

CITY OF BETHLEHEM

Department of Community and Economic Development Interoffice Memo

TO: Rachel Leon, Council President

FROM: Cathy Fletcher, Director of Planning and Zoning

RE: Zoning Ordinance Amendment: Data Centers

Enclosed for City Council's consideration is an Ordinance amending the City's Zoning Ordinance to establish regulations for Data Centers.

The proposed ordinance includes:

- Establishing a definition of "Data Center"
- Permitting Data Centers as a Special Exception within the Industrial (IN) Zoning District, allowing for case-by-case review by the Zoning Hearing Board
- Requiring applicants to submit all plans, studies, evaluations, and mitigation strategies at time of application
- Creating site design standards, including a minimum 200-foot setback from any right-of-way or lot located outside the IN district, and a minimum 1000-foot setback from any lot located in a residential zoning district or any lot with an existing sensitive receptor (i.e., existing dwelling (including institutional uses with a residential component), school, child or adult day care, park, hospital, or community recreation center)
- Establishing maximum building height, minimum yard, minimum buffer yard, and maximum building coverage requirements

Staff are also preparing public-facing materials to help explain the proposed ordinance. Those materials will be provided to City Council as they become available and in advance of public consideration of the ordinance.

Thank you.

CC: Mayor Reynolds
Laura Collins
Matthew Deschler

DATE: July 15, 2026

Catherine Fletcher

Cathy Fletcher, AICP
Director of Planning and Zoning

BILL NO. ____ - 2026
ORDINANCE NO. 2026-_____

AN ORDINANCE OF THE CITY OF BETHLEHEM, COUNTIES OF LEHIGH AND
NORTHAMPTON, COMMONWEALTH OF PENNSYLVANIA, AMENDING PART 13 OF
THE CITY OF BETHLEHEM CODIFIED ORDINANCES,
TITLED “ZONING ORDINANCE”,
FOR THE PURPOSE OF REGULATING DATA CENTER USES.

THE COUNCIL OF THE CITY OF BETHLEHEM DOES HEREBY ORDAIN AND ENACT
THE FOLLOWING ORDINANCE:

SECTION 1. Article 1302.35 of the City of Bethlehem Codified Ordinances, defining a “Day Care Center, Adult” in the Zoning Ordinance, is hereby amended by inserting the following definition of “Data Center” as the new Article 1302.35 and renumbering the definition of “Day Care Center, Adult” as Article 1302.36 and renumbering all subsequent sections of Article 1302 accordingly (**bold underlined** text denotes additions, whereas ~~strikeouts~~ denote deletions):

Data Center. A facility, which may consist of one or more buildings and/or structures, used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, systems, servers, appliances and other associated components related to digital data operations. The facility may also include air handlers, backup power generators, water cooling and storage facilities, utility substations, security facilities, administrative offices, and other associated utility infrastructure to support sustained operations at the Data Center. This use does not include computers or telecommunications-related equipment that is secondary and customarily incidental to an otherwise permitted use on the property, such as servers associated with an office building.

SECTION 2. The zoning district columns LI, IN, and PI in Article 1305.01.e. of the City of Bethlehem Codified Ordinances relating to the use identified as “Data Centers” in the Industrial Uses section of the Types of Uses table, are hereby amended to read as follows (**bold underlined** text denotes additions, whereas ~~strikeouts~~ denote deletions):

LI	IN	PI
....		
P <u>N</u>	P <u>SE</u>	P <u>N</u>

SECTION 3. Article 1322.03(q) of the City of Bethlehem Codified Ordinances, titled “Day Care Center (Child)”, is hereby amended by inserting the following text relating to “Data Center” as

the new Article 1322.03(q) and relettering the existing “Day Care Center (Child)” use as new Article 1322.03(r) and renumbering all subsequent sections of Article 1322 accordingly (**bold underlined** text denotes additions, whereas ~~strikeouts~~ denote deletions):

