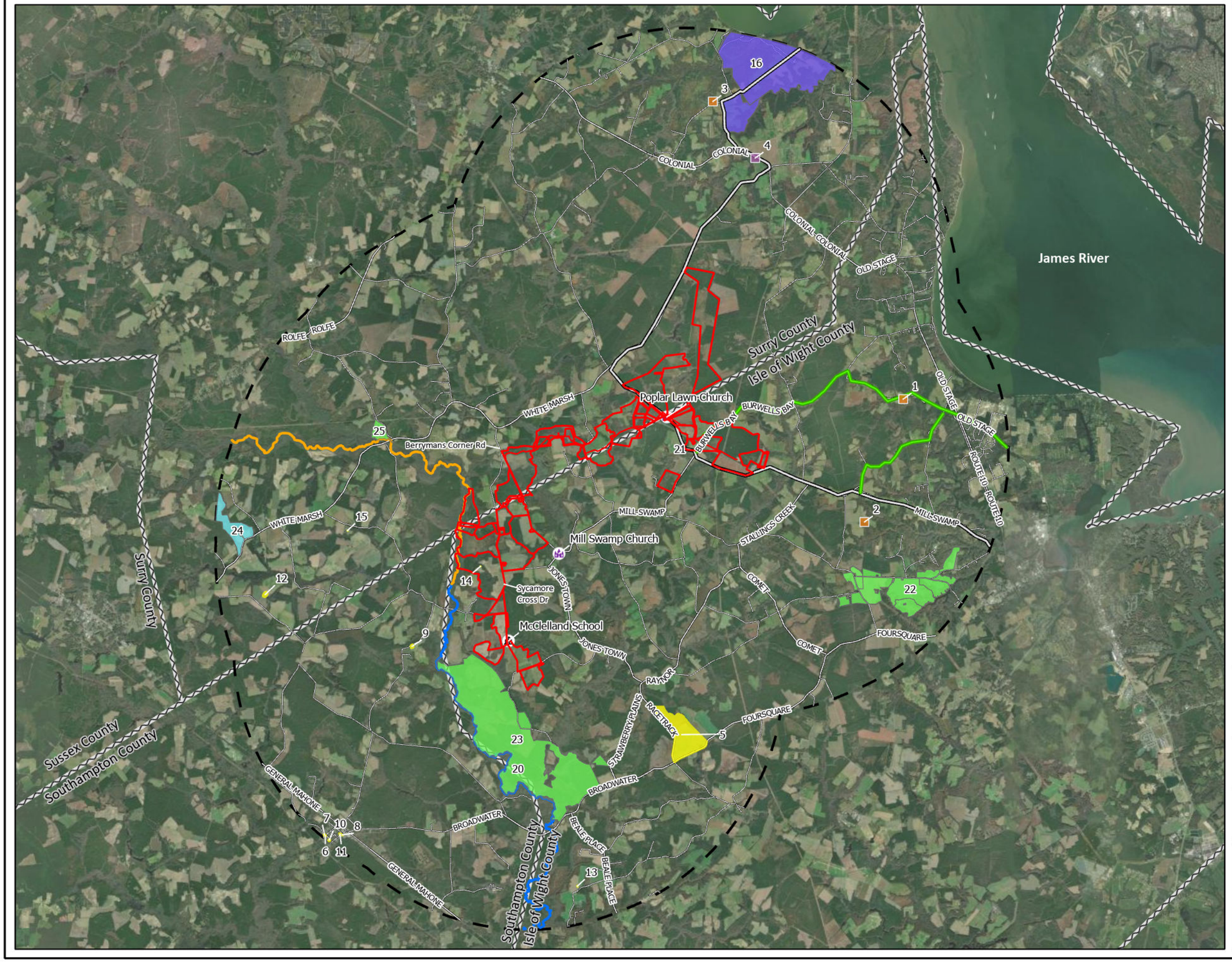
Date: 3/29/2023

Source: Esri, et. al., 2022; AES, 2022; Virginia Open Data Portal, 2022.

Coordinate System: North America Datum, 1983, State Plane, Virginia South, Feet

NOT FOR CONSTRUCTION

P:\GIS\AES\Sycamore_Cross_Solar\GIS\SpatialMXD\20230328_Addl_Wetland_Report\Figure_1_Sycamore_Cross_Solar_Orthoimagery_Project_Location_Map.mxd



LEGEND

- Proposed Project Area
- County Boundaries

Local Community Resources (NEPA 2023)

- Church
- School

National Register of Historic Places

- Building
- Site

Virginia Trails

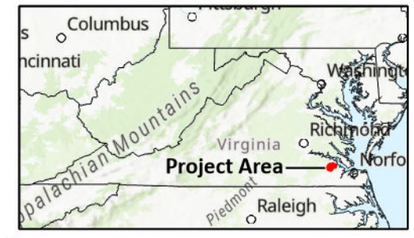
- Proposed James River Heritage Trail
- On-Road Trail

NHD Streams (2022)

- Scenic River (Blackwater River)
- Potential Scenic River (Blackwater River)

USGS Protected Area Database

- Blackwater Sandhills DCR
- Chippokes Plantation State Park
- Virginia Outdoors Foundation
- Wetlands Reserve Program (WRP), Isle of Wight, VA
- Easements
- VCHR Architecture Resoruces (VCRIS 2022)
- Roads (VDOT, 2022)
- VA_Centerline_clip2



0 2 4 Miles

Figure 2
Identified Visual Resource Map
Sycamore Cross Solar Solar Site
Surry, Isle of Wight, and
Southampton Counties, VA

Prepared For: aes

Prepared By: TETRA TECH

Date: 04/2023

Source: ESRI et al. 2023; NEPAssist, accessed March 8, 2023, USGS Protected Areas Database of the United States(PADUS, 2022), Virginia Cultural Resource Information System VCHR, 2022, Virginia Department of Conservation and Recreation 2023

Coordinate System: NAD 1983 StatePlane Virginia South FIPS (US Feet)

APPENDIX A: SELECTED VISUAL SIMULATIONS

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SYCAMORE CROSS SOLAR PROJECT

Isle of Wight and Surry Counties, Virginia

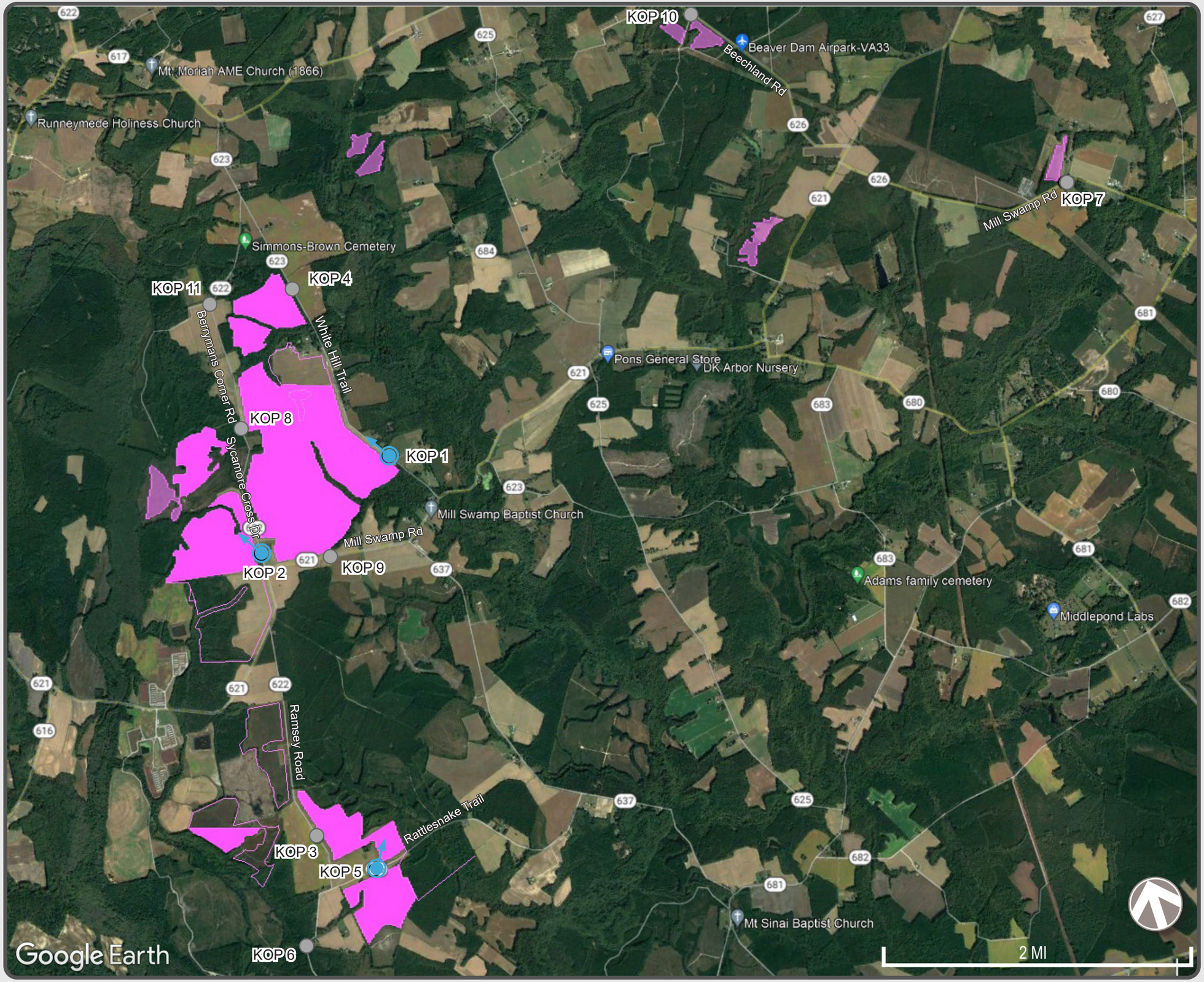
PHOTO SIMULATIONS

APRIL 2023

SYCAMORE CROSS SOLAR PROJECT

KEY OBSERVATION POINT LOCATION MAP

PHOTO SIMULATIONS



LEGEND

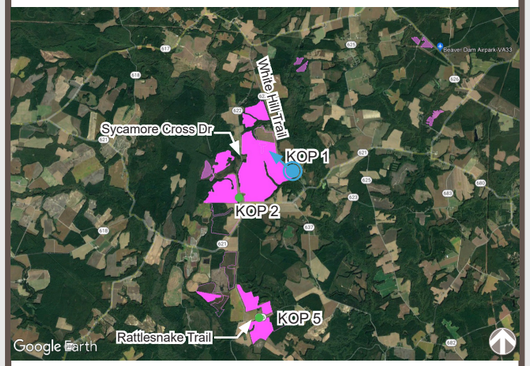
- PHOTO SIMULATION / DIRECTION
- PROJECT AREA
- CANDIDATE KOP LOCATION

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; NOT FOR CONSTRUCTION.

SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

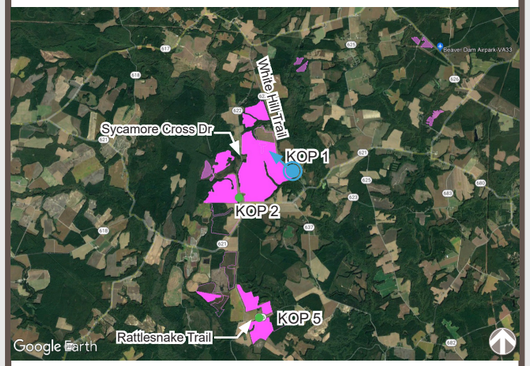
TIME:	11:18 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.994477°
LONGITUDE:	-76.817906°
DISTANCE FROM PROJECT:	155 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 1: White Hill Trail

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

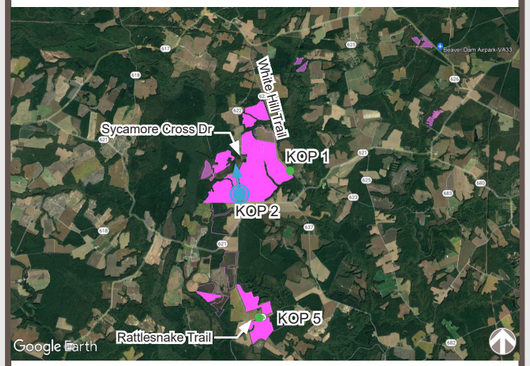
TIME:	11:18 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.994477°
LONGITUDE:	-76.817906°
DISTANCE FROM PROJECT:	155 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

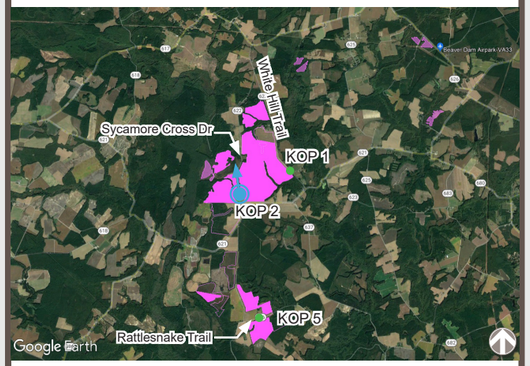
TIME:	10:20 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.986213°
LONGITUDE:	-76.833997°
DISTANCE FROM PROJECT:	175 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 2: Sycamore Cross Dr

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

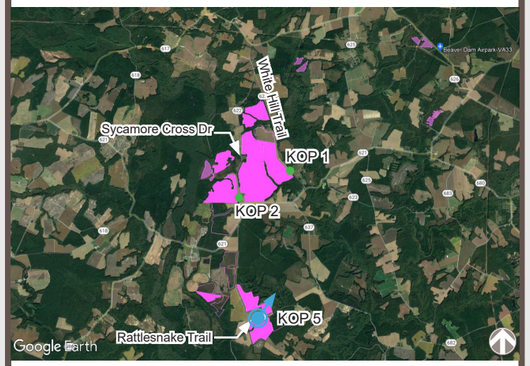
TIME:	10:20 AM
DATE:	3/21/2023
WEATHER CONDITION:	PARTLY CLOUDY
VIEWING DIRECTION:	NORTHWEST
LATITIUDE:	36.986213°
LONGITUDE:	-76.833997°
DISTANCE FROM PROJECT:	175 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

SYCAMORE CROSS SOLAR PROJECT

KOP 5: Rattlesnake Trail

PHOTO SIMULATION



VICINITY MAP

LEGEND

- PHOTO SIMULATION / DIRECTION
- PROJECT AREA
- KOP LOCATION

PHOTOGRAPH INFORMATION

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LONGITUDE:	-76.823667°
DISTANCE FROM PROJECT:	400 FT

DISCLAIMER: PRELIMINARY VISUALIZATIONS ARE FOR REFERENCE ONLY; PROJECT LAYOUT AND LANDSCAPE DETAILS ARE IN DEVELOPMENT AND SUBJECT TO CHANGE.

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Attachment F
Proposed Traffic Management Plan

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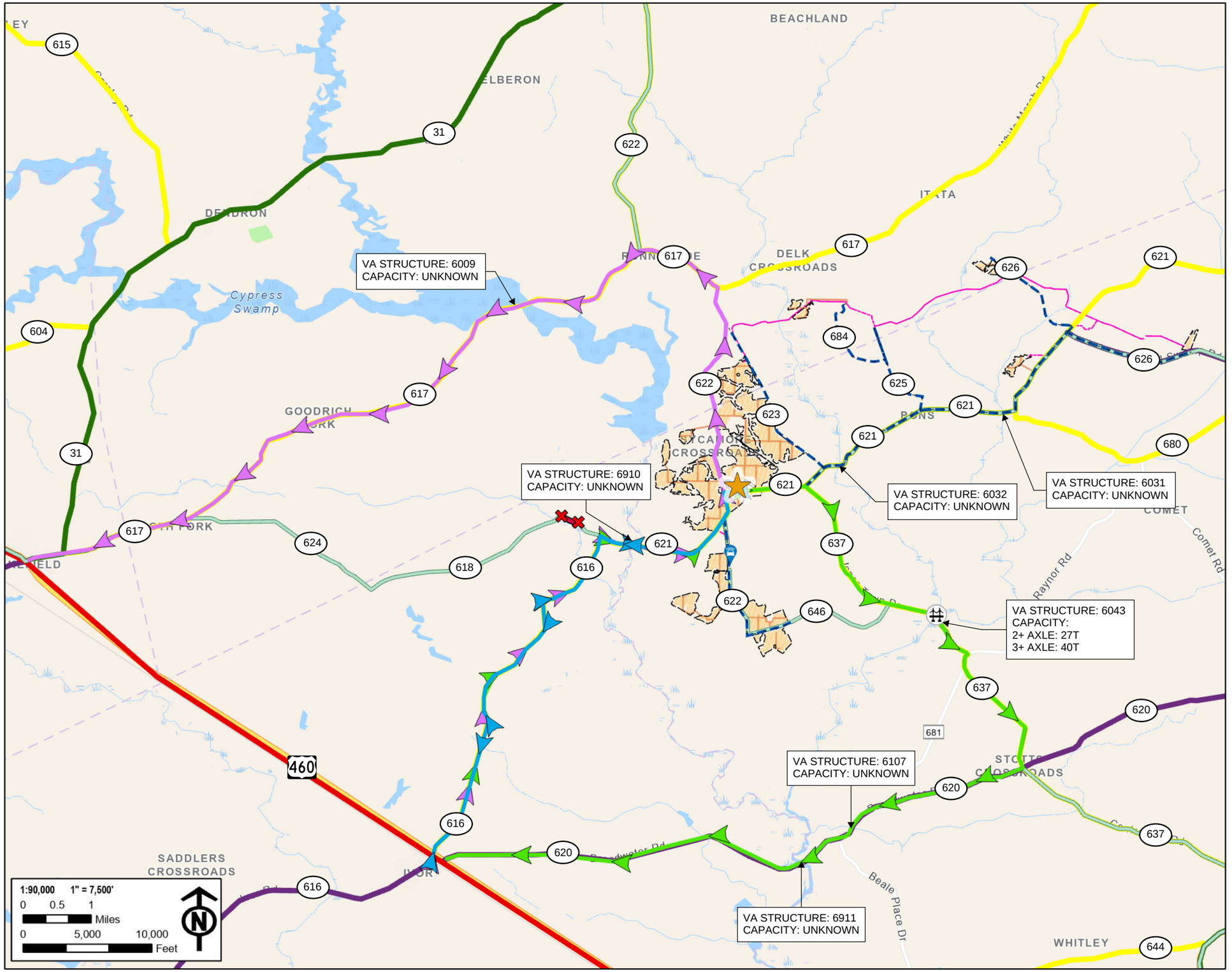

Legend

- Option One - Staging Delivery Route
- Option Two - Staging Delivery Route
- Option Three - Staging Delivery Route
- Primary Staging & Office Area
- Bridge on Route 637
- Daily Employee Parking & Shuttle Pick Up/ Drop Off
- Steep Superelevation
- No Delivery Truck Traffic
- Heavy Haul - Escorted Routes
- Daily Employee Traffic & Shuttle Routes
- Interior Array Roads

VDOT Functional Classification

- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector

- Solar Panel Arrays
- LOD
- Overhead Medium Voltage Lines
- Medium Voltage Lines (Underground)

PROJECT: AES CLEAN ENERGY
SYCAMORE CROSS SOLAR
TRAFFIC MANAGEMENT PLAN
ISLE OF WIGHT COUNTY, VA.

TITLE: **SITE OVERVIEW**

DRAWN BY:	S. ADAMS	PROJ. NO.:	576420.0000.0000
CHECKED BY:	D. PEETS		**FIGURE # 1**
APPROVED BY:	J. HENEGAR		
DATE:	DECEMBER 2023		

TRC
2200 S. MAIN ST.
SUITE A
BLACKSBURG, VA 24060

FILE: SycamoreCross.aprx

Coordinate System: ; Map Rotation:
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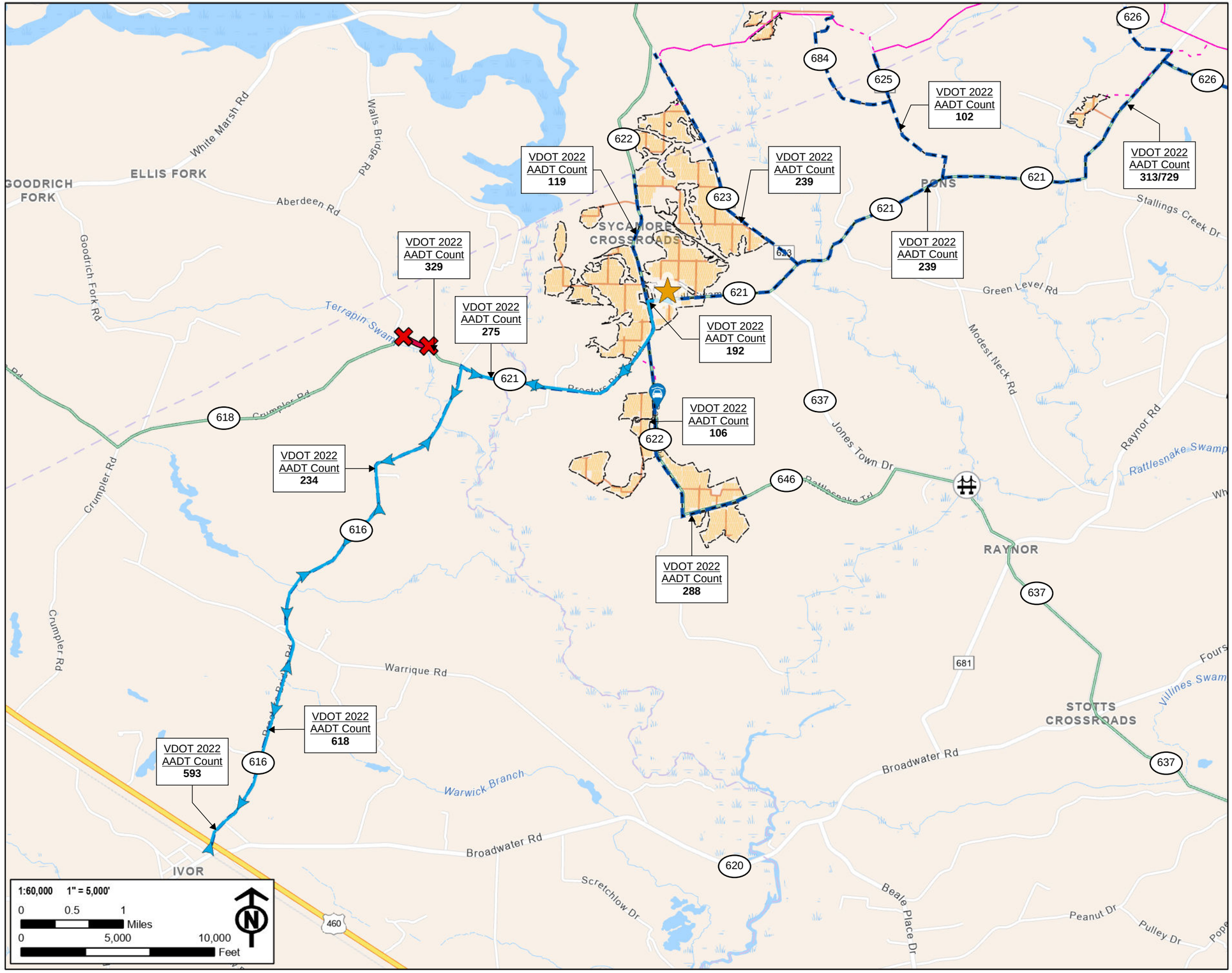


Legend

- Option Three - Staging Delivery Route
- Primary Staging & Office Area
- Bridge on Route 637
- Daily Employee Parking & Shuttle Pick Up/Drop Off
- Steep Superelevation
- No Delivery Truck Traffic
- Heavy Haul - Escorted Routes
- Daily Employee Traffic & Shuttle Routes
- Interior Array Roads
- Solar Panel Arrays
- LOD
- Overhead Medium Voltage Lines
- Medium Voltage Lines (Underground)

PROJECT: AES CLEAN ENERGY
SYCAMORE CROSS SOLAR
TRAFFIC MANAGEMENT PLAN
ISLE OF WIGHT COUNTY, VA.

