

ARTICLE 4.

DIVISION 19 SOLAR ENERGY FACILITIES

Sec. 4-19-1 Solar and Battery Storage Facilities Purpose and Intent.

The purpose of this article is to provide for and regulate the siting, development, construction, installation, operation, and decommissioning of solar energy and battery storage facilities in the County in a manner that promotes economic development and the safe, effective, and efficient use of such facilities while protecting the health, safety, and welfare of the community and avoiding adverse impacts on County resources.

The intent of this article is to encourage solar energy and battery storage facilities in a manner that promotes the development of renewable energy sources while preserving Nottoway County's rural character and fostering context sensitivity with regards to undesirable impacts on adjacent land uses. As such, Nottoway County is limiting the aggregate total energy generated by all Solar Energy Facilities to the total energy consumed by the unincorporated areas of the County, as well as the energy consumed by the Towns of Blackstone, Burkeville, and Crewe, as well as Pickett Park and Ft. Barfoot.

The County seeks to minimize solar energy facilities' impacts on natural resources, including pollinator and wildlife habitats, and existing agricultural, forestal, residential, commercial, industrial, historical, cultural, and recreational uses of property or the future development of such uses of property in the County. This article is not intended to abridge safety, health, environmental, or land use requirements contained in other applicable laws, codes, regulations, standards, or ordinances.

This article does not supersede or nullify any provision of local, state, or federal law that applies to solar energy facilities.

Sec. 4-19-2 Allowable Zoning Districts.

1. Small Scale Solar Energy Facilities, Solar Energy Facilities, and Battery Energy Storage Facilities shall be uses permitted by a special exception in the A-1 (Agricultural), C-1 (Conservation), LI (Light Industrial), and GI (General Industrial) zoning districts.

2. Solar collectors constructed for a single residential, commercial, or industrial structure not constituting a Solar Energy Facility, or a Small-Scale Solar Energy Facility as defined in this section shall be permitted in any zoning district when approved by the Nottoway County Building Official.

Sec. 4-19-3 Definitions.

The following words, terms, and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant. The person or entity who, with due authority, submits an application to the County for a zoning permit and/or special exception permit to site, develop, construct, and install a Solar Energy Facility under this article.

Battery Energy Storage Facility. The energy storage equipment and technology within an energy storage project that is capable of absorbing energy, storing such energy for a period of time, and redelivering such energy after it has been stored.

Buffer (also buffer yard, buffer area): A yard or area improved with screening and/or landscaping materials as required between abutting uses or districts of differing intensities for the purpose of decreasing the adverse impacts of one differing use on another.

Facility Owner. The person or entity that owns all or a portion of a Solar Energy Facility or Battery Energy Storage Facility, whether or not it owns the Site on which the facility is located.

Integrated PV. Photovoltaics incorporated into building materials, such as shingles.

Solar Energy Facility. A renewable energy project that either: (1) generates electricity from sunlight, consisting of one or more PV systems and other appurtenant structures and facilities (including battery storage) within the boundaries of the site, or (2) utilizes sunlight as an energy source to heat or cool buildings, heat or cool water, or produce mechanical power by means of any combination of collecting, transferring, or converting solar-generated energy. The term applies to, but is not limited to, any solar photovoltaic system, solar thermal system, and/or solar hot water system that has a project area four acres or greater. The total megawattage for all medium-scale sites within the entirety of the unincorporated areas of the County shall not exceed 170 megawatts.

Operator. The person or entity responsible for the operation and management of a Solar Energy Facility or Battery Energy Storage Facility.

Photovoltaic or PV. Materials and devices that absorb sunlight and convert it directly into electricity.

Previously Disturbed. Any area of a Site that has undergone mechanical land-forming, construction, or demolition activities within the past 50 years.

Project Area. The area within the fenced area of a Site used for the construction and operation of a Solar Energy Facility or a Battery Energy Storage Facility.

Rated Capacity. The maximum capacity of a solar energy facility based on the sum total of each photovoltaic system's nameplate capacity.

Setback: The minimum distance by which any building or structure must be separated from the front lot line or other lot lines as may be specified; yard.

Setback Line: A line parallel to a street and extending the full width of the lot for a specified distance at all points from the front lot line, street center line or street right-of-way line, and thus defining an area in which no building or structures or portions thereof may be constructed

Site. The real property on which a solar or battery energy storage facility is located.

Site Owner. The person or entity that owns all or a portion of the Site.

Small Scale Solar Energy Facility. A solar energy facility that: (1) has a project area less than four (4) acres; (2) has a rated capacity of 200 kw or less; (3) is mounted on or over a building, parking lot, or other previously disturbed area, or (4) utilizes integrated PV only.

Solar Energy Facility or Solar Facility. A Solar Energy Facility or a Small- Scale Solar Energy Facility, or both. Solar Energy Facility or Solar Facility does not include concentrated solar power (CSP) which utilizes lenses or mirrors to collect and focus the sun's heat. CSP facilities are prohibited as a component of any Solar Energy or Solar Facility.

Sec. 4-19-4 Applicability; permitting.

The requirements set forth in this article shall govern the siting, development, construction, installation, operation, and decommissioning of Solar Energy Facilities and Battery Storage Energy Facilities in the County. A special exception permit is required for each Solar Energy or Battery Energy Storage Facility proposed to be constructed, installed, or operated in the County.

A zoning permit is required for each Small-Scale Solar Energy Facility proposed to be constructed, installed, or operated in the County. Use regulations for specific zoning classifications will state if Small Scale Solar Energy Facilities are permitted in a particular zoning district as a matter of right and if Solar Energy or Battery Energy Storage Facilities are permitted in a particular zoning district subject to the issuance of a special exception permit.

For Solar Energy Facilities and Battery Energy Storage Facilities, the general procedures for applying for a special exception permit shall apply in addition to the requirements of this article. The Planning Commission and the Board of Supervisors can make exceptions on setbacks and acreage under panel based upon parcel dimension and topography. All fees become applicable and shall be paid upon approval of the permit.

1. Pre-application meeting. A pre-application meeting shall be held with the zoning administrator to discuss the location, scale, and nature of the proposed use, what will be expected during that process, and the potential for a siting agreement.
2. Submittal of the permit application and fees.
 - 1) There is a combined application for the 2232 review and Special Exception permit.
 - 2) There are separate fees for the 2232 review and Special Exception permit.
3. 2232 review. The Code of Virginia §15.2-2232 requires a review of public utility facility proposals by the Planning Commission to determine if their general or approximate location, character, and extent are substantially in accord with the Comprehensive Plan or part thereof.
 - 1) The Planning Commission must consider, at a public meeting, whether the project is in substantial accord with the Comprehensive Plan. Failure of the Planning Commission to act within sixty (60) business days of a submission, unless the time is extended by the Board of Supervisors, shall be deemed approval.
 1. If the Planning Commission approves the 2232 review, the project shall be recommended for a public hearing for the Special Exception permit.
 2. If the Planning Commission does not approve the 2232 review, the applicant may appeal the decision to the Board of Supervisors within ten (10) business days after the decision of the Planning Commission. The appeal shall be by written petition to the Board of Supervisors setting forth the reasons for the appeal. The appeal shall be heard and determined within sixty (60) business days from its filing unless the time is extended by the applicant. A majority vote of the Board of Supervisors shall overrule the Planning Commission.
 - 2) If the Board of Supervisors agrees to negotiate a Siting Agreement in accordance with the Code of Virginia § 15.2-2316.8, the 2232 review process may be delayed until negotiations are complete. If the siting agreement is approved, it fulfills the requirement for a 2232 review.

Sec. 4-19-5 Applications, procedures, and requirements for Small Scale Solar Energy Facilities.