(q) **Data Center**

All required plans, studies, evaluations, assessments, and strategies shall be submitted together with the zoning permit or land development application, whichever is submitted first. An applicant proposing a Data Center shall bear the burden of establishing compliance with the following requirements, which shall be in addition to all other Zoning Ordinance requirements except that in any conflict between a requirement in this subsection (q) and another requirement in the Zoning Ordinance, the more restrictive requirement shall apply:

- (1) The applicant shall provide an environmental impact assessment prepared and certified by a qualified professional that evaluates, as applicable, impacts to karst features, air quality, soil quality, water quality (surface water and groundwater), wildlife and wildlife habitat, and stormwater in both normal conditions and adverse conditions (i.e. drought, extended power outages, extreme heat, etc.). Applicant shall propose mitigation strategies where necessary.**
- (2) (i) The applicant shall provide a water utilization report prepared and certified by a qualified professional that identifies water source, projected average daily water demand, peak daily water demand, seasonal variation, cooling system type and efficiency, water reuse or recycling measures, drought or extreme heat assumptions, and any required system improvements.**
(ii) The applicant shall demonstrate that adequate public water capacity exists to support the proposed use. Approval by the City’s Water and Sewer Resources Department that adequate capacity exists shall be sufficient to satisfy this criterion.
- (3) (i) The applicant shall provide wastewater disposal documentation that identifies anticipated wastewater characteristics, discharge volume, discharge destination, and any pretreatment needs.**
(ii) The applicant shall demonstrate that adequate means of wastewater disposal, including domestic wastewater and wastewater used for cooling or industrial purposes, exists to support the proposed use. Approval by the City’s Water and Sewer Resources Department that adequate capacity exists shall be sufficient to satisfy this criterion.
- (4) (i) The applicant shall provide an energy management plan prepared**

and certified by a professional engineer that identifies anticipated peak electrical demand, annual electricity demand, phasing of electric load, energy supply sources that will be utilized, anticipated utility upgrades (including substations or transmission/distribution improvements), and proposed sources of back-up power. The applicant shall provide a power usage effectiveness analysis that measures energy efficiency and identifies any proposed measures to improve energy efficiency.

(ii) If the applicant proposes to connect the Data Center to the electric grid, the applicant shall provide documentation from the applicable electricity service provider certifying that that the necessary capacity is available and that the applicable electricity service provider will serve the Data Center. Known impacts on electric rates or availability for other uses directly attributable to the Data Center project shall be noted. Any electric power generation plant or system located on the same lot as a Data Center and designed or used to supply power directly to the Data Center, including, without limitation, putrescent solid waste-to-energy, solar energy collection systems, wind turbines, fossil fuel, or nuclear energy generating systems, shall not be considered part of the Data Center use nor be considered as accessory to the Data Center use. Such plant or system shall be considered a separate and primary use and shall be approved according to the zoning regulations applicable to such use.

- (5) The applicant shall provide an electronic waste and decommissioning plan addressing the safe removal and/or disposal of servers, batteries, hazardous materials, electronic waste, cooling equipment and related infrastructure when equipment is replaced or when the Data Center is decommissioned.
- (6) The applicant shall provide an emergency response plan prepared and certified by a qualified professional. The plan shall address fire suppression, containment, ventilation, evacuation, site access, hydrant locations, water flow, high-voltage equipment, any necessary first responder training, and provide documentation regarding the type, quantity, and location of all battery, fuel, and other hazardous materials stored and used onsite for electrical power storage systems and otherwise.
- (7) The applicant shall provide a thermal impact mitigation plan prepared and certified by a qualified professional identifying how waste heat will be managed, dissipated, or reused. Passive cooling strategies such as cool roofs, natural vegetation (green roofs/shade trees), and light-colored exterior walls are encouraged to mitigate heat impacts.

