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April 15, 2026

The Honorable Santo Napoli
President, Allentown City Council
435 Hamilton Street
Allentown, PA 18101

c/o: Michael Hanlon (michael.hanlon@allentownpa.gov)
Clerk of City Council

RE: **Bill No. 20-2026**

Dear Mr. Napoli:

The Allentown City Planning Commission (ACPC) has reviewed the proposed Zoning Ordinance amendment to add regulations for data center uses. This matter was before the ACPC on April 14, 2026.Staff prepared a detailed report on the text amendment, which was presented to the ACPC to consider alongside public comment and deliberation.

The Commission passed a formal motion to forward Bill 20-2026 favorably to City Council for consideration. The Commission voted to recommend the zoning ordinance. The chair expressed a preference for adding a requirement that a landscape architect be involved to ensure that the screening features and landscaping are well-designed and provide an appropriate buffer from the street edge and adjacent properties.

Enclosed, please find a copy of the Planning Staff Report and a copy of the DRAFT minutes from the April 14, 2026, ACPC meeting.

Yours truly,

Jennifer Gomez

Digitally signed by: Jennifer Gomez
DN: CN = Jennifer Gomez email = jennifer.gomez@allentownpa.gov
C = AD
Date: 2026.04.15 16:39:19 -04'00'

Jennifer Gomez

cc: COA (Melissa Velez, Michael Handzo, Trevor Tormann)
ACPC (cbrown@browndesigncorp.com)
File

City of Allentown
Staff Report

To:	Allentown City Planning Commission
From:	Bureau of Planning & Zoning Melissa Velez, Senior Planner
Subject:	Bill 20-2026 Zoning Ordinance Amendment RE: Data Center
Meeting Date:	April 14, 2026

Background

Bill 20-2026 is a proposed amendment to the Zoning Ordinance initiated by City staff in order to add regulations for the data center use. A copy of the Bill is attached hereto as Exhibit A. This is an emerging use within the Lehigh Valley and across the country. Currently, the Allentown Zoning Ordinance does not specifically define a data center use. Without use specific regulations, this use could potentially have negative effects on public health, safety and welfare. This amendment is proposed to ensure the City has regulations in place for the data center use that will mitigate potential negative effects. Staff has been receiving inquiries for this use over the past couple of months. Other municipalities in the area have already or are in the process of amending their zoning ordinances to add this use type.

Proposed Bill

In drafting the proposed amendment, staff reviewed and utilized the following:

1. Zoning amendments from other municipalities (adopted or in progress), including South Whitehall Township, Palmer Township, Upper Macungie Township, and Loudoun County, VA, copies attached as Exhibit B.
2. Penn Future's Data Center Model Ordinance, copy attached as Exhibit C.
3. Lehigh Valley Planning Commission's Lehigh County Industrial Land Use Guide (Community Plans + Guides) and the LVPC staff review of the Upper Macungie Township data center zoning ordinance amendment, attached as Exhibit D.

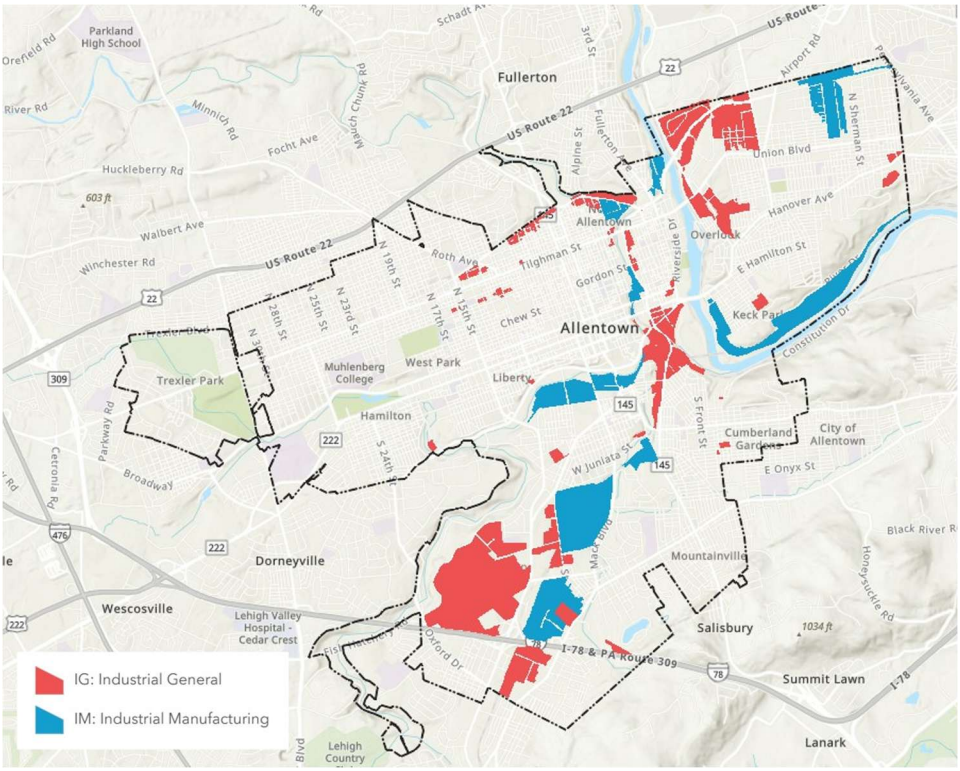
The draft amendment was sent to various reviewers for comments, including the following City Departments and Bureaus: Community & Economic Development; Public Works; Allentown Fire Department; Health Bureau; and, Sustainability Bureau and to the Allentown Environmental Advisory Council. Once comments were incorporated into the draft, it was sent to the Solicitor's Office for review.

On March 4, 2026, the draft amendment, Bill 20, was introduced to City Council and forwarded by the City Clerk to the Allentown City Planning Commission, Lehigh Valley

Planning Commission, and CED Committee for review and comment. A copy of the letter is attached hereto as Exhibit E. The proposed bill features the following:

1. An updated use table adding the Data Center use type. The use is proposed to be permitted by special exception in the IG, Industrial General, and IM, Industrial Manufacturing, zones. See Figure A below for a visual of the locations of the IG and IM zones.

   Figure A: IG and IM Zones

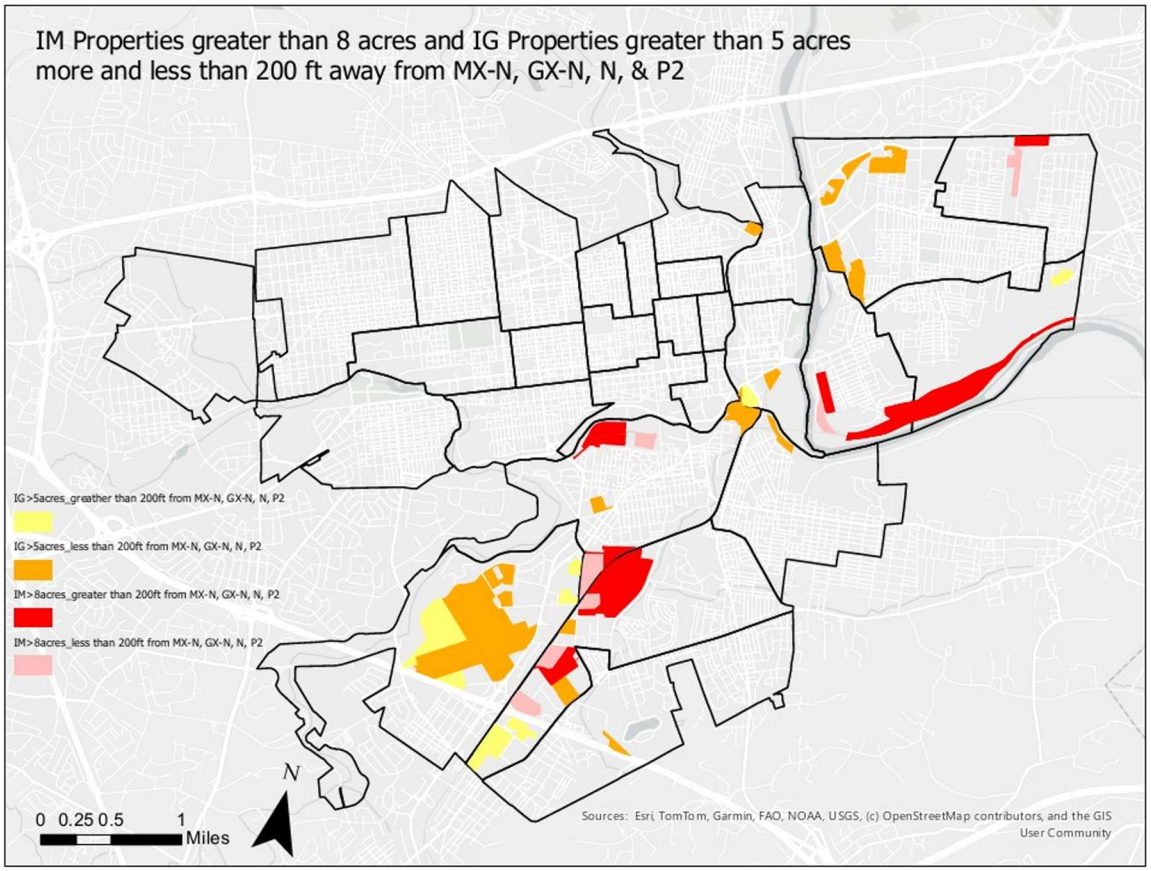


2. A new use category, Data Center Use, under the Manufacturing & Industry Group. The proposed Data Center Use category includes a description of the use and supplemental use regulations. The supplemental use regulations detail the following requirements:
   a. Setbacks from the public right-of-way, certain uses, and other lot lines.
   b. Minimum lot area for data centers over 50,000 sq ft of indoor gross floor area. See Figure B which shows an analysis of permitted locations based on minimum lot area and setbacks from certain uses.
   c. Landscape buffers.
   d. Narrative description of the nature of the proposed use.
   e. Environmental impact evaluation.
   f. Noise and vibration study.

g. Water and sewer utilization report.
h. Power supply utilization and energy management report.
i. Electronic waste plan.
j. Thermal impact mitigation plan.
k. Emergency response plan.
l. Building aesthetics.
m. Off-street loading.
n. Maximum building height.
o. Requirements for submittal.
p. City agency reviews, including Allentown City Planning Commission, Allentown Environmental Advisory Council, and Allentown Shade Tree Commission.
q. Review and acceptance of all required documents by the City Engineer or a third-party consultant (reasonable fees paid by applicant).

