CITY OF WARD
ORDINANCE O-2023-17

AN EMERGENCY ORDINANCE ADOPTING CERTAIN RULES AND REGULATIONS CONCERNING EXTERNAL NOISE ATTENUATION OF DATA CENTERS AND TO PREVENT NOISE DISTURBANCE IN THE CITY OF WARD, ARKANSAS; TO DECLARE AN EMERGENCY; AND FOR OTHER PURPOSES

WHEREAS, the equipment associated with the cooling systems and generators required to operate data centers generate broadband noise and low-frequency hums that result in noise disturbance. Noise disturbance is the cause of degradation and may produce negative impacts on public health, property, and the environment.

WHEREAS, noise attenuation should be an integral part of the design and construction of data centers in order to prevent noise pollution and noise disturbance.

WHEREAS, THE CITY OF WARD finds that the public interest is served by the prevention of unreasonable noise emanating externally from the Data Centers and the provisions of this Ordinance are enacted for the purpose of preserving and protecting the public health, safety, welfare and property of the citizens of Ward, Arkansas.

THEREFORE, BE IT ORDAINED BY THE CITY OF WARD, ARKANSAS, AS FOLLOWS:

ARTICLE 1. PURPOSE AND APPLICABILITY

1. All Data Centers constructed within this jurisdiction shall be designed and built to incorporate external noise attenuation measures in order to minimize the impact of noise disturbance on the residents of Ward, Arkansas.

2. This ordinance shall apply to limit the noise disturbance originating within the municipal limits of Ward, Arkansas.

ARTICLE 2: DEFINITIONS: For the purpose of this Ordinance, the following definitions shall apply unless the context clearly indicates or requires a different meaning:

1. *Ambient Noise*: The all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excusing the alleged offensive noise, at the locations and approximate time at which comparison with the alleged offensive noise is to be made.
2. *Data Center*: A facility constructed and operated that is engaged in storage, management, processing, and transmission of digital data, including facilities used for cryptocurrency mining, which houses networked computer systems along with supporting equipment such as batteries, back-up power generators, HVAC and cooling systems.

3. *Decibel (dB)*: A unit for measuring the volume of a sound, equal to twenty (20) times to the base 10 (10) of the ratio of the pressure of the sound measured to the referenced pressure, which is twenty (20) micropascals (twenty (20) micronewtons per square meter.)

4. *Mechanical Equipment*: The networked computer systems along with supporting equipment such as batteries, backup generators, and cooling systems housed on the Data Center's property.

5. *Noise Attenuation*: The reduction of noise levels through the use of sound-absorbing material, architectural design techniques, and/or any other suitable means.

6. *Noise Disturbance* is any sound which:

   6.1. Endangers or injures the safety or health of humans or animals; or

   6.2. Annoys or disturbs a reasonable person of normal sensitivities; or

   6.3. Endangers or injures person or real property.

7. *Person*: An individual, association, partnership, or corporation, including any officer, employee, department, or agency.

8. *Property Line*: An imaginary line along the ground surface, and its vertical extension, which separates the real property owned by one person from that owned by another person, but not including intra-building real property divisions.

9. *Sound*: An oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.

10. *Sound Level*: The weighted sound pressure level obtained by the use of s sound level meter and frequency weighting network, such as A, B, or C as specified in American National Standards Institute specifications for sound level meters (ANSI SI. 4-1971, or the latest approved revision thereof). If the frequency weighting employed is not indicated, the A-weighting shall apply.

11. *Sound Level Meter*: An instrument which includes a microphone, an amplifier, RMS detector, integrator or time averager, output meter, and weighting networks used to measure sound pressure levels.

ARTICLE 3: NOISE ATTENUATION REQUIREMENTS:

Before a Data Center has commenced construction or operating within this jurisdiction, the property owner and operator proposing to build a Data Center shall comply with the following:

1. ***Notice Requirements***
    a. The property owner and operator must notify all residents within a half-mile radius of the parcel, including any affiliated homeowners' association operating within the half-mile radius, that the property owner and operator intends to build and operate a Data Center on the property. The notice required in this section must be mailed to all postal addresses and homeowners' association addresses contained within a half-mile radius extending from the property line where the proposed Data Center will be built. Proof of notification shall be filed with the city clerk's office within 30 days of providing notice. The property owner and operator must notify the mayor that the property owner and operator intends to build and operate a Data Center. The notification must include the location for the proposed data center.
2. ***Noise Study Requirements***
    a. The property owner of the lands upon which the Data Center is to be located shall conduct a sound study performed by a third-party acoustic engineer to document baseline sound levels in the area of the proposed Data Center, including noise levels measured at the property line in eight locations (north, south, east, west, northeast, northwest, southeast, southwest.) The report of the study must include sound mitigation recommendations based on the results of the sound study. The property owner must provide a copy of the report of the study to the mayor and file with the city clerk within 30 days of completion of the report.
3. ***Noise Attenuation Plan Requirements***
    a. The property owner must consult with a third- party architectural or design firm to develop a building plan that includes necessary noise attenuation measures in order to prevent the external sound level emanating from the Data Center from exceeding the sound level limitations below which will be considered a noise disturbance. The building plan is not required to adopt any or all of the noise attenuation recommendations so long as the plan includes noise attenuation measures that the architectural or design firm deems adequate to be in compliance with this Ordinance. Noise attenuation measures may include but not limited to:
        i. Soundproofing walls, screens, panels, fences, or enclosures
        ii. Buffer yards
        iii. Other noise attenuation measures recommended by the third-party acoustic engineer

b. Mechanical equipment must be shown on any proposed plan and must be fully screened on all sides. Mechanical equipment not screened by a facade of the building must be screened by a visually solid fence, screen wall or panel, or parapet wall and constructed with a design, materials, details, and treatment compatible with those used on the nearest facade of the building.

c. The property owner must provide a copy of the building plan to the mayor and file with the city clerk within 30 days of completion of the plan prior to construction.

d. Any additions, changes, or expansions of the Data Center must comply with the noise attenuation requirements of this Ordinance and must be designed and submitted to the mayor and filed with the city clerk within 30 days of completion of the report.

4. ***Post Completion Noise Study Requirements***

a. Upon the Data Center's completion, the Data Center operator must conduct a post-construction noise study performed by a third-party acoustic engineer to document noise levels emanating from the Data Center when mechanical equipment is running at full capacity, including all HVAC units and generators necessary for peak operation. Noise levels are to be measured at the property line in the original eight locations used during the baseline study. The Data Center operator must provide a copy of the report to the mayor and file with the city clerk within 30 days of completion of the study.

b. The Data Center shall not begin operations until the completion of the post-construction noise study and submission to the mayor and city clerk as required above. In order for the Data Center to be in compliance, the noise study results must show that its operation is in compliance with this Ordinance. If the results show that the Data Center is not in compliance with this Ordinance, the Data Center will be unable to commence operation until the required noise attenuation measures and noise limitations are met.

c. Furthermore, the Data Center operator must conduct annual noise studies under the baseline and post-construction studies specifications in accordance with subsections (a) and (b) above. The Data Center operator must provide the results to the mayor and file with the city clerk within 30 days after the anniversary date of the first sound study report.

ARTICLE 4: PROCEDURE FOR MEASUREMENT:

All tests shall be conducted according to the following procedures:

1. *Complaint Driven:* When the measurement is the result of a complaint, measurements will be taken at the property line of the receiving property.
2. *Normal Monitoring:* When the measurement procedure is in the normal course of monitoring sound, the measurements will be taken at the real property line of the source of the sound.
3. *Outdoor Conditions:* No outdoor measurements must be taken while winds exceed (including gusts) 15 miles per hour; under conditions that will allow the sound level meter to become wet; or when the ambient temperature is out of range of tolerance on the sound meter.
4. *Calibration:* The sound level meter must be verified and calibrated according to the manufacturer's specifications immediately prior to taking the measurements.
5. *Meter Placement*: The sound level meter must be placed a minimum of four feet above the ground or from any reflective surface. The microphone must be pointed at the sound source.
6. *Measurements:* Measurements must include "high", "average", and "low" readings. If the sound level meter does not provide these multiple readings, a minimum of three separate measurements must be taken at a single location at varying time intervals. The average sound level reading shall be used to determine whether there has been a violation of this Ordinance.
7. *Monitoring Report:* The report for each measurement session must include:
    a. The day, date and time of the measurements,
    b. Date and time of recent calibration,
    c. Temperature and wind speed the time of measurement,
    d. Identification of the monitoring equipment,
    e. Location, land use, and description of the source,
    f. Location and land use of the listener, and
    g. Sound level measurements.
8. *Extraneous Sounds:* If there are extraneous sound sources that are unrelated to the measurements and increase the monitored sound level, the measurement shall be postponed until these noises subside.

