

Community Development

Staff Analysis

Town Council Public Hearing

DATE OF HEARING: January 10, 2022

SUMMARY

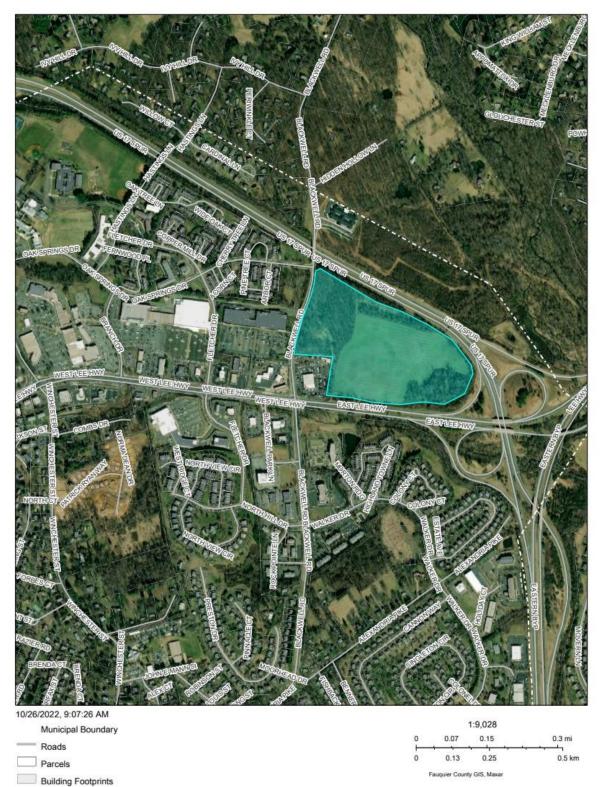
Applicant/ OwnerAmazon Data Services, Inc.RepresentativeWalsh, Colucci, Lubeley & Walsh, P.C.Applicant's Proposal/Request

The owner, Amazon Data Services, Inc., represented by Walsh, Colucci, Lubeley & Walsh, P.C., seeks a Special Use Permit for a 220,200 square foot data center on a 41.79-acre Industrial zoned parcel, identified as GPIN 6984-69-2419-000, designated in the New Town Character District on the Future Land Use Map located off Blackwell Road and Lee Highway. The Owner/Applicant is requesting modifications and waivers.

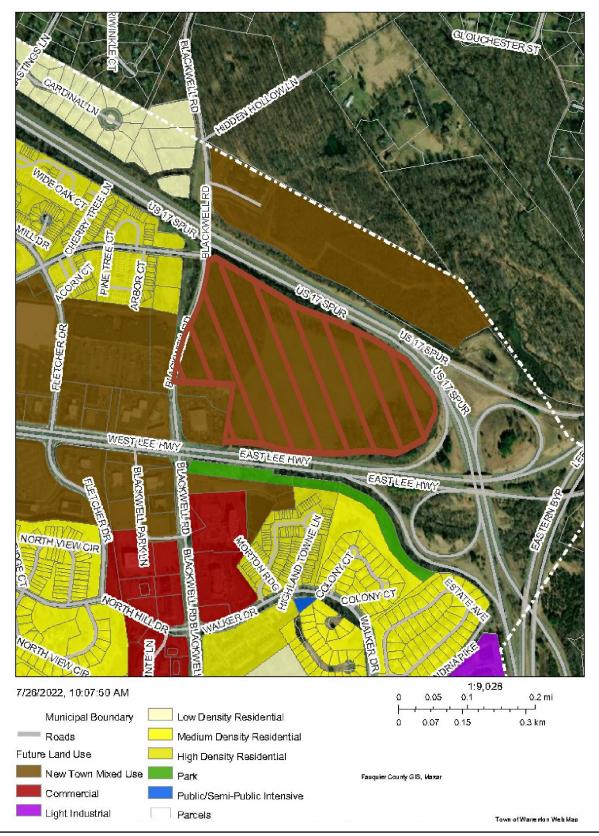
Referral Agency	Date	Outstanding Issues
Zoning	11/1/22	Noise; conditioned to-be addressed
PW/PU	11/1/22	None for SUP; must comply at Site Plan
Police	5/27/22	None for SUP; must comply at Site Plan
Emergency Services	11/1/22	None for SUP; must comply at Site Plan
VDOT	7/7/22	Eliminate as much of guardrail on Blackwell as possible at Site
	1/1/22	Plan.

REFERRAL AGENCY COMMENT SUMMARY

AERIAL MAP



FUTURE LAND USE MAP



SUP 2022-3 | Amazon Data Center

ZONING MAP

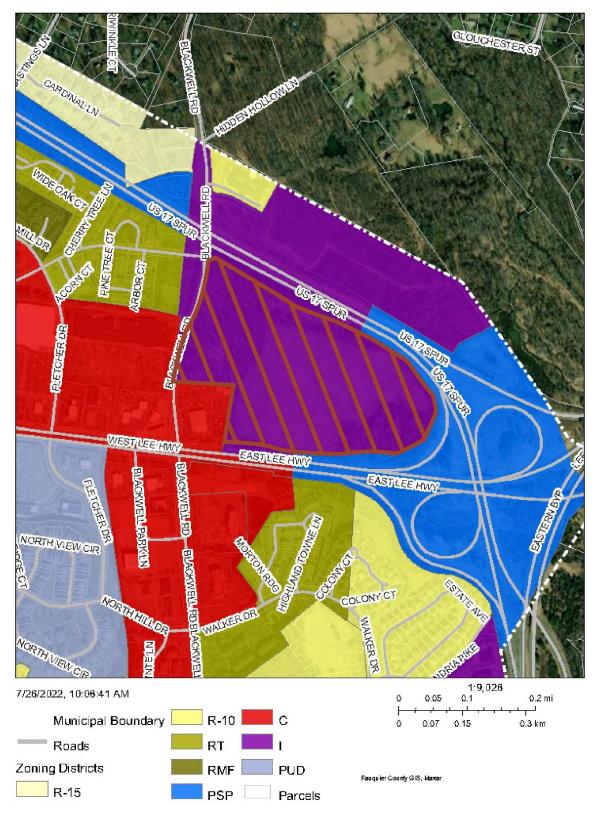


Table of Contents

I. Regulation & Planning Consistency	6
A. Comprehensive Plan Analysis	6
B. Historic and Cultural Resources	7
C. Zoning Analysis	8
Town of Warrenton Zoning Ordinance Permissible Uses By-Right in the Industrial District	8
Noise	9
Lights	11
Building Design and Elevations	11
Landscaping and Tree Buffers	
D. Electrical Power Needs	
E. Transportation & Circulation Analysis	
F. Environmental Analysis	
G. Community Facilities Analysis	14
Water and Sewer	14
Emergency Services and Police	
H. Economic & Fiscal Analysis	
II. Materially Relevant Data Center Considerations	
III. Modifications/Waivers	
IV. ZO Article 11-3.10.3: Evaluation Criteria for Special Use Permit Application	ons 17
V. Draft Conditions of Approval	

