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TOWN OF WARRENTON**

SEP 09 2022

Community Development

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September 9, 2022

Via Hand Delivery and E-Mail

Denise M. Harris
Planning Manager
Community Development Department
21 Main Street
Warrenton, VA 20186

Re: Special Use Permit #SUP2022-00003, AWS Warrenton Data Center /
Post Work Session Submission

Dear Ms. Harris:

In your email to me of August 11, 2022, you asked if our client intended to provide additional information to the Town in preparation for the second work session on this application scheduled for September 27, 2022. We provide the following for the Town's consideration.

1) Schedule a balloon test and let the PC know before it occurs.

This firm has contracted with Wetlands Studies and Solutions to conduct balloon tests. As you know, consultation has already occurred between and among the Town Staff, Bohler, WSSI, and AWS as to the timing of these tests, and their locations and the tests are now scheduled for September 15th. At present the forecast is promising, but September 19 and 20 can be used as rain dates if needed.

2) Provide the Landscape Plan and Tree Survey.

A Landscape Plan is already an exhibit at page 4 of the SUP Plan, and so we would inquire as to what more is required. The Tree Study is included with this letter as **Exhibit 1**.

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3) *Elaborate and document the water usage.*

a) The Applicant has previously reported that the principal ongoing use of water at the site is for “domestic” uses in the sense that it needs water for toilets, sinks, water fountains, humidification, and limited irrigation largely for the purpose of establishing the landscaping. The architects at Corgan have provided the following data. No other comparably valuable use would require so little water.

Office Uses

The average daily water demand for domestic uses is 190.5 gallons per day. The annual such demand is calculated to be 69,532 gallons per year

Humidifiers

The average daily water demand for humidification purposes is calculated to be 190.1 gallons per day and the annual water demand is 69,380 gallons per year. Because there is a requirement that humidifiers be drained and maintained, there is a daily sewer requirement of 18.9 gallons per day and an annual sewer requirement of 6,900 gallons per year associated with this function.

Total

Based on the foregoing, the combined average daily water demand is 380.6 gallons, the annual water demand for domestic purposes and humidification is 138,912 gallons per year.

The average daily demand for sanitary sewer purposes is 209.4 gallons per day, resulting in an annual requirement of 76,432 gallons per year (domestic uses and humidification).

b) As you know, water is also used *in* the cooling system, but as is the Applicant has often stated, it is not used *for* cooling directly. Rather, the facility is air cooled. To accomplish this, the cooling system is initially charged with approximately 19,000 gallons of water over several weeks’ time. This is mixed with propylene glycol at the time of that initial charge. Once it is full it is not thereafter replenished, although the glycol may be recycled into and out of the system.

The facility is served by multiple mechanical system types based on space use. For the purpose of understanding how cooling is managed, the building will consist of two “Data Halls” with a central office/support area separating the two Halls.

For those Data Halls there is a dedicated, redundant, chilled water plant consisting of 500-ton air-cooled chillers and associated pumps, and redundant dual path distribution piping that provides chilled water to Data Hall Air Handling Units (DAHU). Each chiller has an associated Thermal Energy Storage Tank (TES) to allow cooling for “ride-through time” in the event of a loss of normal power, and until normal power is restored. All of the chillers, pumps, tanks and accessories are located on the roof. Freeze protection is accomplished by adding 30% propylene glycol, as noted above.

Each Data Hall is served by these DAHU’s, by connecting into the ceiling above the servers through overhead ductwork, with drops into each “cold aisle” in the Data Halls. The Data Hall racks are built with what is known as Hot Aisle Containment, which extends a barrier from the floor to an opening in the ceiling and allows for the warm air from a bank of servers to rise and recirculate to the DAHU’s where it is re-cooled.¹ Humidification to the Data Hall is provided by wall mounted steam generation humidifiers located with the DAHUs.

4) Invite PC members to visit site.

This is only a matter of advising us when members of the Planning Commission would like to visit. If there are FOIA concerns, then they can visit in pairs. We would like to arrange this so that someone from our team is present and if it could be arranged for one or two days that would be quite nice.

5) Questions about elevations and height.

¹ A “cold aisle/hot-aisle containment system” is one in which cold air is distributed by the means described above into a data hall, to maintain a safe and effective temperature. Of course, the servers generate hot air. They are installed back-to-back, creating an “aisle” between them where this hot air concentrates, and so the “hot aisle containment” system consists of a physical barrier that collects the hot air expelled from the rack-mounted equipment and channels it to the ceiling, where it is collected. It is then returned to the DAHUs, cooled, and the process repeats. This moves hot air to where it can be released safely and efficiently before it has the chance to mix with the cold air, which needs to remain cold in order to be effective, and efficiently re-chills and reuses it.