3. New definitions for Data Center, Data Center Accessory Use, and Renewable Energy.

Figure B: Analysis of Locations Permitting Data Center Greater than 50,000 sq ft



Comments supporting the proposed amendment have been received by the Allentown Environmental Advisory Council and are attached hereto as Exhibit F.

ORDINANCE NO.

FILE OF CITY COUNCIL

BILL NO. - 2026

MARCH 4, 2026

AN ORDINANCE

Amending Part II General Legislation, Chapter 660 Zoning, Article 5 Uses, Table 660-4 Use Table and Section 660-38 Manufacturing & Industry Group, adding the use category Data Center Use; and Article 14 Measurements & Definitions, Section 660-135 Terms Beginning with "D" and Section 660-149 Terms Beginning with "R", adding the definition of Data Center, Data Center Accessory Use, and Renewable Energy.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF ALLENTOWN:

Chapter 660 Zoning
[Adopted by the City Council of the City of Allentown 10-15-2025 by Ord. No. 16166 (Part 13, Title 1, of the 1962 Codified Ordinances). Amendments noted where applicable.]

SECTION ONE: That Chapter 660 Zoning, Article 5 Uses, Table 660-4 Use Table, be amended as follows on Exhibit A, Table 660-4 Use Table.

SECTION TWO: That Chapter 660 Zoning, Article 5 Uses, Section 660-38 Manufacturing & Industry Group, be amended as follows:

§ 660-38 Manufacturing & Industry Group
The manufacturing and Industry use group includes establishments involved in manufacturing, processing, fabrication, packaging, or assembly of goods or the servicing of industrial or commercial machinery, equipment, products or by-products. Uses in this group may include offices and ancillary retail sales as accessory uses.

…

660-38.H DATA CENTER USE

(1) Use Category Description. The data center use category includes a building, buildings, or structures which are occupied primarily by computers and/or telecommunications and related equipment where digital information is processed, transferred and/or stored, primarily to and from offsite locations. 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. This use shall also include cryptocurrency mining, blockchain transaction processing, and server farms. The Data Center Use shall include data center as a principal or accessory use and data center accessory uses (see 660-135).

(2) Supplemental Use Regulations. Data center uses are subject to the following supplemental use regulations:

(a) No new data center use or accessory data center use may be located within:

[1] 75 feet of the right-of-way of a public street;

[2] 200 feet of the lot line of any:

[i] Use within the Residential use group;

[ii] Use within the Civic & Institutional use group (except Cemetery, Governmental Use, Transportation Facilities or Infrastructure & Utilities);

[iii] Child Care use category; or

[iv] Any MX-N-, GX-N-, or N-zoned lot.

[3] 50 feet of any other lot line.

(b) Data center uses with more than 50,000 square feet of indoor gross floor area require a minimum lot area of 5 acres in the IG zone and 8 acres in the IM zone.

(c) A landscaped buffer, including shade trees, evergreen trees, and planting beds, with a minimum width of 25 feet must be provided around the perimeter of the use, except for necessary perpendicular crossings. Rows of shade trees and evergreen trees are to be staggered to create a dense buffer with planting beds at the exterior rows. See 660-78.F for distance and size requirements for plantings in each row. Native plants are encouraged to the maximum extent possible. The Allentown Shade Tree Commission (ASTC) may provide comments on specific plantings.

(d) The zoning hearing board is expressly authorized to require berms, landscaping, fencing and additional setbacks as needed to protect the public health and safety and to avoid conflicts with neighboring uses.

(e) The applicant shall submit a narrative description of the nature of the proposed onsite activities and operations, anticipated hours of operation, anticipated frequencies and types of vehicle trips generated, and anticipated types of materials/equipment stored on site. Information obtained from any required Transportation Impact Statements/Analyses may be summarized here.

(f) Environmental Impact.

[1] The applicant shall submit an evaluation of possible environmental impacts, and where necessary, propose mitigation strategies. The assessment must be prepared by a qualified professional, and consider both normal/ typical conditions and adverse conditions (i.e. drought, extended power outages, extreme heat, etc.) relevant to the following:

[i] Air quality;

[ii] Surrounding soil quality;

[iii] Surrounding water quality;

[iv] Groundwater sources;

[v] Wildlife and wildlife habitat; and

[vi] Greenhouse gas emissions.

(g) Noise and Vibration.

[1] A sound study shall be produced by a licensed professional engineer specializing in acoustics or an engineer Board Certified by the Institute of Noise Control Engineers to demonstrate that the data center and data center accessory uses will conform with the requirements of Chapter 400, Noise. Sound study should also assess any persistent tonal sounds (hums) or other consistent low-frequency or ambient noise. The licensed professional must state whether noise mitigation measures are recommended by noise study and, if so, identify the applicable mitigation measures.

[2] An as-built sound study shall be conducted six months after issuance of the Certificate of Occupancy for any data center and data center accessory uses and upon request by the City thereafter to ensure continuous compliance with the requirements of Chapter 400, Noise, and consistent with the representations and/or mitigation strategies described in the sound study.

[3] A vibration study prepared by a qualified professional shall be provided that demonstrates that no vibration from the data center and data center accessory uses will be perceptible to the human sense of feeling beyond the property line.

(h) Water and Sewer.

[1] A Water Utilization Report shall be submitted detailing, at a minimum the total daily intake volume and source(s) of that water, discharge volumes and destinations, cooling system type and efficiency, and shall demonstrate compliance with the city's stormwater ordinances and regulations. The Report shall be prepared and certified by a professional engineer. The Report shall be subject to review and comment by the City. The City shall have the right to require supplemental or amended reports based upon comments by the City prior to any zoning approval.

[2] The applicant shall submit documentation from the Lehigh County Authority (LCA) certifying that the Authority will supply the water needed for the use. If the LCA or the City identify a detrimental impact or threshold where utility capacity is not sufficient, the applicant shall provide, at their own expense, the infrastructure upgrades and/or system improvements necessary to supply the facility.

[3] If the use uses nonpublic water sources, the applicant shall provide a water feasibility study to determine if there is an adequate supply of water for the use and to estimate the impact on existing wells, groundwater, and surface water in the vicinity. The study shall be reviewed and approved by the Delaware River Basin Commission, LCA and PA Department of Environmental Protection (PA DEP) for water withdrawals from groundwater or streams, where applicable.

[4] The applicant is strongly encouraged to utilize water efficient cooling technology that minimizes the use of water for cooling.

[5] The applicant shall demonstrate adequate means of wastewater disposal have been provided and approved by the PA DEP. Discharge of water used as a direct or indirect cooling medium for equipment is not an authorized non-stormwater discharge into the Municipal Separate Storm Sewer System (MS4) per the City's MS4 NPDES permit.

(i) Power Supply.

[1] The applicant shall identify the portion of its energy use that will be met through on-site renewable energy generation. Data centers are encouraged to make good faith efforts to maximize use of renewable and/or clean energy for electrical and cooling needs, either through on-site generation or verifiable power purchase agreements (PPAs).

[2] An Energy Management Plan shall be submitted detailing at a minimum, annual electricity demand, the supply sources to be utilized, energy storage capacity (if applicable) and efforts made to maximize energy efficiency and use of renewable or clean energy. The plan shall be prepared and certified by a professional engineer.

[3] If the applicant proposes to connect the use to the electric grid, the

applicant shall provide documentation from the applicable electric service provider certifying the necessary capacity is available and the provider will serve the use. An assessment identifying any impacts on electric rates or availability for other uses directly attributable to the use shall be provided to the City.

[4] If the assessment identifies a detrimental impact or threshold where utility capacity is not sufficient, the applicant shall provide, at their own expense, the system improvements necessary to mitigate any limits or system improvements necessary.

[5] If the necessary system improvements are determined by the City Engineer and the respective public utility provider to be infeasible, then on-site utility methods may be considered in compliance with all City ordinances.

(j) Electronic Waste.

[1] An Electronic Waste Plan shall be submitted outlining procedures for safe removal and recycling or disposal of server infrastructure, hazardous materials, batteries, electronic waste, and related products, which will apply in cases when the data center is updated or decommissioned.

(k) Heat Mitigation.

[1] A Thermal Impact Mitigation Plan shall be submitted, including, at a minimum, strategies for waste heat reuse or dissipation. Passive cooling strategies such as cool roofs, natural vegetation (green roofs/ shade trees) and light-colored exterior walls are encouraged to mitigate urban heat islands and reduce energy consumption. The Plan will be prepared and certified by a professional engineer.

(l) Emergency Management.

[1] The applicant shall submit an Emergency Response Plan (ERP) prepared by a qualified professional. The ERP shall:

[i] Be reviewed and accepted by the City Fire Department and Lehigh County Office of Emergency Management as part of the special exception and/or land development process.

[ii] Include detailed procedures for fire suppression, containment, ventilation, and evacuation;

[iii] Include an evaluation of the access roads and hydrant locations within the site to ensure suitable access for emergency equipment within the site;

[iv] Ensure that all first responders receive adequate training specific to the installed system;

[v] Include provisions for annual fire safety inspections demonstrating compliance with fire safety standards to be performed by a qualified professional on behalf of the data center.

[2] Any Data Center use proposing battery storage or any other device or group of devices capable of storing energy in order to supply electrical energy at a later time, whether the energy is stored for use on-site or off-site, shall demonstrate compliance with National Fire Protection Association (NFPA) Standard 855, Installation of Stationary Energy Storage Systems, or similar standards and must include fire suppression systems designed specifically for battery storage.

[3] No Data Center shall be approved unless the applicant demonstrates that procedures for fire suppression, containment, ventilation, and evacuation are sufficiently protective of public health, safety and welfare.

(m) Aesthetics.

[1] Any data center use building façade that faces a public street, MX-N-, GX-N-, or N-zoned lot, existing residential use, or other frontages per 660-18.J(9) must incorporate at least two of the following design elements every 150 horizontal feet:

[i] A change in building material, pattern, texture, or color;
[ii] A change in building height;
[iii] Building step-backs or recesses having a minimum depth of five (5) feet.

(n) At least one (1) off-street loading space shall be provided for a data center.

(o) Maximum building height of 50 feet.

[1] On lots 15 acres or larger in area, the building height may be increased to a maximum of 70 feet through a special exception approval and in accordance with the supplemental workshop building regulations of 660-32.H(1)(a).

(p) All required plans, studies, evaluations, assessments, and strategies shall be submitted together with the zoning permit application. If a land development application is submitted prior to the zoning permit application, such documents shall be submitted together with the land development application. Such documents shall be subject to review and comment by the City. The City shall have the right to require supplements and/or amendments to such documents based upon comments by the City prior to any zoning approval.

(q) Applications for approval of data center use projects shall be referred to the Allentown City Planning Commission (ACPC) and Allentown Environmental Advisory Council (AEAC), for review and comment. Feedback from the ACPC, AEAC, and (when requested) Allentown Shade Tree Commission, shall be reviewed by the applicant and incorporated into any necessary mitigation strategies.

