

Sec. 36-2. - Definitions—Generally.

Data center. A facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, including servers, switches, routers, and associated infrastructure such as air handling, cooling equipment, backup power generation, fuel storage, water storage, electrical substations, and other utility infrastructure necessary to support sustained operations.

Accessory Data Center. A data center occupying more than 10,000 and not more than 25,000 gross square feet, drawing not more than 5 megawatts of grid power, and operated as an ancillary use to a primary use under common ownership. If the data center meets the definition of an accessory data center but requires a substation, it shall be classified as a major data center.

Major Data Center. A data center occupying more than 25,000 and not more than 250,000 gross square feet, or drawing more than 5 and not more than 50 megawatts of grid power.

Hyperscale Data Center. A data center occupying more than 250,000 gross square feet, drawing more than 50 megawatts of grid power, or developed across more than one principal building under common ownership or control on a single parcel.

Square footage, data centers. The square footage of a data center shall include the total square footage of each floor in the data center development, the square footage of any supporting uses, and the square footage of any additional exterior associated equipment or infrastructure located within the property boundaries.

Sec. 36-205. – Data Centers.

(a) *Purpose and Intent.*

The purpose of this section is to establish use-specific standards for data center facilities in order to: (a) accommodate the responsible development of digital infrastructure consistent with the City's economic development goals; (b) protect adjacent residential, institutional, and environmentally sensitive areas from continuous-operation noise, air-quality, water-resource, and visual impacts; (c) ensure adequate utility, water, transportation, and emergency-response infrastructure is in place before operation; and (d) provide predictability for both applicants and the public.

(b) *Development standards.* The development standards shall apply to all data centers regardless of type defined in Sec.36-2. unless otherwise stated.

(1) Backup generators and air quality.

- a. All diesel backup generators shall meet U.S. Environmental Protection Agency (EPA) Tier 4 emission standards. Generators rated below the Tier 4 threshold shall meet the highest applicable EPA Tier.
- b. Routine, non-emergency generator testing shall be limited to Monday through Friday, 10:00 a.m. to 4:00 p.m., excluding federal and state holidays.
- c. The operator shall provide written notice of any scheduled generator testing to all property owners within 1,000 feet not less than 24 hours in advance and shall maintain a public web page listing scheduled testing windows.
- d. Annual generator testing data and emissions reports shall be submitted to the Little Rock Department of Planning & Development.
- e. All on-site fuel storage shall comply with National Fire Protection Association codes NFPA 30 and NFPA 110, and applicable state and local requirements; a fuel-handling plan and spill response plan shall be filed with the Little Rock Fire Department.

(2) Cooling systems.

- a. All cooling systems shall be either fully air-cooled or high-efficiency liquid cooled systems, or equivalent technologies designed to minimize water consumption and wastewater discharge. Open-loop and once-through cooling systems are prohibited. Evaporative-only cooling systems that consume potable water as the primary cooling medium are prohibited.
- b. On-site groundwater wells used as the primary cooling water source are prohibited. Wells used solely for landscape irrigation, fire suppression, or as makeup water for closed-loop systems remain permissible subject to applicable state and federal permitting.
- c. Each application for a major or hyperscale data center shall include a Water Utilization Report, prepared and certified by a professional engineer licensed by the State of Arkansas, identifying total daily intake volume and source(s), discharge volumes and destinations, cooling system type and design Water Use Effectiveness (WUE),

and demonstrating compliance with the city's stormwater requirements.

- d. Development shall achieve a design WUE not exceeding [0.5 L/kWh] at full load and shall report annually on actual operating WUE.
- e. All cooling water discharged to the sanitary sewer shall comply with the Little Rock Water Reclamation Authority requirements. Chemically treated cooling water shall not be discharged to surface waters or stormwater systems.

(3) Energy and electrical substations.

- a. Each application shall include a Utility Capacity Letter from Entergy Arkansas (or successor utility) confirming available capacity to serve the proposed load and identifying any required transmission, generation, or substation upgrades.
- b. Each application for a major or hyperscale data center shall include an Energy Management Plan, prepared by a professional engineer licensed by the State of Arkansas, describing the facility's design Power Use Effectiveness (PUE), waste heat recovery measures (if any), and any on-site renewable generation or off-site renewable procurement commitments.
- c. Substations shall comply with the following standards: chain-link or barbed-wire fencing prohibited along any frontage abutting non-industrial property; all on-site power lines rated at or below 34.5 kV shall be installed underground; all visible above-ground equipment shall be painted in a low-reflective earth tone.
- d. If the substation serving a data center is to be located on a separate parcel from the principal use, the substation shall be reviewed concurrently with the data center application.