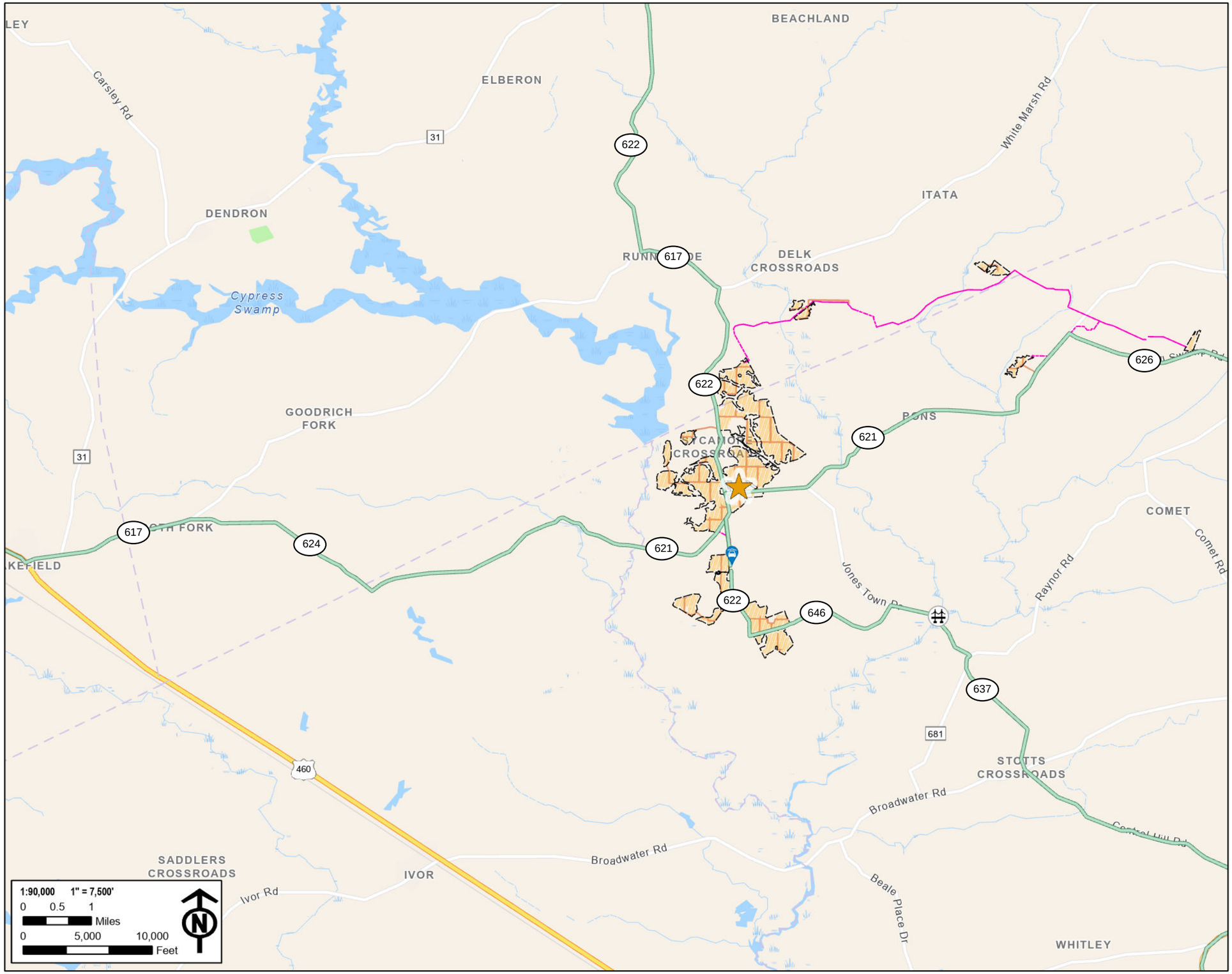
TITLE: **MAP OF OPTION #3 DELIVERY ROUTE**

DRAWN BY:	S. ADAMS	PROJ. NO.:	576420.0000.0000
CHECKED BY:	D. PEETS		**FIGURE # 4**
APPROVED BY:	J. HENEGAR		
DATE:	DECEMBER 2023		

TRC
2200 S. MAIN ST.
SUITE A
BLACKSBURG, VA 24060

FILE: SycamoreCross.aprx

Coordinate System: ; Map Rotation:
Saved By: SADAMS on 12/5/2023 - 11:54:06 PM - File Path: C:\Users\SAdams\OneDrive - TRC\Documents\ArcGIS\Projects\SycamoreCross\SycamoreCross.aprx - Layout Name: 11x17L_2.7



Legend

- Primary Staging & Office Area
- Bridge on Route 637
- Daily Employee Parking & Shuttle Pick Up/ Drop Off
- Daily Employee Traffic & Shuttle Routes
- Interior Array Roads
- Solar Panel Arrays
- LOD
- Overhead Medium Voltage Lines
- Medium Voltage Lines (Underground)

PROJECT: AES CLEAN ENERGY
SYCAMORE CROSS SOLAR
TRAFFIC MANAGEMENT PLAN
ISLE OF WIGHT COUNTY, VA.

TITLE: **DAILY EMPLOYEE TRAFFIC ROUTES**

DRAWN BY:	S. ADAMS	PROJ. NO.:	576420.0000.0000
CHECKED BY:	D. PEETS		**FIGURE # 5**
APPROVED BY:	J. HENEGAR		
DATE:	DECEMBER 2023		

TRC
2200 S. MAIN ST.
SUITE A
BLACKSBURG, VA 24060

FILE: SycamoreCross.aprx

Coordinate System: ; Map Rotation:
Saved By: SADAMS on 12/5/2023 16:49:26 PM File Path: C:\Users\SAdams\OneDrive - TRC\Documents\ArcGIS\Projects\SycamoreCross\SycamoreCross.aprx Layout Name: 11x17L 2.71

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Attachment G
Community Impact Assessment

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SYCAMORE CROSS SOLAR
ECONOMIC & FISCAL CONTRIBUTION TO THE COUNTIES OF SURRY AND ISLE OF WIGHT, VIRGINIA

Prepared for

aes

MANGUM economics

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804-322-7777

MANGUMECONOMICS.COM

SEPTEMBER 2023

About Mangum Economics, LLC

Mangum Economics is a Glen Allen, Virginia based firm that was founded in 2003. Since then, we have become known as a leader in industry analysis, economic impact assessment, policy and program evaluation, and economic and workforce strategy development. The Mangum Team specializes in producing objective and actionable quantitative economic research that our clients use for strategic decision making in a variety of industries and environments. We know that our clients are unique, and that one size does not fit all. As a result, we have a well-earned reputation for tailoring our analyses to meet the specific needs of specific clients, with a specific audience.

Most of our research falls into four general categories:

- **Economic Development and Special Projects:** The Mangum Team has performed hundreds of analyses of proposed economic development projects. One recent example was an analysis of the proposed $2.3 billion Green City "net-zero eco district." The Mangum Team has also authored multiple economic development plans, including identifying industry recruitment opportunities created by the high-speed MAREA and BRUSA sub-sea cable landings in Virginia Beach.
- **Energy:** The Mangum Team has produced analyses of the economic and fiscal impact of over 23 GW of proposed solar, wind, battery, and hydro projects spanning twenty states. Among those projects was Dominion Energy's 2.6 GW Coastal Virginia Offshore Wind project off of Virginia Beach. In addition, the Mangum Team has also performed economic and fiscal impact analyses for the natural gas, nuclear, oil, and pipeline industries.
- **Information Technology:** Working with some of the largest names in the industry, to date the Mangum Team has produced analyses of the economic and fiscal impact of the data center industry in multiple states. Among those, were studies conducted in IL, MD, and VA that were instrumental in the passage of industry-specific legislation.
- **Policy Analysis:** The Mangum Team also has extensive experience in identifying and quantifying the intended and unintended economic consequences of proposed legislative and regulatory initiatives.

The Project Team

Rebecca Kyle, *Senior Research Analyst*

Martina Arel, M.B.A., *Director – Economic Development & Energy Research*

A. Fletcher Mangum, Ph.D., *Founder and CEO*

Table of Contents

Executive Summary

This report assesses the economic and fiscal contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight, Virginia. The primary findings from that assessment are as follows:

1) **Sycamore Cross Solar is a proposed 240-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located northeast of US Highway 460 and west of Route 10 in the counties of Surry and Isle of Wight, Virginia. The total acreage leased and purchased for the project would be approximately 1,156 acres of timberland and agricultural land.**
    - The actively used, fenced-in portion of the project site would encompass approximately 125 acres located in Surry County and approximately 1,030 acres located in Isle of Wight County.
    - The project would involve an investment of $437.1 million in capital equipment and improvements to the existing property. Approximately $34.6 million of that total would be located in Surry County and approximately $402.5 million would be located in Isle of Wight County.[1]

2) **The proposed Sycamore Cross Solar project would make a significant economic contribution to the counties of Surry and Isle of Wight:**
    - The proposed Sycamore Cross Solar project would provide an estimated one-time pulse of economic activity to the counties of Surry and Isle of Wight during its construction phase supporting approximately:
        - 197 direct, indirect, and induced job years.
        - $9.9 million in associated wages and benefits.
        - $91.6 million in economic output.
    - The proposed Sycamore Cross Solar project would provide an estimated annual economic impact to the counties of Surry and Isle of Wight during its ongoing operational phase supporting approximately:
        - 7 direct, indirect, and induced jobs.
        - $0.6 million in associated wages and benefits.
        - $1.6 million in economic output.

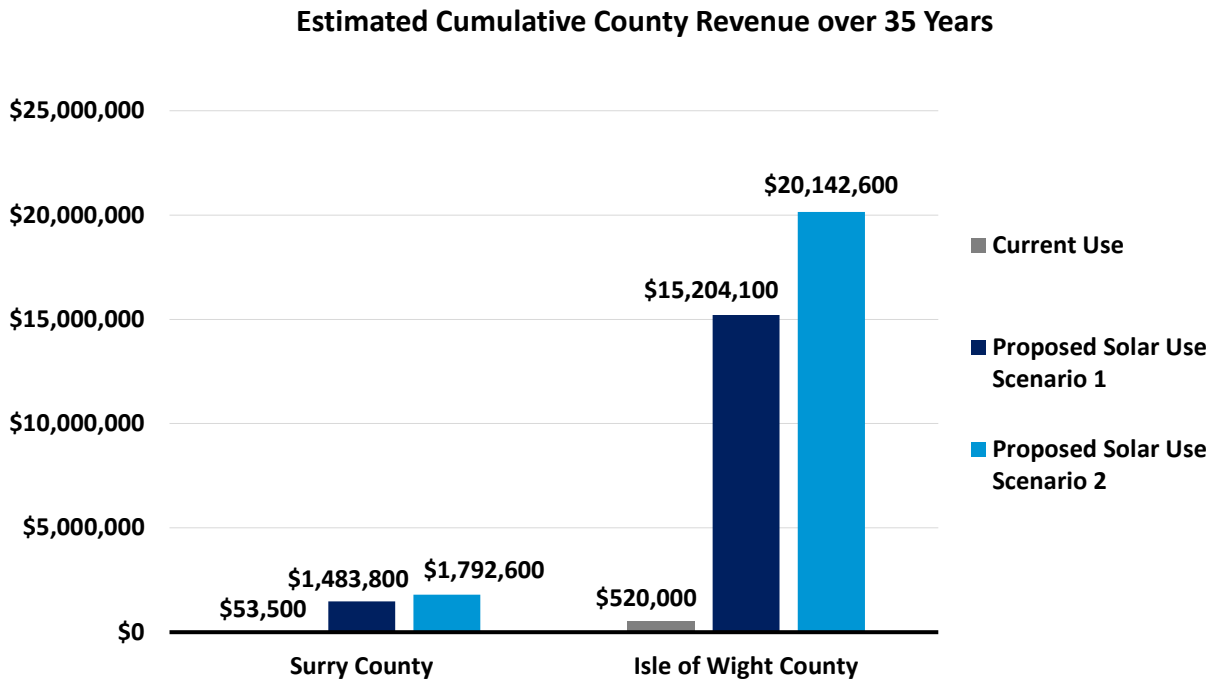
3) **The proposed Sycamore Cross Solar project would also make a significant fiscal contribution to the counties of Surry and Isle of Wight. The proposed project would generate approximately:**
    - $1.4 million in state and local tax revenue from the one-time pulse of economic activity associated with the project's construction.