(r) All documents required by this section, 660-38.H, must be reviewed and accepted by the City Engineer or third-party consultant. When the city determines that competent and expeditious review of the documents detailed in this section require review by a third-party consultant, the applicant is responsible for reasonable fees associated with such third-party consultants.

SECTION THREE: That Chapter 660 Zoning, Article 14 Measurements & Definitions, Section 660-135 Terms Beginning with "D," be amended as follows:

§ 660-135 Terms Beginning with "D"

DATA CENTER. A building, buildings, or structures which are occupied primarily by computers and/or telecommunications and related equipment where digital information is processed, transferred and/or stored, primarily to and from offsite locations. 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. This use shall also include cryptocurrency mining, blockchain transaction processing, and server farms. Data Centers shall include Data Center Accessory Uses.

DATA CENTER ACCESSORY USE. Ancillary uses, equipment, or structures secondary and incidental to a Data Center Use, including but not limited to: administrative, logistical, fiber optic, storage, and security buildings or structures; sources of electrical power such as generators used to provide temporary power when the main source of power is interrupted; electrical substations; utilities; utility lines; domestic and non-contact cooling water and wastewater

treatment facilities; water holding facilities; pump stations; water towers; environmental controls (air conditioning or cooling towers, fire suppression, and related equipment); redundant data communication connections; security features, provided such data center accessory uses/structures are located on the same tract or assemblage of adjacent parcels developed as a unified development with a Data Center. The use shall not include energy generation systems used or intended to be used to supply power to the Data Center during normal operations.

…

SECTION FOUR: That Chapter 660 Zoning, Article 14 Measurements & Definitions, Section 660-149 Terms Beginning with "R," be amended as follows:

…

RENEWABLE ENERGY. Renewable Energy is energy generated from natural sources that are replenished faster than they are consumed. Renewable or "Clean" energy sources are generated by sunlight, wind, water, tidal, geothermal heat, or biomass sources.

SECTION FIVE: That this Ordinance will take effect five (5) days after final passage.

SECTION SIX: That all Ordinances inconsistent with the above provisions are repealed to the extent of their inconsistency.

SECTION SEVEN: The provisions of this Ordinance are separate and severable. If any section, clause or provision or portion of this Ordinance shall be held to be unenforceable or invalid by any Court of competent jurisdiction, the unenforceability or invalidity of any such provision shall not affect the validity and enforceability of the remaining provisions which shall remain valid and continue in effect.

WHEREAS, the City of Allentown is a community that enjoys a quality of life that people want to invest in and where they want to live and raise a family coupled with an attractive area for business and job growth; and

WHEREAS, the City of Allentown has concluded that the recent surge of development of Data Centers and similarly associated facilities in the Commonwealth has generated the necessity to amend Chapter 660 (Zoning) to provide for and regulate these facilities in order to preserve the quality of life and to promote, protect and facilitate the public health, safety and welfare; and

WHEREAS, pursuant to Section 609 of the Municipalities Planning Code, 53 P.S. § 10609, the City of Allentown is authorized and empowered to enact amendments to the City of Allentown Zoning Ordinance after public hearing thereon pursuant to public notice.

Legislative Template

- What department or bureau is this bill originating from? Where did the initiative for the bill originate?

    - CED/Bureau of Planning & Zoning. The bill will amend the Zoning Ordinance to add the use type, regulations and definitions for: Data Center Use.

- Summary and facts of the bill.

    - The purpose of this amendment adds the data center use to the zoning ordinance along with regulations and definitions for said use. This is an emerging use within the Lehigh Valley, State of Pennsylvania and across the country. Without regulations, this use could potentially have negative effects on public health, safety and welfare.

- Purpose – Please include the following in your explanation:
    a. What does the bill do? What are the specific goals or tasks the bill seeks to accomplish?

        - This amendment is proposed to ensure the City has regulations in place for the data center use that will mitigate any potential negative effects on public health, safety and welfare.

    b. What are the benefits of doing this?

        - This new use type will be regulated by the City.
        - Any potential negative effect on public health, safety and welfare will be mitigated by the regulations proposed by this amendment.

    c. How does this bill relate to the City's vision/mission/priorities?

        - This ordinance aligns with the city's mission of public health, safety and welfare.

- Financial Impact – Please include the following in your explanation:
    a. Cost (initial and ongoing)

        - There will be no changes to the current budget.

    b. Benefits (initial and ongoing)

        - The City and staff will be better equipped to handle potential issues that may arise due to this use and be prepared and capable of handling emergencies at such site.

- Funding Sources – Please include the following in your explanation:
    a. If transferring funds, please make sure to give specific account names and numbers. If appropriating funds from a grant, please list the agency awarding the grant.

- There will be no transfer of funds related to this amendment.

- Priority status – Are there any deadlines to be aware of?

    - Data center uses are rapidly expanding throughout the Lehigh Valley. Any data center application submitted prior to advertising will be review under current codes.

- Why should Council unanimously support this bill?

    - Council should unanimously support this bill to ensure the City has regulations in place to mitigate any potentially negative impacts of this emerging use type. Staff has been receiving inquiries for this use over the past couple of months. Other municipalities in the area have already or are in the process of amending their zoning ordinances to add this use type as well. Draft has been reviewed by the Allentown Environmental Advisory Council.

Exhibit A

Table 660-4. Use Table	ZONES																		Description & Add'l Regulations
	MX-				GX-			N						I			P		
	D	C	S	N	D	C	N	NX	N1	N2	N3	N4	N5	IX	IG	IM	P1	P2	
RESIDENTIAL (See 660-36)																			
Household Living																			
Household Living	◓	◓	◓	◓	●	●	●	●	●	●	●	●	●	-	-	-	-	-	660-36.A
Adaptive Reuse	○	○	○	○	○	○	○	-	-	-	-	-	-	-	-	-	-	-	660-36.A
Number of Allowed Units per building	Regulated by building type (see Article 4)																		
Student Residence	Regulated only within the Student Residence Overlay (SRO) zone (see 660-10)																		660-36.B
Group Home																			
Small	-	-	-	-	○	○	○	○	○	○	○	○	○	-	-	-	-	-	660-36.C
Large	-	-	-	-	-	○	○	○	○	○	-	-	-	-	-	-	-	-	660-36.C
Congregate Living																			
Dormitory	◓	◓	◓	-	●	◔	-	-	-	-	-	-	-	-	-	-	-	●	660-36.D
Drug or Alcohol Rehabilitation Facility	-	-	-	-	-	◔	-	-	-	-	-	-	-	-	-	-	-	○	660-36.D
Fraternity or Sorority	-	-	-	-	-	◔	-	-	-	-	-	-	-	-	-	-	-	●	660-36.D
Halfway House	-	-	-	-	-	◔	-	-	-	-	-	-	-	-	-	-	-	○	660-36.D
Nursing Home	-	◓	◓	○	-	○	○	○	○	○	-	-	-	-	-	-	-	●	660-36.D
Personal Care Home	-	◓	◓	○	-	○	○	○	○	○	-	-	-	-	-	-	-	●	660-36.D
Rooming or Boarding House	-	-	-	-	-	◔	-	-	-	-	-	-	-	-	-	-	-	○	660-36.D
Temporary Shelters	-	-	-	-	-	◔	-	-	-	-	-	-	-	-	-	-	-	○	660-36.D
Other Congregate Living Arrangements	-	-	-	-	-	◔	-	-	-	-	-	-	-	-	-	-	-	○	660-36.D
COMMERCIAL (See 660-37)																			
Adult Use	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	-	660-37.A
Animal Service																			
Indoor	●	●	●	◔	●	●	◔	-	-	-	-	-	-	◐	◐	◐	-	-	660-37.B
Outdoor, Limited	◓	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	○	660-37.B
Outdoor, General	-	-	○	-	-	-	-	-	-	-	-	-	-	-	●	-	-	○	660-37.B
Child Care																			
Family Child Care Home	-	-	-	●	-	●	●	●	●	●	●	●	●	-	-	-	-	-	660-37.C
Group Child Care Home	-	-	-	-	-	●	●	●	-	○	○	○	○	-	-	-	-	-	660-37.C
Micro Child Care Center	◓	●	●	●	●	●	●	-	-	-	-	-	-	◐	◐	◐	-	●	660-37.C
Child Care Center	◓	●	●	○	●	●	○	-	-	-	-	-	-	●	◐	◐	-	●	660-37.C
Consumer Service, Indoor																			
Art Gallery	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	○	660-37.D
Business Support Service	◓	●	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	-	660-37.D
Maintenance & Repair Service	◓	●	●	●	●	●	●	-	-	-	-	-	-	●	●	●	-	-	660-37.D
Personal Improvement Service	●	●	●	●	●	●	●	-	-	-	-	-	-	◐	-	-	-	-	660-37.D
Studio, Artist or Instructional Service	◓	●	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	○	660-37.D
Business Training	◓	●	●	●	●	●	●	-	-	-	-	-	-	●	●	●	-	-	660-37.D
Personal Credit Establishment	-	○	●	-	●	◔	-	-	-	-	-	-	-	-	-	-	-	-	660-37.D
Day Care Center, Adult	◓	●	●	○	●	●	○	-	-	-	-	-	-	●	◐	◐	-	●	660-37.E
Eating and Drinking Places																			
Bring-Your-Own-Bottle Establishment	●	◐	●	-	●	◐	-	-	-	-	-	-	-	-	-	-	-	-	660-37.F
Catering	◓	●	●	◐	-	◐	◐	-	-	-	-	-	-	●	◐	◐	-	-	660-37.F
Restaurant	●	●	●	◐	●	◐	◐	-	-	-	-	-	-	◐	-	-	-	◐	660-37.F
Tavern	●	◐	●	-	●	◔	-	-	-	-	-	-	-	-	-	-	-	-	660-37.F
Food Truck	○	○	○	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	660-37.F
Entertainment, Spectator/ Participant																			
Betting Use	◓	○	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	660-37.G