1. Application. For proposed Small Scale Solar Energy Facilities, the application shall consist of all of the following:

- 1) A project narrative and site plan that comply with subsections (a) and (b) in Section 4-19-6.
 - 2) Any additional information or documentation required by the zoning administrator.
2. Requirements. All of the following requirements apply to all Small-Scale Solar Energy Facilities in the County:
- 1) The signage, noise, and lighting requirements in Section 4-19-7.
 - 2) The fencing requirement and the height restriction in Section 4-19-7.
 - 3) The setback and vegetative buffering requirements in Section 4-19-7.
 - 4) A decommissioning plan and security that comply with subsection (d) of Section 4- 19-6-1.

Sec. 4-19-6 Applications and procedures for Solar Energy Facilities and Battery Energy Storage Facilities.

1. Application. In addition to materials required for a special exception permit application under sections 5-5-2 and 4-19-4, applications for Solar Energy Facilities or Battery Energy Storage Facilities shall, unless otherwise provided herein, include the following information:
 - 1) Project narrative. A narrative identifying the Applicant, Facility Owner, Site Owner, and Operator, if known at the time of the application, and describing the proposed Solar Energy Facility or Battery Energy Storage Facility, including an overview of the project and its location; the size of the Site and the Project Area; the current use of the Site; the estimated time for construction and proposed date for commencement of operations; the planned maximum rated capacity of the facility; the approximate number, representative types, and expected footprint of solar and/or battery storage equipment to be constructed, including without limitation photovoltaic panels; ancillary facilities, if applicable; and how and where the electricity generated at the facility will be transmitted, including the location of the proposed electrical grid interconnection.
 - 2) Site plan. The site plan shall include the following information:
 1. Property lines, minimum required setback lines under this article, and any proposed setback lines that exceed the minimum requirements.

2. Existing and proposed buildings and structures, including preliminary location(s) of the proposed solar or battery storage equipment.
3. Existing and proposed access roads, permanent entrances, temporary construction entrances, drives, turnout locations, and parking, including preliminary comments from the Virginia Department of Transportation (VDOT) pertaining to proposed construction and permanent entrances for the site. Prior to site plan approval a written confirmation from the Virginia Department of Transportation ("VDOT") that all entrances satisfy applicable VDOT requirements; provided, however, unless expressly required by VDOT, these requirements shall not exceed VDOT requirements for other types of projects in the underlying zoning district.
4. If not in conflict with VDOT construction/design standards,, all interior roads shall be surfaced with gravel. Proposed locations and maximum heights of substations, electrical cabling from the solar systems to the substations, panels, ancillary equipment and facilities, buildings, and structures (including those within any applicable setbacks).
5. Fencing as required under this article and other methods of ensuring public safety.
6. Areas where the vegetative buffering required in this article will be installed and maintained and areas where pollinator-friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers required in this article will be installed and maintained.
7. Existing wetlands, woodlands, and areas containing substantial woods or vegetation, including those woodlands designated as 'high value forestry land' as designated by the Virginia Department of Forestry's Forest Conservation Model.
8. Identification of recently cultivated lands and predominant soil types, including all on site soils identified as or prime agricultural soils in the 'soil index' for Nottoway County published by the Natural Resources Conservation Service (NRCS) (based on publicly available data) of those lands.
9. A natural heritage and wildlife management study, consistent with the Virginia Division of Wildlife Resources Solar Energy Facility guidance that identifies any threatened or endangered species and wildlife travel patterns, together with any necessary mitigation measures to ensure compatibility of the project.

10. Additional information as determined by the zoning administrator, which may include, but may not be limited to, a scaled elevation view and other supporting drawings, photographs of the proposed site, photo or other realistic simulations or modeling of the proposed solar energy project from potentially sensitive locations as deemed necessary by the zoning administrator to assess the visual impact of the project, aerial image or map of the site, and additional information that may be necessary for a technical review of the proposal.
 11. Additional information required by the planning commission or Board of Supervisors.
- 3) Documentation of the authorization to submit the application and to use property for the proposed facility. Documentation shall include proof of current or future control over the proposed site or possession of the right to use the proposed site in the manner requested. The applicant may redact sensitive financial or confidential information.
 - 4) Decommissioning plan; security.
 1. The applicant shall provide a detailed decommissioning plan that provides procedures and requirements for removal of all parts of the Solar Facility or the Battery Energy Storage Facility and its various structures at the end of the useful life of the Solar Energy Facility or if it is deemed abandoned pursuant to section 4-19-9. The plan shall include the anticipated life of the Solar Energy Facility; the estimated overall cost of decommissioning the Solar Energy Facility in current dollars; the methodology for determining such estimate; the methodology for providing security for the determined cost of decommissioning, which shall be either cash escrow, performance surety bond(s), certified check(s), irrevocable letter(s) of credit, or other surety acceptable to the County ; the manner in which the Solar Facility will be decommissioned; and the methodology for updating the decommissioning plan, the estimated decommissioning cost, and the security for the estimated decommissioning cost, all in accordance with the requirements of Section 4- 19-9 below.
 2. Decommissioning plans shall be updated every five (5) years and each updated decommissioning plan shall be prepared at the owner's expense and shall be submitted to the County Administrator's Office for review six (6) months prior to the current plan's expiration date.

- 5) Liability insurance. The applicant shall provide proof of liability insurance in an amount determined by the County to be adequate to cover operations at the Solar Energy or Battery Energy Storage Facility. The applicant shall provide proof of such liability insurance for the Solar Energy Facility before issuing a building permit. Obtaining and maintaining the requisite liability insurance will be a mandatory condition of the special use permit.
- 6) Landscaping and screening plan. At the time of application submission and prior to any land disturbance activity by the applicant the applicant must submit for County review a preliminary landscaping and screening plan describing the proposed buffer area and how the requirements of this ordinance, as outlined below, will be met. Prior to approval and issuance of a final zoning and building permit a final landscaping and screening plan that addresses the vegetative buffering required in this article, including the use of existing and newly installed vegetation to screen the facility. The plan also must address the use of pollinator- friendly and wildlife-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the project area and in the setbacks and vegetative buffering as required in this article. Final seed area mixes, where used for groundcover, will be determined based upon availability and compatibility of a representative list of species common to the region and consider flammability of the final growth at maturity to minimize potentials for wildfires.
- 7) Erosion and sediment control plan. A preliminary erosion and sediment control plan outlining steps to be taken to protect adjacent properties from runoff shall be submitted at time of application. A full erosion and sediment control plan must be submitted and approved by the Nottoway County staff, in conjunction with designated review representatives and/or agencies, prior to any land disturbing activity. Erosion and sediment control plans must meet or exceed DEQ minimum standards as provided in the most recent edition of the Virginia Erosion and Sediment Control Handbook and may be reviewed by the County or their designated representatives in accordance with the provisions of this ordinance for third party reviews. In addition, all soil from the defined area of disturbance (Project Area) shall remain on site and must be stabilized per DEQ standards. Final seed area mixes, when used for groundcover, will be determined based upon availability and compatibility of a representative list of species common to the region, considering flammability of the final growth at maturity to minimize potential for wildfires.
- 8) Stormwater management plan. Acknowledgement that a stormwater management plan must be approved by the Virginia Department of Environmental Quality (DEQ) prior to issuance of any building or zoning permits and any land disturbing activities commencing on site. Stormwater management plans, developed by a licensed engineer, must meet or exceed DEQ minimum standards and may be reviewed and inspected by the County or their designated representatives in accordance with the provisions of this ordinance for third-party reviews and inspections.

