
3-1100 Emerging Technologies District

Sec. 3-101. Uses Generally Permitted

A. In order to accomplish the purposes of this ordinance the following base zoning districts are established:

A-L	Limited Agricultural District
A-R	Agricultural-Rural Residence District
RVC	Rural Village Center
R-1	Urban Residence District
R-2	Vacation Residence District
B-1	Local Business District
B-2	General Business District
M-1	Light Industrial District
M-2	General Industrial District
ET	Emerging Technologies District
PD	Planned Development District

Sec. 3-1101. Purpose of the district.

The purpose of the Emerging Technologies (ET) District is to permit master planned developments consisting of a combination of commercial, industrial, utility, technology-focused, and related uses in a campus-like environment. Due to its flexible nature and the goals of the County to encourage and accommodate innovative development, the ET District is intended to be implemented as a conditional zoning district. An applicant's use of conditional zoning is encouraged as the most appropriate means to provide for the necessary zoning regulations to address the unique impacts of a proposed rezoning of property to the ET District.

The district is intended to be applied only to large contiguous areas of the County that are located in close proximity to strategic and necessary resources, such as high-capacity electric generation and transmission facilities, natural gas lines, and navigable waterways. Properties to which this district is applied should be located so as to minimize potential conflicts with residential or other commercial uses and should be in locations where the use will minimally impact traffic and be adequately served by existing roadway capacity. The district and its uses should not cause undue environmental impacts, and should be consistent with the general location, character, and extent as described in the Future Land Use map of the County's adopted Comprehensive Plan.

Sec. 3-1102. Uses Generally Permitted.

The following uses, as defined by Section 3-1108 or Article II of the Zoning Ordinance are permitted in the Emerging Technologies (ET) district, subject to approval of the Board of Supervisors as described in section 3-1105. Uses allowed by right or through a Conditional Use Permit shall also be subject to all other applicable requirements contained in the Zoning Ordinance including additional, modified or more stringent standards listed in article IV, Supplemental Regulations, as denoted by an asterisk (*) below, for those specific uses unless otherwise approved as part of the ET District.

Sec. 1102 (A) Permitted Principal Uses

Only the following uses shall be permitted by right in the ET district.

Civic Use Types

Utility Service/Minor

Commercial Use Types

Business or Trade School

Educational Facility

Science and Technology Center

Research, Experimental, and Technology Center

Construction Office, Temporary

Office, General

Contractor's Yard

Industrial Use Types

Data Warehouse Center

Energy Storage Facility

Flex Industrial

Laboratory

Outdoor Storage, Construction Material (Temporary)

Renewable Energy Generation Facility

Warehousing and Distribution

Water Storage Tank

Sec. 1102 (B). Conditional Uses

The following uses shall be permitted upon issuance of a Conditional Use Permit following the process in Section 1-500 *et seq.* of the Zoning Ordinance.

Civic Use Types

Utility Service/Major*

Industrial Use Types

Electrical Component Manufacturing Facility

Natural Gas Terminal

Small Scale Nuclear Modular Reactors

Miscellaneous Use Types

Alternate Discharge Sewage System*

Surface Water Withdrawal

Surface Water Withdrawal System

Sec. 1102 (C). Accessory Uses

Accessory uses to each of the permitted uses above shall be permitted, including water dependent facilities, shall be permitted as Accessory Use is defined in the Zoning Ordinance.

Sec. 3-1103. Site development regulations.

- A. Each ET District shall be subject to the following site development standards.
 1. Minimum district size: 500 acres of contiguous land.
 2. With the exception of areas of the ET District adjacent to industrial uses or industrially-zoning areas, all structures must be sufficiently screened, consistent with the master plan and to the Administrator's satisfaction, such that structures will not create a materially-adverse visual impact on neighboring properties, the James River, or historic sites, in Surry or in other localities.
 3. The maximum height of any structure shall be 75'.
 4. Notwithstanding the maximum height of structures, an exception may be granted by the Board of Supervisors for structures that are associated with an accessory use, provided that the applicant proves that the accessory use and associated structure will not create a materially-adverse visual impact on neighboring properties, the James River, or historic sites, in Surry or in other localities. The Board of Supervisors will consider the exception request and make a determination as part of its decision on the application and master plan. The Board of Supervisors may place reasonable conditions on any exception granted under this section.
 5. There shall be no minimum setback requirements for development in the ET District; however, setback requirements shall be specifically established during the review and approval of the master plan. The following guidelines shall be used in establishing the building spacing and setbacks:

- a. Building spacing shall provide adequate room for circulation, safety, and emergency access;
- b. Building spacing and design shall provide adequate space for outdoor activity areas (patios, decks, etc.) associated with individual uses.
- 6. Streets in the ET District shall be public in accordance with VDOT and county standards unless private streets are approved by the Board of Supervisors through the acceptance of conditional zoning proffers.
- 7. Exterior lighting in the ET District must be established with minimal impact to neighboring properties and the regional skyline.

Sec. 3-1104. Relationship to existing development regulations.

- A. All regulations of the Zoning Ordinance shall apply to the development of the ET District, unless specifically modified by conditional zoning proffers accepted by the Board of Supervisors.

Sec. 3-1105. Application process.

- A. Prior to submitting a formal application for review and approval under these provisions, the applicant and County staff shall meet to discuss the requirements of this section. The purpose of the meeting is to obtain a mutual understanding of the application requirements and process. The applicant is encouraged to submit information on the scope and nature of the proposal to allow staff to become familiar with the proposal in advance of this meeting.
- B. Any application to rezone land to the ET district shall constitute an amendment to the zoning ordinance pursuant to section 1-510, the impacts of which can only be effectively mitigated through conditional zoning. The applicant's rezoning application packet must indicate whether the applicant intends to utilize conditional zoning for the rezoning request, and all conditions proffered by the owner shall comply with Section 1-513, as amended. The written and graphic information submitted by the applicant as part of the application process and incorporated into the ET District master plan shall be incorporated as part of the ordinance rezoning property to the ET District. As part of any approval of an ET District master plan, all proffers accepted by the Board of Supervisors shall constitute conditional zoning regulations pursuant to Section 1-513, as amended.
- C. To initiate an amendment rezoning property to the ET District, the applicant shall complete a rezoning application packet. This information shall be accompanied by graphic and written information, which shall constitute a preliminary master plan. All information submitted shall be of sufficient clarity and scale to clearly and accurately identify the location, nature, and character of the proposed district. At a minimum this information shall include the following, to the satisfaction of the Administrator:
 - 1. A legal description and plat showing the site boundaries, and existing street lines, lot lines, and easements.
 - 2. Existing zoning, land use, and ownership of each parcel proposed for the district.
 - 3. A general statement of planning objectives to be achieved by the district, including a description of the character of the proposed development, the existing and proposed ownership of the site, the market for which the development is oriented, and objectives towards any specific manmade and natural characteristics located on the site.
 - 4. A description and analysis of existing site conditions, including information on topography, archeological and historic resources, natural water courses, floodplains, unique natural features, and tree cover areas.
 - 5. A land use plan designating specific uses for the district, and establishing site development regulations, including setback, height, building coverage, and lot coverage.
 - 6. A circulation plan for the district, including location of existing and proposed vehicular, pedestrian, and other transportation facilities. General information on the trip generation, ownership and maintenance, and proposed construction standards for these facilities. If private rights-of-way are proposed a detailed

proposal of how the rights-of-way will be maintained and improved and the initial monetary contribution by the developer over the first 20-year period shall be provided. A traffic impact analysis shall be required in accordance with VDOT standards.