[1] Data Source: AES Corporation. Allocation of generation capacity and investment subject to change based on final design.

- Surry County:
  - $1.5 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments, (Scenario 1); or
  - $1.8 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance. The payments would be based on the project's generation capacity and would include a 10 percent escalator every five years (Scenario 2).
- Isle of Wight County:
  - $15.2 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and the taxation of the associated capital investments, (Scenario 1); or
  - $20.1 million in cumulative county revenue over the facility's anticipated 35-year operational life assuming revenues are generated from the reassessment of the real property and payments associated with a locally adopted revenue share ordinance. The payments would be based on the project's generation capacity and would include a 10 percent escalator every five years (Scenario 2).

4) **The proposed Sycamore Cross Solar project would have a significantly greater fiscal impact on The counties of Surry and Isle of Wight than the property generates in its current use:**

- Surry County: The proposed Sycamore Cross Solar project would generate approximately $1.5 million (from taxation on capital investments) or $1.8 million (from a revenue share ordinance) in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $53,500 in cumulative county revenue in the property's current use – that's a 28- to 34-fold increase over the current use revenues.
- Isle of Wight County: The proposed Sycamore Cross Solar project would generate approximately $15.2 million (from taxation on capital investments) or $20.1 million (from a revenue share ordinance) in cumulative county revenue over the facility's anticipated 35-year operational life, as compared to approximately $520,000 in cumulative county revenue in the property's current use – that's a 29- to 39-fold increase over current use revenues.



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

Introduction

This report assesses the economic and fiscal contribution that the proposed Sycamore Cross Solar project would make to the Counties of Surry and Isle of Wight, Virginia. This report was commissioned by AES Clean Energy (AES) and produced by Mangum Economics.

The Project

Sycamore Cross Solar is a proposed 240-megawatt (MW) alternating current (AC) solar photovoltaic power generating facility. The project would be located northeast of US Highway 460 and west of Route 10 in the counties of Surry and Isle of Wight, Virginia. The total acreage leased and purchased for the project would be approximately 1,156 acres of timberland and agricultural land. The estimated actively used, fenced-in solar site encompasses approximately 125 acres in Surry County and 1,030 acres in Isle of Wight County.

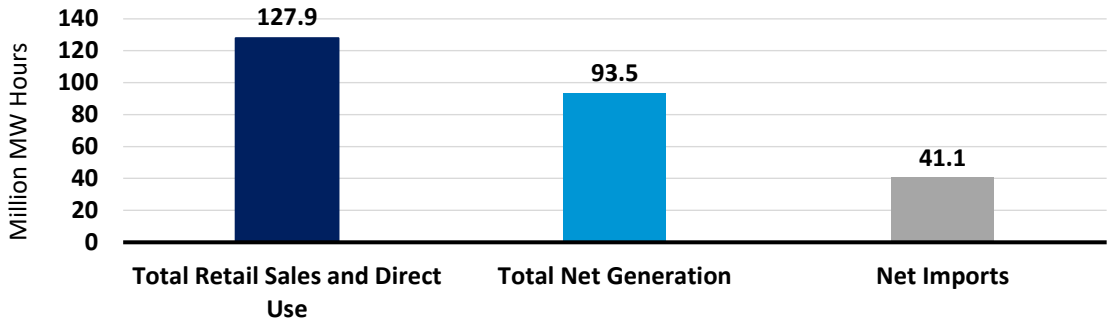
Electricity Production in Virginia

This section provides a backdrop for the proposed Sycamore Cross 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 2021 electricity sales and direct use in Virginia totaled 127.9 million megawatt hours, ranking the state 10th among the fifty states in terms of electricity consumption. However, only 73 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 2021 (in millions of megawatt-hours)[2]



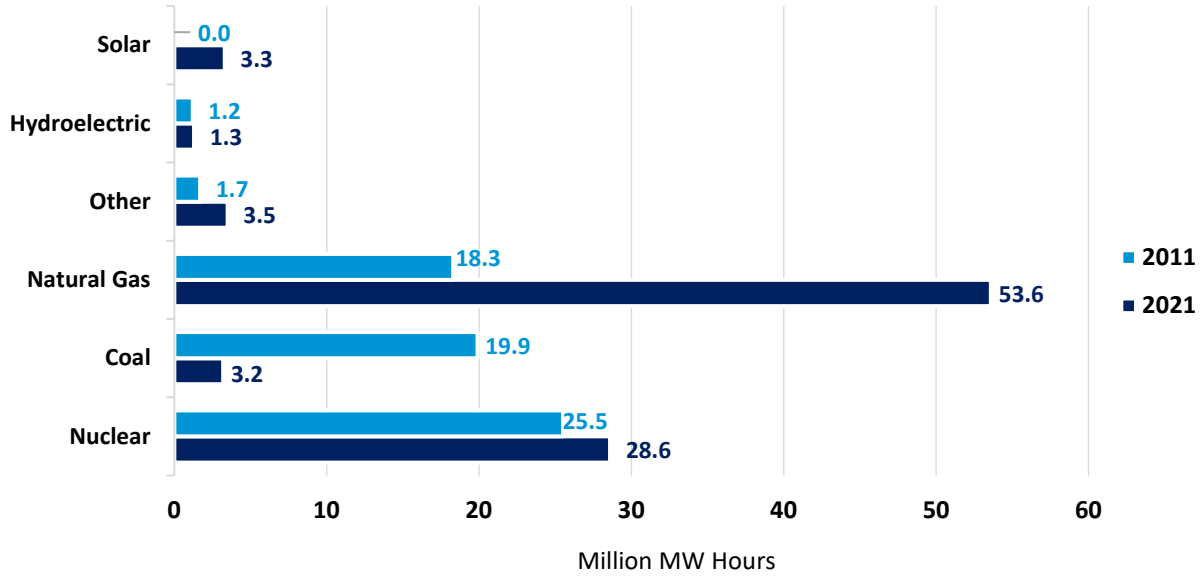
[2] Data Source: U.S. Energy Information Administration. In this chart, "Net Imports" also takes into account losses during transmission. As a result, it does not directly equal the residual of "Total Net Generation" minus "Total Retail Sales and Direct Use."

Sources of Production

Between 2011 and 2021, the total amount of electricity produced in Virginia increased from 66.7 to 93.5 million megawatt hours, while retail and direct consumption of electricity increased from 112.1 to 127.9 million megawatt hours. Consequently, imports of electricity decreased by 11.8 million megawatt hours (or 22 percent) during this time.[3] 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 2011 and 2021 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 2011, accounting for 19.9 million megawatt hours (or 29.9 percent) of production, by 2021 production had fallen by 16.7 million megawatt hours, making coal a distant fifth place source of electricity with only 3.4 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 18.3 million megawatt hours (or 27.5 percent) of Virginia's electricity production in 2011, by 2021 that proportion had almost tripled to 53.6 million megawatt hours (or 57.3 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 3.3 million megawatt hours in 2021.

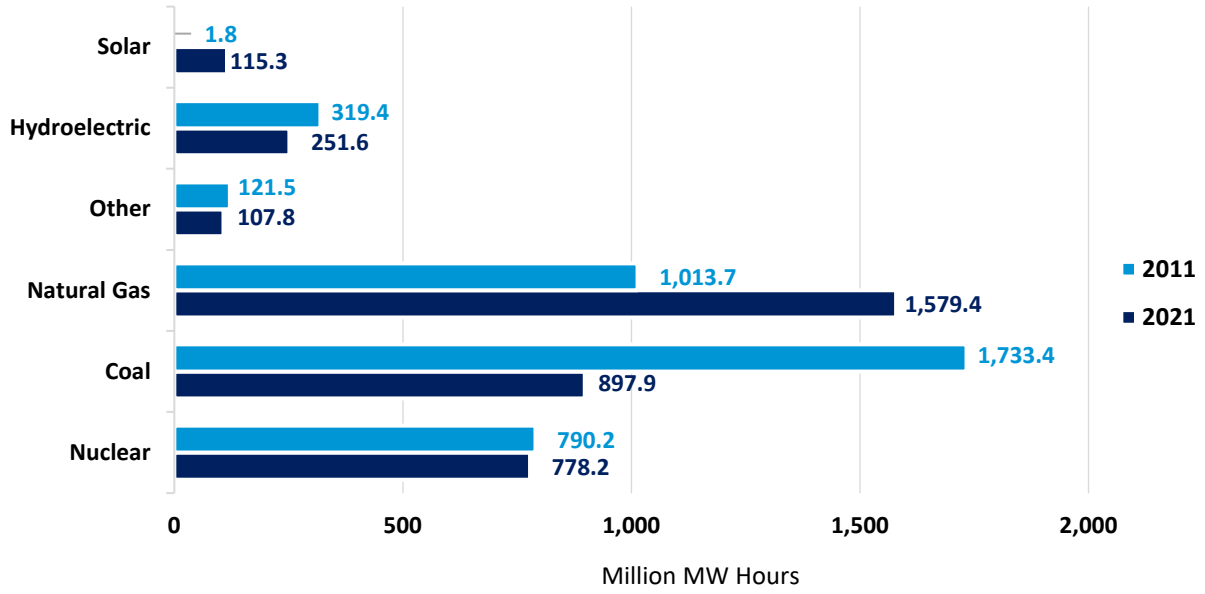
Figure 2: Electricity Generation in Virginia by Energy Source in 2011 and 2021 (in millions of megawatt-hours)[4]



[3] Imports also takes into account losses during transmission. As a result, totals do not equal sum of components.
[4] Data Source: U.S. Energy Information Administration. The "Other" category includes battery, wood, wind, petroleum, other biomass, "other", and pumped storage.

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 2011 and 2021 the amount of electricity produced using coal declined by 835.5 million megawatt hours from 42 to 22 percent of production, while in contrast the amount of electricity produced using natural gas increased by 565.7 million megawatt hours from 25 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 slower pace than in Virginia. Between 2011 and 2021, the amount of electricity produced using solar increased by 113.5 million megawatt hours to 2.8 percent of total electricity production in the nation compared to 3.5 percent of total electricity production in Virginia.