- (4) *Noise limits.* Sound levels shall not exceed the standards outlined in the table below where daytime is 7:00 a.m. to 10:00 p.m. and nighttime is 10:00 p.m. to 7:00 a.m. Sound levels shall be measured at the receiving property line, not at the source. Where the ambient pre-construction sound level at any receiver point already exceeds the standard above, the applicable standard shall be the ambient level plus 0 dB (i.e., the data center shall not increase the ambient at that receiver). Standards do not apply during a federally or state-declared emergency or during a power outage requiring backup generator operation.

Adjacent property type	Daytime A-weighted	Nighttime A-weighted	C-weighted (24 hr)
Industrially zoned	70 dBA	65 dBA	75 dBC
Commercial / office	65 dBA	60 dBA	70 dBC
Residentially zoned (any density)	60 dBA	55 dBA	65 dBC

- a. Pre-application acoustical study, prepared by a qualified acoustical engineer, including (a) ambient baseline measurements at the property line and at the nearest Sensitive Receptors during both daytime and nighttime hours, (b) 1/3 octave emission analysis of all proposed cooling equipment and generators, (c) ISO 9613-2 propagation modeling, and (d) predicted A-weighted and C-weighted sound levels at the receiver locations identified above.
- b. Post-construction verification study within 90 days of beginning operation, repeated annually, by a qualified acoustical engineer licensed by the State of Arkansas; results submitted to the Department of Planning & Development.
- c. Permanent on-site acoustic monitor for any major or hyperscale data center with continuous logging accessible to the City upon request.
- d. If verification or monitoring identifies a violation, the operator shall submit a corrective action plan within 30 days and achieve compliance within 180 days.

(5) *Screening and buffers.*

- a. All rooftop and ground-level mechanical equipment, including cooling towers, chillers, generators, fuel tanks, transformers, and substation equipment, shall be fully screened from grade-level view at the property line. Screening material and security fencing shall be low-reflective. Security fencing shall be located behind required landscape buffer.
- b. Landscape buffer of not less than 100 feet width along any frontage abutting non-industrially-zoned or used property, planted with three staggered rows of evergreen trees with a minimum installation height of 6 feet, supplemented by deciduous canopy trees at intervals of not more than 30 feet. Landscape buffer of not less than 50 feet width along any frontage abutting industrially-zoned property.

(6) *Setbacks*. In addition to the setback standards of the applicable zoning district, buildings and associated infrastructure related to hyperscale data centers must be separated from non-industrial zoned or used property by at least one thousand 1,000 feet for hyperscale data centers, 500 feet for major data centers, and 100 feet for accessory data centers, non-industrial property line to data center building or infrastructure.

(c) Monitoring, reporting, and enforcement.

(1) The operator shall designate a single point of contact for community concerns and shall maintain a public-facing web page listing the contact, scheduled generator testing windows, and the most recent annual noise verification report.

(2) Annual reports of operation shall include: (a) noise verification study results; (b) backup generator testing and emissions data; (c) actual measured WUE and PUE; and (d) any complaints received and the operator's response.

Use table. (to be drafted in codified language)

Use type	C-3	C-4	I-1	I-2	I-3	All other districts
Accessory Data Center	CUP	CUP	Permitted	Permitted	Permitted	Not permitted
Major Data Center	Not permitted	Not permitted	CUP	CUP	Permitted	Not permitted
Hyperscale Data Center	Not permitted	Not permitted	Not permitted	Not permitted	Permitted	Not permitted

Whereas: Entergy Arkansas is regulated by the Arkansas Public Service Commission, ensuring safe, reliable, and affordable services for consumers

Whereas: Central Arkansas Water is governed by a seven-member Board of Commissioners and is regulated by the Arkansas Department of Health (ADH)

Whereas: Little Rock Water Reclamation Authority is governed by a seven-member Board of Commissioners and is regulated by the Arkansas Department of Health (ADH)

Whereas: Industrial projects in the State of Arkansas generally require permits from the Arkansas Department of Environmental Quality (DEQ). These permits ensure compliance with state and federal air quality standards

Whereas: Projects impacting wetlands require federal, state, and local permits, primarily under Section 404 of the Clean Water Act overseen by the U.S. Army Corps of Engineers and the Environmental Protection Agency (EPA)

Requirements:

Noise: As written in heavy industrial zoning classification

Setbacks: As written in heavy industrial zoning classification

Water: Proof of will-serve letter from water utility demonstrating sustainable supply

Electrical: Proof of will-serve letter from electric utility demonstrating grid capacity or funding plans

Fire Safety: As written in heavy industrial zoning classification