- 9) A construction plan to be approved before the issuance of a building permit, which shall include a proposed construction schedule, proposed hours of construction and how the effective mitigation of dust, burning operations, access and road improvements, and handling of general construction complaints will be addressed to the satisfaction of the Zoning Administrator.
- 10) Virginia Cultural Resource Information System report. A report by the Virginia Department of Historic Resources, Virginia Cultural Resource Information System, must be submitted to identify historical, architectural, archeological, or other cultural resources on or near the proposed facility. A copy of the cultural resources review conducted in conjunction with the Virginia Department of Historic Resources for the permit by rule process shall be submitted by the applicant prior to the issuance of a building permit, shall be in addition to the initial report required above, and shall further identify historical, architectural, archeological, or other cultural resources on or near the proposed facility.
- 11) Additional information. If deemed relevant to the consideration of a special exception permit application or the conditions to be included in any special exception use permit, the zoning administrator, planning commission, or Board of Supervisors may require the applicant to submit any of the following information, either as part of the special exception permit application or as a condition of any special exception permit:
 1. The identification and location of any existing Solar Energy Facilities or Battery Energy Storage Facilities and any known proposed Solar Energy or Battery Energy Storage Facilities within a five-mile radius of the proposed Site.
 2. A report of impact on adjacent property values prepared by a qualified third-party, such as a licensed real estate appraiser.
 3. An economic impact analysis prepared by a qualified third-party that reports any expected change in the value of the subject property, expected employment during the construction of the facility, any expected impact on the County's tax revenues, the estimated costs to the County associated with the facility in the form of additional services, and information on any other economic benefits or burdens from the facility that may be requested by the zoning administrator.
 4. A report regarding potential impacts on pollinators and pollinator habitats at the Site, including, but not limited to, the submission of a completed solar site pollinator habitat assessment form as required by the zoning administrator. Final seed area mixes, when used for groundcover, will be determined based upon availability and compatibility of a representative list of species common to the

region, considering flammability of the final growth at maturity to minimize potential for wildfires.

5. A glint and glare study that demonstrates either that the panels will be sited, designed, and installed to eliminate glint and glare effects on roadway users, nearby residences, commercial areas, and other sensitive viewing locations, or that the applicant will use all reasonably available mitigation techniques to reduce glint and glare to the lowest achievable levels. The study will assess and quantify potential glint and glare effects and address the potential health, safety, and visual impacts associated with glint and glare. Any such assessment must be conducted by qualified individuals using appropriate and commonly accepted software and procedures.
 6. A traffic impact study modelling the construction and decommissioning processes, including recommendations for traffic control and lane closures of public streets and roads during construction. County staff will review the study in cooperation with VDOT.
 7. A water resource plan identifying the availability of and how water and sewer services will be provided to the Site, including a plan for continuous monitoring of groundwater quality during the life of the Solar Energy Facility or Battery Energy Storage Facility.
 8. An assessment of fire, rescue, and law enforcement requirements as compared to existing capacities and facilities.
2. Review and inspection fees. The County may retain qualified third parties to review portions of a permit application and to inspect a project for which the County, in its sole discretion, determines that assistance is needed. Any out-of-pocket costs incurred by the County for such review and/or inspection by qualified third parties shall be paid by the Applicant upon the Applicant's prior approval. The third-party reviewers and inspectors and their estimated costs will be submitted to the Applicant for approval before the costs are incurred. The County may, in the alternative, accept such review by qualified third parties selected, retained, and paid by the Applicant.

Notwithstanding any provisions related to the timing and validity of site plan approvals set forth in the Code of Virginia, construction shall commence thirty-six (36) months from the date of approval of the special exception permit or the special exception permit shall be void. Not less than six (6) months prior to the expiration date of the original Special Exception Permit, the owner may request a one-time extension from the Board of Supervisors for an additional twelve (12) months to commence construction. The Board of Supervisors may grant the extension, based upon satisfactory evidence that the

applicant has proceeded in good faith with the permitting process. In no case shall the permit be extended beyond eighteen months (18) months.

3. Community meeting. A public meeting advertised in newspapers with a general local circulation, social media, radio media, and posting on local government public notice boards shall be held by the Applicant prior to the public hearing with the planning commission to give the community an opportunity to hear from the Applicant and ask questions regarding the proposed Solar Energy or Battery Energy Storage Facility. All meetings held pursuant to this paragraph shall be subject to and meet all of the following requirements.
 - 1) The Applicant shall inform the zoning administrator and adjacent property owners in writing of the date, time, and location of the meeting, at least seven (7) but not more than fourteen (14) business days in advance of the meeting date.
 - 2) The date, time, and location of the meeting shall be advertised in a newspaper serving the area of the County in which the proposed Solar Energy or Battery Energy Storage Facility is to be located at least seven (7) but not more than fourteen (14) business days in advance of the meeting date.
 - 3) The meeting shall be held within the County at a location open to the general public with adequate parking and seating facilities that will accommodate persons with disabilities.
 - 4) At the meeting, members of the public shall have the opportunity to review application materials, ask questions of the Applicant, and provide feedback to the Applicant.
 - 5) The Applicant shall provide to the zoning administrator a summary of any input received from members of the public at the meeting.
4. Exemptions. The zoning administrator may exempt applications for facilities smaller than four (4) acres with a rated capacity equal to or less than one megawatt (MW) from some of the requirements of this section; provided, however, the zoning administrator may not exempt applications from any of the requirements included in section 4-19-5.
5. Post-application documentation and approvals. All documentation required to be submitted to the County and approvals required from the County after the issuance of the permit shall, unless otherwise stated in the conditions attached to the special exceptions permit, be submitted or obtained no later than the date of any application for a building permit for the facility. The failure or refusal to submit required documentation or obtain required approvals following the issuance of a special exceptions permit shall result in the suspension of the special exceptions permit and the denial of the building permit.

Sec. 4-19-7 Location, appearance, and operational requirements.

The following requirements apply to Solar Energy and Battery Energy Storage Facilities:

1. Visual impacts. The Applicant shall demonstrate through project siting and proposed mitigation, as necessary, that the Solar and Battery Energy Storage Facility minimizes impacts on viewsheds, including from residential areas and areas of scenic, historical, cultural, archaeological, and recreational significance. The Solar 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 and reduce glint and glare to levels that meet or exceed industry standards.
2. Signage. All signage on the Site shall comply with the County sign ordinance, as adopted and from time to time amended, and the signage requirements, if any, set forth in the approved special exception permit conditions.
3. Noise. Noise levels from the facility shall comply at all times with applicable County noise ordinances, as adopted and from time to time amended.
4. Setbacks. The project area shall be set back a distance of at least three hundred (300) feet from all public rights-of-way, (1,200) feet from a habitable dwelling, and a distance of at least three hundred (300) feet from adjacent property lines. Waivers may be sought by the Applicant to reduce the setbacks adjacent to a non-immediate family- owned parcel to no less than three hundred (300) feet. Exceptions may be made for adjoining parcels that are owned or controlled by the Applicant or immediate family-owned and are included in the Site. Increased or decreased setbacks from all public rights of way and adjacent property lines up to three hundred (300) feet, and additional buffering may be included in the conditions for a particular permit, dependent upon the Site topography and parcel dimensions. Solar Energy and Battery Energy Storage Facilities also shall meet all setback requirements for primary structures for the zoning district in which the Solar Energy or Battery Energy Storage Facility is located in addition to the requirements set forth above. Access, erosion and stormwater structures, and interconnection to the electrical grid may be made through setback areas provided that such are generally perpendicular to the property line.
5. Fencing. The Project Area shall be enclosed by security fencing not less than six (6) feet in height and equipped with an appropriate anticlimbing device such as strands of barbed wire on top of the fence. The height and/or location of the fence may be altered in the approved special exception permit conditions for a particular permit. Fencing must be installed on the interior of the vegetative buffer required in this section so that it is screened from the

ground-level view of adjacent property owners. The fencing shall be properly maintained at all times while the Solar Facility is in operation.