ARTICLE 5: NOISE LIMITATIONS:

It shall be unlawful for any Data Center to make, or continue to cause or permit to be made or continued, noise levels constituting a noise disturbance. For the purposes of

this section, the external noise level emanating from Data Centers shall be deemed disturbing to a person, reasonably calculated to disturb the peace and unreasonably offensive and injurious to the public, or their property, if the sound level is:

1. 65 dBa or higher during the hours of 8 A.M. to 10 P.M. or 55 dBa or higher during the hours of 10 P.M. to 8 A.M. (as determined by a third-party acoustic engineer) measured at the property line of the receiving property.
2. The standard which may be considered in determining whether a violation of this Ordinance exists includes but is not limited to the following:
    a. The level or volume of the noise
    b. The time of day or night the noise occurs
    c. The duration of the noise
    d. Whether the noise is recurrent, intermittent or constant
    e. Whether proper and reasonable noise attenuation methods were followed and maintained

ARTICLE 6: VIOLATIONS

1. Any or all of the following persons may be held responsible for noise violations:
    a. The person operating the equipment or creating the noise;
    b. The person who employs the person operating the equipment or creating the noise at the time of the violation;
    c. The person who owns or rents the property where the violation occurs.
2. The following acts, and the causing thereof, are declared to be in violation of this Ordinance:
    a. The sound level emanating from the Data Center exceeds 65 dBa or higher during the hours of 8 A.M. to 10 P.M. or 55 dBa or higher during the hours of 10 P.M. to 8 A.M. measured at the property line of the receiving property.
    b. The noise attenuation measures provided in the design plan to the mayor are not incorporated in the construction of the Data Center.
    c. Any of the required sound study results are not filed with the mayor and the city clerk within 30 days of completion of the report.
    d. The building plan is not filed with the mayor and the city clerk within 30 days of completion of the plan prior to construction.
    e. Failure to act in accordance with any other provision of this Ordinance.
3. All data centers shall be in compliance with the requirements of this Ordinance before commencing operation; failure to do so will be deemed in violation of this Ordinance and result in an injunction and/or a stay in commencing operation.

ARTICLE 7: PENALTIES

(1) Any person(s), firm, corporation, partnership, association, owner, occupant, agent or anyone having ownership in the subject property or supervision or control over the Data Center that violates or fails to comply with any provision of this Ordinance, shall be guilty of a misdemeanor.

(2) Upon conviction of such violation, any offending party shall be punished by fine of $1,000 for any one specified offense or violation, or double that sum for repetition of the offense or violation. If the act prohibited is continuous in time, the fine or penalty for allowing the continuance thereof, in violation of this Ordinance, shall be $500 for each day that it may unlawfully continue. If the prohibited act continues after conviction of violation, an injunction in court of proper jurisdiction to abate the nuisance and violation of the Ordinance may be sought and awarded.

(3) The city or any citizen shall be entitled to pursue all legal and equitable remedies available under the law in order to abate the nuisance and compel compliance with this Ordinance, including injunctive relief and any civil damages the court deems appropriate.

(4) Until the Data Center is in compliance with this Ordinance and required noise attenuation measures are implemented and noise limitations met, the data center shall cease operations.

ARTICLE 8: SEVERABILITY

If any provision of this Ordinance is found to be invalid by the decision of any court of competent jurisdiction, such invalidity shall not affect the remaining sections, phrases, and provisions of this Ordinance which remain valid and enforceable.

ARTICLE 9: EMERGENCY CLAUSE

The City of Ward Governing Body finds that the immediate implementation of this ordinance is necessary for the preservation of the public's peace, health, safety, welfare, and property, an emergency is hereby declared to exist and that this Ordinance is to be in effect immediately after its adoption.

SAID ORDINANCE WAS ADOPTED ON 7/17/23.

YEAS: 6 **NAYS:** Ø

APPROVED:

Charles Gastineau, Mayor

ATTEST:

Krystal Rummel

Krystal Rummel, City Clerk