I. Regulation & Planning Consistency

This section is based on relevant regulatory and planning documents. The following table summarizes the area characteristics:

Direction	Current Land Use	Future Land Use Map Designation	Zoning
North	Poet's Walk / Hwy 17 Spur	New Town Mixed Use	R 10 / Industrial / PSP
South	Country Chevrolet / Hotel / Residential Townhouses	č ,	Commercial / RT Residential
East	Highway	N/A	PSP Public Semi-Public
West	Car Dealership / Gas Station / Commercial Retail	New Town Mixed Use / High Density Residential	RT Residential/ Commercial / PSP

A. Comprehensive Plan Analysis

The Code of Virginia §15.2223 states the Comprehensive Plan's purpose is to serve as a guide for the future. It is general in nature in that it designates the general location, character, and extent of features for the Town. While not to be confused with entitled zoning, Plan Warrenton 2040 features an overall vision of the Town. The multiple sections of the plan are extensive. Below are highlights related to the Plan.

Plan Warrenton 2040 designates this proposed parcel on the Future Land Use Map in the New Town Character District. This character district consists of mostly commercial and industrial lands on the northern side of Town from the US29/15 gateway entrance to the Business17 gateway entrance. In its entirety, it is envisioned to be "a signature location for a regional employer and jobs center, it will contain mixed-use residential, entertainment and commercial uses organized by a compact interior street grid network and a park area that is located over an existing floodplain," (Plan Warrenton 2040 Character District Guide Book page 15).

The intent of this district is to utilize the direct access from US 29/15 to encourage potential signature office and job centers with the characteristics of a mixed-use development. The proposal area was initially envisioned with structures up to six stories, with a minimum of thirty-five (35) feet for a single-story commercial, and lot coverage of 80% (Plan Warrenton 2040 Character District Guide Book page 20).

The New Town District provides a major economic development opportunities given its accessibility, large lots, and high visibility. Therefore, a goal for this district is to, *"Evaluate development incentives that stimulate private investment and new development,"* (Plan Warrenton 2040 page 63).

Economic development is further encouraged within the Community Facilities section noting the importance of making responsible and strategic community facility investments to sustain the fiscal well-being and economic resiliency of the Town. This is further reiterated in the vision calling to, "*Provide a high quality of life to capture economic benefits through diverse businesses, employers, and residences,*" (Plan

Warrenton 2040 Character District Guide Book page 19).

Quality of life is an important aspect throughout the Comprehensive Plan, noted especially in the Open Space, Parks, and Environment section as a promotion of health and wellness. A goal in this section encourages "*Preserving, enhancing, and protecting the environmental, scenic, and natural quality of the Town,*" (Plan Warrenton 2040 page 33). Strategies to this goal include utilization of nature-based systems for stormwater management and minimize the loss of existing tree cover for habitat preservation. Connectivity improvements are also noted as tools for strengthening the public health infrastructure.

Walkability and multimodal transportation are noted within the Transportation section of the Comprehensive Plan as ways to improve health and safety to promote community livability. This section encourages construction of sidewalks on both sides of an existing street, specifically introducing sidewalk linkages in Character District redevelopments. This proposal's parcel fronts the Gateway and Signature streets identified in Plan Warrenton 2040 Warrenton Street Typology and includes new bicycle/pedestrian facilities on the Desired Outcome Map (Plan Warrenton 2040 page 40).

The Applicant stated on page 3 of the October 28, 2022, letter to Denise Harris, Planning Manager, from the Applicant's representative John Foote that the comprehensive plan "is a compilation of policies...No individual site can be expected to meet all objectives in the Plan." The letter goes on to state the "2040 Plan has significant economic and fiscal goals that seeks to achieve a strong, diversified, and resilient economy..." The proposal includes no access to US29/15 as the New Town Character District Illustrative concept chows on page 19 of Plan Warrenton 2040.

Staff Findings

The application is proposing a single use, major employer on the site that will diversify the Town economic base. The secured site will not allow public access and thus no internal streets or open space. However, the Applicant is including a 5' sidewalk along the property frontage on Blackwell Road. The requested waiver to increase the height of the buildings to 37' is within the two to six stories envisioned on this parcel in the comprehensive plan (Plan Warrenton 2040 page 14). Staff has asked the Applicant to consider green infrastructure and LEED standards as encouraged in Plan Warrenton 2040. The Applicant is proposing building elevations that will incorporate a variety of materials at the gateway of Town. Staff has conditioned the consideration for additional architectural design elements in conjunction with Zoning Ordinance Article 9-26.1.F, which require these to better align with the character and goals of the Town.

B. Historic and Cultural Resources

U.S. 29/15 and US29 Business (aka Lee Highway) are designated as part of the Journey Through Hallowed Ground National Scenic Byway (JTHG NSB). The National Park Service defines byways as "a distinctive collection of American roads that tell a story and provide the visitor a unique experience." To be designated, a corridor must contain one of the following six intrinsic qualities: archaeological, cultural, historic, natural, recreational, or scenic. The JTHG NSB Corridor Management Plan (CMP) states under 4.2.15 Managing Roadside Character, "byway communities should work with utility companies to underground utility lines whenever possible." The CMP provides best practices for roadway design, gateways, and access management. The National Park Service National Scenic Byways Guide dated May 2002 stated, "Perhaps one of the underlying principles for the program has been articulated best by a byway leader who said the program is about recognition, not regulation."

Plan Warrenton 2040 dedicates a section to historic resources within the Town of Warrenton. A key aspiration of which is to, "conserve, reuse, and promotes historic resources to enhance the Town's sense of place and grow the economy through economic activity," (Plan Warrenton 2040 page 16). An emphasis of this

section focuses on the existing built environment and conservation of natural resources, inside and outside of the Historic District. Preservation of the natural environment is further supported by encouraging, "enhance[ing] the environment through preservation and sustainability best practices," (Plan Warrenton 2040 page 17).

Staff Findings

The Virginia Department of Historic Resources database does not list any archeological or historic resources on the proposed site. There are two noted archeological sites adjacent to the north-east corner of the property on the north side of US 17. Any underground lines should avoid the proposed area to protect documented historic resources. The Town of Warrenton is pursuing a Smart Scale grant for a roundabout at Lee Highway and Blackwell Road which will help to address the gateway transition from US 29/15 to Old Town. The Applicant provides access to the site off Blackwell Road and has agreed to condition no access from the site to Lee Highway thereby eliminating the need for additional deceleration lanes or additional transportation measures that would alter the existing road. The Applicant has also indicated there is no intention to introduce new signage beyond the street address off Blackwell Road. The October 28, 2022, submission removes a potential substation from this property and the Applicant agrees to condition no substation. The Zoning Ordinance requires all electrical service lines from a substation to the use to be placed underground.