6. Vegetative buffer.
 - 1) Existing plant materials
 1. Use of native or adaptive plant materials shall be utilized to ensure water conservation, growth, and survival of new plantings that reflect the existing plant materials and environment.
 2. Existing established plant material shall be utilized, including those preserved, and shall be annotated on the submitted plan. Pervious surface area shall be retained around existing vegetation at a minimum of 1.5 times the critical root zone of each tree to allow infiltration of surface water and air.
 3. Existing healthy vegetation may be counted towards meeting performance criteria for buffers.
7. Plant sizes and standards
 - 1) The standards for all trees and shrubs utilized within Agricultural Constructed Buffer Opaque shall conform to the American Standard for Nursery Stock 2014. The sizes of installed plants shall conform to the Nottoway County planting standards.
 1. Large deciduous trees shall be at least 6 feet in height and 1" in caliper at the time of planting and shall mature at a height of at least 30'.
 2. Large evergreen trees shall be at least 5' tall at the time of planting and shall mature at a height of at least 30'.
 3. Small ornamental or understory trees shall be at least 5' in height and ¾" caliper at the time of planting, and be at least 18' in height at maturity
 4. Large shrubs shall be at least 18" tall and in a 3 gal. container at the time of planting and be expected to mature at a height of at least 8'.
 5. No vegetation installed shall be on the USDA invasive species list for Virginia.
 - 2) Location of required landscape - All landscape buffer shall be located on the property it serves within the mandated Setback. Landscaping or native vegetation that is existing on any adjacent property not on the property where the Solar facility is located shall not serve as any required buffer. Any exception to this requirement would require a recorded easement.
 - 3) Protection – No landscape other than grasses shall be permitted to be installed in a public underground utility easement without permission of the public utility owner.
 - 4) Riparian buffer – Setbacks shall be retained and complied.
 - 5) Overhead public utility easement shall be landscaped with grasses or woody vegetation that does not exceed 20' in height at maturity. Buffer plantings within 15' outside the overhead utility easement shall not exceed 30' in height.
 - 6) Solar panel field shall be installed on native soil within the installation. No topsoil shall be removed within the general area of the solar panel field. Exception will be reserved for roadways, parking lots, or building pads for required infrastructure. The solar panel field shall be stabilized with permanent vegetation consisting of grasses

and forbs, including some pollinator species. This cover crop(s) shall be depicted on the site plan.

8. Types of Buffers

- 1) Agricultural Buffer Opaque – This native established buffer shall be described as an existing natural vegetative woodland comprised of native hardwood trees, understory trees, both deciduous and evergreen. It should provide an opaque buffer that cannot be seen through visually and shall have achieved a height of a minimum of 12'. It may be enhanced with evergreen large overstory, understory, or large shrubs to improved buffer screening. Spacing on center shall not exceed 12 feet. Buffer is located within the 300' setback and be outside of the required fence on the perimeter of the panel field.
- 2) Agricultural Constructed Buffer Opaque – This designed and installed buffer shall be a minimum of 30' in width, be 80% opacity, and in each 100 linear feet, and contain the following: 6(six) Deciduous Canopy Trees, 1(one) Evergreen Canopy Tree, 4(four) Deciduous Understory Trees, 10(ten) Evergreen Understory Trees or Evergreen Large Shrubs. Trees shall be randomly placed within the 30' x 100', evergreen shrubs shall be infilled to promote a natural look, and repeated with randomness with no plant closer than 12' on center to another plant. Placement shall promote a naturalized arrangement.
- 3) Suggested list of possible plant material is attached. Choices shall not be limited to be from this list, but may be utilized as a guide. Selection of native and locally plant material within a 200-mile range is encouraged to promote ecologically appropriate plants and enhance establishment.

9. Landscape Installation and Inspection

1. Time Limit – All landscaping and stabilizing ground cover shall be installed prior to receiving a certificate of occupancy, including grassing and mulching.
2. Extensions and Inspections – Planning Department may grant extensions to this above time limit. If an exception is granted to allow installation during the appropriate planting season to ensure establishment is successful. Applicant shall post a 150% bond of cost of materials, labor, and any other installation costs, based on the highest estimate received. Temporary extension shall be for 30-180 days depending upon the inspectors' best estimate and a suitable planting season, an approved substitution due to availability of specified and approved plant species or plant size of the approved plan.
- 3) The Planning Department may issue a temporary certificate of occupancy for a term not to exceed 180 days, the next planting season, whichever comes first. Only 25% of the plant material may delayed in this exemption, and must be bonded.
- 4) Prior to obtaining a permanent certificate of occupancy, the property owner or developer shall submit an "as built" landscape plan.

- 5) Planning Department shall inspect prior to issuing a certificate of occupancy, and one year post certificate of occupancy, with the “as built” landscape plan to ensure compliance with plan, and proper maintenance of the landscape materials. Deficiencies shall be corrected per the original site plan.
10. Maintenance Responsibility and Replacement Vegetation
 - 1) Maintenance shall be the responsibility of the operator of the Solar facility for care, replacement, and watering and integrated pest control of all plant materials installed on the “as built” plan. This buffer shall be retained and managed during the entirety of the life and operation of the solar facility. Any damaged or poor-quality plantings shall be removed and replaced in the proper planting season.
11. Surface Water Buffer. The Applicant shall address the impact of the facility on rivers and streams. A buffer of at least 250 feet is required on either side of any perennial stream within the identified project area and may be increased or decreased dependent upon site topography.
12. Pollinator habitats. The Project Area will be seeded with appropriate pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers. The Project Area will be seeded promptly following completion of construction in such a manner as to reduce invasive weed growth and sediment in the project area. The Facility Owner and Operator are also required to install pollinator-friendly native plants, shrubs, trees, grasses, forbs, and wildflowers in the setbacks and vegetative buffering.
13. Height. Ground-mounted Solar Energy generation and Battery Energy Storage facilities and equipment shall not exceed a height of twenty-five (25) feet, which shall be measured from the highest natural grade below each solar panel. This limit shall not apply to utility poles and the interconnection to the overhead electric utility grid.
14. Lighting. Lighting shall be limited to the minimum reasonably necessary for security purposes and shall be designed to minimize off-site effects. Lighting on the Site shall comply with any dark skies ordinance the Board of Supervisors may adopt or, from time to time, amend.
15. Density; location. Solar Energy Facilities shall not be located within one mile of an airport. If an airport lies within one (1) mile of a Solar Energy Facility the applicant must submit, prior to issuance of any Land Disturbance or Building permits written certification from the Federal Aviation Administration that the location of the Solar Facility poses no hazard for, and will not interfere with, airport operations.
16. Entry and inspection. The Applicant, Facility Owners, and/or Operator will allow designated County and County Emergency Management officials access to the facility for inspection purposes, provided such inspectors will be subject to all established safety requirements and protocols while within the facility.

Sec. 4-19-8 Additional considerations for conditions.

To preserve and protect County viewsheds and resources, to protect the health, safety, and welfare of the community, and to otherwise advance the purpose and intent of this article, the following non-exhaustive list of additional criteria may be considered by, but shall in no way limit the deliberation, consideration, or determinations of, the planning commission and the Board of Supervisors in addressing whether to recommend or grant a permit and in determining what conditions to impose on any permit, for any Solar Energy Facility or a Battery Energy Storage Facility.