Bohler has prepared revised graphics that depict the height of the structure with the roof-mounted equipment and they are attached to this letter as **Exhibit 2**.

The architects at Corgan are presently working on revised graphics for the building itself but they are not completed. They will be available for the Work Session and will include photorealistic renderings. The standard parapet height is 41'-0" and the highest parapet height is 45'-0". The equipment screening height is 56'-4", and the top of tallest point on rooftop equipment is 56'-9".

Bohler has also prepared a Preliminary Grading Plan as promised at the Work Session, and it is included with this letter as **Exhibit 3**.

6) Noise generation.

A summary of the very extensive noise study that was performed is attached to this letter together with the entire study, which contains the technical background, are attached to this letter as **Exhibits 4 and 5**. To amend previous responses to the effect that noise limits can be fully achieved, this demonstrates that the noise ordinance requirements for the site can be achieved in every location where there is anyone to hear. The only place frequency levels are exceeded is over Route 17 and at the very edge of Parcel 9985-60-5718-500, which is itself zoned Industrial, and is currently vacant.

7) Lighting impacts.

The Town requires a Lighting Plan to be provided as a part of the Site Development Plan. This requires the preparation and submission of a photometric plan that shows the intensity of light throughout the site and at the boundary of the property. The Applicant has written that all building mounted lighting will have a maximum height of 25', and controls be installed on the site fixtures such that they dim to 50% output between 11 PM and dawn, and that fixtures be LED cut off, downward facing, lights that reduce or eliminate spillover at the property boundary. The Applicant has no need to illuminate anything but its secure perimeter and internal areas.

8) Relationship with Dominion, power needs, and phasing.

While AWS does not have a role in planning transmission line routing, it understands that Dominion Energy is working collaboratively with the County, the Town, and the public to understand priorities and refine routes prior to its SCC

submission. The Applicant has said that it will commence operation on existing power and await a decision on additional power by others.

9) Explanation of emergency plans and how potential leaks are contained.

AWS Data Centers (DC) adhere to the Federal Spill Prevention and Control Countermeasure Plan (SPCC) Regulations, as well as State and County rules for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. See 40 CFR Part 112. AWS DC's SPCC Plans are certified by a professional engineer, who assures that all passive and active control measures for oil containment, storage, and discharge comply with Local, State and Federal regulations.

AWS DC's SPCC Plans list a combination of active and passive containment measures needed to meet the requirements of 40 CFR 112.7(c). All affected AWS employees are trained annually on the SPCC mitigation measures. AWS DC's double-walled storage tanks have inner and outer tank walls that meet the definition of secondary containment under the DEQ LPR-SRR-2019-03 - Storage Tank Program Compliance Manual, Volume V - AST Guidance, and under 40 CFR Part 112, Section 8.1.2.2; therefore, tertiary containment² is not required. AWS's fuel oil loading and unloading operations fall under the general secondary containment requirements of 40 CFR Part 112.7(c). Oil water separators are not required under 40 CFR 112.7(c) of the SPCC Rule, and at the State and County level are only mentioned as a recommendation, not a mandate.

Diesel fuel oil is delivered by a licensed tanker truck fuel delivery company. Truck unloading facilities and procedures meet the locally accepted standards and the U.S. Department of Transportation (DOT) requirements.

10) Geotechnical Report

A copy of the Geotechnical Study for the site is provided as **Exhibit 6**.

11) Planned Community Outreach, if any.