C. Zoning Analysis

On August 10, 2021, Town Council approved a Zoning Ordinance Amendment (ZOTA 2021-0321) to Articles 3, 9, and 12 to allow for Data Centers within the Industrial (I) Zoning District by Special Use Permit approval, subject to the requirements of §9-26.

The legislative intent of the Industrial Zoning District is "providing for a variety of light manufacturing, fabricating, processing, wholesale distributing, and warehousing uses appropriately located for access by highways and providing a controlled environment within which signing is limited, uses are to be conducted generally within completely enclosed buildings, and a moderate amount of landscaping is required."

Town of Warrenton Zoning Ordinance Permissible Uses By-Right in the Industrial District

By right, this zoning district entitles the property to the following uses without legislative approval under Article 3-4.12.2:

 Accessory buildings Active and Passive Recreation and Recreational Facilities Banks and savings and loan offices Broadcasting studios and offices Business and office supply establishments Cabinet, upholstery, and furniture shops Cafeteria or snack bar for employees Clinics, medical or dental Commercial uses constituting up to 15% of permitted site or building area Accessory buildings Nurseries and greenhouses Offices- business, professional, or administra Off-street parking and loading subject to Article 9 Printing, publishing, and engraving establishments photographic processing; blueprinting; photoc and similar uses Private club, lodge, meeting hall, labor union, or fraternal organization or sorority Rental service establishment Retail or wholesale sales and service incident 	icle 7 ment; opying;
- Retail or wholesale sales and service incident	al to a

- Conference Centers

- Contractor's office and warehouse without outdoor storage

- Crematory

- Dwellings for resident watchmen and caretakers employed on the premises

- Employment service or agency
- Flex Office and Industrial uses
- Health and Fitness Facilities
- Institutional buildings
- Janitorial service establishment

- Laboratories, research, experimental or testing, but not testing explosives, rockets, or jet engines

- Light manufacturing uses which do not create danger to health and safety in surrounding areas and which do not create offensive noise, vibration, smoke, dust, lint, odor, heat, glare, or electrical impulse than that which is generally associated with light industries

- Mobile Food Vendors subject to Article 9-24

- Monument sales establishments with incidental processing to order but not including shaping of headstones

permitted manufacturing, processing, storing, or distributing use

- Rug and carpet cleaning and storage with incidental sales of rugs and carpets

- Security service office or station
- Sign fabricating and painting
- Signs, subject to Article 6
- Studios

- Transmission and receiving towers of height not exceeding 125'

- Utilities related to and necessary for service within the Town, including poles, wires, transformers, telephone booths, and the like for electrical power distribution or communication service, and underground pipelines or conduits for local electrical, gas, sewer, or water service, but not those facilities listed as requiring a special use permit

- Wholesale establishment, storage warehouse, or distribution center. Furniture moving.

This application is for a permissible use by special use permit upon approval by the Town Council under the Town of Warrenton Zoning Ordinance Article 3-4.12.3 for a data center in the Industrial District.

Noise

The Applicant provided a Noise Study; however, in the October 28, 2022, submission it was stated the report is a preliminary draft. The Town's Zoning Ordinance Article 9-14 governs the noise regulations. It contains the following performance standards:

- 9-14 Performance Standards for All Non-Residential Uses
 - 9-14.1 Performance Standards. Performance standards for each non-residential use will be in conformance with standards adopted by the Town Council and in no case shall standards relative to water, air, sound, and land pollution control be less than those standards adopted by the Virginia Department of Health, the Virginia Water Control Board, and the Virginia Air Pollution Control Board.
 - 9-14.2 The sound pressure level of sound radiated from an establishment, measured at the lot line of the site thereof that is the nearest thereto, shall not exceed the values in any octave band of frequency that are specified in Table 9-1 below, or in Table 9-1 as modified by the correction factors set forth in Table 9-2. The sound pressure level shall be measured with a sound level meter and an associated octave band analyzer conforming to standards prescribed by the American National Standards Institute.

Table 9-1 Maximum Permissible Sound Pressure Levels Measured re 0.0002 dyne per CM ²			
Frequency Band	Along Residential District	At Any Other Point on the	
Cycles per Second	Boundaries – Maximum	Lot Boundary – Maximum	
	Permitted Sound Level	Permitted Sound Level	
	In Decibels	In Decibels	
63	64	72	
125	60	70	
250	54	65	
500	48	59	
1000	42	55	
2000	38	51	
4000	34	47	
8000	30	44	

Table 9-2	
Correction Factors	
	Correction
Condition	in Decibels
On a site contiguous to or across a street from the boundary of any	Minus 5
R-district established by this chapter.	
Operation between the hours of 10:00 p.m. and 7:00 a.m.	Minus 5
Sound of impulsive character (e.g., hammering)	Minus 5
Sound of periodic character (e.g., sawing)	Minus 5
Tone (e.g., hum or screech)	Minus 5
Sound source operated less than:	
20% in any one hour period	Plus 5 ¹
5% in any one hour period	Plus 10 ¹
1% in any one hour period	Plus 15 ¹

1. Apply only one of these corrections. All other corrections (including any one of the footnoted) are cumulative.

Staff Findings

The Applicant submitted a Zoning Determination to be able to interpret the Zoning Ordinance correctly for their noise analysis. This determination was issued December 16, 2022. The Applicant is offering to agree to a Condition of Approval that requires a sound study demonstrating the operation of the data center meets the requirements of the Zoning Ordinance as a condition of approval of a Site Plan. The Applicant further agreed to a condition to conduct a sound study one month after the use commences to demonstrate compliance. If the use does not comply, the Applicant is required to reach compliance within 180 days. Staff finds that the proposed Conditions of Approval provide assurances that the use must meet the Zoning Ordinance prior to Site Plan approval. At the December 20, 2022, Planning Commission Public Hearing the Applicant presented suggestions to further modify the noise condition. However, since the Planning Commission moved to recommend denial this condition was not modified.

Lights

The Zoning Ordinance states all lighting must be full cut-off and cast no glare on adjacent properties or on the public right-of-way. Intensities should not exceed 1.0-foot candles upon adjoining streets, commercial, and industrial properties and shall not exceed 0.5-foot candles upon adjoining residential and institutional properties (Article 9-8.6.3).

Staff Findings

All lighting requirements are required to be met under Article 9-8 at time of Site Plan Development submission. Staff cannot comment on lighting at this time as the Applicant has not provided specific lighting information. However, the draft Conditions of Approval agreed to by the Applicant state all lighting provisions will meet the requirements of §9-8, all exterior lighting will utilize LED, designed with cutoff and fully shielded fixtures, all building mounted lighting will be maximum height of 25', lights will be dimmed to 50% output between 11 PM and dawn, and parking lot lights will be a maximum height of 20'.

Building Design and Elevations

The Applicant presented at the October 18, 2022, Planning Commission work session new elevations. The Town of Warrenton Zoning Ordinance Article 9-26.1.F.1 states building facades for data centers shall include at least two of the following design elements:

- Change in building height.
- Buildings set-backs or recesses.
- Fenestration (25% minimum).
- Change in building material, pattern, texture, or color.
- Use of accent materials.