1. The topography of the site and the surrounding area.
2. The proximity of the site to, observability from, and impact on urban and residential areas.
3. The proximity of the site to, observability from, and impact on areas of historical, cultural, and archaeological significance.
4. The proximity of the site to other solar energy facilities or battery energy storage facilities, as well as other energy-generating facilities and utility transmission lines.
5. The proximity of the site to, observability from, and impact on areas of scenic significance, including scenic byways, vistas, and blueways.
6. The proximity of the site to, observability from, and impact on public rights-of-way, including, but not limited to highways, secondary roads, streets, and scenic byways.
7. The proximity of the site to, observability from, and impact on recreational areas, such as parks, battlefields, trails, lakes, rivers, and creeks.
8. The proximity of the site to airports, both public and private.
9. The preservation and protection of wildlife and pollinator habitats and corridors.
10. The proximity of the site to any urban planning area or community planning area identified in the comprehensive plan.
11. The size of the site.
12. The proposed use of available technology, coatings, and other measures to mitigate adverse impacts of the facility.
13. Any other criteria addressed in sections 4-19-6 and 4-19-7 of this Article 4, Division 19.
14. The preservation and protection of prime farmland in the county in accordance with the following:
 - 1) "Prime Farmland" shall have the meaning assigned to it by the Natural Resource Conservation Service (NRSC) of the United States Department of Agriculture, except those lands established in silviculture shall not be considered prime farmland;
 - 2) If no more than five percent of the site is Prime Farmland, this consideration will be waived;
 - 3) If more than five percent of the site is Prime Farmland that is not contiguous, this consideration may be waived;
 - 4) If more than ten percent of the site is Prime Farmland that is contiguous, the Prime Farmland can be removed from the project area; and
 - 5) The Board of Supervisors may waive any or all of the foregoing.

15. Special Provisions for Battery Energy Storage Facilities. Battery Energy Storage Facilities, in addition to the general provisions and requirements outlined in this Division, shall meet the following additional requirements:

- 1) Battery Storage Energy Facilities shall be constructed, maintained, and operated in accordance with national industry standards and regulations including the most current adopted edition of the Virginia Uniform Statewide Building Code (VUSBC).
- 2) Battery cells shall be placed in a Battery Energy Storage System (BESS) with a system appropriate Battery Management System (BMS). The BESS shall provide a secondary layer of physical containment to the batteries and be equipped with system appropriate cooling, ventilation, and fire suppression systems. Each individual battery should have 24/7 automated fire detection and extinguishing technology built in, specific to the BESS system proposed. The BMS shall monitor individual battery module voltages and temperatures and humidity, off- gassing of combustible gas, fire, ground fault and DC surge, and door access and be able to shut down the system before Thermal Runaway takes place.
- 3) The Battery Energy Storage System will be placed on an appropriate foundation and screened with vegetation outside of environmentally sensitive areas.
- 4) Access to all batteries and electrical switchgear shall be from the exterior for normal operation and maintenance. Access to the BESS interior units shall not be permitted while the system is in operation except for safety personnel and emergency responders.
- 5) Qualifications and experience from selected developers and integrators shall be Provided, including, but not limited to, disclosure of fires or other hazards at other facilities.
- 6) Safety testing and failure modes analysis data from selected developers and manufacturers shall be provided.
- 7) The latest applicable product certifications shall be provided.
- 8) The Battery Storage Facility Operator or Facility Owner shall be responsible for any environmental remediation required by the County or the Commonwealth of Virginia and the costs of such remediation. All remediation shall be completed in a timely fashion negotiated with the County and applicable state agencies.
- 9) Battery storage shall be developed in collaboration with technical experts and the County's first responders to utilize technology-appropriate practices for safe energy storage systems including, but not limited to, the following:
 1. Adequate access/egress for first responders.
 2. Adequate facility signage (for battery chemistry and emergency contacts designated by the owner/operator).
 3. Accessible Safety Data Sheets.

4. System-specific emergency response plans.
 5. Training for first responders on the type of systems, potential hazards and risks, and system-specific emergency response plans.
 6. Adequate water systems and fire suppression appliances for responding fire fighters if required in the emergency response plan.
 7. Signage designating on-site hazard materials.
 8. Emergency lighting.
 9. Separate battery modules for ease of access to isolate a failed battery from the System.
 10. Sufficient disconnect and shutdown capability, including a master ‘kill’ switch to disable and discharge batteries.
 11. System-appropriate sensors and alarms.
 12. Air ventilation and suppression systems.
 13. Drainage for water runoff.
 14. Other practices as recommended by experts or local first responders.
- 10) The Battery Energy Storage Facility Operator or Facility Owner shall conduct regular on-site inspections of the battery units and submit a written report to the zoning administrator on their condition at least once every six (6) months. The Battery Energy Storage Facility Operator or Facility Owner shall conduct monthly inspections electronically of battery units and submit a written report to the zoning administrator monthly.
- 11) Any other factors, materials, evidence, or considerations deemed relevant by the planning commission or the Board of Supervisors.

Sec. 4-19-9 Unsafe or abandoned projects; decommissioning.

1. If the County building official has determined that a Solar Energy Facility, a Small- Scale Solar Energy Facility, or Battery Energy Storage Facility is unsafe, the facility shall be repaired by the Facility Owner, Site Owner, or Operator to meet federal, state, and local safety standards, or be removed by the Facility Owner, Site Owner, or Operator at the Facility Owner’s, Site Owner’s or Operator’s expense. The Facility Owner, the Site Owner, or the Operator must complete the repair or removal of the facility, as directed by the building official, within the time period allowed by the building official or as required by the approved special exception permit conditions or by agreement. If directed to do so by the building official, the Site Owner, the Facility Owner, or the Operator will remove the Solar Energy Facility, the Small Scale Solar Energy Facility, or the Battery Energy Storage Facility in compliance with the approved decommissioning plan established for such facility.
2. If any Solar Energy Facility, Small Scale Solar Energy Facility, or Battery Energy Storage Facility is not operated for a continuous period of twelve (12) months, the County may notify the Facility Owner by registered mail that it has declared the Solar

Energy Facility, Small Scale Solar Energy Facility, or Battery Energy Storage Facility abandoned and provide forty-five (45) business days for a response. In its response, the Facility Owner shall set forth reasons for the operational difficulty and provide a reasonable timetable for corrective action. If the County deems the timetable for corrective action to be unreasonable, it may notify the Facility Owner, and the Facility Owner, Site Owner, or Operator shall remove the Solar Energy Facility, the Small-Scale Solar Energy Facility, or Battery Energy Storage Facility at the Facility Owner's, Site Owner's or operator's expense in compliance with decommissioning plan established for such facility.

3. At such time that a Solar Energy Facility, Small Scale Solar Energy Facility, or Battery Energy Storage Facility is scheduled to be abandoned, the Facility Owner, Site Owner, or Operator shall notify the zoning administrator in writing.
4. Within 365 days of the date of abandonment, whether as declared by the County as set forth in paragraph 2 above or as scheduled by the Facility Owner, Site Owner, or Operator under paragraph 3 above, the Facility Owner, Site Owner, or Operator shall complete the physical removal of the Solar Energy Facility or Small Scale Solar Energy Facility or Battery Energy Storage Facility at the Facility Owner's, Site Owner's or Operator's expense in compliance with the decommissioning plan established for such facility. This period may be extended at the request of the Facility Owner, the Site Owner, or the Operator upon approval of the Board of Supervisors. Decommissioning shall include removal of all solar electric systems, buildings, cabling, electrical components, security barriers, roads, foundations, pilings, and any other associated facilities, so that any agricultural ground upon which the facility and/or system was located is again tillable and suitable for agricultural or forestal uses. The Site shall be graded and re-seeded to restore it to as natural a pre-development condition as possible or replanted with pine seedlings to stimulate pre-timber pre- development conditions as indicated on the Preliminary Site Plan. Notwithstanding the foregoing, the Site Owner may submit, and the Board of Supervisors may approve, an alternative post-decommissioning condition plan which may provide for an alternative plan for the preparation, repair, and conditioning of the property following decommissioning.
5. When the Facility Owner, Site Owner, Operator, or other responsible party decommissions a Solar Energy Facility, Small Scale Solar Energy Facility, or Battery Energy Storage Facility, all equipment and other facility components shall be handled and disposed of in conformance with federal, state, and local requirements. All equipment, both above and below ground, must be removed as part of the approved decommissioning plan. Internal paths, roads, travel ways, and landscaping may be left at the discretion of the Site Owner.
6. If the Facility Owner, Site Owner, or Operator fails to timely remove or repair an unsafe or abandoned Solar Facility or Battery Energy Storage Facility after written notice, the County may pursue a legal action to have the Solar Facility or Battery Energy Storage Facility removed at the expense of the Facility Owner, Site Owner, and Operator, each of whom shall be jointly and severally liable for the expense of removing or repairing the

facility. The County also may call upon the decommissioning security to complete the approved decommissioning.

