

SECTION 250-340 Data Centers (version created with Fiscal Court recommendations – Version 2 to SRC)

Purpose and Intent

Data centers consist of networked computer systems used for data storage and processing and include supporting equipment such as batteries, generators, fuel storage, cooling devices, and renewable energy sources. The regulations established herein are intended to define and control data centers to minimize their impact on surrounding properties, ensure compatibility, and promote sustainable development. The intent is to:

1. Protect adjacent land from adverse impacts such as visual light, noise, and air pollution.
2. Ensure compatibility with other adjacent land uses and existing regulations.
3. Provide proper notice to the community to promote engagement and transparency in the approval process.

Definitions

Data – Any information, whether digital, electronic, optical or quantum, that can be collected, stored, processed, or transmitted.

Data Center – A facility used primarily for the storage, processing, or transmission of data which includes, but not limited to, buildings designed to accommodate computer servers, storage systems, or specialized computing hardware. **The facility is designed to operate as a regional, national, or global node in a distributed computing network, including but not limited to commercial cloud, artificial intelligence, or high-performance computing systems.** Examples of these facilities and uses include (but not limited to) crypto processing, commercial cryptocurrency mining (bitcoin mining), and artificial intelligence training and/or processing.

Large Data Center - A data center, as defined above, that meets one or more of the following criteria:

- Total gross **power**, actual or projected, exceeds 50 megawatts (MW) at maximum design capacity from **any power source**, including **power** generated on site by any means.
- Gross floor area **of a single building** dedicated to computing systems and support infrastructure that exceeds **100,000** square feet.

Medium Data Center – A data center, as defined above, that meets one or more of the following criteria:

- Total gross power, actual or projected, exceeds 5 megawatts (MW) at maximum design capacity and less than 50 megawatts (MW) from any power source, including power generated on site by any means.
- Gross floor area of a single building dedicated to computing systems and support infrastructure that exceeds 20,000 square feet and less than 100,000 square feet.

Small Data Center –

- Total gross power, actual or projected, less than or equal to 5 megawatts (MW) at maximum design capacity from any power source, including power generated on site by any means.
- Gross floor area of a single building is dedicated to computing systems and support infrastructure less than 20,000 square feet.

Zoning Districts and Location Restrictions

Permitted Zoning Districts: A data center located within Oldham County shall only be allowed in the C-4, I-1, I-2, IPD Zoning Districts and only after the approval of a Development Plan from the Oldham County Planning Commission. When the proposed data center or the cumulative square footage is classified as Large, the applicant shall be required to go before the appropriate legislative body for review and approval / denial. The contents of the plan shall include all items set forth in Division 390, Site Plan Regulations and include any required impact studies.

The classification of data centers shall be determined by the following:

1. Building Size
2. Power capacity

The following chart classifies data centers as **small**, **medium**, and **large** and be allowed in a particular zoning based on these factors:

Data Center Classification Chart				
Classification		Small	Medium	Large
<i>Allowable Zoning District</i>		C-4, I-1, I-2, and IPD	I-1, I-2, and IPD	I-2 and IPD
<i>Building Size</i>		Less than or equal to 20,000 square feet	Greater than 20,001 square feet and less than 99,999 square feet	Greater than 100,000 square feet
<i>Power Capacity</i>		Less than or equal to 5 MW	Greater than 5 MW and less than 50 MW	Greater than 50 MW
<i>Note: The greater capacity will always take precedence</i>				

Building Requirements and Setbacks

1. Maximum Building Height, Lot Coverage, and Impervious Surface shall be defined by the zoning classification for which the data center is proposed with the exception of the following:
 - All structures, buildings, maintenance equipment, ground located cooling, ventilation, or backup power generation equipment must be located at least **1,000 feet** from the lot lines of all adjoining properties with any type of residential zoning class or residential use and **1,500 feet** from **the lot lines of all adjoining properties with an** existing public or private school. This measurement shall be taken from the structure, building, or equipment.