7. A public services and utilities overview providing requirements for and provision of all utilities, sewers, and other facilities to serve the district and the proposed uses and structures.
8. An open space and district screening plan, including any areas proposed for passive and active recreational uses, natural and undisturbed areas, and proposed buffer areas around the perimeter of the district. Information on the specific design and location of these areas and their ownership and maintenance should be included.
9. A narrative addressing the noise that is expected to emanate from the uses in the district and a preliminary description of measures to be taken to mitigate noise and ensure that equipment and processes on the properties in the district are not audible to nearby uses properties, and resources, in Surry or in other jurisdictions.
10. Viewshed studies or visibility analyses, from such sites as are requested by the County, sufficient to demonstrate to the satisfaction of the Board of Supervisors that the proposed development within the district will not create a materially-adverse visual impact on neighboring properties, the James River, or historic sites, in Surry or in other localities.
11. Generalized statements pertaining to architectural and community design guidelines of any use visible from the public right-of-way or navigable waterway shall be submitted in sufficient detail to provide information on building designs, orientations, styles, and lighting overview.
12. A development schedule indicating the location, extent, and phasing of proposed development. Specific information on development of the each use should be included and should be integrated into the phasing plan for the overall development of the district.
13. A summary disclosure of any and all hazards or hazardous materials as well as a preliminary hazard mitigation plan detailing potential risks from each use shall be submitted with the master plan.

The master plan approved by the Board of Supervisors, including all supporting documentation expressly included in proffers or referenced in the master plan by the applicant, shall constitute the final master plan for the ET District. Any subsequent modification to the final master plan shall be made only in accordance with the process in this Section 3-1105.

Sec. 3-1106. Approval of preliminary and final site development plans; Revisions to the master plan.

- A. Following the approval of the final master plan, the applicant or its authorized agent, shall be required to submit preliminary and final site plans for approval in accordance with Section 5-205 of the Zoning Ordinance. The owner shall not commence construction for any phase or component of the ET District until the corresponding final site plan is approved and the County has issued any necessary zoning permits or building permits. In addition to the requirements of 5-205, an applicant shall be required to submit the following as part of its preliminary site plan:
 1. A noise study and noise reduction plan detailing the sources of any potential noise which could emanate from the uses in the district and measures to be taken to mitigate noise and ensure that equipment and processes on the properties in the district are not audible to nearby properties, uses, and resources in Surry County or other jurisdictions.
 2. A lighting plan, detailing sources of outdoor and exterior light and providing sufficient evidence to prove that lighting on the site will not visibly impact neighboring properties or the regional night skyline.

- 3. A hazard mitigation plan which must be approved by Surry County's Chief of Emergency Management, in coordination with the Virginia Department of Emergency Management, prior to final site plan approval.
- 4. Impervious surface locations.

B. Preliminary and final site plans submitted for review shall comply with the final master plan approved by the Board of Supervisors. Prior to approval of any site plan that includes material deviations from the final master plan, as determined by the Administrator, a revision to the final master plan shall be reviewed and approved following the procedures and requirements of Section 3-1105. Deviations requiring revision of the final master plan shall include, but not be limited to, the following changes:

- 1. Any increase in the density of the development or addition of uses;
- 2. Substantial change in circulation or access;
- 3. Substantial changes in grading or utility provisions;
- 4. Substantial changes in the location, classification, or mixture of land uses or buildings as shown on the master plan;
- 5. Reduction, or substantial change in the distribution or location, of the approved open space, landscaping, or buffering;
- 6. Substantial change in architectural or site design features of the development;
- 7. Substantial change in the phasing of public improvements and amenities;
- 8. Any other change that the Administrator finds is a material divergence from the final master plan, based upon the approved application and the public record of comments and concerns raised during consideration the initial or subsequent modifications to the ET zoning.

Sec. 3-1107. Control following approval of final site plans.

- A. The Administrator shall periodically inspect the site and review all building permits issued for the development to ensure general compliance with the development phasing and other requirements of the ET District master plan, the accepted proffers, and the Zoning Ordinance.

Sec. 3-1108. Use Types, New Definitions (Draft)

The following terms are exclusive to this district and defined herein. All other uses are as defined in this chapter, Appendix A – Zoning.

Data Warehouse Center. A Data Warehouse Center, or Data Center, is a facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer and/or network equipment, systems, servers, appliances, and other associated components related to digital data operations. Such facility may also include air handlers, power generators, water cooling and storage facilities, utility substations, and associated utility infrastructure to support sustained operations at a data center. *Warehousing and Distribution*, as defined in Article II of the Zoning Ordinance, shall not include *Data Warehouse Centers*.