Figure 3: Electricity Generation in the United States by Energy Source in 2011 and 2021 (in millions of megawatt-hours)[5]

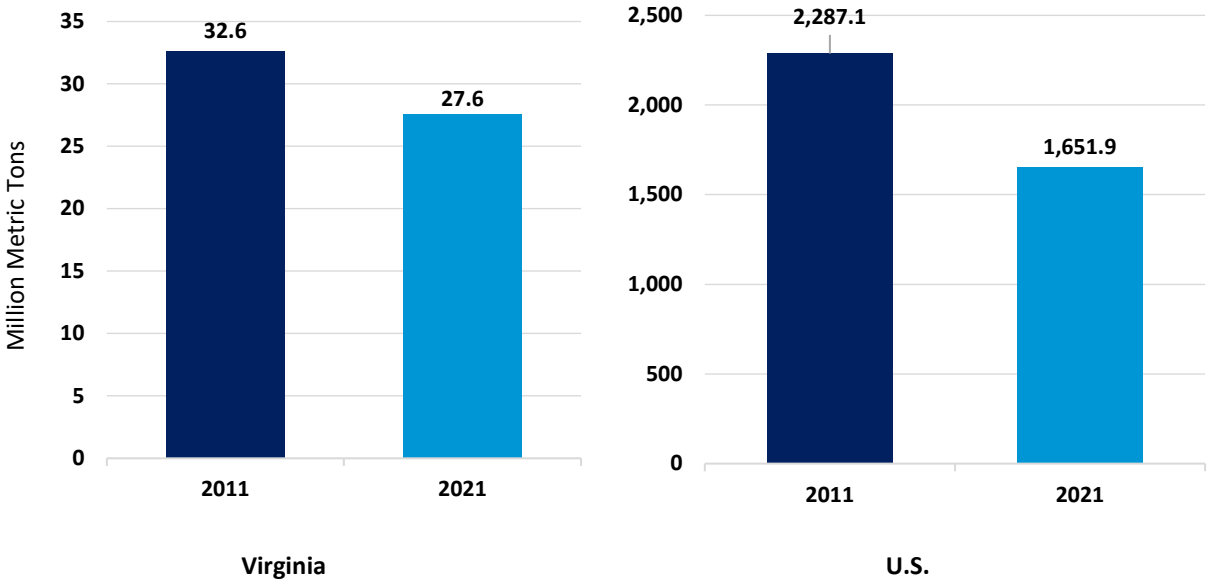


Impact on the Environment

In discussing the impact of these trends on the environment, it is important to realize that electricity production is one of the U.S.'s largest sources of greenhouse gas emissions. Figure 4 depicts carbon dioxide emissions from electricity production in 2011 and 2021 for both Virginia and the U.S. As these data indicate, between 2011 and 2021, as the share of electricity produced in Virginia by coal fell from 29.9 to 3.4 percent, carbon dioxide emissions from electricity production fell from 32.6 to 27.6 million metric tons. Where at the national level, as the share of electricity produced by coal fell from 42 to 22 percent, carbon dioxide emissions from electricity production fell from 2,287.1 to 1,651.9 million metric tons.

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

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



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

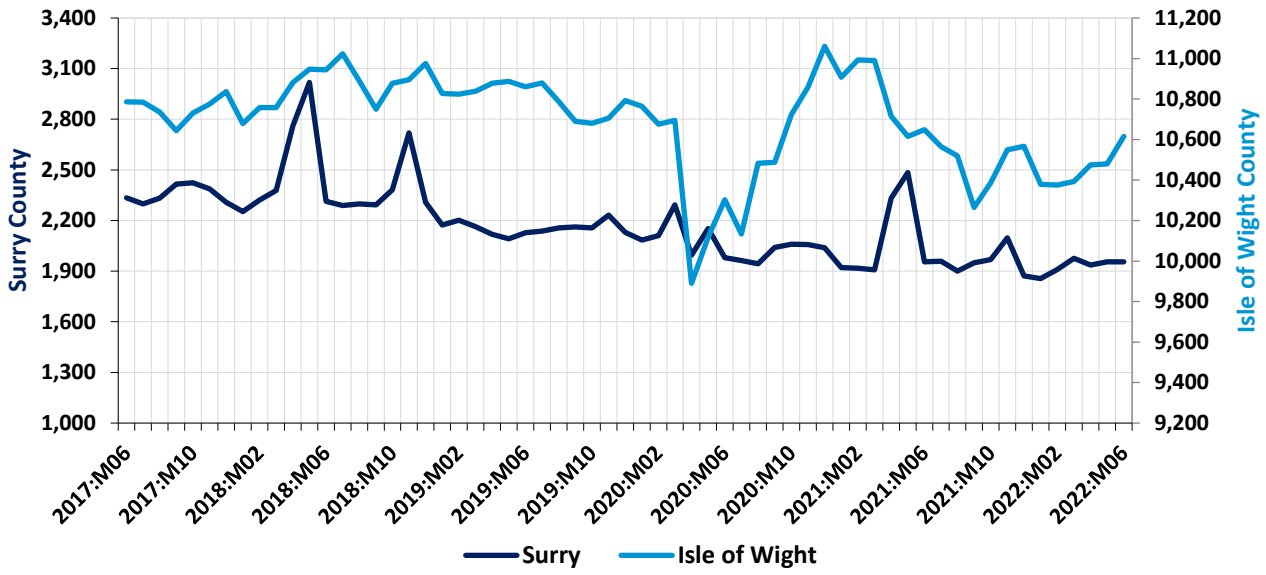
Local Economic Profile

This section provides context for the economic and fiscal impact assessments to follow by profiling the local economies of the counties of Surry and Isle of Wight.

Total Employment

Figure 5 depicts the trend in total employment in the counties of Surry and Isle of Wight from June 2017 through June 2022. As these data show, employment in Surry County generally declined through the five-year period. Employment in Isle of Wight County remained generally stable until the decrease in economic activity associated with the COVID-19 pandemic led to a steep employment decline in Isle of Wight County in April 2020. Since then, employment has rebounded back to pre-pandemic levels. As of June 2022, county employment stood at 1,956 jobs in Surry County and 10,616 jobs in Isle of Wight County. This represents an overall decrease in employment of 16.2 percent (or 379 jobs) in Surry County and 1.6 percent (or 170 jobs) in Isle of Wight County over the five-year period. To put this number in perspective, over this same period, total statewide employment in Virginia increased by 1.5 percent.[7]

Figure 5: Total Employment in the Counties of Surry and Isle of Wight– June 2017 to June 2022[8]

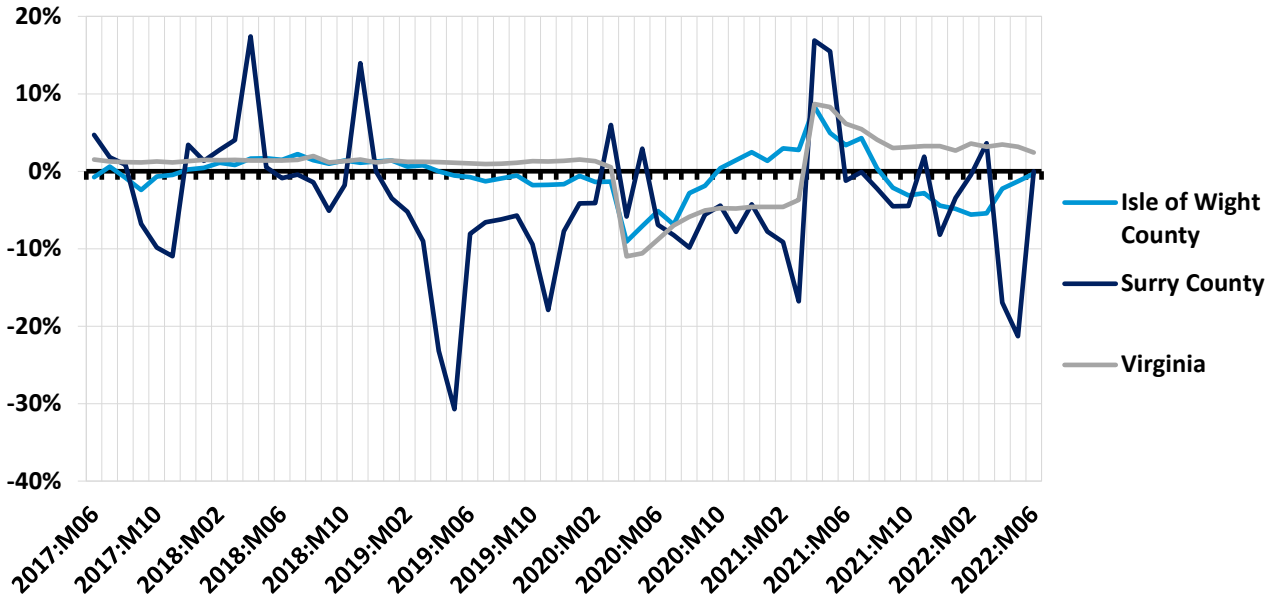


To control for seasonality and provide a point of reference, Figure 6 compares the year-over-year change in total employment in the counties of Surry and Isle of Wight to that of the state of Virginia over the same five-year period. Any point above the zero line in this graph indicates an increase in employment, while any point below the zero line indicates a decline in employment. As these data show, Surry County experienced periods of high employment growth and high employment loss throughout the period. Isle of Wight County tracked closely with the statewide trend throughout the

[7] Data Source: U.S. Bureau of Labor Statistics.
[8] Data Source: U.S. Bureau of Labor Statistics.

five-year period. As of June 2022, the year-over-year change in total employment was 0 percent in Surry County and minus 0.3 percent in Isle of Wight County as compared to 2.4 percent statewide in Virginia.

Figure 6: Year-Over-Year Change in Total Employment – June 2017 to June 2022[9]



Employment and Wages by Industry Supersector

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 the counties of Surry and Isle of Wight by industry supersector.[10]

Figure 7 provides an indication of the distribution of private sector employment across industry supersectors in the counties of Surry and Isle of Wight in the second quarter of 2022. As these data indicate, the largest industry sector that quarter in Surry County was Trade, Transportation, and Utilities (873 jobs). In Isle of Wight County, the largest industry sector that quarter was Manufacturing (2,646 jobs).

Figure 8 provides a similar ranking for average private sector weekly wages by industry supersector in the counties of Surry and Isle of Wight in the second quarter of 2022. As these data show, the highest paying industry sector that quarter in Surry County was Trade, Transportation and Utilities ($2,088 per week). In Isle of Wight County, the highest paying sector was Information ($2,089 per week).

[9] Data Source: U.S. Bureau of Labor Statistics.
[10] A "supersector" is the highest level of aggregation in the coding system that the Bureau of Labor Statistics uses to classify industries.

Figure 7: Private Employment by Industry Supersector in the Counties of Surry and Isle of Wight– 2nd Qu. 2022[11]