7. Financial assurance for the completion of decommissioning shall be provided to the County as set forth in Virginia Code § 15.2-2241.2 in a form and amount approved by the Board of Supervisors and shall remain in full effect until all decommissioning activities are completed. The terms governing financial assurance for decommissioning shall be set forth in the approved decommissioning agreement, which shall include, but may not be limited to, the following:
 - 1) The Applicant, Facility Owner, or Site Owner shall provide the financial assurance required by the Board of Supervisors before any building permit is issued to allow construction of the Solar Facility.
 - 2) The estimated cost of decommissioning shall be recalculated every five (5) years at the expense of the Facility Owner or Operator. If the recalculated estimated cost of decommissioning exceeds the original estimated cost of decommissioning by ten percent (10%) or more, then the amount of the financial assurance shall be increased to equal or exceed the new cost estimate. If the recalculated estimated cost of decommissioning is less than ninety percent (90%) of the original estimated cost of decommissioning, the financial assurance may be reduced to the recalculated estimate of decommissioning cost.
 - 3) If the terms of the Decommissioning agreement are not met, the County may collect the surety and may enter the Site to remove the equipment, apparatus, and any other personal property or improvements placed on the real property as a part of, or in connection with, the Solar Facility or Battery Energy Storage Facility as it deems appropriate.

Sec. 4-19-10 Federal, state, and local requirements.

1. Compliance with uniform statewide building code. All Solar Energy Facilities, Small-Scale Solar Energy Facilities, and Battery Energy Storage Facilities shall be constructed and operated in compliance with the uniform statewide building code.
2. Compliance with National Electric Code. All Solar Energy Facilities, Small Scale Solar Energy Facilities, and Battery Energy Storage Facilities shall be constructed and operated in compliance with the National Electric Code.
3. Compliance with regulations governing electric energy supply. Solar Energy Facilities connected to the utility grid must comply with the permitting requirements of the state corporation commission or the permit by rule requirements of the Department of Environmental Quality, as applicable.
4. FAA regulations. All Solar Energy Facilities and Small-Scale Solar Energy Facilities must meet or exceed the standards and regulations of the United States Federal Aviation Administration.
5. Other applicable laws. All Solar Energy Facilities, Small-Scale Solar Energy Facilities, and Battery Energy Storage Facilities shall be constructed and operated in compliance

with all applicable local, state, and federal laws, rules, regulations, permit requirements, and ordinances.

6. All DEQ fines will be matched by the developer and paid to Nottoway County.

Appendix A: Recommended Plants

Scientific Name	Common Name	Native - N Native Cultivar - C Exotic - E	Mature Height	Mature Width	Sun Exposure	Evergreen - G	Drought Tolerant - D	Wet Soil Tolerant - W	Tough Urban Sites - U	Resistant to Deer - R	Edible - E
Large Trees (Height > 50')											
<i>Acer rubrum</i>	Red Maple	N	40-120'	30-50'	● ○			W		R	
<i>Acer rubrum</i> 'Franksred' and other cultivars	Red Sunset Maple	C	50-60'	35-40'	● ○			W		R	
<i>Acer saccharum</i> subsp. <i>floridanum</i>	Southern Sugar Maple	N	20-70'	20-30'	● ● ○			W		R	
<i>Aesculus flava</i>	Yellow Buckeye	N	40-60'	30-40'	● ○					R	
<i>Betula nigra</i>	River Birch	N	40-90'	40-60'	● ○			W		R	
<i>Betula nigra</i> 'Dura Heat'	Dura Heat River Birch	C	40-70'	40-60'	● ○			W	U	R	
<i>Carpinus betulus</i>	European Hornbeam	E	40-60'	30-40'	● ○		D		U		
<i>Carya glabra</i>	Pignut Hickory	N	60-80'	25-40'	● ○		D			R	
<i>Carya illinoensis</i>	Pecan Tree	N	70-100'	40-75'	● ○		D	W			E
<i>Catalpa speciosa</i>	Northern Catalpa	N	40-70'	20-40'	● ○		D	W			
<i>Celtis laevigata</i>	Sugar Hackberry	N	50-70'	30-60'	● ○		D		U	R	
<i>Celtis occidentalis</i>	Hackberry	N	40-100'	40-60'	● ● ○		D	W	U		E
<i>Chamaecyparis obtusa</i>	Hinoki Falsecypress	E	50-75'	10-25'	● ○	G					
<i>Chamaecyparis thyoides</i>	Atlantic White Cedar	N	60-80'	30-40'	● ○	G		W			
<i>Corylus colurna</i>	Turkish Filbert	E	40-80'	30-50'	● ○		D		U		E
<i>Cryptomeria japonica</i>	Japanese Cedar	E	50-60'	20-30'	● ○	G				R	
<i>Cupressus sempervirens</i> and other varieties	Italian Cypress	E	40-70'	3-6'	○	G	D		U		
<i>Diospyros virginiana</i>	Persimmon	N	30-80'	20-35'	● ○		D				E
<i>Fagus grandifolia</i>	American Beech	N	60-80'	40-80'	● ○					R	
<i>Ginkgo biloba</i> 'Autumn Gold' and other fruitless males only	Ginkgo	E	50-80'	30-40'	○		D		U	R	
<i>Gleditsia triacanthos</i>	Thornless Honeylocust	N	30-70'	30-50'	○		D		U	R	
<i>Gymnocladus dioica</i>	Kentucky Coffeetree	N	60-75'	40-50'	○		D		U		
<i>Liquidambar styraciflua</i>	Sweetgum	N	60-100'	40-50'	● ○		D	W	U	R	
<i>Liriodendron tulipifera</i>	Tulip Poplar	N	70-130'	30-60'	● ○					R	
<i>Magnolia acuminata</i>	Cucumber Tree	N	50-80'	35-60'	● ○						
<i>Magnolia grandiflora</i>	Southern Magnolia	N	60-80'	30-50'	● ○	G			U	R	
<i>Nyssa sylvatica</i>	Black Gum	N	30-100'	20-35'	● ○		D	W	U	R	E
<i>Nyssa sylvatica</i> 'JFS-PN Legacy' and other cultivars	Gum Drop Black Gum	C	30'	20'	● ○		D	W	U	R	E
<i>Pinus sylvestris</i>	Scotch Pine	E	30-70'	20-35'	○	G			U	R	
<i>Pinus taeda</i>	Loblolly Pine	N	60-90'	20-40'	○	G	D	W	U	R	
<i>Platanus occidentalis</i>	Sycamore	N	75-110'	75-100'	● ○		D	W	U	R	
<i>Platanus x acerifolia</i>	London Planetree	E	75-100'	60-75'	○				U	R	
<i>Prunus serotina</i>	Black Cherry	N	60-80'	30-60'	○					R	
<i>Quercus alba</i>	White Oak	N	50-135'	50-80'	● ○		D			R	
<i>Quercus coccinea</i>	Scarlet Oak	N	50-80'	45-78'	● ○		D			R	

Note: Evergreen plants are highlighted in green.