The Applicant is requesting, per Zoning Ordinance Article 9-26.1.D, to have Town Council approve a building height two feet higher than the allowed 35.'

Staff Findings

The Applicant agreed to condition the October 28, 2022 "Illustrative Elevations" and included in their December 20, 2022 presentation to Planning Commission an illustrative fronting Lee Highway. Staff is proposing further design conditions specific to the building orientation to Lee Highway.

Landscaping and Tree Buffers

The Town of Warrenton Zoning Ordinance Article 9-26.1.1 includes additional landscaping requirements for data centers, beyond Article 8 Landscaping Requirements. This includes any portion of the data center visible from a park or adjoining/across the street from a residential district to be screened by vegetation consisting of a double staggered row of evergreen trees planted 15 feet on center. A three-foot berm with a double staggered row of shrubs on ten-foot center may be used in place of the double staggered row of evergreen trees.

Staff Findings

The SUP Plan provides landscaping calculations that meet minimum requirements for parking and canopy. Additional information will need to be provided at time of Site Development Plan submission showing conformance with landscape species type and height requirements and minimum buffer requirements under Article 9-26. Existing vegetation is shown as to be utilized for some of the buffer requirements. No waivers of landscaping requirements have been requested. While the SUP Plan indicates a 100' buffer and tree save area, the Tree Survey report provided by the Applicant indicates a large number of trees to be removed along Blackwell Road. This report has not been updated with the October 28, 2022 submission. Staff has requested the Applicant consider a larger tree save area along Blackwell Road and adjacent to the car dealership. Another concern of staff is where the electrical lines will access the site. Dominion indicated their practice is to underground distribution lines in roads or access roads where feasible. If it is determined not feasible, an easement with no vegetation planted above it will be required to access the site. The latest Dominion route proposal shows the property being accessed from Lee Highway, not Blackwell Road, which would create a gap in the landscape buffer. Finally, the Journey Through Hallowed Ground National Scenic Byway includes a landscape plan for the Living Legacy Project with identified tree and shrubs (e.g. red cedars, red maples, red buds, etc). Plantings along the JTHG NSB corridor are encouraged to incorporate these species as VDOT did for the interchange over US29 to Laurel Ridge Community College.

D. Electrical Power Needs

The Applicant has stated several times the use may commence on the existing power; however, it will need additional power to become fully operational. As such, the Applicant submitted a "load request" to Dominion Energy. This triggered a lengthy, and separate, review process by that company that is required to explore multiple options. Dominion has held community meetings and continues its review. Dominion updated the Fauquier County Board of Supervisors on November 10, 2022 and the Town Council on December 13, 2022 indicating the previous route considerations have changed. The new routes being considered will go through a public process before being submitted to the SCC for approval.

What may be considered as part of the Dominion review process is how utility lines are implemented within Town boundaries. Likewise, sub-stations within the Town boundaries require Special Use Permits. However, this SUP application is specific to a data center use. The Applicant agreed to condition no sub-station will be located on the property and to offer to fund the undergrounding of utility lines from any future sub-station to the use.

Staff Findings

The Zoning Ordinance Article 9-26.1.C requires all utility lines between a sub-station and data center will be placed underground. If a future sub-station was determined by Dominion to be located within Town boundaries, it would require a separate SUP application. If Dominion determines that a future sub-station

is located outside of Town boundaries, then it will fall under the purview of the jurisdiction the sub-station would be located. Regardless, all utility lines from the sub-station to the data center are required to be placed underground within the Town limits.

Public Works and Utilities will require careful planning and approval of the location of these underground facilities so as not to interfere with the provision of water, sanitary sewer and storm sewer facilities required for this property and offsite properties in the area where those underground power facilities are proposed. This is critical for sanitary and storm sewers that are typically gravity systems and are typically constrained by the vertical elevation of surface features.

E. Transportation & Circulation Analysis

Transportation is reviewed and regulated with the standards imposed by the Public Facilities Manual and Virginia Department of Transportation (VDOT). The bounding roads for the proposed parcel are Blackwell Road that is designated as a signature street; Route 17 is a limited access freeway/expressway; and the eastern end of Lee Highway is a principle arterial gateway. The Applicant states the use will generate "very little traffic" in the Statement of Justification. The full buildout is anticipated to be approximately 52 employees with a maximum of 32 employees at any given time.

The gateway into Town is the subject of a VDOT Pipeline Study and a Town of Warrenton 2022 Smart Scale application for a roundabout. Development of this site has proven problematic in the past for interested parties due to constraints that prevent transportation improvements without extensive investment.

The Applicant is proposing a single access to the site off Blackwell Road, closing the existing access point off Blackwell Road once construction is completed, and a five-foot sidewalk along the frontage of Blackwell Road. There is to be no access on to Lee Highway resulting in no additional conflict points at the entrance of Town. The site will have a 24 hour a day gated security with no public access.

Staff Findings

The proposed traffic generation for this use is less than other potential by-right industrial uses. The Applicant agrees to condition no access on to US Routes 29 nor 17. The Applicant is further asking for a reduction in the Town of Warrenton Zoning Ordinance required 22 loading spaces on site for a traditional industrial use. The Applicant is providing a five-foot-wide sidewalk along the frontage of Blackwell Street where none currently exists.

F. Environmental Analysis

Development within the Town of Warrenton is held to federal, state, and local regulations or standards including, but not limited to:

- Virginia Stormwater Management Program (VSMP) Regulations
- Article 3-5.1 Floodplain District (FPD)
- Article 4 Site Conservation Manual (SCM)
- Article 5 Stormwater Management (SWM)
- Article 10 Site Development Plan (SDP)
- Commonwealth of Virginia Erosion and Sediment Control (ESC) Law
- Virginia Erosion and Sediment Control Handbook (VESCH)
- Department of Environmental Quality (DEQ) Regulations

Attachment B – Staff Analysis

The Applicant submitted a Geotechnical Engineering Analysis produced by ECS Mid Atlantic, LLC dated August 15, 2022. This document conducted field and lab testing, design recommendations, and site construction recommendations. The report details a proposed retaining wall on the northeast side of the site to expose a maximum of six feet. Page 8 of the report characterizes the subsurface as being located within the Central Blue Ridge Anticlinorium. Based on the USGS Geological Map of Virginia the site is within the Catoctin Formation – Metabasalt soils. The groundwater observations found groundwater was encountered in four of the 20 borings. Page 29 Item 5.2.3 indicates weathered rock was encountered. Rock excavations will be required for mass grading and installation of deep utilities with the likelihood that blasting and/or hoe-ramming will be required for below auger refusal depths.

The Applicant also submitted a grading plan produced by Bohler dated October 28, 2022, and a tree survey conducted by TNT Environmental dated April 5, 2022.

Grading plan, SWM, BMP, aeration condition, permeable pavers, tree save, and underground utilities for this project shall not interfere with the surface or subsurface features of the floodplain for that tributary.