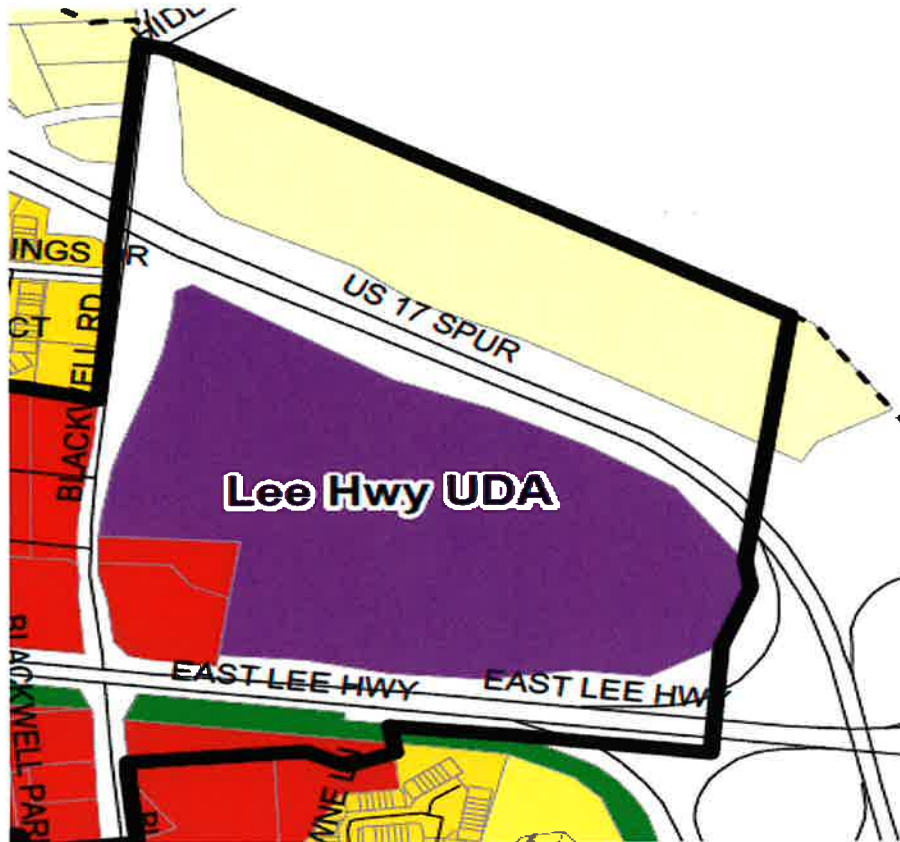
It is still a matter under internal discussion as to whether this can be done effectively. As a general matter, the Applicant has found that the public hearing

² Tertiary containment may consist of such things as a remote or diked impoundment comprised of various combinations such as site drainage, sumps, diversion tanks, pits, ponding areas, lagoons, and/or impervious liners.

process remains the most valuable venue for the exchange of information between itself and the community, and the relevant decision-makers. It is in such a forum that information can be shared in an orderly manner, and questions asked that are directly related to the land use issues presented in any case. Based on the specific circumstances pertaining to this case, and the first work session before the Planning Commission, it must be asked whether either an in-person or virtual session could be productive, or whether it would continue to be focused on issues over which the Applicant has no control.

12) Relationship to the Comprehensive Plan.

The Applicant has responded extensively to questions regarding the Comprehensive Plan. The property is shown on the Future Land Use Map as Light Industrial and is zoned Industrial. The property is also located within the Lee Highway Urban Development Area (UDA). One of the Goals and Policies of the Lee Highway UDA is to evaluate development incentives that stimulate private investment and new development. This data center will be a new development on vacant industrial land and will finally put the land to a productive use that has escaped every other potential purchaser that has evaluated it over the last three plus decades.



The proposed data center is a light industrial use, and thus aligns directly with the land use plan. There is little likelihood that another user, were the Applicant not seeking this approval, would rezone the land to a less intense classification. Despite contentions that there are alternative sites in the Town, there is a limited supply of industrially zoned land in Warrenton, some of that land is already in industrial use, or topographically challenged, and this site is suitable for the proposed facility.

A Comprehensive Plan cannot, however, be evaluated solely by looking at its colored land use maps. It is a compilation of policies. The site is located in the New Town Warrenton Character District, which is, among other things, intended to create a mix of uses, green space and public amenities, *as well as provide a location for a major employer*. No individual site can be expected to meet all objectives in the Plan. The District is also a place in which the Town seeks a signature job center. The Applicant in this case is indeed a major employer, and while the data center will not employ hundreds of workers, those that it does employ make above average incomes. Traffic burden post-construction is very low. The physical design of the data center is intended to have the least possible impact on those residential areas in the vicinity,

with substantial screening and buffering areas as depicted on the Landscape Plan, and where the facility itself is situated on the Property. Although a degree of that design must follow the requirements of form following function, the enhanced architecture that Corgan has now produced is intended to avoid previous designs of other data centers that were less architecturally appealing, and to satisfy the purpose and intent of § 9-26.1(F) of the Town Zoning Ordinance with respect to Building Façades at data center developments.

The 2040 Plan has significant economic and fiscal goals that seek to achieve a strong, diversified, and resilient economy that supports both residents and businesses and increases the employment base. The Town proposes that it be *proactive* in its own economic development, and this unique development advances each of these goals

The local tax revenues generated by a data center will assist in promoting a diverse, equitable, and stable tax base to maintain a healthy economy, with exceptionally little impact on Town services.