Skills Game	◓	○	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	660-37.G
Indoor, Small	●	●	●	◔	●	●	◔	-	-	-	-	-	-	-	-	-	-	●	660-37.G
Indoor, Large	●	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	660-37.G
Outdoor	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	660-37.G
Funeral & Mortuary Service	-	-	●	-	-	●	○	-	-	-	-	-	-	-	-	-	-	-	660-37.H
Lodging																			
B & B Inn	-	-	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	660-37.I
Hotel/Motel	●	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	660-37.I
Marina	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	660-37.J
Office																			
Admin., Business or Professional Office	◓	●	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	●	660-37.K
Medical Lab or Health-Related Service	◓	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	660-37.K
Financial Service	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	○	660-37.K
Service Office	◓	◓	●	-	●	◐	-	-	-	-	-	-	-	●	●	●	-	-	660-37.K
Walk-In Office	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	660-37.K
Retail Sales																			
Indoor	●	●	●	●	●	◐	◔	-	-	-	-	-	-	●	-	-	-	◐	660-37.L
Outdoor	-	○	○	-	-	○	-	-	-	-	-	-	-	○	-	-	-	-	660-37.L
Self-Service Storage	-	-	-	-	-	○	-	-	-	-	-	-	-	○	-	-	-	-	660-37.M
Vehicle Sales & Service																			
Personal Vehicle Repair & Maintenance, Minor	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	660-37.N
Personal Vehicle Repair & Maintenance, Major	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	●	-	-	660-37.N
Personal Vehicle Sales and Rentals	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	660-37.N
Fueling Station	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	660-37.N
MANUFACTURING & INDUSTRY (See 660-38)																			
Artisan Manufacturing	◓	●	●	○	●	●	○	-	-	-	-	-	-	●	●	●	-	●	660-38.A
Low-Impact Manufacturing	◓	◓	◐	-	●	◔	-	-	-	-	-	-	-	●	●	●	-	-	660-38.B
Moderate-Impact Manufacturing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	660-38.C
High-Impact Industry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	660-38.D
Industrial Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	660-38.E
Recycling Use																			
Recyclable Material Collection	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	660-38.F
Recyclable Material Processing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	●	-	-	660-38.F
Warehousing & Distribution																			
Indoor, Up to 50,000 sq. ft. GFA	◓	◓	◐	-	◓	◔	-	-	-	-	-	-	-	●	●	●	-	-	660-38.G
Indoor, More than 50,000 sq. ft. GFA	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	●	-	-	660-38.G
Outdoor, More than 50,000 sq. ft. (site area)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	660-38.G
Outdoor Industrial Sites	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	660-19.C
Data Center Use	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	660-38.H
CIVIC & INSTITUTIONAL (See 660-39)																			
Cemetery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	660-39.A
College or University	◓	●	●	-	●	◐	-	-	-	-	-	-	-	-	-	-	-	●	660-39.B
Community Assembly	●	●	●	○	●	◐	○	-	-	-	-	-	-	-	-	-	-	●	660-39.C
Detention or Correctional Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	660-39.D
Governmental Uses	●	●	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	●	660-39.E
Hospital	-	◓	◓	-	-	○	-	-	-	-	-	-	-	-	-	-	-	●	660-39.F
Library or Cultural Exhibit	●	●	●	○	●	●	○	-	-	-	-	-	-	-	-	-	○	●	660-39.G
Parks and Open Space	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	660-39.H
School	◓	◓	◓	○	●	○	○	-	-	-	-	-	-	-	-	-	-	●	660-39.I
Transportation Facilities	-	-	●	-	●	-	-	-	-	-	-	-	-	-	●	●	-	●	660-39.J

Infrastructure & Utilities																			
Minor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	660-39.K
Major	○	○	○	○	○	○	○	○	○	○	○	○	○	●	●	●	○	○	660-39.L
OTHER PRINCIPLE USES (See 660-40)																			
Agriculture	◓	●	●	●	◓	●	●	●	●	●	●	●	●	●	●	●	●	●	660-40.A
Communication, Commercial																			
Antenna	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	660-40.B
Tower	-	-	○	-	-	-	-	-	-	-	-	-	-	○	●	●	○	○	660-40.B
Live/Work Units	◓	◓	◓	◓	◓	●	●	-	○	○	-	-	-	-	-	-	-	-	660-40.C
Off-Street Parking	○	○	○	○	○	○	○	○	○	○	-	-	-	○	-	-	○	○	660-40.D

Key (see 660-34.B): ● = permitted | ○ = special exception approval required | ◓ = permitted above, below, or at rear of ground story
◐ = permitted in limited area | ◔ = special exception on mixed-use corridor | - = prohibited

TOWNSHIP OF SOUTH WHITEHALL
LEHIGH COUNTY, PENNSYLVANIA

ORDINANCE NO. 2025-__
(Duly Adopted _____, October XX, 2025)

AN ORDINANCE OF SOUTH WHITEHALL TOWNSHIP (LEHIGH COUNTY, PENNSYLVANIA) AMENDING PART II ("GENERAL LEGISLATION"), CHAPTER 350 ("ZONING") OF THE CODIFIED ORDINANCES TO ADD "DATA CENTER" AS A NEW USE TO SECTION 350-48(d)(2), ADD SECTION 350-33 TO CREATE A PLANNED INNOVATION, RESEARCH, AND TECHNOLOGY (PIRT) OVERLAY DISTRICT AND ESTABLISHING REGULATIONS FOR THE PIRT DISTRICT, ADD ATTACHMENT 4 – APPENDIX D: PIRT DESIGN GUIDELINES, AMEND THE ZONING MAP TO IDENTIFY THE BOUNDARY OF THE PIRT OVERLAY DISTRICT, AND PROVIDE FOR A REPEALER, FAILURE TO ENFORCE NOT A WAIVER, SEVERABILITY, AND EFFECTIVE DATE

WHEREAS, South Whitehall Township ("Township") is a political subdivision, municipal corporation, and First-Class Township of the Commonwealth of Pennsylvania, being a body both corporate and politic, situated in Lehigh County, duly established and lawfully existing under and pursuant to the First-Class Township Code of the Commonwealth of Pennsylvania, 53 P.S. §§ 55101 et seq., as amended; and

WHEREAS, the 2023 South Whitehall Township Comprehensive Plan established a vision to guide future growth in a sustainable and harmonious manner that preserves the character, community, and diversity of South Whitehall Township; and

WHEREAS, the 2023 South Whitehall Township Comprehensive Plan recommended utilizing the land use plan to inform updates to the Subdivision and Land Development Ordinance, Zoning Ordinance, and other regulatory documents to be consistent with the Comprehensive Plan; and

WHEREAS, the Township is desirous of providing options for industrial development in the northern tier that promote technologically centered uses that create minimal traffic impacts and are proportionately buffered from the surrounding area; and

WHEREAS, pursuant to Section 609 of the MPC, 53 P.S. §10609, the Township is authorized and empowered to enact amendments to the South Whitehall Township Zoning Ordinance after public hearing thereon pursuant to public notice; and

WHEREAS, the South Whitehall Township Planning Commission reviewed the following amendments to the South Whitehall Township Zoning Ordinance at its duly advertised public meetings and recommended approval thereof; and

WHEREAS, the South Whitehall Township Board of Commissioners has conducted a public hearing pursuant to public notice concerning the following amendments to the South Whitehall Township Zoning Ordinance; and

WHEREAS, the South Whitehall Township Board of Commissioners desires to ordain and enact the amendments to the South Whitehall Township Zoning Ordinance as set forth hereinafter.

NOW, THEREFORE, BE IT ENACTED AND ORDAINED by the Board of Commissioners of South Whitehall Township, as follows:

SECTION 1.
Part II ("General Legislation"), CHAPTER 350 ("Zoning"), ARTICLE 4 ("Zoning Use Regulations")

The South Whitehall Township Zoning Ordinance, Chapter 350, Article 4, Section 350-48 Use Schedules, is and shall hereby be amended as follows:

Amendment 1.A. Amend §350-48(d)(2) by replacing the existing subsection in its entirety with the following:

350-48(d)(2) Data Center.

(A) Definition: A centralized facility engaged in the storage, management, processing, and/or transmission of a businesses' digital data, and housing computer and/or network equipment, systems, servers, appliances, and other associated components related to digital data operations.

(i) Additional definitions for this section:

PRINCIPAL STRUCTURE, DATA CENTER — The building(s) or structure(s) that operate the primary use of the data center.

Example: Data Center buildings which contain core computing infrastructure, servers, and networking equipment.

ACCESSORY STRUCTURE, DATA CENTER — The building(s) or structure(s) that support the Principal Structure(s) but are not considered a primary use.

Example: Office buildings, guardhouses, security structures, and other administrative-type buildings or structures.

ANCILLARY EQUIPMENT, DATA CENTER — Equipment and/or structures that contain equipment necessary for the functionality of the primary use.

Example: Mechanical, electrical, or plumbing equipment, power generation or distribution equipment, substations, generators, storage tanks, or heating, ventilation, and air conditioning (HVAC) equipment (either ground mounted or roof mounted).

CONTINUOUS NOISE — Noise that remains stable and constant over a 24-hour period of time.

Example: Heating and ventilation systems

INTERMITTENT NOISE — Noise that increases or decreases over a 24-hour period of time.

Example: Machinery functioning in cycles or the use of generators

IMPULSIVE NOISE — Loud, unexpected noise in short bursts

Example: Alarms or construction

LOW FREQUENCY NOISE — Constant, soft background noise

Example: Low hum of a power station

(B) Use classification: Industrial.

(C) Where permitted: Data Centers shall be permitted in the Industrial (I) Zone only by Conditional Use or under the provisions of §350-33 Planned Innovation, Research, and Technology (PIRT) Overlay District, provided that the owner has executed and submitted an owner's consent opting into the PIRT Overlay District as a condition of land development.

Zoning District	RR-3	RR-2	RR	R-2	R-3	R-4	R-5	R-10	NC	OC	GC	GC-1	HC	HC-1	CR	IC-1	I
Primary																	
Accessory																	
Special exception																	
Conditional use																	X

(D) Minimum off-street parking calculations:

(i) Office & Security Buildings: 1.0 space per 300 square foot area

(ii) Data Center Operations: 1.0 space per employee based on the maximum number of employees on site at peak periods of time.

(iii) Storage & Loading Areas: 1.0 ten-foot by eighty-foot (10' x 80') truck staging parking space for temporary truck queuing outside of the security fence.

(E) Additional regulations:

(i) Dimensional Standards:

Data Center Dimensional Standards	
Minimum lot size	10 acres
Minimum lot width	200'
Max. Building Footprint	150,000 sf
Max. Building Height (Principal Structures)*	40'
Max. Building Height (Accessory Structures)	35'

Max. Impervious Coverage	75%
Max. Building Coverage	50%
Front/Side Setbacks: Principal Structure(s)	
From Existing Public Roads (Front or Side)	350’
From New Public Roads (Front or Side)**	150’
From Industrial Uses (Front or Side)	50’
From All Other Uses (Front or Side)	350’
Front/Side Setbacks: Accessory Structure(s)	
From Existing Public Roads (Front or Side)	200’
From New Public Roads (Front or Side)**	50’
From Industrial Uses (Front or Side)	25’
From All Other Uses (Front or Side)	200’
Front/Side Setbacks: Ancillary Equipment (Ground-Mounted)	
From Existing Public Roads (Front or Side)	150’
From New Public Roads (Front or Side)**	150’
From Industrial Uses (Front or Side)	50’
From All Other Uses (Front or Side)	150’
**Rooftop structures considered Ancillary Equipment may exceed the 40’ height limitation subject to the provisions of §350-42(h).* ***Public roads constructed as part of a Data Center development or as part of the PIRT District, shall be considered New Public Roads.*	

(ii) Buffering:

[1] A minimum two hundred-foot (200’) buffer zone shall be established between the property line and the Build-To Line of the Principal Structure(s) to provide a visual and auditory cushion between the Data Center and uses other than the Data Center and public roads.