Building Requirements and Setbacks Chart				
	C-4	I-1	I-2	IPD
Minimum Acreage	1 acre	1 acre	1 acre	1 acre
Minimum Lot Width	50 feet (150 feet without sanitary sewers)	150 feet	150 feet	100 feet (150 feet without sanitary sewers)
Maximum Structure Height	45 feet	50 feet	50 feet (an additional 5 feet is allowed for every 5 feet of additional front, side, and rear yard setback increase)	45 feet (an additional 15 feet is allowed for every 5 feet of additional front, side, and rear yard setback increase)
Minimum Front Yard Setback	None (1,000 feet when adjoining residentially zoned or used property)	100 feet (1,000 feet when adjoining residentially zoned or used property)	100 feet (1,000 feet when adjoining residentially zoned or used property)	35 feet (1,000 feet when adjoining residentially zoned or used property)
Minimum Side Yard Setback	None (1,000 feet when adjoining residentially zoned or used property)	35 feet (1,000 feet when adjoining residentially zoned or used)	35 feet (1,000 feet when adjoining residentially zoned or used property)	15 feet (1,000 feet when adjoining residentially zoned or used property)
Minimum Rear Yard Setback	None (1,000 feet when adjoining residentially zoned or used property)	25 feet (1,000 feet when adjoining residentially zoned or used)	25 feet (1,000 feet when adjoining residentially zoned or used property)	25 feet (1,000 feet when adjoining residentially zoned or used property)
Maximum Lot Coverage for Structures	40% of the lot area	75% of the lot area	75% of the lot area	60% of the lot area
Maximum Impervious Surface	65% of the lot area	90% of the lot area	90% of the lot area	80% of the lot area

Building Aesthetics and Appearance

1. The principal façade applies to all building façades that face existing and/or planned public roads or face property with adjacent residential use and shall include the façade which includes the main entrance of the building.
2. A data center must include at least one main entrance and must project or be recessed from the main building plane and/or be differentiated from the remainder of the building façade by a change in building material.
3. The main entrance of the building shall incorporate plantings a minimum of 50% of the length of the façade that should include a mix of evergreens, deciduous shrubs, grasses, or ferns. These plantings are in addition to any required buffers or landscaping requirements as defined in Division 300, Landscaping Regulations.
4. Principal façade of a building must incorporate the following standards at least every 150 horizontal linear feet:
 - a. Change in façade surface to include building material, pattern, texture, color, accent materials.
 - b. Varied materials, colors, and textures are encouraged to create a high-quality and non-obtrusive design. Earthtones are encouraged.
 - c. Windows, doors, or similar fenestration, i.e. faux windows which shall be distributed both horizontally and vertically and comprise at least 30% of the principal façade.

5. All loading and unloading areas, including overhead doors, shall be oriented towards the side or rear property lines. Loading docks are not permitted in the front or street side yards and shall not be oriented towards the front property line.
6. All buildings must be constructed to minimize glare or reflection on adjacent properties and roadways and should use appropriate textured glass, anti-reflective coating, and screening.

Location, Screening, and Sound Attenuation

1. Data center equipment may be ground mounted or roof top mounted.
2. All Data Center equipment must be shown on the submitted site plan.
3. All ground mounted equipment, up to and including generators, fuel storage tanks, and utility substations are prohibited from the front yard.
4. Ground mounted equipment shall be located on a side farthest from any type of residential use, encouraged to be in the rear of the property, and are not permitted adjacent to any property with a Zoning District permitting residential use, an existing residential development, residentially, or school used property.
5. All Data Center equipment shall be fully screened on all sides from all existing and planned public roads as well as adjoining parcels utilizing a mixture of screening materials, berms, or landscaping. The visually solid screen must be constructed with a design, materials, details, and treatment compatible with those used on the closest principal façade and consistent with building design material.
6. Data Center equipment requires sound dampening barriers, a minimum of ten (10) feet in height or a minimum of two (2) feet above generator height (whichever is greater).
7. Screening walls for Data Center equipment may be designed to allow for ventilation of the mechanical equipment.
8. Screening for roof mounted equipment shall be screened by a parapet wall equal to the height of the tallest rooftop equipment and should be designed to blend with the architectural style, materials, and color of the building.