Electrical Component Manufacturing Facility. An electrical component manufacturing facility may manufacture a wide variety of electrical components, including but not limited to semiconductors (also known as microchips), light bulbs, and transformers. *Industry Types I, II, and II*, as defined in Article II of the Zoning Ordinance, shall not include *Electrical Component Manufacturing Facilities*.

Energy Storage Facility. Energy storage is the process of accumulating energy in particular equipment or systems so that it can be used at a later time, as needed, including mechanical, electrochemical, thermal, chemical, electrical, and hydrogen-based storage devices and technologies. The following methods of energy storage are permitted as part of this land use:

- Mechanical: pumped water, gravity, compressed air, flywheel storage
- Electrochemical: advanced lead acid, lithium ion, flow batteries, zinc batteries
- Thermal: molten salt, chilled water
- Phase change materials, thermochemical storage
- Electrical: super capacitors, magnetic energy storage
- Hydrogen-based: fuel cells, power to gas storage

Flex Industrial. Flex industrial is any of one or more of a group of uses in a completely enclosed building, or campus of completely enclosed buildings, including but not limited to light manufacturing, storage, distribution, warehousing, assembly, shipping, and sales for product manufactured on site. This use is exclusive of agricultural or food preparation processes.

Natural Gas Terminal. A Natural Gas Terminal is a facility for managing the import and/or export of natural gas or liquified natural gas, including equipment and infrastructure for loading and unloading of natural gas or liquified natural gas cargo to/from ground transportation tankers or water-going tankers, liquefaction, re-gasification, processing, storage, pumping, compression, and metering of natural gas.

Outdoor Storage, Construction Materials (Temporary). The temporary holding, staging, or storage of materials utilized in construction of uses and structures within the ET district, limited to the time of said construction, to include machinery, tools, or construction equipment and/or supplies such as lumber, prefabricated structural elements, forms, jigs, stone, or other articles utilized in the fabrication of structural elements, structural steel, steel wire rods, concrete beams, or other materials utilized in construction, and parking for construction employees.

Renewable Energy Generating Facility. Renewable energy generating facilities are solely intended to produce energy to be consumed primarily on site and to support other uses permitted in the *Emerging Technologies* zoning district. Methods of energy generation may include the use of innovative and emerging green technology, including but not limited to hydrogen production.

Research, Experimental, and Technology Center. Research, Experimental, and Technology Centers (RETCs) conduct causal, preliminary, descriptive, or observational research finding the cause-and-effect relationships between variables. RETC areas include qualitative, retrospective,

prospective, marketing and advertising and correlational research. No manufacturing or storage of dangerous or volatile materials is undertaken at RETCs.

Science and Technology Center (STC). STCs are sites at which a combination of innovative and experimental research, laboratory work, development, and educational projects are undertaken. No manufacturing is undertaken at STCs other than prototype development accessory to the STC use, and not including production for distribution or sale.

Small Scale Modular Nuclear Reactor (SMR). Small scale modular nuclear reactors are advanced nuclear reactors that have a power capacity of up to 300MW(3) per unit. SMRs must be built off-site and transferred to the use site. SMRs may be used individually or as a group.

Surface Water Withdrawal. Surface Water Withdrawal means removal or diversion of surface water in for consumptive or non-consumptive use thereby altering the instream flow or hydrologic regime of the surface water. All surface water withdrawals shall be conducted in accordance with statutory and regulatory requirements, including the regulations of the State Water Control Board.

Surface Water Withdrawal System. Surface Water Withdrawal System means any device or combination of devices or systems used to withdraw surface water such as, but not limited to, a machine, pump, culvert, hose, tube, screen, or facilitated concrete or metal structure. All surface water withdrawal systems shall be conducted in accordance with statutory and regulatory requirements, including the “Virginia Water Protection Permit Program Regulation” (9 Va. Admin. Code 25-210-10 *et seq.*, as amended).

Water Storage Tank. A tower or other facility for the storage of water for supply to a water system.