(8) (i) The applicant shall provide a full spectrum (dBA and dBC) pre-construction sound study conducted by a qualified acoustical expert that the Data Center will comply with the following maximum noise levels, as measured at any lot line of the lot on which the Data Center is located:

(A) Maximum Allowed Noise Level, Expressed as A-Weighted Decibels (“dBA”)

<u>Daytime</u>	<u>Nighttime</u>
<u>(7:00 a.m. to 10:00 p.m.)</u>	<u>(10:00 p.m. to 7:00 a.m.)</u>

<u>60 dBA</u>	<u>55 dBA</u>
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A person shall not cause or permit the emission of a pure tone that exceeds an A-weighted sound level 5 dBA lower than the applicable maximum given in the above table.

(B) Maximum Allowed Noise Level, Expressed as C-Weighted Decibels (“dBC”)

<u>Daytime</u>	<u>Nighttime</u>
<u>(7:00 a.m. to 10:00 p.m.)</u>	<u>(10:00 p.m. to 7:00 a.m.)</u>

<u>75 dBC</u>	<u>70 dBC</u>
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(ii) The study shall evaluate all major noise sources associated with the Data Center, including mechanical equipment, air handlers, chillers, cooling towers, transformers, substations, and generators, and shall evaluate normal operations, peak cooling conditions, generator testing (time of day, duration, and frequency), tonal noise, low-frequency noise and cumulative site noise.

(iii) The applicant shall submit a post-construction sound study of existing operations no sooner than one month but no more than 12 months after the issuance of the first Certificate of Occupancy, and shall undertake additional testing at the direction of the City based upon reasonable complaint or evidence of changed operations.

(9) The applicant shall provide a vibration study demonstrating that no vibrations from the Data Center will be perceptible above 65 VdB beyond any lot line of the lot on which the Data Center is proposed to be located.

- (10) The applicant shall demonstrate, by means of a photometric study conducted by a qualified professional expert, that the Data Center will comply with the lighting control requirements of Article 1318.25, specifically including, without limitation, Article 1318.25(f).**
- (11) A Data Center shall provide at least 1.20 parking spaces for every one employee, based upon the maximum number of employees on site during the largest shift, or, if the number of employees is not known, then a minimum of five parking spaces shall be provided.**
- (12) A Data Center shall be subject to the following setbacks:**
- (i) at least 200 feet from any right-of-way or from the lot line of any lot not located in the IN district.**
- (ii) at least 1,000 feet from the lot line of any:**
- (A) lot located in a residential zoning district**
- (B) existing dwelling (including institutional uses with a residential component), school, child or adult day care, park, hospital, or community recreation center.**
- (13) A Data Center shall not exceed 80 feet in height, inclusive of any rooftop structures.**
- (14) The minimum yard requirements are as follows:**
- (i) Minimum front yard setback = 80 feet.**
- (ii) Minimum side yard setback = 80 feet.**
- (iii) Minimum rear yard setback = 80 feet.**
- (15) The minimum buffer yard required in Article 1318.23 shall be 40 feet wide. All equipment yards, generators, substations, and utility infrastructure shall be surrounded by a secure fence at least 8 feet in height, and such fencing shall be further surrounded on its exterior side by an evergreen plant screen, which shall be a minimum of 6 feet high at planting with an expectation to grow to a minimum of 15 feet high at maturity.**
- (16) The maximum percent building coverages shall be as follows:**

- (i) For a building less than 50,000 square feet in building area = 50%.
- (ii) For a building 50,000 square feet in building area and less than 250,000 square feet in building area, an additional 3 square feet of lot area shall be required for each square foot of additional building area above 50,000 square feet.
- (iii) For a building 250,000 square feet or greater in building area, an additional 5 square feet of lot area shall be required for each square foot of additional building area above 250,000 square feet.

SECTION 4. All ordinances and parts of Ordinances inconsistent herewith be, and the same are hereby repealed.

Sponsored by: /s/ _____

/s/ _____

PASSED finally in Council on this _____ day of _____, 2026.

/s/ _____
President of Council

ATTEST:

/s/ _____
City Clerk

This Ordinance approved this _____ day of _____, 2026.

/s/ _____
Mayor