Staff Findings

In general, the following measures should be incorporated to the maximum extent possible to ensure that the development of the data center is done in a sustainable manner that is consistent with the goals of the Town:

- Apply best practices for erosion control.
- Minimize land disturbance and maximize on-site tree preservation.
- Reduce the heat island effect by minimizing impervious areas and enhancing the landscaping.
- Reduce, control, and treat surface runoff through effective stormwater practices that treat the quantity and quality of runoff to comply with the Town's Municipal Separate Storm Sewer System (MS4) Stormwater Requirement and Stormwater Management Ordinance.
- Use Best Management Practices (BMP), per Virginia Stormwater BMP Clearinghouse, to meet water quality and quantity requirements.
- Incorporate permeable paving in parking areas.
- Protection of surface and groundwater quality.
- Comply with all applicable State and Federal regulations regarding spill prevention and control requirements.
- Comply with all applicable State and Federal requirements and regulations regarding wetlands preservation and mitigation.

G. Community Facilities Analysis

Public community facilities in the Town are provided by the Town, Fauquier County, and other public groups for the benefit of all residents. The availability and quality of these facilities, that include, schools, libraries, hospitals, parks, police and fire and rescue services, are evaluated when people are considering moving into the Town or nearby area. The provision of these facilities adds to the desirability of living in the Town.

Water and Sewer

The Town's Water and Sewer Capacity Evaluation of 2015 anticipated water and sewer demand of approximately 23,500 gallons per day. Per the letter provided by Mr. John Foote, Esquire, Walsh, Colucci, Lubeley, & Walsh, dated September 9th, the proposed use will require the following:

1.	Domestic Water Use of:	190.5 GPD

- 2. Humidification of: 190.1 GPD
- Total Daily Use Committed by the letter: 380.6 GPD

The initial charging of the Air-Cooling System will require 19,000 gallons of water. However, this will not create a daily demand on water use since the system is a closed system to assist with the cooling of air, such as an air conditioning system.

The Town of Warrenton Zoning Ordinance Article 9-26.B states data centers shall utilize recycled water for air chillers, in conjunction with using recycled water, for cooling purposes. Potable water is not permitted to be used for cooling.

Staff Findings

The initial charging of the air-cooling system will not create an excess daily demand on water; therefore, the average demand will not put a burden on the Town water system. The domestic water use will be determined by the number and types of bathroom fixtures, which are not provided at this time. Based on the commitments above, wastewater generation will not create an issue to the Town's wastewater infrastructure.

In regards to other public infrastructure, undergrounding of the power lines will need careful considerations and approval so as not to interfere with the water, sanitary sewer, and storm sewer facilities required for this site and off-site properties.

Emergency Services and Police

The proposed data center will be a highly secured site with guard gate security personnel 24 hours a day, security fencing surrounding the site, and a patrolled trail. The Applicant stated on page 9 of the October 28, 2022, letter to Denise Harris, Planning Manager, from the Applicant's representative John Foote that, "The security that will be provided will benefit the surrounding area...Compared to other uses it will not increase the burden of local law enforcement."

The Applicant has agreed to conditions that require coordination with the Town and Emergency Services through training, a designated point of contact, and abiding to all federal and state compliance requirements.

Staff Findings

The Town of Warrenton Police Department state the proposed data center is in a unique location that effectively insulates it from the rest of the Town. From a public safety perspective, the impact to the citizens will mostly begin and end at the entry and exit point on Blackwell Road.

H. Economic & Fiscal Analysis

The Town and Fauquier County both collect real estate and business personal property tax. The Fauquier County Commissioner of the Revenue serves as the assessor for all real and personal property located in the Town.

- Real estate is reassessed every four years.
- Business personal property assessments are updated annually. Businesses are required to file an annual declaration of business personal property with the Commissioner's office. Assets are reported at their original cost and the Commissioner's office applies a depreciation factor based on the year that the asset was acquired by the business.

• Tax rates are set by the governing bodies as part of the annual budget process. Current rates per \$100 of assessed value are shown in the chart below.

Jurisdiction	Real Estate	Business Personal Property
Fauquier County	\$0.903	\$3.65
Town of Warrenton	\$0.0401	\$1.00

During the construction phase, the Town will collect Business, Professional, and Occupational License taxes from the contractors working on the construction of the building. Contractors are assessed at a rate of \$0.085 per \$100 of gross receipts.

There currently are no similar businesses located in the Town upon which to base a comparison for a fiscal analysis. While real estate assessments are public, personal property assessments are not. Per Code of Virginia §58.1-3, local tax officials are prohibited from divulging any information acquired with respect to, "the transactions, property, including personal property, income or business of any person, firm or corporation." As such, other jurisdictions are unable to provide fiscal information on similar businesses.

In the October 28, 2022, letter to Denise Harris, Planning Manager, from the Applicant's representative John Foote, there is a statement on page 10 that, "The Applicant will invest approximately \$550,000,000 in this facility and thus in the community."

Staff Findings

The Applicant indicated in the Statement of Justification that the use will "materially grow its nonresidential tax base...data centers produce a substantial revenue stream." The Applicant goes on to state "Amazon pays taxes on all of its data centers, principally consisting of an increased valuation of real property on which the facility sits, and business personal property taxes." Due to the fact the property is vacant, staff finds these statements to be true if the use is permitted.

II. Materially Relevant Data Center Considerations

This section of the report is intended to identify issues raised during the review of the proposal, which are not directly related to the policies, goals, or action strategies, but which are materially relevant to the Town's responsibilities in considering land use issues. The materially relevant issues in this case are as follows:

- <u>Town Council Zoning Text Amendment:</u> July 11, 2017, Town Council initiates a Zoning Ordinance Text Amendment to research industrial areas and the possibility of adding data centers. The ensuing initiation was not pursued with the Planning Commission nor Town Council. On April 13, 2021, Town Council again initiated a Zoning Ordinance Text Amendment to allow for data centers in the I – Industrial District with the approval of a Special Use Permit. On May 25, 2021, the Planning Commission held a Work Session to discuss the Zoning Ordinance Text Amendment (ZOTA 2021-0321) for allowance of data centers in the I District with a Special Use Permit. Two subsequent Planning Commission Public Hearings were held on June 15, 2021, and July 20, 2021, resulting in a vote 5-1 to recommend approval of the Zoning Ordinance Text Amendment. On August 10, 2021, Town Council held a Public Hearing for ZOTA 2021-0321. Two Warrenton residents and one non-resident spoke during the Public Hearing. Town Council voted unanimously (7-0) to approve ZMA 2021-0321.
- <u>Dominion Energy Virginia (Dominion):</u> According to the Dominion Energy website, in April 2022, Dominion Power initiated a public notification to address increasing demand for energy and

Attachment B – Staff Analysis

infrastructure needs. This process includes desktop review of existing features and constraints, such as culturally sand environmentally sensitive lands, residences, schools, and parks. Dominion explores co-locating along existing corridors like roads and other linear easements. The process includes public outreach. Dominion's approval process for energy infrastructure follows regulatory procedures with authority resting with the State Corporation Commission (SCC) that requires certification of transmission lines at or above 138 kilovolts (kV). Additionally, the PJM Interconnection is the regional transmission organization that coordinates the movement of wholesale electricity in Virginia, Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, West Virginia, and Washington, D.C. At the time of the writing of this Staff Analysis, Dominion is indicating the intent to submit to the SCC in the first quarter of 2023. The SCC review process may take a year or longer. Local permitting requirements commence after the SCC process concludes.

