

ORDINANCE NO. _____

AN ORDINANCE ENTITLED, AN ORDINANCE TO AMEND ORDINANCE 2004-01, AS AMENDED, OF THE
ZONING ORDINANCE OF GRANT COUNTY.

BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF GRANT COUNTY, SOUTH DAKOTA: that Article II "Definitions", adopted by Ordinance 2004-01, as amended, be amended by adding language in bold and underline:

Section 244.b. IT Load. IT load refers to the total electrical power consumed by IT equipment (such as servers, storage arrays, and network switches) within a data center, typically measured in kilowatts (kW) or megawatts (MW). It represents the power used specifically for computing operations, excluding cooling or facility infrastructure.

Section 287a. WUE Water Usage Effectiveness. WUE stands for Water Usage Effectiveness in data centers. It is calculated as the annual gallons of water used divided by the total annual kilowatt hours (kWh) used by IT equipment.

BE IT FURTHER ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF GRANT COUNTY, SOUTH DAKOTA: that Article XII "General Requirements", adopted by Ordinance 2004-01, as amended, be amended by removing the strikeout language and adding language in bold and underline:

Article XII. General Requirements.

Section 1220. Data Processing Center Performance Standards .

Section 1220.01. Siting Requirements

1. Data processing centers shall comply with the following requirements:

- a. Fencing: A six (6) foot sight obscuring fence shall be required along the entire perimeter of the facility. Such fence shall comply with all other requirements of Grant County Zoning Ordinance.
- b. **Generator Enclosures:** All electrical generators shall be enclosed behind a solid wall ~~made constructed~~ of concrete or ~~another~~ **an** equivalent sound absorbing material. **The enclosure shall extend** a minimum of four (4) feet ~~higher than~~ **above** the highest point on the generator. This requirement may be reduced or eliminated if a noise mitigation plan is submitted in accordance with all other requirements of Grant County Zoning Ordinance demonstrating ~~that peak sound levels do not exceed those allowed in this Section~~ **with applicable sound limits**.
- c. **Buffer** Yard requirements: The entire perimeter of the facility shall be screened from adjoining properties by a buffer yard. The side and rear buffer yards shall be a minimum of fifty (50) feet, and the minimum front buffer yard shall be one-hundred fifty (150) feet.

- 2.d.** All equipment and structures shall be a minimum of fifty feet from the property boundary of the facility as delineated on the site plan, and/or one-quarter mile (1,320 feet) from any church, school, or residence.

Section 1220.02. **Electric** Utility Notification

1. No grid-connected data processing center shall be issued a permit until ~~evidence has been provided by the operator that installation of the system has been approved by the electrical utility provider~~ **the operator provides written verification from the applicable electric utility provider**. Off-grid systems shall be exempt from this requirement.
2. ~~Written verification from the~~ **Electric** Utility provider **verification** shall ~~state the following confirm:~~
 - a. Adequate capacity is available on the applicable supply lines and substations **s** to ensure that the capacity available to serve the other needs of the planning area is consistent with the normal projected load growth envisioned by the data center.
 - b. ~~Utility supply equipment and related~~ **E**lectrical infrastructure are sufficiently sized and can safely accommodate the proposed use.
 - c. The **proposed** use will not cause electrical interference or fluctuations in line voltage on and off the operating premises.

Section 1220.03. Noise.

1. ~~All proposed~~ **Data processing** centers ~~that are~~ **located** within one-quarter mile (1,320 feet) of a residence, church, or school shall submit a noise mitigation plan in **cluding** ~~accordance with the following:~~
 - a. Name and qualifications of the person who measured the decibel levels.
 - b. Equipment used.
 - c. ~~Location of the~~ **Noise measurements** **locations** ~~depicted~~ **shown** on a scaled site plan. The points of measurement shall be at all property lines and other noise receptors (residences, etc.).
 - d. A list of all sound sources that contribute to the overall sound emissions from the site and the following for each source;
 - i. Peak sound levels, in decibels, emitted by each source; and,
 - ii. Sound levels, in decibels, for sound continuously emitted by each source for a duration exceeding thirty (30) minutes; and,
 - iii. The frequencies of the sound emissions from each source;
 - iv. A site diagram showing the location of each sound source.

- e. A description of any and all methods, systems, devices or structures intended to be used to mitigate sound emissions, including technical specifications, descriptions of materials and/or engineering specifications.
- f. A certification, signed by the preparer of the document, certifying the accuracy of the materials contained within the noise mitigation plan and that the plan will effectively reduce sound emissions to levels required by Grant County.

g.2. The county reserves the right to **may** require independent verification of noise measurements and/or **may request** additional measurements **at different points on the property.**

3. Noise Limits.

h.a. The maximum sound level ~~allowed as~~ **shall not exceed fifty-five (55) dBA (A-weighted), including constructive interference,** measured **twenty-five (25) feet** from the receiving physical structure of any occupied residence, church or government building ~~is fifty five (55) dBA after any applicable adjustments provided for herein are applied.~~

i.b. Between the hours of 10:00 p.m. and 7:00 a.m. the maximum sound level ~~allowed as~~ **shall not exceed forty-five (45) dBA (A-weighted), including constructive interference,** measured **twenty-five (25) feet** from the receiving physical structure of any occupied residence, church or government building ~~of forty five (45) dBA after any applicable adjustments provided for herein are applied.~~

ii.d. ~~At any hour of the day or night the applicable noise limitations in (h) and (i) above may be exceeded for any receiving property by no more than~~ **The above limits may be exceeded as follows:**

1).i. 5 dBA for a total of 15 minutes in any one-hour period; or

2).ii. 10 dBA for a total of 5 minutes in any one-hour period; or

3).iii. 15 dBA for a total of 1.5 minutes in any one-hour period.