Appendix A: Recommended Plants

Scientific Name	Common Name	Native - N Native Cultivar - C Exotic - E	Mature Height	Mature Width	Sun Exposure	Evergreen - G	Drought Tolerant - D	Wet Soil Tolerant - W	Tough Urban Sites - U	Resistant to Deer - R	Edible - E
<i>Quercus falcata</i>	Southern Red Oak	N	60-100'	50-60'	● ○		D			R	
<i>Quercus imbricaria</i>	Shingle Oak	N	50-70'	50-60'	● ○		D	W		R	
<i>Quercus laurifolia</i>	Laurel Oak	N	40-60'	30-40'	● ○			W			
<i>Quercus macrocarpa</i>	Bur Oak	N	70-80'	70-80'	● ○		D			R	
<i>Quercus montana</i>	Chestnut Oak	N	50-70'	50-70'	● ○		D			R	
<i>Quercus nigra</i>	Water Oak	N	50-100'	35-60'	● ○			W		R	
<i>Quercus pagoda</i>	Cherrybark Oak	N	90-130'	30-70'	● ○					R	
<i>Quercus palustris</i>	Pin Oak	N	70-90'	40-50'	● ○			W		R	
<i>Quercus phellos</i>	Willow Oak	N	50-80'	30-40'	● ○			W	U	R	
<i>Quercus rubra</i>	Northern Red Oak	N	60-90'	60-75'	● ○		D			R	
<i>Robinia pseudoacacia</i>	Black Locust	N	50-70'	20-35'	● ○		D		U		
<i>Sassafras albidum</i>	Sassafras	N	40-70'	25-40'	● ○		D			R	
<i>Styphnolobium japonicum</i>	Japanese Pagoda Tree	E	50-75'	50-75'	● ○		D		U	R	
<i>Taxodium distichum</i>	Baldcypress	N	50-100'	15-40'	● ○			W	U	R	
<i>Tilia americana</i>	American Basswood, Linden	N	50-80'	30-50'	● ○		D				
<i>Ulmus americana</i> 'Lewis & Clark'	Prairie Expedition® American Elm	C	55-60'	35-40'	● ○		D		U	R	
<i>Zelkova serrata</i>	Japanese Zelkova	E	50-80'	50-80'	● ○		D		U		
Medium Trees (Height: 30-50')											
<i>Acer buergerianum</i>	Trident Maple	E	25-35'	20-30'	○		D		U		
<i>Aesculus x carnea</i>	Red Horsechestnut	E	30-40'	25-35'	● ○					R	
<i>Castanea mollissima</i>	Chinese Chestnut	E	35-40'	40-50'	○		D				E
<i>Cedrus deodara</i>	Deodar Cedar	E	30-50'	30-40'	● ○	G	D		U	R	
<i>Celtis occidentalis</i> 'Prairie Sentinel'	Prairie Sentinel® Hackberry	C	36-42'	9-12'	● ○		D		U	R	
<i>Cladrastis kentuckea</i>	Yellowwood	N	30-45'	40-45'	● ○		D				
<i>Hesperocyparis arizonica</i>	Arizona Cypress	E	40-60'	15-20'	○	G	D		U	R	
<i>Ilex opaca</i>	American Holly	N	40-60'	10-20'	● ● ○	G				R	
<i>Ilex opaca</i> cultivars	American Holly	C	40-60'	10-20'	● ● ○	G				R	
<i>Juniperus virginiana</i>	Eastern Red Cedar	N	30-40'	10-20'	● ○	G	D		U	R	
<i>Koelreuteria paniculata</i>	Golden Raintree	E	30-40'	15-35'	● ○		D		U	R	
<i>Parrotia persica</i>	Persian Ironwood	W	20-40'	15-30'	● ○						
<i>Pistacia chinensis</i>	Chinese Pistache	E	25-40'	25-35'	○		D		U		
<i>Prunus x yedoensis</i>	Yoshino Cherry	E	30-40'	20-50'	● ○		D		U		
<i>Quercus stellata</i>	Post Oak	N	40-50'	35-50'	○		D		U	R	
<i>Thuja occidentalis</i>	American Arborvitae	N	40-60'	10-15'	● ○	G		W			
<i>Ulmus parvifolia</i>	Chinese Elm	E	40-60'	50-60'	● ○		D		U		
Small Trees (Height: < 30')											
<i>Acer griseum</i>	Paperbark Maple	E	20-30'	15-25'	● ○						
<i>Acer leucoderme</i>	Chalk Maple	N	20-30'	15-25'	● ● ○		D		U		

Note: Evergreen plants are highlighted in green.

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<i>Acer palmatum</i> varieties and cultivars	Japanese Maple	E	15-25'	10-25'	●●					R	
<i>Aesculus pavia</i>	Red Buckeye	N	15-25'	10-20'	●			W		R	
<i>Alnus serrulata</i>	Tag Alder	N	10-15'	8-15'	●○		D	W	U		
<i>Amelanchier</i>	Common Serviceberry	N	15-25'	15-25'	●●○						E
<i>Amelanchier x grandiflora</i>	Apple Serviceberry	C	15-25'	15-25'	●○					R	E
<i>Amelanchier arborea</i>	Downy Serviceberry	N	15-25'	10-15'	●○			W		R	E
<i>Asimina trioba</i>	Pawpaw	N	15-30'	15-30'	●●○					R	E
<i>Carpinus caroliniana</i>	American Hornbeam	N	20-30'	20-30'	●●			W			
<i>Castanea pumila</i>	Chinquapin	N	15-30'	10-20'	●○		D				E
<i>Cercis canadensis</i>	Eastern Redbud	N	20-30'	25-35'	●○					R	
<i>Cercis canadensis</i> cultivars	Redbud	C	20-30'	25-35'	●○					R	
<i>Chamaecyparis pisifera</i>	Japanese Falsecypress	E	20-30'	10-20'	●●○	G	D				
<i>Chionanthus retusus</i>	Chinese Fringetree	E	18-35'	10-25'	●○						
<i>Chionanthus virginicus</i>	American Fringetree	N	12-30'	12-20'	●○		D		U	R	
<i>Cornus alternifolia</i>	Pagoda Dogwood	N	15-25'	20-32'	●○					R	
<i>Cornus florida</i>	Flowering Dogwood	N	15-25'	15-30'	●○					R	
<i>Cornus florida</i> cultivars	Flowering Dogwood	C	15-25'	15-30'	●○					R	
<i>Cornus kousa</i>	Kousa Dogwood	E	20-30'	15-20'	●○					R	
<i>Cornus mas</i>	Cornelian Cherry Dogwood	E	20-25'	15-20'	●○					R	
<i>Cotinus coggygria</i>	Smoketree, Smokebush	E	10-15'	10-15'	○		D			R	
<i>Crataegus phaenopyrum</i>	Washington Hawthorn	N	25-30'	20-25'	●○		D		U	R	
<i>Crataegus viridis</i>	Green Hawthorn	N	20-35'	20-35'	○		D				
<i>Crataegus viridis</i> 'Winter King'	Winter King Hawthorn	C	20-35'	20-35'	○		D				
<i>Euscaphis japonica</i>	Korean Sweetheart Tree	E	12-20'	10-15'	●○		D				
<i>Halesia carolina</i>	Carolina Silverbell	N	10-40'	25-35'	●○						
<i>Hamamelis virginiana</i>	Common Witchhazel	N	15-30'	15-20'	●○					R	
<i>Ilex x attenuata</i> 'Fosteri'	Foster's Holly	N	20-30'	10-20'	●○	G				R	
<i>Lagerstroemia indica</i>	Crape myrtle	E	8-40'	15-25'	○		D		U	R	
<i>Magnolia tripetala</i>	Umbrella magnolia	N	15-40'	15-30'	●○						
<i>Magnolia virginiana</i>	Sweetbay Magnolia	N	10-20'	10-20'	●○	G		W		R	
<i>Magnolia soulangeana</i>	Saucer Magnolia	E	15-33'	15-25'	●○					R	
<i>Magnolia stellata</i>	Star Magnolia	E	15-24'	10-15'	●○						
<i>Malus hybrids</i>	Crabapple	E	15-26'	10-20'	○						E
<i>Ostrya virginiana</i>	Hop-Hornbeam	N	20-30'	10-15'	●●○		D		U	R	
<i>Oxydendrum arboreum</i>	Sourwood	N	20-30'	10-15'	●●○		D			R	
<i>Prunus Americana</i>	American Plum	N	10-20'	15-25'	●○						E
<i>Prunus caroliniana</i>	Carolina Cherry Laurel	N	15-35'	15-20'	●○	G	D			R	
<i>Prunus mume</i>	Flowering Apricot	E	10-20'	10-20'	○						

Note: Evergreen plants are highlighted in green.