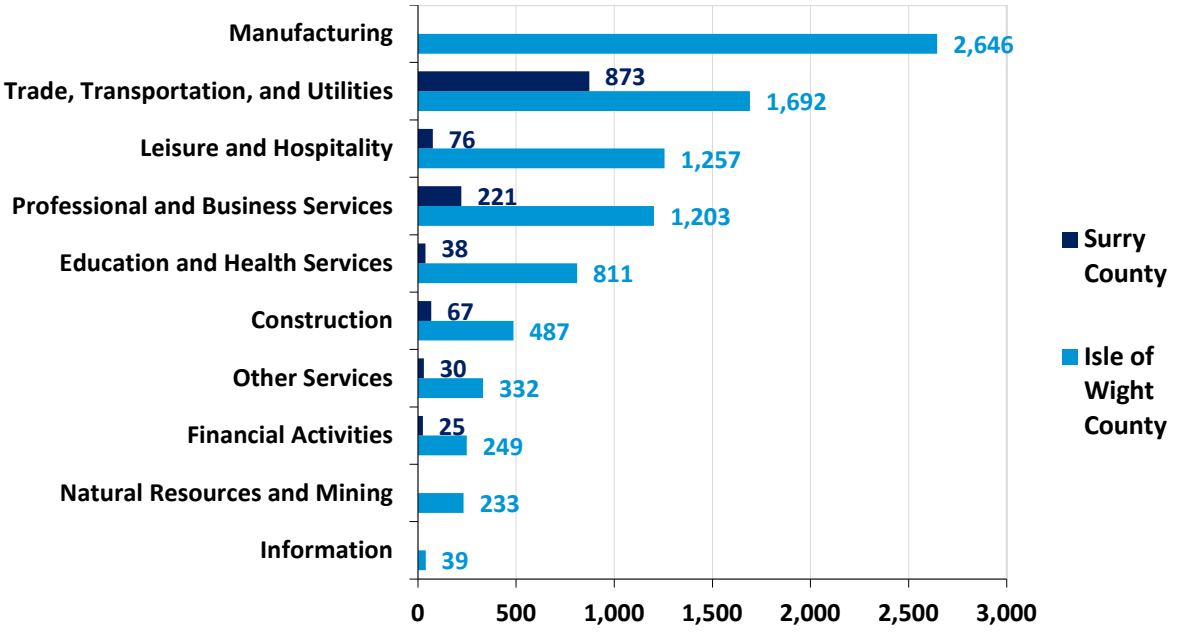
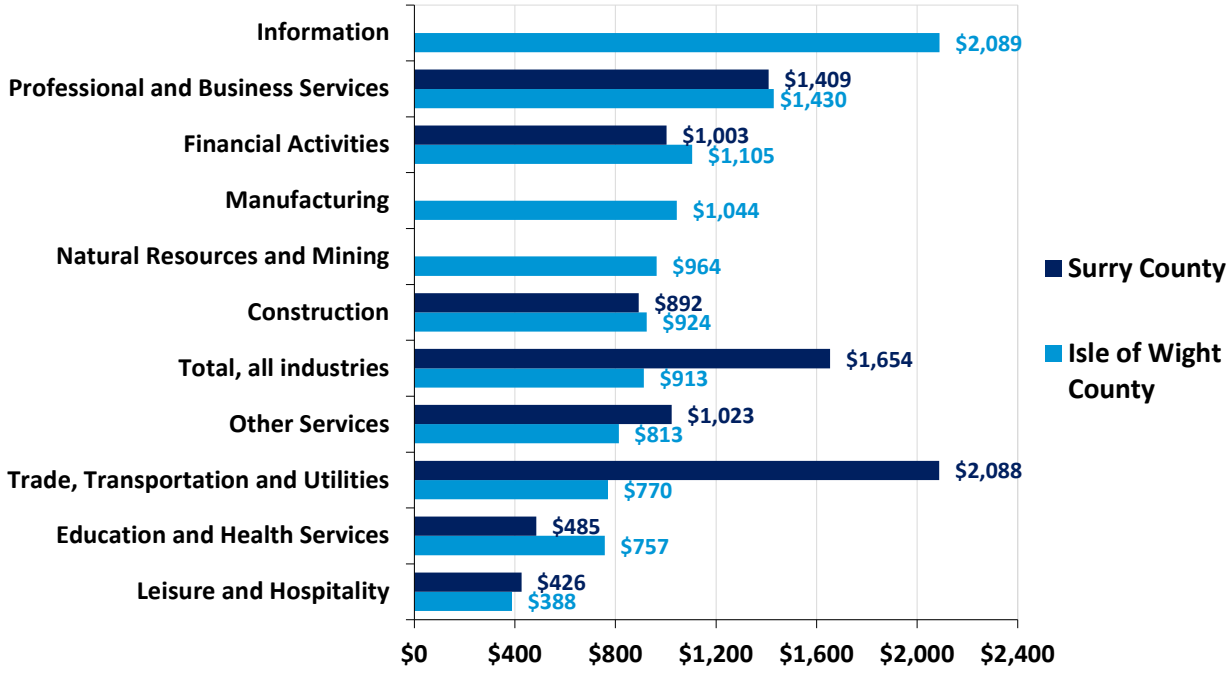


Figure 8: Average Private Weekly Wages by Industry Supersector in the Counties of Surry and Isle of Wight – 2nd Qu. 2022[12]

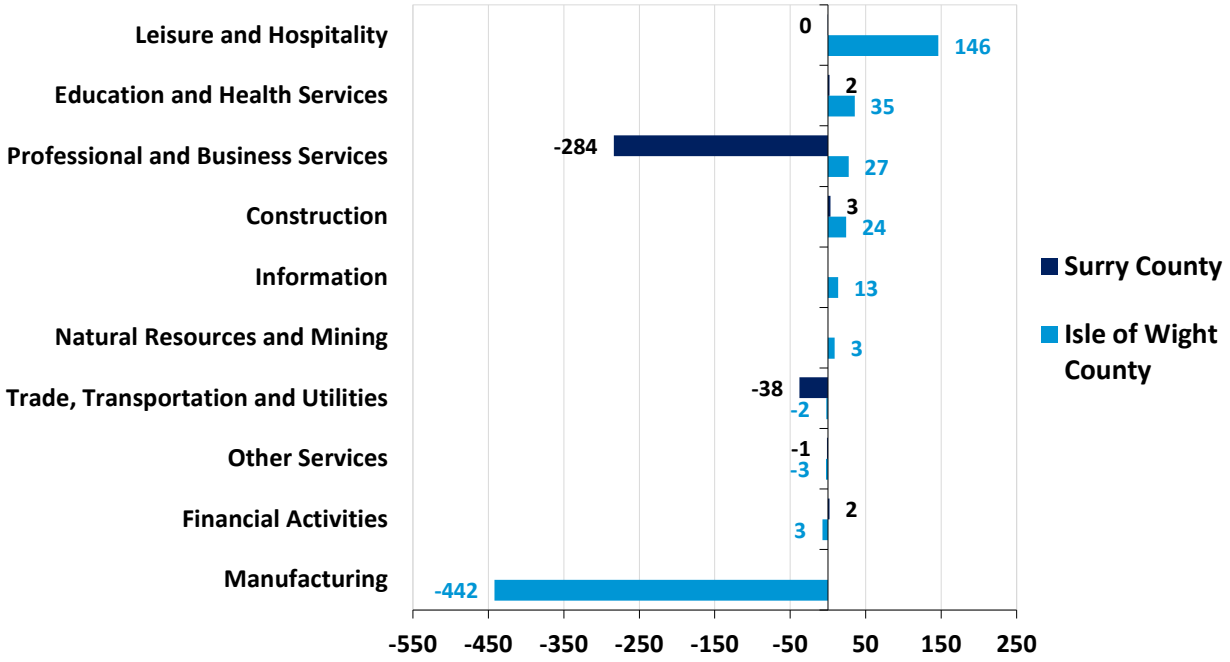


[11] Data Source: U.S. Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

[12] Data Source: U.S. Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

Figure 9 details the year-over-year change in private sector employment from the second quarter of 2021 to the second quarter of 2022 in the counties of Surry and Isle of Wight by industry supersector. Over this period, the largest employment gains in Surry County occurred in the Construction (up 3 jobs) sector, and the largest employment loss occurred in the Professional and Business Services (down 284 jobs) sector. The largest employment gain in Isle of Wight County occurred in the Leisure and Hospitality (up 146 jobs) sector, and the largest employment loss occurred in the Manufacturing (down 442 jobs) sector.

Figure 9: Change in Private Employment by Industry Supersector in the Counties of Surry and Isle of Wight from 2nd Qu. 2021 to 2nd Qu. 2022[13]

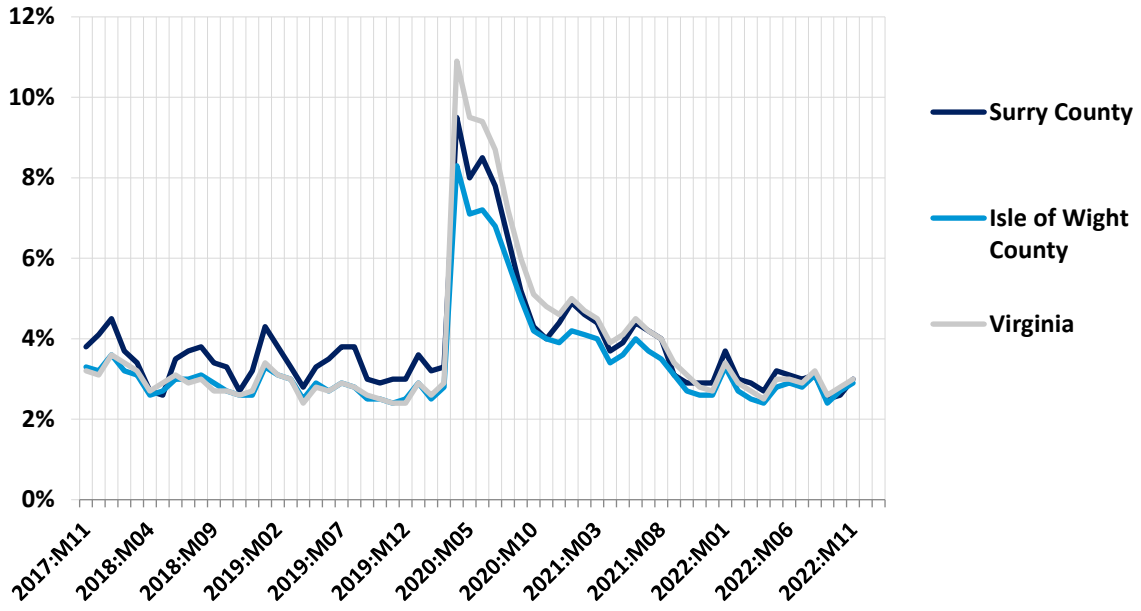


Unemployment

Figure 10 illustrates the unemployment trend in the counties of Surry and Isle of Wight over the five-year period from November 2017 through November 2022 and benchmarks those data against the statewide trend for Virginia. As these data show, unemployment rates in the counties of Surry and Isle of Wight generally tracked closely to the statewide norm. In April 2020 unemployment in both the counties and the state significantly rose as a result of the labor dislocations caused by the COVID-19 pandemic. The counties' unemployment rates did not peak as high as the statewide rate. As of November 2022, unemployment stood at 3.0 percent in Surry County, 2.9 percent in Isle of Wight County, and 3.0 percent in Virginia as a whole.

[13] Data Source: Bureau of Labor Statistics. Data on the Natural Resources and Mining, Manufacturing, and Information sectors in Surry County have been suppressed due to data confidentiality.

Figure 10: Unemployment Rate – November 2017 to November 2022[14]



[14] Data Source: Bureau of Labor Statistics.

Economic and Fiscal Impact

This section quantifies the economic and fiscal contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight. The 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 Sycamore Cross Solar project, the analysis employs a regional economic impact model called IMPLAN.[15] 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 Sycamore Cross 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 Sycamore Cross 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).

[15] IMPLAN is produced by IMPLAN Group, LLC.

Construction Phase

This portion of the section assesses the economic and fiscal impact that the one-time pulse of activity associated with construction of the proposed Sycamore Cross Solar project would have on the counties of Surry and Isle of Wight.

Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- Total investment in the Sycamore Cross Solar project is estimated to be approximately $437.1 million.[16]
- Of that total:
    - Architecture, engineering, site preparation, and other construction and development costs are estimated to be approximately $253.1 million.[17]
    - Capital equipment costs are estimated to be approximately $184.0 million.[18] It is anticipated that no capital equipment would be purchased from vendors in the counties of Surry and Isle of Wight.[19]
- For ease of analysis, all construction expenditures are assumed to take place in a single year.

Economic Impact

Applying these inputs in the IMPLAN model results in the following estimates of one-time economic and fiscal impact. As shown in Table 1, construction of the proposed Sycamore Cross Solar project would directly provide a one-time pulse supporting approximately: 1) 102 job years, 2) $5.3 million in wages and benefits, and 3) $75.9 million in economic output to the counties of Surry and Isle of Wight.

Taking into account the economic ripple effects that direct investment would generate, the total estimated one-time impact on the counties of Surry and Isle of Wight would support approximately: 1) 197 job years, 2) $9.9 million in wages and benefits, 3) $91.6 million in economic output, and 4) $1.4 million in state and local tax revenue.

[16] Data Source: AES.
[17] Data Source: AES.
[18] Data Source: AES.
[19] Data Source: IMPLAN Group LLC.