- <u>Fauquier County Board of Supervisors:</u> The Board of Supervisors Work Sessions with Dominion Energy providing updates regarding energy needs and infrastructure occurred on the following dates: April 14, 2022; June 9, 2022; May 12, 2022; September 8, 2022; July 14, 2022; August 11, 2022, and November 10, 2022.
- <u>History of the Site:</u> Fauquier County Real Estate Records indicate no improvements on the site dating back to 1997. In the late 1990s Walmart considered this site but ultimately located at its current location at the southside of the Town. In 2007 Wilson Land submitted a proposed plan for a Planned Unit Development called Warrenton Greene. Planning Commission spent over a year on the application and the associated ZOTA 2008-07 to recommend approval to the Town Council on June 17, 2009. Town Council approved the ZOTA 08-01 on November 10, 2009, and tabled the remaining applications. The Applicant withdrew the applicants on February 7, 2011, stating the economy made the proposals no longer viable.

III. Modifications/Waivers

- 1. A two-foot increase allowance for an eight-foot fence is requested. The maximum by-right fencing height allowed is six feet, as noted in Article 2-19 of the Zoning Ordinance.
- 2. A decrease in required loading spaces is requested. Twenty-two spaces are required per Article 7-18 and the Special Use Permit Plan is providing one loading space.
- 3. A building-height waiver allowance to increase two feet is requested. The maximum building height permitted is 35 feet (Article 9-25.1 (D)(1)) and the Applicant is requesting a modification to permit a building height of 37 feet. The setbacks to be provided by the Applicant exceed the minimum setback required for the additional building height. The Comprehensive Plan called for building heights up to 65' or 75' with a Special Use Permit in this location of the New Town Character District.

IV. ZO Article 11-3.10.3: Evaluation Criteria for Special Use Permit Applications

Standard	Analysis
1. Whether the proposed Special Use Permit is consistent with the Comprehensive Plan.	The Comprehensive Plan includes goals and policies for Historic Resources, Community Facilities, Housing,

	Open Space and Environment, Transportation, Economic and Fiscal Resilience, and Character District Plans. The New Town Character District envisions a mix of uses and a major employer for this part of the Town.
2. Whether the proposed Special Use Permit will adequately provide for safety from fire hazards and have effective measures of fire control.	The project is required to meet all building and safety codes at time of construction. The Conditions of Approval outline federal, state, and local coordination and compliance regulations.
3. The level and impact of any noise emanating from the site, including that generated by the proposed use, in relation to the uses in the immediate area.	A Zoning Determination has been requested by the Applicant on October 18, 2022. The Zoning Determination was issued December 16, 2022. The Conditions of Approval call for the Applicant to demonstrate compliance at time of Site Plan and again after the use is operational. Conditions also include a process and timeline for compliance if at any time the use fails to comply in the future.
4. The glare or light that may be generated by the proposed use in relation to uses in the immediate area.	All lighting must meet the requirements under Article 9- 8 at time of Site Development Plan submission. Lighting must be full cut-off and, "shall not cast glare upon adjacent property or upon a public right of way. The intensity at adjoining streets and commercial or industrial properties shall not exceed 1.0-foot candles, and the intensity at adjoining residential or institutional property boundaries shall not exceed 0.5-foot candles." No waivers of lighting requirements have been requested (Article 9-8.8). Further the Applicant agreed to a condition addressing maximum heights of lights and dimming to 50% between 11 PM and dawn.
5. The proposed location, lighting and type of signs in relation to the proposed use, uses in the area, and the sign requirements of this Ordinance.	The Applicant stated there are no signs proposed nor required for the use, aside from addressing numbers.
6. The compatibility of the proposed use with other existing or proposed uses in the neighborhood, and adjacent parcels.	The use adjacent to commercial uses, with the nearest residential uses currently located over 400 feet away on Oak Springs Drive. All landscape buffering requirements must be met at time of Site Development Plan submission.
7. The location and area footprint with dimensions (all drawn to scale), nature and height of existing or proposed buildings, structures, walls, and fences on the site and in the neighborhood.	 An SUP plan has been provided showing the general location of the existing and proposed structures. The SUP plan shows an existing fence noting maximum height of 8'.

	 The proposed 37' tall single-story data center building is 220,200 square feet. A 6' retaining wall is proposed at the Northeast corner of the site. There is a proposed guard booth and cargo screening
	building at the entrance to the site.
8. The nature and extent of existing or proposed landscaping, screening and buffering on the site and in the neighborhood.	The SUP plan shows existing tree preservation areas located throughout the site and include approximately 122,000 square feet of existing tree canopy. Additional landscaping is proposed throughout to help screen the use. Some landscaping is proposed along Blackwell Road around the entrance to the site.
9. Whether the proposed Special Use Permit will result in the preservation or destruction, loss or damage of any significant topographic or physical, natural, scenic, archaeological or historic feature.	The Applicant must meet all local, state, and federal requirements at time of Site Development Plan submission associated with environmental impacts, wetlands, etc. A Phase 1 investigation is required at time of Site Development Plan submission. Wetlands have been noted on the SUP Plan. The Virginia Department of Historic Resources database does not list any archeological or historic resources on the proposed site.
10. The timing and phasing of the proposed development and the duration of the proposed use.	A single phase is proposed with construction lasting 18 months.
11. Whether the proposed Special Use Permit at the specified location will contribute to or promote the welfare or convenience of the public.	The Applicant is proposing sidewalk extension on Blackwell Road.
12. The traffic expected to be generated by the proposed use, the adequacy of access roads and the vehicular and pedestrian circulation elements (on and off-site) of the proposed use, all in relation to the public's interest in pedestrian and vehicular safety, efficient traffic movement and access in case of fire or catastrophe.	52 maximum employees are proposed with 32 employees on site at any one time. Visitors to the site are proposed average 5-10 persons per day. The projected traffic would have minimal impact on Blackwell Road with the internal circulation designed to accommodate this need.
13. Whether the proposed use will facilitate orderly and safe road development and transportation.	The proposed SUP Plan provides adequate parking on site for employees and company vehicles per Article 7-7 of the Zoning Ordinance. Sidewalk connections are shown on the SUP Plan as to be provided along Blackwell Road and within the property from to Blackwell Road.
	The proposed Data Center will be a secured site restricting access to the site. A continuous internal roadway is proposed from the Blackwell Road entrance following around the building and back to the entrance.