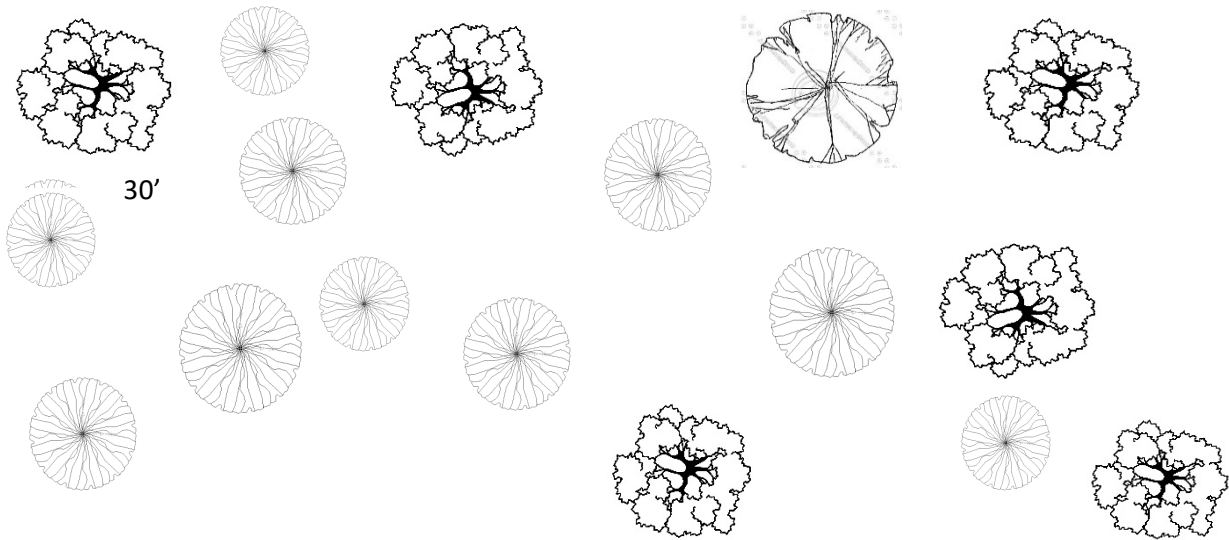
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<i>Prunus virginiana</i>	Choke Cherry	N	20-30'	18-25'	○						
<i>Ptelea trifoliata</i>	Hoptree	N	15-20'	10-20'	●○		D				
<i>Stewartia ovata</i>	Mountain Stewartia	N	10-15'	10-15'	●○						
<i>Styrax japonicus</i>	Japanese Snowbell	E	20-30'	20-30'	●○						
<i>Syringa reticulata</i>	Japanese Tree Lilac	E	20-30'	15-20'	○				U	R	
Large Shrubs (Height: 10-20')											
<i>Aralia spinosa</i>	Devil's Walkingstick	N	10-35'	6-10'	●○		D		U	R	
<i>Camellia japonica</i>	Japanese Camellia	E	10-13'	5-10'	●	G				R	
<i>Chamaecyparis thyroides</i> 'Rubicon' and other cultivars	Rubicon White Cedar	C	15-25'	4-12'	●○	G		W		R	
<i>Clethra acuminata</i>	Cinnamonbark	N	8-20'	4-6'	●●○					R	
<i>Cleyera japonica</i>	Japanese Cleyera	E	10-15'	8-10'	●○	G	D				
<i>Corylus americana</i>	Hazelnut	N	9-12'	8-13'	●●○						E
<i>Hesperocyparis arizonica</i> 'Limelight' and other cultivars	Yellow Arizona Cypress	C	15-20'	4-5'	○	G	D		U	R	
<i>Hamamelis virginiana</i>	Witchhazel	N	15-30'	15-20'	●○					R	
<i>Ilex cornuta</i> 'Needlepoint'	Needlepoint Holly	E	15-20'	10-20'	●○	G	D		U	R	
<i>Ilex cornuta</i> 'Sizzler'	Sizzler Holly	E	10-15'	10-15'	●○	G	D		U	R	
<i>Ilex decidua</i>	Possumhaw	N	7-15'	5-12'	●○			W			
<i>Ilex latifolia</i>	Lusterleaf Holly	E	20-23'	7-12'	●○	G	D			R	
<i>Ilex x 'Mary Nell'</i>	Mary Nell Holly	E	10-25'	5-10'	●○	G	D			R	
<i>Ilex x 'Nellie R. Stevens'</i>	Nellie Stevens Holly	E	15-25'	8-15'	●○	G	D		U	R	
<i>Ilex verticillata</i>	Winterberry Holly	N	3-15'	3-12'	●●○			W		R	
<i>Ilex vomitoria</i>	Yaupon Holly	N	10-20'	8-12'	●●○	G	D	W	U	R	
<i>Ilex vomitoria pendula</i>	Weeping Yaupon Holly	N	15-30'	6-12'	●○	G	D	W	U	R	
<i>Juniperus scopulorum</i> 'Blue Arrow'	Blue Arrow Juniper	N	12-15'	2'	○	G	D		U	R	
<i>Juniperus scopulorum</i> 'Skyrocket'	Skyrocket Juniper	N	15-30'	6-8'	○	G	D		U	R	
<i>Juniperus chinensis</i> 'Torulosa'	Hollywood Juniper	E	10-15'	6-15'	○	G	D			R	
<i>Kalmia latifolia</i>	Mountain Laurel	N	4-15'	4-8'	●○	G				R	
<i>Lindera benzoin</i>	Spicebush	N	8-15'	6-15'	●		D	W	U		E
<i>Myrica cerifera</i>	Wax Myrtle, Bayberry	N	20-25'	8-10'	●○	G	D	W	U	R	
<i>Osmanthus fragrans</i>	Fragrant Tea Olive	E	10-20'	10-14'	●	G	D			R	
<i>Osmanthus heterophyllus</i>	Holly Leaf Tea Olive	E	6-21'	5-10'	●○	G	D		U	R	
<i>Podocarpus macrophyllus</i>	Chinese Podocarpus	E	15-50'	6-8'	●○	G	D			R	
<i>Rhus copallinum</i>	Flameleaf Sumac	N	7-15'	10-20'	●○		D				
<i>Rhus glabra</i>	Smooth Sumac	N	9-15'	9-15'	●○		D				
<i>Thuja occidentalis</i> 'Degroot's Spire'	Degroot's Spire Arborvitae	C	15-30'	4-5'	●○	G					
<i>Vaccinium virgatum</i>	Rabbiteye Blueberry	N	10-15'	6-8'	●○			W			E
<i>Viburnum rufidulum</i>	Blackhaw Viburnum	N	10-20'	10-20'	●○		D			R	

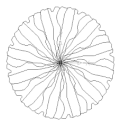
Note: Evergreen plants are highlighted in green.

Screening / Buffering

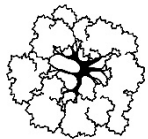
-----100' wide x 30' deep-----



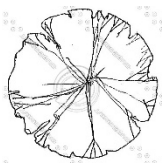
KEY



Understory Trees/Large Shrub



Overstory Large Deciduous Shade Tree



Evergreen Overstory Tree

Plantings shall be placed randomly, approximately 12-15 feet apart on center. Rows or designs should be naturalized and not repeated uniformly. Per 100' length of buffer shall be 6 Deciduous Overstory Shade Trees, 1 Evergreen Overstory Tree, and 14 Understory Trees or Large Evergreen Shrubs