[2] The buffer zone shall consist of a landscaped earthen berm at least fifteen feet (15’) in height located within one hundred feet (100’) from the property line. The slope of the berm shall not exceed a slope of 3:1.

[3] At the top of the berm, two staggered rows of dense evergreens shall be planted. Trees shall be at least six feet (6’) in height when planted and spaced at a maximum of fifteen feet (15’) apart in a row. Rows shall be offset in order to achieve maximum visual screening.

[4] The front face of the berm shall be planted and maintained as either a native grassland meadow or native wildflower meadow. Seed mixes, planting/landscaping plans, and proposed maintenance plans shall be submitted for review and approval by the Township Landscape & Shade Tree Commission.

[5] If space allows, the back face of the berm may be planted with dense trees or shrubbery to help buffer sound and vibration.

(iv) Screening:

[1] All ground-mounted Ancillary Equipment shall either be fully enclosed in a building or screened on at least three sides by sound dampening barrier walls to buffer sound and vibration to the highest extent possible.

[2] All roof-mounted Ancillary Equipment shall be screened on at least three sides by sound dampening barrier walls to buffer sound and vibration to the highest extent possible.

[3] Security fencing is permitted, provided that it is made of black metal, no higher than eight feet (8'). Perimeter fencing shall be located on the back face of the berm, unless at the entrance to the facility. Portions of fence that are visible from a public road (i.e. near the entrance gate to the facility) shall not include barbed wire or razor wire.

(v) Specific Standards for Conditional Use:

[1] Average Continuous Noise levels from the data center shall be limited to or below Average Continuous Noise levels prior to development at the property line. Continuous Noise levels shall be measured as the average decibel (dB) level over a 24-hour period at the property line. This requirement shall not apply to emergency situations or during construction.

[2] Such uses shall require the submission of a Pre-Construction Noise Study to be reviewed by Township staff and any Township Boards/Commissions/Councils or consultants deemed necessary to review and comment. The Pre-Construction Noise Study shall be prepared by a licensed professional engineer, specializing in acoustics or an engineer Board Certified by the Institute of Noise Control Engineers. The Noise Study shall use best practices and predictive acoustic modeling including sound source location and directivity, and barrier effects of building and topography, to provide the following information:

[a] Study shall measure and document at least three locations of existing ambient noise at the property line. Noise levels shall be described and identified as the average decibel (dB) at each location over a 24-hour period.

[b] Identification of noise-sensitive locations within five hundred feet (500') of the property boundary (i.e. schools, hospitals, residential structures).

[c] Modeled expected Continuous Noise generated from all Principal Structures, Accessory Structures, and Ancillary Equipment at full operational load.

[d] Modeled expected maximum Impulsive Noise generated from standard equipment testing and maintenance

[e] Modeled expected maximum Impulsive Noise generated from emergency situations (i.e. the use of backup generators, alarms, etc.)

[f] Identification of specific mitigation strategies to reduce or maintain average Continuous Noise levels equal to existing dB levels at the property line under normal operations (i.e. sound dampening, equipment location, operational adjustments, etc.). This shall not apply to emergency events requiring the use of backup generators.

[g] A statement on the anticipated impact of Low Frequency Noise on any surrounding noise-sensitive locations.

[3] Such uses shall require the submission of a Community and Environmental Impact Statement to be reviewed by Township staff and any Township Boards/Commissions/Councils or consultants deemed necessary. The Community and Environmental Impact Statement shall contain the following:

[a] A narrative description of the nature of the proposed on-site activities and operations, anticipated hours of operations, anticipated frequencies and types of vehicle trips generated, and anticipated types of materials/equipment stored on site.

[b] An evaluation of potential impacts of the proposed use, both positive and negative, upon:

- Emergency services and fire protection
- Water supply
- Sewage disposal
- Solid waste disposal
- School facilities and school district budget
- Municipal revenues and expenses

[c] An evaluation of potential environmental impacts and proposed mitigation strategies if necessary, on the following:

- Air Quality
- Surrounding Soil Quality
- Surrounding Water Quality
- Groundwater Sources
- Wildlife Habitat

Amendment 1.B. Amend the numbering of the remaining uses listed in §350-48(d) by shifting each use in its entirety one level to continue alphabetically and numerically as follows:

350-48(d)(3) Day-Care Center
350-48(d)(4) Dwelling, Apartment as part of a mixed-use building
350-48(d)(5) Dwelling, Apartment Building
350-48(d)(6) Dwelling, Single Detached
350-48(d)(7) Dwelling, Single Detached, Lot Averaging Development Option
350-48(d)(8) Dwelling Unit, Three-flat
350-48(d)(9) Dwelling Unit, Townhouse
350-48(d)(10) Dwelling Unit, Twin
350-48(d)(11) Dwelling Unit, Two-Flat

Amendment 1.C. Amend §350-48(f)(4)(A) by replacing the existing subsection in its entirety with the following:

350-48(f)(4) Flex Space.

(A) Definition: A building or buildings, that allow a mixture of uses permitted in the appropriate Zoning District Schedule, typically with an adaptable layout. This definition does not permit the establishment of a use within a flex space that would not otherwise be permitted in accordance with this chapter, nor does it abrogate any requirements of any individual use proposed within the flex space that are in accordance with this chapter.

SECTION 2.
Part II ("General Legislation"), CHAPTER 350 ("Zoning"), ARTICLE 2 ("Base Zoning Districts")

The South Whitehall Township Zoning Ordinance, Chapter 350, Article 2, Section 350-24 Zoning District Schedules, is and shall hereby be amended as follows:

Amendment 2.A. Amend §350-24(c)(17) to include Data Center as a use permitted in the Industrial (I) District by Conditional Use:

	Maximum Dwelling Units Per Gross Acre	Minimum Lot Area Per Use	Minimum Frontage (feet)	Minimum Front to Street Ultimate Right-of-Way Line (feet)	Minimum Sides to Lot Lines (feet)	Minimum Rear to Lot Lines (feet)	Maximum Units Per Building	Maximum Height Building Structure (feet)
CONDITIONAL USES								
Data Center			Subject to provisions of § 350-48(d)(2)					
Solar energy facility			Subject to provisions of § 350-48(s)(11)					
Special event venue		2.0 acre	200	100	100	100		35
Wind energy facility			Subject to the provisions of § 350-48(w)(5)					

SECTION 3.
Part II ("General Legislation"), CHAPTER 350 ("Zoning"), ARTICLE 3 ("Special Districts and Development Types")

The South Whitehall Township Zoning Ordinance, Chapter 350, Article 3, Section 350-33 is and shall hereby be amended as follows:

Amendment 3.A. Amend §350-33 by replacing the existing subsection in its entirety with the following:

§350-33 Planned Innovation, Research, and Technology (PIRT) District

(a) Short Title

This section shall be known and may be cited as the Planned Innovation, Research, and Technology District (PIRT District).

(b) Purpose and Intent

In addition to the goals stated in §350-02 Purposes, of this Chapter, it is the purpose and intent of the PIRT District to:

(1) Provide a controlled and protected environment for the orderly growth and development of research and technology-related businesses within a campus-like setting.

(2) Provide an option for new, technologically centered industrial uses that place minimal impact on the surrounding transportation network.

(3) Provide opportunities for South Whitehall Township to grow its economic base while appropriately buffering industrial uses from public roadways and non-industrial land uses.

(c) Applicability

(1) The provisions of this section shall govern the permitted uses, dimensional standards, and design criteria for any proposed project submitted as part of the Planned Innovation, Research, and Technology District (PIRT District). Except as otherwise provided in this section, provisions contained in the Zoning Ordinance shall apply to development within the PIRT District.

(A) Any proposed development in the PIRT District shall be subject to the requirements as established in this section and the procedures and development standards as established in Chapter 312. Subdivision and Land Development except where specified.

(B) Site design and architectural standards for projects in the PIRT District shall follow those specified in 350-33(f)(2) or 350-33(g)(2). Graphical depictions and guidance for these standards are provided in Appendix D: Planned Innovation, Research, and Technology (PIRT) District Design Guidelines. Compliance with these standards shall be approved by the Township, prior to the issuance of any Zoning Certificate of Use.

(C) All projects submitted as part of the PIRT District shall require an owner's consent opting into the Planned Innovation, Research, and Technology (PIRT) District as a condition of land development meeting the following requirements:

(i) The owner's consent shall be a notarized written statement to the Board of Commissioners, which is signed by the property owner of record of the lot and the developer if the developer is not the property owner of record, consenting to the application of the provisions of Section 350-33 and which shall be in a form prepared by the Township Solicitor and shall be recorded in the Lehigh County Clerk of Judicial Records, Recorder of Deeds Division.

(d) Permitted Primary Uses

(1) The following uses as defined in Chapter 350 Article 4 Zoning Use Regulations are permitted as primary uses in the PIRT District:

(A) Coordinated Development (of uses permitted in the PIRT District)
(B) Flex Space (of uses permitted in the PIRT District)
(C) Office, Business and Professional
(D) Research and Development Facilities
(E) School, College and/or University
(F) School, Commercial and/or Trade

(2) The following Special Use Types are permitted as primary uses in the PIRT District, subject to the regulations listed in §350-33(g):

(A) Data Center

(e) Permitted Accessory Uses

(1) The following uses as defined in Chapter 350 Article 4 Zoning Use Regulations are permitted as accessory uses in the PIRT District:

(A) Communication Facility, Cellular
(B) Communication Facility, Radio and Television (Non-Residential)
(C) Geoexchange Energy Systems
(D) Solar Energy Facility
(E) Solar Energy Systems, Nonresidential
(F) Utility Support Facility
(G) Wind Energy Facility
(H) Wind Energy Systems, Small Free-Standing
(I) Wind Energy Systems, Small Roof-Mounted

(f) General Regulations

(1) Dimensional Standards

All permitted uses in the PIRT District shall follow the dimensional requirements in the table below. Dimensional Requirements for Special Use Types shall follow those specified in §350-33(g).