	A continuous sidewalk around the entirety of the building is additionally proposed.
14. Whether, in the case of existing structures proposed to be converted to uses requiring a Special Use Permit, the structures meet all code requirements of the Town of Warrenton.	There are no existing structures currently on site other than some fencing.
15. Whether the proposed Special Use Permit will be served adequately by essential public facilities, services and utilities.	Public Works Department finds the initial charging of the air-cooling system will not create an excess daily demand on water and the average demand will not put a burden on the Town water system. The domestic water use will be determined by the number and types of bathroom fixtures, which are not provided at this time. The wastewater generation will not create an issue to the Town's wastewater infrastructure.
16. The effect of the proposed Special Use Permit on environmentally sensitive land or natural features, wildlife habitat and vegetation, water quality and air quality. The location of any major floodplain and steep slopes.	The site will be graded and cleared, except the buffers. A Geotechnical Report, Grading Plan, and Tree Survey were submitted with the application. Staff encourages the Applicant to consider best management practices as the Applicant will be required to follow local, state, and federal standards at Site Plan and construction.
17. Whether the proposed Special Use Permit use will provide desirable employment and enlarge the tax base by encouraging economic development activities consistent with the Comprehensive Plan.	The Applicant states the proposal invests approximately \$550,000,000 which is an indirect investment into the community. Opportunity for employment and taxable revenue are also mentioned as economic benefits.
18. The effect of the proposed Special Use Permit use in enhancing affordable shelter opportunities for residents of the Town, if applicable.	Not applicable.
19. The location, character, and size of any outdoor storage.	No outdoor storage is proposed.
20. The proposed use of open space.	The Applicant states all open space on the property will be used for security fencing or left as open space following construction.
21. The location of any major floodplain and steep slopes.	No floodplain is located on site. A steep slope on the north-eastern end of the property will require a 6' retaining wall.
22. The location and use of any existing non- conforming uses and structures.	The parcel is considered vacant but has been utilized for some farming which is a non-conforming use.
23. The location and type of any fuel and fuel storage.	50,000 gallon above-ground fuel tanks are proposed on the northern end of the site.

Attachment B – Staff Analysis

24. The location and use of any anticipated accessory uses and structures.	A guard booth is shown at the entrance to the property.
25. The area of each proposed use.	Refuse storage shown on north side of the building. All refuse storage must be screened.
26. The proposed days/hours of operation.	The facility will operate twenty-four hours a day, each day of the year.
27. The location and screening of parking and loading spaces and/or areas.	Proposed landscaping is shown around the parking spaces. A waiver is requested for loading from the required 22 spaces to one.
28. The location and nature of any proposed security features and provisions.	The SUP plan shows a guard booth at the entrance to the site and fencing around the perimeter. The Applicant is requesting an increase of the fence height from six feet to eight feet.
29. The number of employees.	52 employees are projected at full buildout of the data center. The Applicant states an average of 32 present on site at any given time.
30. The location of any existing and/or proposed adequate on and off-site infrastructure.	The Applicant is proposing to underground all power needs from an off-site power distribution facility. A stormwater management pond is proposed on the southern edge of the parcel.
31. Any anticipated odors which may be generated by the uses on site.	None proposed.
32. Refuse and service areas.	Refuse storage shown on north side of the building. All refuse storage must be screened.

V. Draft Conditions of Approval

SPECIAL USE PERMIT CONDITIONS Applicant: AMAZON DATA SERVICES, INC. (the "Applicant") Owner: AMAZON DATA SERVICES, INC. SUP2022-0003, Amazon Data Center PIN # 6984-69-2419 (the "Property") Special Use Permit Area: ± 41.79 acres Zoning: INDUSTRIAL (I) Date: November 15, 2022

In approving a Special Use Permit, the Town Council may impose such conditions, safeguards, and restrictions as may be necessary to avoid, minimize, or mitigate any potentially adverse or injurious effect of such special uses upon other properties in the neighborhood, and to carry out the general purpose and intent of this Ordinance. The Council may require a guarantee or bond to ensure that compliance with the imposed conditions. All required conditions shall be set out in the documentation approving the Special Use Permit (SUP). These conditions shall run with the land so as to bind future landowners. Any party or officer identified by title shall mean and include any successor to that person or entity's powers or responsibilities.

- 1. <u>Site Development</u>: The Property shall be developed in substantial conformance with these conditions and the Special Use Permit Plan entitled, "Special Use Permit Plan for Amazon Data Services, Inc.," prepared by Bohler Engineering, dated July 10, 2022 and revised through October 28, 2022, and consisting of 3 sheets, subject to minor modifications approved by the Town in connection with final Site Plan review and final engineering, and except as otherwise provided in these Conditions (the "SUP Plan"). The building and other structures to be constructed on the Property are referred to herein as the "Facility."
- 2. <u>Use Parameters. Use Limitation</u>: The use approved with this SUP shall be limited to a data center as set forth in § 3-4.12.3 of the Town of Warrenton Zoning Ordinance.
- 3. <u>Electric Substation:</u> There shall be no electric substation constructed on the Property.
- 4. <u>Undergrounding of Electrical Lines from a Substation to the Facility</u>: Pursuant to Warrenton Zoning Ordinance § 9-26.1(C), the distribution lines from the off-site substation serving the data center are required to be underground. Applicant will ensure payment of the undergrounding of these distribution lines with the utility company in accordance with its requirements.
- 5. <u>Building Design and Elevations</u>:
 - a. The architectural design of the data center shall substantially conform to the elevations entitled "Illustrative Elevations," shown on Sheet 6 of the SUP Plan. The Elevations shall be subject to minor modification approved by the Town in connection with Site Plan review. Additional changes to the design and materials may be made provided that any such changes are approved by the Planning Director prior to the issuance of a building permit.
 - b. At time of Site Plan, the Applicant shall provide all elevations for the building in compliance with the Town of Warrenton Zoning Ordinance Article 9-26.1.F. In

Attachment B – Staff Analysis

addition, the Applicant shall orient the building along Lee Highway to reduce the visible impact using architectural details such as a perceived reduction in massing and scale, fenestration and windows, exterior colors and materials, overhangs, canopy or porticos, recesses and/or projections, arcade, raised corniced parapets, and varying roof lines.