Section 1220.04. Signage.

1. No signage shall be permitted on the perimeter fence, with the exception of one (1) sign not to exceed thirty-two (32) square feet that displays the name, address and emergency contact information of the facility as well as appropriate warning signs.

Section 1220.05. Structural Requirements.

1. The facility shall meet all requirements of the most current edition of the International Building Code (IBC). Any electric wiring shall be located underground, except where wiring is brought together for interconnection to system components and/or the local utility power grid.

2. The use of cargo containers, railroad cars, semi-truck trailers and other similar storage containers for any component of the operation is strictly prohibited.

Section 1220.06. Access.

1. All roads shall be of sufficient width to accommodate emergency vehicle access as determined by the Grant County Emergency Management Director.

Section 1220.07. Submittal Requirements. **Applicants shall provide:**

1. A **project** narrative describing the proposed **data processing facility including an overview of the project;**
2. A site plan showing the proposed location and dimensions of all equipment, existing and proposed structures, screening, fencing, property lines, access roads, turnout locations, ancillary equipment, and the location of any church, school, or residence within one-quarter mile (1,320 feet) of the perimeter of the facility;
3. An **acoustical** study prepared by an **acoustical qualified** engineer that describes the anticipated noise level of the facility and any proposed mitigation efforts such as sound walls, baffles, ventilation silencers, additional separation from surrounding uses, etc.;
4. **Other relevant Any additional** studies, reports, certifications, and approvals **or documentation** as may be reasonably **requested required** by **Grant the** County **to ensure compliance with this Article;** and
5. Signature of the property owner(s) and **the owner/operator of the facility operator** (if different than the property owner).

Section 1220.08. Water Usage and Redundancy Requirements

1. **Purpose. Data processing centers shall utilize water resources efficiently, minimize impacts on aquifers and water systems, and maintain operational resilience during service interruptions.**
2. **Applicability. This section applies to all new construction, expansion, or substantial modification of data processing centers exceeding ten (10) megawatts of IT load**
3. **Water Efficiency Plan: All applicants shall submit a Water Efficiency Plan demonstrating:**
 - a. **Estimated annual and peak water demand;**
 - b. **Cooling system type and associated water consumption;**
 - c. **Measures to minimize potable water use, including use of air-cooled or hybrid cooling systems, Closed-loop water systems (recycled water), or alternative non-potable sources where feasible.**

4. Maximum Water Usage Requirements

- a. All data processing centers shall achieve and maintain a maximum annual Water Usage Effectiveness (WUE) of 0.05 gallons per kWh.
- b. A minimum of fifty percent (50%) of total water usage shall come from non-potable water sources (e.g., reclaimed water, stormwater reuse) shall be utilized for cooling and mechanical systems unless infeasible due to public health or technical constraints.
- c. Use of potable water for cooling shall be minimized and may be restricted during drought or emergency conditions.
- d. Facilities must comply with all applicable drought restrictions and demonstrate operational adjustments under reduced water availability conditions.
- e. Data processing centers shall provide at least one of the following:
 - i. Dual independent water supply connections; or
 - ii. On-site water storage sufficient to maintain critical cooling operations for a minimum of [24–72] hours at peak load.

5. Monitoring and Reporting

- a. Operators shall install water metering systems capable of measuring:
 - i. Total facility water use;
 - ii. Cooling system water use; and
 - iii. Source type (potable vs. non-potable).
- b. An annual report shall be submitted to the county including:
 - i. Total water consumption;
 - ii. Calculated WUE;
 - iii. Breakdown by source; and
 - iv. Measures taken to reduce water use.

6. Backup Cooling Capability. Facilities must be designed to maintain safe operating temperatures during water supply interruptions through:

- a. Air-cooled backup systems;
- b. Thermal storage systems; or

c. Equivalent approved technologies.

7. Emergency Operations Plan. Applicants shall submit an Emergency Water Supply and Cooling Plan including:

a. Procedures for water supply interruption;

b. Load shedding or operational scaling strategies;

c. Coordination with local utilities and emergency management.

8. Conditions of Approval. Approval of a data center may be conditioned upon:

a. Demonstration of long-term water availability;

b. Submission of a water conservation plan; and

c. Financial assurance to cover infrastructure impacts related to water supply.

9. Modifications. The Board of Adjustment may grant modifications where the applicant demonstrates:

a. Equivalent or superior water efficiency; and

b. No increased burden on municipal infrastructure or water resources