PIRT District Dimensional Standards	
Minimum lot size	2.5 acres
Minimum lot width	100’
Max. Building Height (Principal Structures)	40’
Max. Impervious Coverage	75%
Max. Building Coverage	65%
Setbacks: Primary Use	
From Existing Public Roads (Front or Side)	200’
From New Public Roads (Front or Side)*	50’
From Industrial Uses (Front or Side)	50’
From All Other Uses (Front or Side)	200’
Setbacks: Accessory Use	
From Existing Public Roads (Front or Side)	150’
From New Public Roads (Front or Side)*	50’
From Industrial Uses (Front or Side)	25’
From All Other Uses (Front or Side)	100’
**Public roads constructed as part of a development in the PIRT District shall be considered New Public Roads*	

(2) Design Standards

All permitted uses in the PIRT District shall follow the architectural and design standards specified below. Graphical depictions and guidance on these standards are provided in Appendix D: Planned Innovation, Research, and Technology (PIRT) District Design Guidelines. Compliance with these standards shall be approved by the Township, prior to the issuance of any Zoning Certificate of Use.

(A) Pedestrian Zone

(i) Purpose. The Pedestrian Zone is intended to provide safe and enjoyable pedestrian circulation along public road frontages.

(ii) Location. The Pedestrian Zone shall be located on the property, parallel to all public road frontages between an intersection and another intersection or a property line. The Pedestrian Zone shall encompass the first twenty feet (20’) of the property starting at the Ultimate Right-of-Way and extending into the center of the property. The Pedestrian Zone shall be allowed within the required setback area.

(iii) Shade Trees. Shade trees shall be required to be planted within the Pedestrian Zone between the road and the trail/walkway following the provisions of §312-40 of the Subdivision and Land Development Ordinance. This requirement shall nullify the requirement to plant shade trees within the public right-of-way.

(iv) Trail/Walkway. A minimum ten foot (10') wide pedestrian trail/walkway shall be constructed in the Pedestrian Zone between the row of Shade Trees and fence row. The trail/walkway shall be constructed in accordance with the latest version of the Township's standard construction documents. A public access easement shall be dedicated to the Township, granting public use of the trail/walkway on private property. This trail/walkway shall satisfy any sidewalk requirements in the Subdivision and Land Development Ordinance.

(v) Fencing. White split rail or horse rail fencing shall be constructed parallel to the trail/walkway as a visual barrier between the Pedestrian Zone and Buffer Zone. Chain link, mesh, or chicken wire shall not be permitted in the Pedestrian Zone.

(B) Buffer Zone

(i) A minimum fifty-foot-wide (50') buffer zone shall be established and maintained along all lot lines between dissimilar types of uses (i.e., residential, commercial, or institutional).

(ii) The Buffer Zone shall be allowed within the required setback area.

(iii) Openings for driveways and Township-required access drives shall be permitted to cross buffer zones in a perpendicular direction. Plantings in the buffer zone shall be located as to not obstruct vision for traffic entering and leaving the site and shall be subject to the clear site triangle requirements of the Township Code.

(iv) Buffer zones shall consist of a combination of dense hedges, evergreens, and shrubbery designed to provide visual screening year-round between dissimilar uses. Trees shall be at least six feet (6') in height at planting and spaced close together to provide screening but still ensure long-term survival.

(v) Buffer zones shall be indicated on a Landscape Plan and reviewed by the Township Landscape and Shade Tree Commission.

(vi) Existing vegetation may supplement required plantings if recommended by the Township Landscape and Shade Tree Commission.

(C) Facades

(i) Primary Façade: The Primary Façade refers to the main exterior or wall of a building that faces a public road or public thoroughfare.

(ii) Primary Facades shall include a visual vertical break at least every 75 linear feet.

(iii) Buildings with multiple Primary Facades shall utilize consistent architectural treatments, styles, materials, colors, and details.

(iv) Primary Facades shall have a defined base and cap, with a change in material, color, and/or projection to distinguish it from the main body of the façade.

(v) Main building entries located on Primary Facades shall either project or recess from the façade plane or feature a change in building material.

(D) Site Design and Screening

(i) All ground-mounted mechanical, electrical, and/or plumbing equipment, HVAC systems, power generation, and the like, shall be located behind the Buffer Zone as to not be visible from a public road.

(ii) Equipment that cannot be hidden behind the Primary Façade shall be screened from public roads through the use of vegetation, fences, walls, topography, or any combination of these elements.

(iii) Loading docks, dumpsters, waste facilities, and/or utilities shall not be located on Primary Facades or directly visible from public roads.

(g) Special Use Type – Data Center

Data Centers are permitted by right as part of the PIRT District in accordance with the following standards

(1) Dimensional Standards:

Data Center Dimensional Standards – PIRT District	
Minimum lot size	10 acres
Minimum lot width	200’

Max. Building Footprint	500,000 sf
Max. Building Height (Principal Structures)*	50’
Max. Building Height (Accessory Structures)	35’
Max. Impervious Coverage	75%
Max. Building Coverage	65%
Front/Side Setbacks: Principal Structure(s)	
From Existing Public Roads (Front or Side)	350’
From New Public Roads (Front or Side)**	150’
From Industrial Uses (Front or Side)	50’
From All Other Uses (Front or Side)	350’
Front/Side Setbacks: Accessory Structure(s)	
From Existing Public Roads (Front or Side)	200’
From New Roads (Front or Side)**	50’
From Industrial Uses (Front or Side)	25’
From All Other Uses (Front or Side)	200’
Front/Side Setbacks: Ancillary Equipment (Ground-Mounted)	
From Existing Public Roads (Front or Side)	200’
From New Public Roads (Front or Side)**	50’
From Industrial Uses (Front or Side)	25’
From All Other Uses (Front or Side)	200’
**Rooftop structures considered Ancillary Equipment may exceed the 50’ height limitation subject to the provisions of §350-42(h).* ***Public roads constructed as part of a development in the PIRT District shall be considered New Public Roads*	

(2) Design Standards

All Data Centers in the PIRT District shall follow the architectural and design standards specified below. Graphical depictions and guidance on these standards are provided in Appendix D: Planned Innovation, Research, and Technology (PIRT) District Design Guidelines. Compliance with these standards shall be approved by the Township, prior to the issuance of any Zoning Certificate of Use.

(A) Pedestrian Zone: Data Centers shall be required to include a Pedestrian Zone according to the provisions of §350-33(f)(2)(a).

(B) Transition Zone:

(i) Purpose. The Transition Zone is intended to preserve existing viewsheds, farmland, natural landscapes, and/or to provide pollinator habitat between the Pedestrian Zone and the Buffer Zone. The Transition Zone shall prioritize preserving existing farmland wherever possible.).

(ii) Location. Between the Pedestrian Zone and the Buffer Zone. In instances where the space between the Pedestrian Zone and the Buffer Zone is less than 100' , a Transition Zone shall not be required and the applicant shall follow the Landscaping Requirements in §350-33(g)(2)(B)(iii).

(iii) Landscaping Requirements.

[1] Where preserving farmland is not possible, the Transition Zone shall be designed as a Managed Natural Area as identified in the 2024 *South Whitehall Landscapes* plan and adhering to the following guidelines:

- Intentionally designed or improved to enhance or maintain wildlife habitat, water quality, and/or biodiversity
- Landscaping shall be designed in a way to maintain natural resources and provide visual aesthetics from the Pedestrian Zone. i.e. wildflower meadows, grasslands, woodlands, constructed wetlands, or natural stormwater management systems.
- Plant material shall consist of diverse species native to Pennsylvania.
- A landscape plan shall be prepared by a Registered Landscape Architect (RLA) and submitted for review by the Township Landscape and Shade Tree Commission.

(C) Buffer Zones:

(i) Purpose. The Buffer Zone is intended to provide a visual screen and auditory buffer between the Principal Structures and the property line and public roadways.

(ii) Location. Between the Build-To Line (or edge of setback) and either the Transition Zone, Pedestrian Zone, or property line, whichever is closer.

(iii) Buffer Zone Option A – Landscaping. Where space allows, a landscaped buffer shall be required to screen the nearest Principal Structure from the Pedestrian Zone or the property line where a Pedestrian Zone is not required. The landscaped

buffer shall provide a visual barrier of at least eighteen feet (18') higher than the elevation of either the Pedestrian Zone or property line through one of the following ways:

[1] Existing topography and vegetation subject to the approval of the Township Landscape and Shade Tree Commission.

[2] Combination of an earthen berm and dense vegetation planted on top and the front face of the berm, with the cumulative height of both the berm and vegetation being at least eighteen feet (18') or higher. For example, a six foot (6') tree planted on a twelve foot (12') berm or an eight foot (8') tree planted on a ten foot (10') berm.

[3] Dense vegetation planted without a berm if natural topography or the size of the vegetation at planting provides a visual barrier of at least eighteen feet (18').

[4] Landscaping Requirements

- A landscape plan, prepared by a Registered Landscape Architect (RLA), shall be submitted to the Township Landscape and Shade Tree Commission for review and approval.
- All new plant material shall be of nursery stock and grown under the same climatic conditions at the development site within the appropriate hardiness zone.
- Evergreens. Two staggered rows of evergreen trees at least six feet (6') in height at time of installation shall be planted, either on top of the berm or at the rear of the Buffer Zone if a berm is not required. Rows shall be offset in order to achieve maximum visual screening and trees within a row shall be spaced at an interval of one tree per fifteen feet (15') or less.
- Canopy Trees. Canopy trees shall be planted interspersed along the front face of the berm or in front of the evergreens if a berm is not required.

- Ornamental Trees. Ornamental or “flowering” trees shall be planted between the canopy trees and either the Pedestrian Zone or the property line. Trees shall be at least two inches (2”) in caliper when planted and spaced at an interval of one tree per forty feet (40’), either in a row or staggered.
- Shrubs. Shrubs shall be dispersed throughout the Landscaped Buffer to break up the visual plan. Shrubs shall be a combination of evergreen and deciduous species, with a minimum of 50% being evergreen.

(iv) Buffer Zone Option B – Retaining Wall. Where space is limited between either the property line or Pedestrian Zone and the Principal Structure, retaining walls may be utilized under the following guidelines:

[1] Retaining walls shall be located as close to the Pedestrian Zone or property line as possible.

[2] A decorative split rail or horse rail fence shall be erected at the top of the retaining wall.

[3] Dense evergreens or shrubs shall be planted behind the split rail fence as vegetative screening.

[4] The combination of retaining wall and vegetative screening shall cover at least eighteen feet (18’) above the elevation of either the adjacent Pedestrian Zone or property line.

(D) Perimeter Fences and Walls.

(i) Security Fencing. Security fences and associated infrastructure shall be permitted within the building setback behind the Buffer Zones.