- c. The Facility shall be no greater than 37 feet in height, as that term is defined in the Town Zoning Ordinance. The mechanical equipment installed on the roof of the building shall be screened with mechanical louver screens.
- 6. <u>Signage</u>: There shall be no signage except for a street address; provided that if any further signage is sought it shall comply with applicable sign ordinance requirements.
- 7. <u>Fencing</u>: All fencing on the Property shall be as depicted on the SUP Plan, and shall not exceed 8 feet in height. Security fencing shall be the style and type as shown on Page 2 of the Special Use Permit Plan produced by Bohler dated July 10, 2022 and updated through October 28, 2022. Chain link fencing, with or without slatted inserts, and/or barbed wire or other similar visible deterrence devices shall not be permitted where visible from the public.
- 8. <u>External Fuel Storage Tanks</u>: The Applicant shall install above-ground double-walled fuel tanks that meet the definition of secondary containment under the DEQ LPR-SRR-2019-03 Storage Tank Program Compliance Manual, Volume V AST Guidance, and pursuant to 40 CFR Part 112, Section 8.1.2.2, in the general locations shown on the SUP Plan, for the storage of fuel supplies necessary to maintain an Uninterruptible Power Supply in the event of a loss of external electrical power.
- 9. <u>Parking</u>: The Applicant shall provide not fewer than 56 parking spaces as shown on the SUP Plan, one of which shall be a loading space.
- 10. <u>Site Maintenance</u>: The Applicant shall maintain the Property in a clean and orderly manner, and shall provide an on-site masonry screened refuse container station in the location generally shown on the SUP Plan.
- 11. <u>Access</u>: Access to the site shall be provided as shown on the SUP Plan, subject to changes approved by the Town in consultation with the Virginia Department of Transportation. Mountable curbs shall be provided as required by the Town. There shall be no access from either Routes 17 or 29.
- 12. <u>Access for Town Staff</u>: The Town is obliged to report annually to the Virginia Department of Environmental Quality as to the ongoing operation and maintenance of stormwater management facilities installed on the Property. The Applicant shall provide the Town Manager with an on-site employee who shall serve as the sole point of contact for arranging access to the Property for the Town's conduct of such inspections, and shall keep that point of contact current at all times.
- 13. <u>Water & Public Sewer Connection</u>: The Property shall connect to public water and public sewer at the Applicant's expense. The Applicant shall limit its water use to internal domestic uses such as service to bathrooms, kitchens, humidification, and external irrigation. It shall not use public water for the general purposes of cooling the data center, but may use it for the initial charging of

the cooling system. It shall consult with the Director of the Department of Public Works and Utilities as to the scheduling of the initial charging of the system so as to minimize the impact on the Town's water system.

- 14. Emergency Services:
 - a. The Applicant shall coordinate training between the Town's fire and rescue companies and those other companies and departments that have experience with data centers after commencement of operations at the Property and when convenient for the Town's first responders. Furthermore, upon commencement of operations at the Property, the Applicant will provide the Town's first responders its "Data Center Response Manual" for use in training for emergencies at its Facility, and shall assist in advising those first responders how to implement its provisions.
 - b. The Applicant shall assure that the water line systems at the Facility have sufficient fire flows, as determined by the Town Fire Marshal.
 - c. The Applicant shall maintain Facility security personnel 24 hours a day, and each day of the year.
- 15. <u>Pedestrian access</u>: The Applicant shall construct a five-foot sidewalk on the east side of Blackwell Road along its frontage on that Road.
- 16. <u>Noise</u>: The Applicant shall provide a sound study prepared by a qualified party or company approved by the Director of Community Development that demonstrates the operation of the data center will meet the requirements of § 9-14.2 of the Town of Warrenton Zoning Ordinance relating to noise, as a condition of approval of a site development plan. In addition, the Applicant shall conduct a separate sound study one month after commencement of business operations to ensure compliance with the aforesaid Section. If noise levels at any point where a measurement is required by the Ordinance to be taken do not so comply, the Applicant shall forthwith undertake such further mitigation measures as are required to achieve compliance within a reasonable time not to exceed 60 days, or, if 60 days is insufficient to achieve compliance, the Applicant shall promptly begin and diligently pursue mitigation until compliance has been achieved.

For reference, the Town of Warrenton Zoning Ordinance § 9-14.2 states:

9-14.2 The sound pressure level of sound radiated from an establishment, measured at the lot line of the site thereof that is the nearest thereto, shall not exceed the values in any octave band of frequency that are specified in Table 9-1 below, or in Table 9-1 as modified by the correction factors set forth in Table 9-2. The sound pressure level shall be measured with a sound level meter and an associated octave band analyzer conforming to standards prescribed by the American National Standards Institute.

Table 9-1 Maximum Permissible Sound Pressure Levels Measured re 0.0002 dyne per CM ²			
Frequency Band	Along Residential District	At Any Other Point on the	
Cycles per Second	Boundaries – Maximum Permitted Sound Level	Lot Boundary – Maximum Permitted Sound Level	
	In Decibels	In Decibels	
63	64	72	
125	60	70	
250	54	65	
500	48	59	
1000	42	55	
2000	38	51	
4000	34	47	
8000	30	44	

Table 9-2	
Correction Factors	
Condition	Correction in Decibels
On a site contiguous to or across a street from the boundary of any R-district established by this chapter.	Minus 5
Operation between the hours of 10:00 p.m. and 7:00 a.m.	Minus 5
Sound of impulsive character (e.g., hammering)	Minus 5
Sound of periodic character (e.g., sawing)	Minus 5
Tone (e.g., hum or screech)	Minus 5
Sound source operated less than:	
20% in any one hour period	Plus 5 ¹
5% in any one hour period	Plus 10 ¹
1% in any one hour period	Plus 15 ¹

1. Apply only one of these corrections. All other corrections (including any one of the footnoted) are cumulative.

- 17. <u>Lighting</u>: The Applicant shall submit a Lighting Plan pursuant to the provisions of § 9-8 et seq. of the Town of Warrenton Zoning Ordinance in connection with its Site Development Plan. All exterior lighting shall utilize LED and be designed and constructed with cutoff and fully shielded fixtures that direct light downward and into the interior of the property and away from adjacent roads and adjacent properties. All building mounted lighting shall have a maximum height of 25', and the Applicant shall install controls on the site fixtures such that they dim to 50% output between 11 PM and dawn. Freestanding parking lot lights shall be a maximum of 20.'
- 18. <u>Tree Save:</u> The Applicant shall provide a tree preservation plan at time of Site Plan that seeks to minimize land disturbance and maximize on-site vegetation.
- 19. <u>Best Management Practices:</u> BMPs shall incorporate aeration for water retention using solar power.
- 20. <u>Landscaping:</u> The Applicant will follow the Zoning Ordinance Article. All plantings must consist of native, drought tolerant species appropriate for the Town of Warrenton climate.

- 21. <u>Employment Opportunities</u>: The Applicant shall provide outreach to qualified persons residing in the Town of Warrenton who may be interested in employment at the data center through a variety of media such as the conduct of a job fair, the inclusion of a direct link to potential opportunities on the Town website, or on other websites for the purpose. Such outreach shall be made reasonably in advance of the construction of the Project so that interested persons may make application for positions, not less than six months prior to the anticipated completion of construction.
- 22. <u>Programs for Local Schools</u>: The Applicant shall ensure coordination by the appropriate Amazon personnel with the Town of Warrenton and the Fauquier County School Division regarding the establishment and maintenance of educational programs in the K-12 grades, and with Laurel Ridge Community College, to establish and maintain workforce development programs for career pathways in data center construction and operations, and such other programs as the parties may deem mutually beneficial.