Generator Regulations and Testing Requirements

1. Backup power generation using diesel fuel, natural gas, or Battery Energy Storage systems are permitted on all data centers within Oldham County.

2. Backup diesel generators shall be a minimum of Tier IV (or the highest Environmental Protection Association industry standard available at the time of application) which meet stricter emission standards and prohibit possible harmful effects from the generator.
3. Except for generator testing or commissioning activities, generator use shall be limited to backup and emergency use only. Continuous generator use outside of power outages is prohibited.
4. All turbines are prohibited.
5. Generators shall be tested no more than once per week per unit.
6. Generator testing is permitted only during the hours of 12 P.M. to 5 P.M. Monday through Friday.

Cooling Requirements

1. All liquid cooled equipment must utilize a closed-loop system.
2. Water used for liquid cooling systems must come from a municipal source and not from any type of private well system.
3. Water discharge for liquid cooling systems shall only occur after treatment (if required) and only to municipal sewer facilities.
4. If a Thermal Energy District (waste heat recapture) is created and functional, participation is required for any new data center.

Landscaping, Lighting, and Fencing Requirements

1. Landscaping Requirements
 - a. Landscaping requirements shall adhere to Division 300, Landscaping Regulations.
2. Lighting Requirements
 - a. Lighting requirements shall adhere to Division 310, Lighting Regulations.
3. Fencing Requirements
 - a. **Boundary fencing shall not exceed 10-feet in height.**
 - b. **Permitted boundary fence materials include aluminum and iron.**
 - c. Chain link fencing and/ or barbed / razor wire fencing are **only** allowed around fuel storage.

Examples include:



Security

1. Any type of video and/or audio surveillance shall be restricted to property boundaries and public right-of-way.

Required Impact Studies

1. Noise –
 - a. A pre-construction and post construction noise analysis is required for all data centers **with the generators in both active and inactive states**.
 - b. This analysis must be conducted, signed, and stamped by a certified/ licensed acoustical engineer.
 - c. The required noise analysis shall ensure a maximum of 55 dB (A) at the property line for no greater than 15 minutes.
 - d. The locations of the noise measuring equipment for the pre-construction noise analysis shall be shown on the submitted site plan. The points of measurement shall be at all property lines and generally at points most susceptible to noise from applicable proposed equipment.
 - e. The noise analysis should include the date, time, and duration of measurements taken and should be taken at various times of the day and night.
 - f. Any noise analysis greater than 55 dB (A) at the property line shall have an abatement plan to mitigate any additional increase in noise.
2. Traffic – A roadway impact assessment may be required after consultation with the Oldham County Engineer’s Office and **shall** be required prior to the Planning

Commission hearing to evaluate the potential impact of construction on the existing road system.

3. Environmental - Environmentally sensitive areas include areas of steep slopes (over 20%) of at least 5,000 square feet, 100-year flood plains, and areas of poor soils as determined by Administrator and Flood Plain Administrator in consultation with Natural Resources Conservation Service, improper fill, wetlands, and springs. If the development is in an environmentally sensitive area, the Zoning Administrator or Flood Plain Administrator may require an environmental assessment that includes mitigation factors.
4. Health Impact Assessment – A Health Impact Assessment may be required after consultation with the Oldham County Health Department and be required prior to the Planning Commission hearing. A Health Impact Assessment will be required for any proposed data center classified as Large.

Notifications

1. The applicant must hold at least one neighborhood meeting prior to filing an application for a data center.
2. This meeting shall be conducted no later than 30 days prior to applying for the Technical Review Committee hearing, a required step in the Development Plan and/or Zoning Map Amendment process.
3. All neighborhood meeting information including invitations, addresses of those notified, attendance sheets, meeting notes, presented questions and concerns, as well as responses to feedback shall be provided with the application.
4. All property owners (as listed in current Oldham County PVA records) within 500 feet of the property lines of the proposed data center must be notified of the neighborhood meeting at least two weeks before the meeting via first-class USPS mail.