[1] Security fencing shall be a maximum of eight feet (8’) high and made of dark metal material. Portions of fence that are visible from a public road (i.e. near the entrance gate to the facility) shall not include barbed wire or razor wire.

(ii) Security/Perimeter Walls. In lieu of or in addition to security fencing, solid security/perimeter walls shall be permitted.

[1] Security/Perimeter walls visible from public roads or thoroughfares shall be constructed of either stone or masonry.

(iii) Entrance gates visible from a public road shall not include barbed wire or razor wire.

(E) Facades

(i) Primary Façade: The Primary Façade refers to the main exterior or wall of a building that faces a public road, public thoroughfare, or dissimilar land use (i.e. residential, commercial, etc.).

(ii) Primary Facades shall include a visual vertical break at least every 150 linear feet.

(iii) Primary Facades shall have a defined base and cap, with a change in material, color, and/or projection to distinguish it from the main body of the façade.

(iv) The roof edge on a Primary Façade shall include a decorative roof parapet of at least forty-two inches (42”) in height to help visually screen rooftop equipment. Decorative roof parapets shall be exempt from the maximum building height specified in the dimensional table.

(v) Main building entries located on Primary Facades shall either project or recess from the façade plane or feature a change in building material.

(vi) Buildings with multiple Primary Facades shall utilize consistent architectural treatments, styles, materials, colors, and details.

(F) Site Design

(i) All ground-level Ancillary Equipment shall be located behind the Buffer Zone as to not be visible from a public road or thoroughfare.

(ii) Any ground level Ancillary Equipment (including substations) that cannot be hidden behind the Buffer Zone shall be screened from public roads or thoroughfares through the use of a vegetative buffer or screen wall.

[1] Buffer Requirements. Dense evergreens shall be planted in a manner that provides eight feet (8’) or higher screening around three sides of the Ancillary Equipment.

[2] Screen Wall Requirements. Decorative screen walls of either a natural material or made to look like a natural material shall be erected in a manner that provides eight feet (8') or higher screening around three sides of the Ancillary Equipment.

(iii) Loading docks, dumpsters, waste facilities, and/or utilities shall be located behind the Buffer Zone.

(iv) Any rooftop mechanical equipment, including, but not limited to condensers, generators, and/or cooling equipment shall be visually screened using a solid or louvered sound wall containing soundproofing materials designed to absorb noise. Rooftop sound walls shall incorporate consistent styles and/or colors of the Primary Façade. Rooftop sound walls shall be reviewed as Ancillary Equipment when considering height limitations.

(v) Data Center Lighting Standards

[1] Lighting installed for outdoor use shall not emit more than the recommended standard established in the current Illuminating Engineering Society (IES) Handbook.

[2] Luminaires emitting more than 1,000 lumens shall be fully shielded and shall not emit more than 5% of their total lumen output above 80 degrees from nadir.

[3] Along property lines facing non-industrial uses, the illumination level emitted from the Data Center (i.e. Light Trespass) shall not exceed 0.05 horizontal footcandle beyond the Buffer Zone.

(3) Noise Control

(A) Average Continuous Noise generated by a Data Center under the PIRT (including Principal Structures, Accessory Structures, and/or Ancillary Equipment) during normal operations shall be limited to maximum decibels levels at the property line in accordance with the following table:

Maximum Continuous Noise Levels at Property Line*	
Facing Residential/Commercial/Institutional Uses	Facing Industrial Uses
57db	67db

*Measured as the average dB over a 24-hour period

(i) These restrictions shall not apply to Intermittent Noise or Impulsive Noise from either routine maintenance or emergency situations.

(B) Routine maintenance in the form of backup generator testing shall be limited to Monday – Friday between the hours of 9AM and 5PM, excluding any recognized Federal Holidays. Testing of backup generators shall occur in cycles, only allowing for up to 25% of the backup generators to be running at one time.

(C) Upon submission of a Land Development Application, the applicant shall provide a Pre-Construction Noise Study to be reviewed by Township staff and any Township Boards/Commissions/Councils or consultants deemed necessary to review and comment. The Pre-Construction Noise Study shall be prepared by a licensed professional engineer, specializing in acoustics or an engineer Board Certified by the Institute of Noise Control Engineers. The Noise Study shall use best practices and predictive acoustic modeling including sound source location and directivity, and barrier effects of building and topography, to provide the following information:

(i) Description and measurements of existing ambient noise at a minimum of three locations at the property line. Existing ambient noise measurements shall be described and identified as the average decibel (dB) at each location over a 24-hour period.

(ii) Identification of noise-sensitive locations within five hundred feet (500') of the property boundary (i.e. schools, hospitals, residential areas).

(iii) Modeled expected Continuous Noise generated from all Principal Structures, Accessory Structures, and Ancillary Equipment at full operational load.

(iv) Modeled expected maximum Intermittent Noise generated from standard equipment testing and maintenance, including testing of backup generators in one 25% cycle.

(v) Modeled expected maximum Impulsive Noise generated from emergency situations (i.e. the use of all backup generators, alarms, etc.)

(vi) Identification of specific mitigation strategies to reduce or maintain Continuous Noise levels in accordance with the Maximum Permissible Noise levels in the above table. (i.e.

sound dampening, equipment location, operational adjustments, etc.)

(vii) A statement on the anticipated impact of Low Frequency Noise on any surrounding noise-sensitive locations.

(D) All Ancillary Equipment (either ground-mounted or roof-mounted) shall be enclosed on at least three sides by sound/vibration dampening walls. These walls may also serve as a visual barrier to comply with §350-33(g)(2)(F).

(E) Prior to land development approval, the applicant shall provide a post-construction noise monitoring plan that shall demonstrate the data center's compliance with the maximum average Continuous Noise levels permitted at the property line. Said plan shall be reviewed by the Township and terms of the monitoring shall be agreed upon as conditions of the land development approval.

(4) Community and Environmental Impact Statement

(A) Upon submission of a Land Development Application, the applicant shall provide a Community and Environmental Impact Statement to be reviewed by Township staff and any Township Boards/Commissions/Councils or consultants deemed necessary. The statement shall include:

(i) A narrative description of the nature of the proposed on-site activities and operations, anticipated hours of operations, anticipated frequencies and types of vehicle trips generated, and anticipated types of materials/equipment stored on site. Information obtained from any required Transportation Impact Statements/Analyses may be summarized here.

(ii) An evaluation of potential impacts of the proposed use, both positive and negative, upon:

[1] Emergency services and fire protection
[2] Water supply
[3] Sewage disposal
[4] Solid waste disposal
[5] School facilities and school district budget
[6] Municipal revenues and expenses

(iii) An evaluation of possible environmental impacts and proposed mitigation strategies if necessary relevant to the following:

[1] Air Quality
[2] Surrounding Soil Quality

[3] Surrounding Water Quality
[4] Groundwater Sources
[5] Wildlife Habitat

SECTION 4.
CHAPTER 350 ZONING – ATTACHMENT 4 – APPENDIX D
The South Whitehall Township Zoning Ordinance, Chapter 350 ("Zoning") is hereby amended to add the following new Attachment 4, which is attached hereto and incorporated herein as Exhibit "A":

Attachment 4 – Appendix D: Planned Innovation, Research, and Technology (PIRT) District Design Guidelines

SECTION 5.
ZONING MAP UPDATE – DESIGNATION OF PIRT OVERLAY
The South Whitehall Township Zoning Map is hereby amended to identify the boundary of the Planned Innovation, Research, and Technology (PIRT) Overlay District.

SECTION 6 – REPEALER
All other ordinances, resolutions and other regulations of the Township, or any parts of ordinances, resolutions, and other regulations of the Township, in conflict herewith, are hereby repealed. All other provisions of the ordinances, resolutions and other regulations of the Township of South Whitehall, Lehigh County, Pennsylvania shall remain in full force and effect.

SECTION 7 – FAILURE TO ENFORCE NOT A WAIVER
The failure of the Township to enforce any provision of this Ordinance shall not constitute a waiver by the Township of its rights or future enforcement hereunder.

SECTION 8 – SEVERABILITY
If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts of this Ordinance. It is hereby declared as the intent of the Board of Commissioners that this Ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included herein.

SECTION 9 – EFFECTIVE DATE
This Ordinance shall become effective immediately following its adoption by the Board of Commissioners.

DULY ENACTED AND ORDAINED, as an Ordinance this ____ day of October ___, 2025 by a majority of the Board of Commissioners of the Township of South Whitehall, Lehigh County, Pennsylvania, at a duly advertised meeting of the Board of Commissioners at which a quorum was present. As part of this Ordinance, the Board of Commissioners has directed that the

President, or Vice-President in the absence of the President, execute this Ordinance on behalf of the Board.