While there were comments presented at the Work Session to the effect that the new Plan envisioned the development of the site with a greater mix of uses than that which is sought in this Application, the history and circumstances of the property suggest that this will not be the future of the land. As was mentioned at the Work Session, two major retailers have evaluated the site and concluded that it could not be made to suffice for their purposes. This has been largely because Blackwell Road cannot handle a significant, sustained, traffic burden. There is presently insufficient right-of-way and it would be exceptionally difficult and costly to improve it. An estimate for the reconstruction of the intersection of Blackwell and Lee Highway alone is set at a high end of \$3.5M. Importantly, Blackwell Road at the site is identified as a Signature Street in the Complete Streets Recommendations, a classification that does not include significant reconstruction.

It is also a fact that the land had been on the market for many years without success. Its size and developable acreage argues against a smaller mixed-use project.

13) Taxation.

It has been suggested that recent changes in Virginia law have adversely affected the taxation of data centers.³

³ It has also been suggested that some data centers may be exempt from local taxation of real estate and tangible personal property. This is not so. Virginia Code § 58.1-3502 makes

Virginia segregates personal property for taxation by localities, and has authorized localities to tax tangible personal property, defined as all personal property that is physical personalty, not intangible, not merchants' capital, or short-term rental property.

There are two statutes that relate to the classification of data centers for purposes of taxation. First, § 58.1-3503 (A)(17) with regard to the general classification of tangible personal property, classifies "computer equipment and peripherals used in a data center" as a potentially separate classification for tangible personal property taxation. A data center is defined (by incorporation from the next statute below) as

a facility whose primary services are the storage, management, and processing of digital data and is used to house (i) computer and network systems, including associated components such as servers, network equipment and appliances, telecommunications, and data storage systems; (ii) systems for monitoring and managing infrastructure performance; (iii) equipment used for the transformation, transmission, distribution, or management of at least one megawatt of capacity of electrical power and cooling, including substations, uninterruptible power supply systems, all electrical plant equipment, and associated air handlers; (iv) Internet-related equipment and services; (v) data communications connections; (vi) environmental controls; (vii) fire protection systems; and (viii) security systems and services[.]

Second, by Va. Code § 58.1-3506 (A)(43) the General Assembly has created yet another optional classifications of tangible personal property for taxation, and permits data centers to be segregated from other forms of personal property under that section, again at the locality's option.

The distinction between the two statutes is that they permit the application of different tax rates to classifications of kinds of personal property depending on which statute is used for the purpose of classification.

any firm, company, or corporation engaged in business for profit who or which leases, borrows or otherwise has made available to it any tangible personal property to be used in such business from any agency or political subdivision of the federal, state or local governments liable to local taxation.

Regardless of which classification is employed, data centers are to be valued by means of a percentage or percentages of original cost, or by such other method as may reasonably be expected to determine the actual fair market value. This is determined by the local assessor, and was not changed by the new statute.

That new statute, Code § 58.1-3295.3, found in the Article in the Tax Code dealing with Reassessment/Assessment (Valuation) Procedure and Practice, addresses in part the assessment of data centers. It references “computer equipment and peripherals” as subject to classification under either of the two foregoing statutes, § 58.1-3503 (A)(17) or § 58.1-3506 (A)(43). They remain *valued* for taxation purposes as they have previously been assessed.

However, now if “fixtures” are installed at a data center and taxed under the provisions of Title 58.1 dealing with Tangible Personal Property, Machinery and Tools and Merchants Capital Taxation, those fixtures must now be assessed using the cost approach. "Cost approach" means assessing value by determining the cost to construct a reproduction or suitable replacement of fixtures, and deducting physical, functional, and economic depreciation sustained by such fixtures. "Fixtures" means all fixtures and equipment used in a data center *except computer equipment and peripherals, equipment used for external surveillance and security, and fire and burglar alarm systems*. The term includes generators, radiators, exhaust fans, and fuel storage tanks; electrical substations, power distribution equipment, cogeneration equipment, and batteries; chillers, computer room air conditioners, and cool towers; heating, ventilating, and air conditioning systems; water storage tanks, water pumps, and piping; monitoring systems; and transmission and distribution equipment.

In short, HB 791 passed by the legislature in 2022 does not affect the valuation of computer equipment and peripherals, or the local taxation thereof.

14) Proposed Conditions of a Special Use Permit.

As is customary in the Town, the Applicant is attaching a proposed set of conditions for the special use permit for review and edit by the Town as **Exhibit 7**.

15) Conclusion.

The Applicant respectfully submits that valid planning aspirations must also take into consideration existing zoning and land use history, and the actual, instead of the imagined, impact of a use. This proposal advances a number of policies that are set out in the 2040 Plan, and is matched well both to the actual zoning of the land, and to a realistic future.

Denise M. Harris
September 9, 2022
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Very truly yours,

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