Table 1: Estimated One-Time Economic and Fiscal Impact on the Counties of Surry and Isle of Wight from Construction of the Sycamore Cross Solar Project[20,21]

Economic Impact	Employment (Job Years)[22]	Wages and Benefits	Output
1st Round Direct Economic Activity	102	$5,253,400	$75,938,700
2nd Round Indirect and Induced Economic Activity	95	$4,671,900	$15,708,700
Total Economic Activity	**197**	**$9,925,300**	**$91,647,400**
Fiscal Impact			
State and Local Tax Revenue			**$1,431,500**

**Totals may not sum due to rounding.*

Ongoing Operations Phase

This portion of the section assesses the annual economic and fiscal impact that the proposed Sycamore Cross Solar project would have on the counties of Surry and Isle of Wight during its anticipated 35-year operational phase.

Economic Impact Inputs

The analysis is based on the following inputs:

- The Sycamore Cross Solar project would employ approximately five individuals and spend approximately $1.3 million each year for maintenance and repair, vegetative control, and other operational expenditures.[23]

Economic Impact

Applying these inputs in the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 2, annual operation of the proposed Sycamore Cross Solar project would on average directly support approximately: 1) 5 jobs, 2) $0.5 million in wages and benefits, and 3) $1.3 million in economic output to the counties of Surry and Isle of Wight.

[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. Due to preliminary nature of the project, the analysis is based on industry averages. Actual spending patterns may vary based on vendor contracts and final design.
[21] A construction sector job, also referred to as a job year, is equal to one job over one year. It is used to denote employment on construction projects where the construction schedule extends beyond one year and to account for the fact that actual on-site employment may vary over the period.
[22] Please note that it is not possible to determine how much of the economic impact would take place in specifically Isle of Wight County or Surry County. That level of granularity is not available for a regional analysis.
[23] Data Source: AES.

Taking into account the economic ripple effects that direct impact would generate, the total estimated annually supported impact on the counties of Surry and Isle of Wight would be approximately: 1) 7 jobs, 2) $0.6 million in wages and benefits, and 3) $1.6 million in economic output.

Table 2: Estimated Annual Economic Impact on the Counties of Surry and Isle of Wight from the Ongoing Operation of the Sycamore Cross Solar Project[24]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	5	$501,200	$1,250,000
2nd Round Indirect and Induced Economic Activity	2	$82,900	$302,700
Total Economic Activity	**7**	**$584,100**	**$1,552,700**

**Totals may not sum due to rounding.*

Fiscal Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The Sycamore Cross Solar project would involve an investment of approximately $437.1 million in capital equipment and improvements to the existing property. Approximately $34.6 million of that total would be invested in Surry County and approximately $402.5 million in Isle of Wight County.[25]
- The Sycamore Cross Solar project would be situated on approximately 125 acres in Surry County and on approximately 1,030 acres in Isle of Wight County.[26]
- The actively used, fenced-in acreage in Surry County would be reassessed at $13,000 per acre.[27]
- The actively used, fenced-in acreage in Isle of Wight County would be removed from the land use program and reassessed at $15,000 per acre.[28]
- Tax rates and locality ratios remain constant throughout the analysis.
- The initial interconnection request for Sycamore Cross Solar was filed in March 2017.[29]
- The Sycamore Cross Solar project's total generation capacity would be 240 MW AC, of which approximately 19 MW would be located in Surry County and approximately 221 MW would be located in Isle of Wight County.[30]
- The Sycamore Cross Solar project would become operational in the fourth quarter of 2026.[31]

[24] Please note that it is not possible to determine how much of the economic impact would take place in specifically Isle of Wight County or Surry County. That level of granularity is not available for a regional analysis.
[25] Data Source: AES.
[26] Data Source: AES.
[27] Data Source: Surry County Commissioner of Revenue's Office. Current assessment value of existing solar farm in the county.
[28] Data Source: Isle of Wight County Commissioner of Revenue's Office. Current assessment value of existing solar farm in the county.
[29] Data Source: AES.
[30] Data Source: AES.
[31] Data Source: AES.

Fiscal Impact – Surry County

This portion of the section quantifies the direct fiscal contribution that the proposed Sycamore Cross Solar project would make to Surry County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Sycamore Cross Solar project would generate for Surry County over a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Sycamore Cross Solar would generate for Surry County from taxes levied on the capital investment, while Scenario 2 assumes tax revenue generated from the capital investment will be replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

Reassessment of Property

Table 3 details the increased property assessments associated with reassessing the 125-acre fenced-in site as solar use property. The county real estate tax revenue from the project after reassessment is estimated to be approximately $11,600 per year, for a cumulative total of approximately $404,600 over the project's anticipated 35-year operational life expectancy.[32] In contrast, the property currently generates approximately $1,530 per year in real estate tax revenue for the county, for a cumulative total of approximately $53,500 over 35 years.[33]

Table 3: Estimated Surry County Revenue Generated by the Proposed Sycamore Cross Solar Project over 35 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use[34]	$1,628,100
Surry County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax – Solar Use	$11,600
Cumulative Revenue over 35 Years	**$404,600**

**Totals may not sum due to rounding.*

Scenario 1: Taxation of Capital Investment

Table 4 separately details the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Surry County over a 35-year period from taxes levied on capital investment. This calculation is based on: 1) the taxable portion of capital investments pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660[35], times 2) the State Corporation Commission's utility assessment ratio for taxation of public utilities in Surry County, times 4) the State Corporation

[32] Assumes property will be reassessed at $13,000 per acre once it is under solar use.
[33] Derived from Surry County's Real Estate Assessment database. Includes value of existing structures.
[34] Calculated as 125 acres times $13,000.
[35] The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW for which an interconnection request was filed between January 1, 2015 and June 30, 2018 are subject to an 80 percent exemption from local property taxes.

Commission's depreciation guidelines for solar facilities, times 5) Surry County's real property tax rate of $0.71 per $100 of assessed value pursuant to Virginia Code §58.1-2606.

As the data in Table 4 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Sycamore Cross Solar project would be approximately $43,600 in the project's first year of operation, with that figure projected to decline to approximately $4,800 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 $1.1 million.

Table 4: Estimated Surry County Revenue by Proposed Solar Investment Over 35 Years

Year	Total Capital Investment subject to Exemption[36]	Depreciated Value of Taxable Capital Investment[37]	Additional Annual County Tax Revenue Solar Investment[38]
1	$34,602,325	$6,141,221	$43,600
2	$34,602,325	$6,141,221	$43,600
3	$34,602,325	$6,141,221	$43,600
4	$34,602,325	$6,141,221	$43,600
5	$34,602,325	$6,141,221	$43,600
6	$34,602,325	$6,141,221	$43,600
7	$34,602,325	$6,141,221	$43,600
8	$34,602,325	$6,141,221	$43,600
9	$34,602,325	$6,120,068	$43,500
10	$34,602,325	$6,016,349	$42,700
11	$34,602,325	$5,906,490	$41,900
12	$34,602,325	$5,790,489	$41,100
13	$34,602,325	$5,667,664	$40,200
14	$34,602,325	$5,536,652	$39,300
15	$34,602,325	$5,398,133	$38,300
16	$34,602,325	$5,251,426	$37,300
17	$34,602,325	$5,095,848	$36,200
18	$34,602,325	$4,931,400	$35,000
19	$34,602,325	$4,756,034	$33,800
20	$34,602,325	$4,571,115	$32,500
21	$34,602,325	$4,374,596	$31,100
22	$34,602,325	$4,166,477	$29,600
23	$34,602,325	$3,946,075	$28,000

[36] Data Source: AES.
[37] Accounts for the State Corporation Commission's depreciation guidelines for solar facilities and the utility assessment ratio for taxation of public utilities in Surry County. Also accounts for the 80 percent exemption from local property taxes pursuant to Virginia Code §58.1-3660 for projects over 20 MW with an interconnection request between January 1, 2015 and June 30, 2018.
[38] 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 Surry County's real property tax rate of $0.72 per $100 of assessed value.

Year	Total Capital Investment subject to Exemption[36]	Depreciated Value of Taxable Capital Investment[37]	Additional Annual County Tax Revenue Solar Investment[38]
24	$34,602,325	$3,712,027	$26,400
25	$34,602,325	$3,464,331	$24,600
26	$34,602,325	$3,200,941	$22,700
27	$34,602,325	$2,922,539	$20,800
28	$34,602,325	$2,627,078	$18,700
29	$34,602,325	$2,314,558	$16,400
30	$34,602,325	$1,982,250	$14,100
31	$34,602,325	$1,630,835	$11,600
32	$34,602,325	$1,258,268	$8,900
33	$34,602,325	$863,183	$6,100
34	$34,602,325	$682,358	$4,800
35	$34,602,325	$682,358	$4,800
Estimated Cumulative Total			**$1,079,200**

**Totals may not sum due to rounding.*

Scenario 1: 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 Sycamore Cross Solar project would make to Surry County over its 35-year anticipated operational life under Scenario 1. As these data indicate, that cumulative total is approximately $1.5 million.

Table 5: Estimated Cumulative Surry County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 1

County Real Estate Tax	$404,600
County Revenue from Taxation of Capital Investments	$1,079,200
Total Cumulative Revenue over 35 Years	**$1,483,800**

**Totals may not sum due to rounding.*

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Surry County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636 in lieu of taxes on capital investment. This statute 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 July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026.

Table 6 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 19 MW AC and an assumed commissioning date in the fourth quarter of 2026, a revenue share ordinance would generate approximately $1.4 million over the anticipated 35-year operational life of the project.

Table 6: Estimated Surry County Revenue Generated from a Revenue Share Ordinance over 35 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	19	$1,540	$29,300
2	19	$1,540	$29,300
3	19	$1,540	$29,300
4	19	$1,540	$29,300
5	19	$1,540	$29,300
6	19	$1,694	$32,200
7	19	$1,694	$32,200
8	19	$1,694	$32,200
9	19	$1,694	$32,200
10	19	$1,694	$32,200
11	19	$1,863	$35,400
12	19	$1,863	$35,400
13	19	$1,863	$35,400
14	19	$1,863	$35,400
15	19	$1,863	$35,400
16	19	$2,050	$38,900
17	19	$2,050	$38,900
18	19	$2,050	$38,900
19	19	$2,050	$38,900
20	19	$2,050	$38,900
21	19	$2,255	$42,800
22	19	$2,255	$42,800
23	19	$2,255	$42,800
24	19	$2,255	$42,800
25	19	$2,255	$42,800
26	19	$2,480	$47,100
27	19	$2,480	$47,100
28	19	$2,480	$47,100
29	19	$2,480	$47,100
30	19	$2,480	$47,100
31	19	$2,728	$51,800
32	19	$2,728	$51,800
33	19	$2,728	$51,800
34	19	$2,728	$51,800
35	19	$2,728	$51,800
Cumulative Total			**$1,388,000**

Scenario 2: 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 Sycamore Cross Solar project would make to Surry County over its 35-year anticipated operational life under Scenario 2. As these data indicate, that cumulative total is approximately $1.8 million.

Table 7: Estimated Cumulative Surry County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 2

	Total Revenue
County Real Estate Tax	$404,600
County Revenue from Revenue Share Ordinance	$1,388,000
Total Cumulative Revenue over 35 Years	**$1,792,600**

Fiscal Impact – Isle of Wight County

This portion of the section quantifies the direct fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County. The analysis considers two scenarios. Both scenarios include the additional revenue that the Sycamore Cross Solar project would generate for Isle of Wight County over a 35-year period from the increased property assessments associated with reassessing the site as solar use property. Scenario 1 then describes the additional revenue Sycamore Cross Solar would generate for Isle of Wight County from taxes levied on the capital investment, while Scenario 2 assumes tax revenue generated from the capital investment will be replaced with revenue associated with a locally adopted revenue share ordinance and based on the project's total generation capacity.

Reassessment of Property

Table 8 details the increased property assessments associated with removing the affected acreage from the land use program and reassessing the 1,030-acre fenced-in site as solar use property. The county real estate tax revenue from the project after reassessment is estimated to be approximately $109,700 per year, for a cumulative total of approximately $3.8 million over the project's anticipated 35-year operational life expectancy.[39] Adding one-time rollback taxes of approximately $157,700 increases that cumulative total to approximately $4.0 million. In contrast, the property currently generates approximately $14,900 per year in real estate tax revenue for the county, for a cumulative total of approximately $520,000 over 35 years.[40]

Table 8: Estimated Isle of Wight County Revenue Generated by the Proposed Sycamore Cross Solar Project over 35 Years from Real Estate Taxes

Estimated Increased Appraised Value of Property under Solar Use[41]	$15,455,300
Isle of Wight County Real Estate Tax Rate	0.0071
Annual County Real Estate Tax – Solar Use	$109,700
Cumulative Revenue over 35 Years	**$3,840,600**
One-time Rollback Taxes[42]	**$157,700**
Cumulative Revenue over 35 Years	**$3,998,300**

**Totals may not sum due to rounding.*

[39] Assumes property will be reassessed at $15,000 per acre once it is under solar use.
[40] Derived from Isle of Wight County's Real Estate Assessment database. Includes value of existing structures.
[41] Calculated as 1,030 acres times $15,000.
[42] Rollback taxes are computed as the difference between the land use value assessment tax and the tax on the fair market value for the affected acreage for five complete tax years plus the current year, including simple interest. Does not account for changes in assessment values.

Scenario 1: Taxation of Capital Investment

Table 9 separately details the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Isle of Wight County over a 35-year period from taxes levied on capital investment. This calculation is based on: 1) the taxable portion of capital investments pursuant to the 80 percent local tax exemption pursuant to Virginia Code §58.1-3660[43], times 2) the State Corporation Commission's utility assessment ratio for taxation of public utilities in Isle of Wight County, times 4) the State Corporation Commission's depreciation guidelines for solar facilities, times 5) Isle of Wight County's real property tax rate of $0.71 per $100 of assessed value pursuant to Virginia Code §58.1-2606.

As the data in Table 9 indicate, based on these calculations the estimated additional county revenue from taxation of capital investments associated with the proposed Sycamore Cross Solar project would be approximately $452,700 in the project's first year of operation, with that figure projected to decline to approximately $50,300 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 $11.2 million.

Table 9: Estimated Isle of Wight County Revenue by Proposed Solar Investment Over 35 Years

Year	Total Capital Investment subject to Exemption[44]	Depreciated Value of Taxable Capital Investment[45]	Additional Annual County Tax Revenue Solar Investment[46]
1	$402,479,675	$63,767,270	$452,700
2	$402,479,675	$63,767,270	$452,700
3	$402,479,675	$63,767,270	$452,700
4	$402,479,675	$63,767,270	$452,700
5	$402,479,675	$63,767,270	$452,700
6	$402,479,675	$63,767,270	$452,700
7	$402,479,675	$63,767,270	$452,700
8	$402,479,675	$63,767,270	$452,700
9	$402,479,675	$63,547,627	$451,200
10	$402,479,675	$62,470,669	$443,500
11	$402,479,675	$61,329,943	$435,400
12	$402,479,675	$60,125,450	$426,900
13	$402,479,675	$58,850,105	$417,800

[43] The Virginia Code §58.1-3660 stipulates that solar facilities over 20MW for which an interconnection request was filed between January 1, 2015 and June 30, 2018 are subject to an 80 percent exemption from local property taxes.
[44] Data Source: AES.
[45] Accounts for the State Corporation Commission's depreciation guidelines for solar facilities and the utility assessment ratio for taxation of public utilities in Isle of Wight County. Also accounts for the 80 percent exemption from local property taxes pursuant to Virginia Code §58.1-3660 for projects over 20 MW with an interconnection request between January 1, 2015 and June 30, 2018.
[46] 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 Isle of Wight County's real property tax rate of $0.71 per $100 of assessed value.

Year	Total Capital Investment subject to Exemption[44]	Depreciated Value of Taxable Capital Investment[45]	Additional Annual County Tax Revenue Solar Investment[46]
14	$402,479,675	$57,489,736	$408,200
15	$402,479,675	$56,051,430	$398,000
16	$402,479,675	$54,528,101	$387,100
17	$402,479,675	$52,912,663	$375,700
18	$402,479,675	$51,205,118	$363,600
19	$402,479,675	$49,384,208	$350,600
20	$402,479,675	$47,464,104	$337,000
21	$402,479,675	$45,423,552	$322,500
22	$402,479,675	$43,262,550	$307,200
23	$402,479,675	$40,974,013	$290,900
24	$402,479,675	$38,543,772	$273,700
25	$402,479,675	$35,971,825	$255,400
26	$402,479,675	$33,236,918	$236,000
27	$402,479,675	$30,346,135	$215,500
28	$402,479,675	$27,278,221	$193,700
29	$402,479,675	$24,033,175	$170,600
30	$402,479,675	$20,582,658	$146,100
31	$402,479,675	$16,933,753	$120,200
32	$402,479,675	$13,065,205	$92,800
33	$402,479,675	$8,962,844	$63,600
34	$402,479,675	$7,085,252	$50,300
35	$402,479,675	$7,085,252	$50,300
Estimated Cumulative Total			**$11,205,800**

**Totals may not sum due to rounding.*

Scenario 1: Total Fiscal Impact

Table 10 combines the results from the calculations depicted in Tables 8 and 9 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County over its 35-year anticipated operational life under Scenario 1. As these data indicate, that cumulative total is approximately $15.2 million.

Table 10: Estimated Cumulative Isle of Wight County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 1

County Real Estate Tax	$3,998,300
County Revenue from Taxation of Capital Investments	$11,205,800
Total Cumulative Revenue over 35 Years	**$15,204,100**

Scenario 2: Revenue Share Ordinance

The following section describes the additional annual revenue that the proposed Sycamore Cross Solar project would generate for Isle of Wight County assuming the county adopts an energy revenue share ordinance under Virginia Code §58.1-2636 in lieu of taxes on capital investment. This statute 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 July 1, 2021, allows a 10 percent escalator to be applied to the $1,400 per MW revenue share every five years, beginning in 2026.

Table 11 details the revenue generated from a revenue share ordinance including the 10 percent escalator. Based on a total generation capacity of 221 MW AC and an assumed commissioning date in the fourth quarter of 2026, a revenue share ordinance would generate approximately $16.1 million over the anticipated 35-year operational life of the project.

Table 11: Estimated Isle of Wight County Revenue Generated from a Revenue Share Ordinance over 35 Years

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
1	221	$1,540	$340,300
2	221	$1,540	$340,300
3	221	$1,540	$340,300
4	221	$1,540	$340,300
5	221	$1,540	$340,300
6	221	$1,694	$374,400
7	221	$1,694	$374,400
8	221	$1,694	$374,400
9	221	$1,694	$374,400
10	221	$1,694	$374,400
11	221	$1,863	$411,800
12	221	$1,863	$411,800
13	221	$1,863	$411,800
14	221	$1,863	$411,800
15	221	$1,863	$411,800
16	221	$2,050	$453,000
17	221	$2,050	$453,000
18	221	$2,050	$453,000
19	221	$2,050	$453,000
20	221	$2,050	$453,000
21	221	$2,255	$498,300
22	221	$2,255	$498,300
23	221	$2,255	$498,300
24	221	$2,255	$498,300
25	221	$2,255	$498,300
26	221	$2,480	$548,100

Year	MW	Revenue Share per MW with Escalator	Annual County Revenue
27	221	$2,480	$548,100
28	221	$2,480	$548,100
29	221	$2,480	$548,100
30	221	$2,480	$548,100
31	221	$2,728	$602,900
32	221	$2,728	$602,900
33	221	$2,728	$602,900
34	221	$2,728	$602,900
35	221	$2,728	$602,900
Cumulative Total			**$16,144,300**

Scenario 2: Total Fiscal Impact

Table 12 combines the results from the calculations depicted in Tables 8 and 11 to provide an estimate of the cumulative fiscal contribution that the proposed Sycamore Cross Solar project would make to Isle of Wight County over its 35-year anticipated operational life under Scenario 2. As these data indicate, that cumulative total is approximately $20.1 million.

Table 12: Estimated Cumulative Isle of Wight County Revenue from the Proposed Sycamore Cross Solar Project over 35 Years under Scenario 2

	Total Revenue
County Real Estate Tax	$3,998,300
County Revenue from Revenue Share Ordinance	$16,144,300
Total Cumulative Revenue over 35 Years	**$20,142,600**

Current Agricultural Use

This section provides a benchmark for the previous estimates of the economic contribution that the proposed Sycamore Cross Solar project would make to the counties of Surry and Isle of Wight by estimating the economic and fiscal contribution that the site makes to the counties in its current use.

Economic Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The proposed Sycamore Cross Solar project would be situated on an approximately 1,156-acre tract of land, of which approximately 125 acres are located in Surry County and 1,030 acres are located in Isle of Wight County.[47]
- The land currently is timberland and agricultural land used to produce corn, soybeans, cotton, and peanuts.[48]

Economic Impact

Applying these inputs to the IMPLAN model results in the following estimates of annual economic impact. As shown in Table 13, in its current use, the proposed Sycamore Cross Solar project site directly supports approximately: 1) 1 job, 2) $0.1 million in wages and benefits, and 3) $0.4 million in economic output to the counties of Surry and Isle of Wight.

Taking into account the economic ripple effects that direct impact generates, on average, the total annually supported impact on the counties of Surry and Isle of Wight is approximately: 1) 2 jobs, 2) $0.2 million in wages and benefits, and 3) $0.5 million in economic output.

Table 13: Total Estimated Annual Economic Impact of the Sycamore Cross Solar Project Site on the Counties of Surry and Isle of Wight– Current Use[49]

Economic Impact	Employment	Wages and Benefits	Output
1st Round Direct Economic Activity	1	$111,400	$382,200
2nd Round Indirect and Induced Economic Activity	1	$56,700	$163,800
Total Economic Activity	**2**	**$168,100**	**$546,000**

**Totals may not sum due to rounding.*

[47] Data Source: AES.
[48] Data Source: AES.
[49] Calculations based data from the U.S. Department of Agriculture and IMPLAN Group, LLC for Isle of Wight County, Surry County, and Virginia.

Fiscal Impact Inputs and Assumptions

The analysis is based on the following inputs and assumptions:

- The proposed Sycamore Cross Solar project would be situated on an approximately 1,156-acre tract of land, of which approximately 125 acres would be located in Surry County and 1,030 acres would be located in Isle of Wight County.[50]
- The current assessment value of the affected acreage in Surry County is approximately $0.2 million.[51]
- The current assessment value of the affected acreage in Isle of Wight County is approximately $2.1 million.[52]

Fiscal Impact – Surry County

Table 14 details the estimated tax revenue that the proposed Sycamore Cross Solar site generates for Surry County in its current use. As the data in Table 14 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $1,530 per year, for a cumulative total of approximately $53,500 over 35 years.

Table 14: Estimated Surry County Revenue Generated by the Proposed Sycamore Cross Solar Project Site over 35 Years from Real Estate Taxes – Current Use

Estimated Assessed Value of Property – Current Use	$215,300
Surry County Current Real Estate Tax Rate	0.0071
Estimated Annual County Real Estate Tax – Current Use	$1,530
Total Cumulative Revenue over 35 Years	**$53,500**

**Totals may not sum due to rounding.*

Fiscal Impact – Isle of Wight County

Table 15 details the estimated tax revenue that the proposed Sycamore Cross Solar site generates for Isle of Wight County in its current use. As the data in Table 15 indicate, the current county real estate tax revenue from the project site is estimated to be approximately $14,900 per year, for a cumulative total of approximately $520,000 over 35 years.

[50] Data Source: AES.
[51] Data Source: Derived from Surry County's Real Estate Assessment database. Includes value of existing structures.
[52] Data Source: Derived from Isle of Wight County's Real Estate Assessment database. Includes value of existing structures.