TOWNSHIP OF SOUTH WHITEHALL BOARD OF COMMISSIONERS

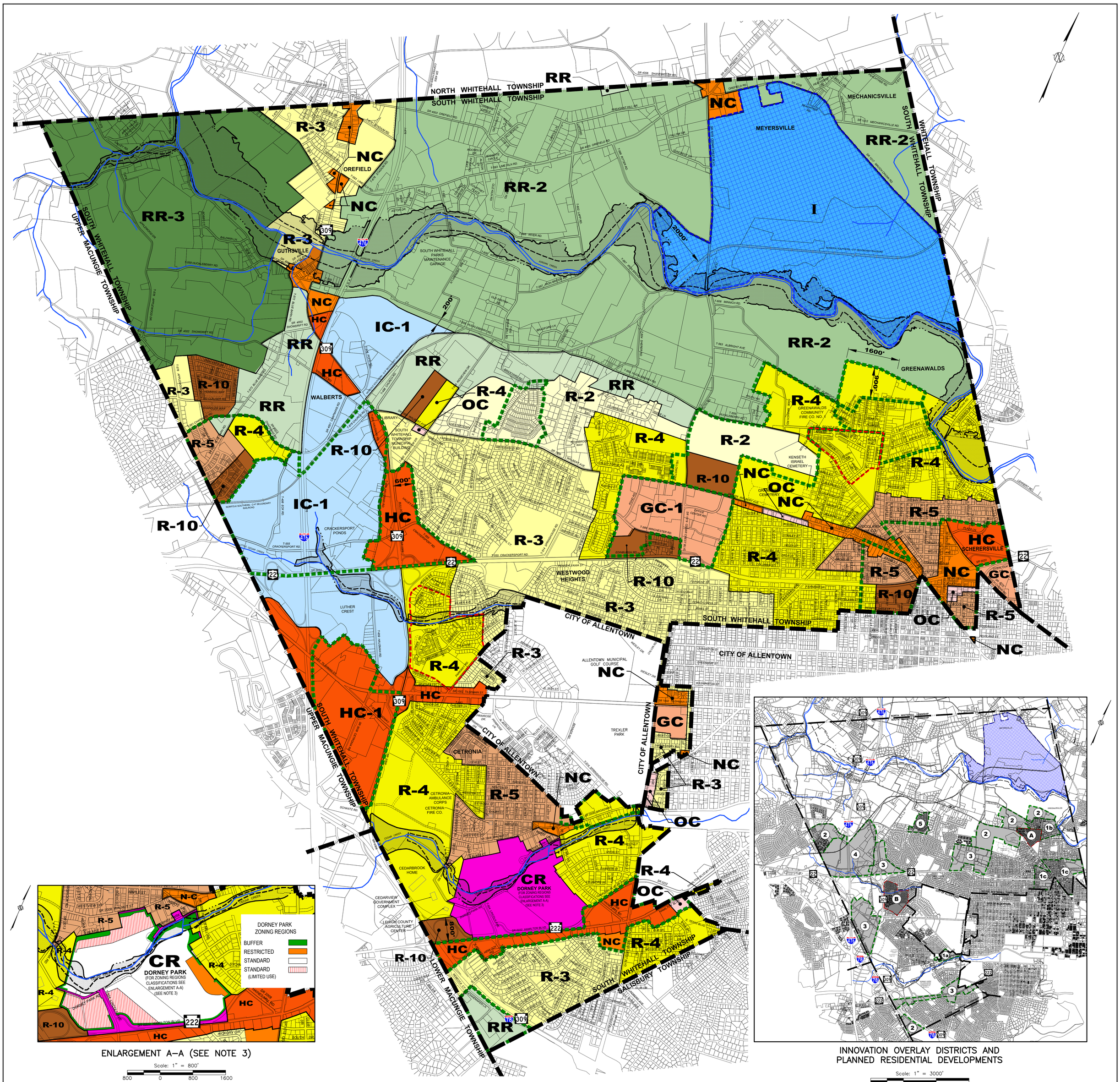
_____

Diane Kelly, President

ATTEST:

_____

Tricia Dickert, Township Secretary



ENLARGEMENT A–A (SEE NOTE 3)

Scale: 1" = 800'
800 0 800 1600

INNOVATION OVERLAY DISTRICTS AND PLANNED RESIDENTIAL DEVELOPMENTS

Scale: 1" = 3000'
3000 0 3000 6000

ZONING DISTRICTS

RESIDENTIAL

RR-3	RURAL RESIDENTIAL–3
RR-2	RURAL RESIDENTIAL–2
RR	RURAL RESIDENTIAL AND AGRICULTURAL
R-2	LOW DENSITY RESIDENTIAL
R-3	LOW DENSITY RESIDENTIAL
R-4	MEDIUM DENSITY RESIDENTIAL
R-5	MEDIUM DENSITY RESIDENTIAL
R-10	HIGH DENSITY RESIDENTIAL

INDUSTRIAL

IC-1	INDUSTRIAL–COMMERCIAL–SPECIAL HEIGHT LIMITATION
I	INDUSTRIAL

COMMERCIAL

HC	HIGHWAY COMMERCIAL
HC-1	HIGHWAY COMMERCIAL–SPECIAL HEIGHT LIMITATION
NC	NEIGHBORHOOD COMMERCIAL
GC	GENERAL COMMERCIAL
GC-1	GENERAL COMMERCIAL–SPECIAL HEIGHT LIMITATION
CR	COMMERCIAL RECREATION
OC	OFFICE COMMERCIAL

LEGEND

100–YEAR FLOODPLAIN – SEE NOTE 5

INNOVATION OVERLAY DISTRICTS AND PLANNED RESIDENTIAL DEVELOPMENTS

INNOVATION OVERLAY DISTRICTS (SEE NOTE 2)

PLANNED RESIDENTIAL DEVELOPMENTS

PLANNED INNOVATION, RESEARCH, AND TECHNOLOGY (PIRT) OVERLAY DISTRICT

NOTES

1. THE BACKGROUND DATA SHOWN, WHICH REPRESENTS THE PARCEL BOUNDARIES, RIGHT–OF–WAYS AND MUNICIPAL BOUNDARY WAS OBTAINED FROM AND IS SOLELY BASED UPON DATA PROVIDED BY LEHIGH COUNTY IN JANUARY 2014. THE BACKGROUND DATA WHICH REPRESENTS THE FLOODPLAIN WAS OBTAINED FROM AND IS SOLELY BASED UPON DATA PROVIDED BY THE LEHIGH VALLEY PLANNING COMMISSION IN 2005.
2. INNOVATION OVERLAY DISTRICT BOUNDARIES ARE BASED ON INFORMATION PROVIDED BY THOMAS COMITTA ASSOCIATES, INC., IN DECEMBER 2013.
3. DORNEY PARK BOUNDARY AND ZONING REGIONS ARE BASED ON INFORMATION PROVIDED BY BARRY ISETT ASSOCIATES, INC., IN JANUARY 2014.
4. INFORMATION INCLUDED ON THIS PLAN IS FOR ZONING DISTRICT REFERENCE ONLY. SOUTH WHITEHALL TOWNSHIP AND THE PIDCOCK COMPANY DO NOT GUARANTEE THE ACCURACY OF THE BACKGROUND INFORMATION SHOWN AND RECOMMEND IT BE CHECKED FOR ACCURACY BY THE USER.
5. THE 100–YEAR FLOODPLAIN IS FOR ILLUSTRATION ONLY. THE MOST RECENT FLOOD INSURANCE RATE MAP AS PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) SHALL BE USED FOR ANY DETERMINATION OF THE 100–YEAR FLOOD ZONE.

LEGEND

INNOVATION OVERLAY DISTRICTS (SEE NOTE 2)

(1) NEIGHBORHOOD INFILL DEVELOPMENT
- (1a) – BROADWAY
- (1b) – GREENAWALDS
- (1c) – CLIFFORD PARK

(2) TND – RESIDENTIAL CLUSTER
(3) TND – COMMERCIAL RETROFIT
(4) TND – INDUSTRIAL RETROFIT AND INFILL
(5) AAND–O – ACTIVE ADULT NEIGHBORHOOD DEVELOPMENT – OVERLAY

PLANNED RESIDENTIAL DEVELOPMENTS

(A) FERNWOOD TERRACE PRD
(B) CEDAR CREEK FARM PRD

PLANNED INNOVATION, RESEARCH, AND TECHNOLOGY (PIRT) OVERLAY DISTRICT

SOUTH WHITEHALL TOWNSHIP

LEHIGH COUNTY, PENNSYLVANIA

ZONING MAP

THE PIDCOCK COMPANY
CIVIL ENGINEERING AND LAND PLANNING ARCHITECTURE LAND SURVEYING
OXFORD DRIVE AT FISH HATCHERY ROAD
ALLENTOWN, PENNSYLVANIA

THIS MAP IS PART OF THE ZONING ORDINANCE OF SOUTH WHITEHALL TOWNSHIP, LEHIGH COUNTY, PENNSYLVANIA ADOPTED BY ORDINANCE NO. _____ ENACTED _____

BOARD OF COMMISSIONERS

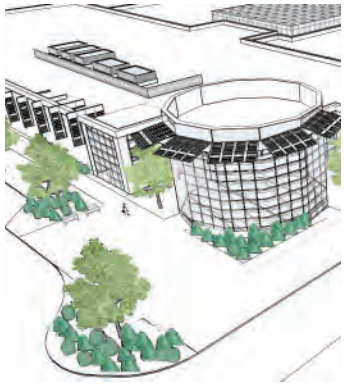
SECRETARY PRESIDENT

1000' 0 1000' 2000'
SCALE: 1"=1,000' (APPROXIMATE)
0.5 KM 0 1 KM
0.5 MILE 0 1 MILE

SWT-774

Drawing name: S:\Municipalities\SWT\Design Projects\MAPS\Zoning\SWT-774 Zoning Map.dwg Last Modified: Jul 29, 2025 - 11:40am

PIRT District



Planned Innovation, Research, and Technology District

Design Guidelines

South Whitehall Township, Pennsylvania

July 30, 2025

SOUTH WHITEHALL TOWNSHIP

Prepared by:

In-TOWN Design Studio LLC

The PIRT District

The Planned Innovation, Research, and Technology (PIRT) District provides an opportunity to support the growing tech industry while modernizing South Whitehall's industrial zone. Promoting a unique blend of land uses, the PIRT aims to establish a hub for fostering technological innovation and provide a place for aspiring students, tech professionals, innovators, and entrepreneurs to interface and grow their careers.

Through the use of detailed design standards, developments within the PIRT should blend cohesively as a campus yet still maintain appropriate buffering and landscaping to project the iconic, rural setting of the Jordan Valley.

The imagery, depictions, and descriptions within this Design Guideline are intended to help illustrate the design standards required in the PIRT District and provide real-world examples of these designs in place.

Planned Innovation, Research, and Technology (PIRT) District*	
Minimum Lot Size	2.5 acres
Minimum Lot Width	100'
Max. Building Height (Principal Structures)	40'
Max. Impervious Coverage	75%
Max. Building Coverage	65%
<u>Setbacks: Primary Use</u>	
From Existing Public Roads (Front or Side)	200'
From New Public Roads (Front or Side)**	50'
From Industrial Uses (Front or Side)	50'
From All Other Uses (Front or Side)	200'
<u>Setbacks: Accessory Use</u>	
From Existing Public Roads (Front or Side)	150'
From New Public Roads (Front or Side)**	50'
From Industrial Uses (Front or Side)	25'
From All Other Uses (Front or Side)	100'

**Standards for Permitted Uses in the PIRT District - Special Use Types may have additional bulk requirements - refer to the Data Center Special Use types guidelines*

*** Public roads constructed as part of a development in the PIRT District shall be considered New Public Roads.*

Primary Facades in the PIRT District will avoid long, monotonous, uninterrupted walls and have an expressed Main Building Entry.

Public-facing buildings must have architectural features and articulated facades.

The PIRT district encourages research and technology-related businesses located within a campus-like setting with consistent architecture located around common open spaces.

PIRT developments will include research and technology-related businesses within a campus-like setting.

Primary Facades will avoid long, monotonous, uninterrupted walls or roof planes.

Each building with a Primary Facade shall have a defined building entry.

The purpose and intent of the PIRT District is to:

1. Provide a controlled and protected environment for the orderly growth and development of research and technology-related businesses within a campus-like setting.

2. Provide an option for new, technologically centered industrial uses that place minimal impact on the surrounding transportation network.

3. Provide opportunities for South Whitehall Township to grow its economic base while appropriately buffering industrial uses from public roadways and non-industrial land uses.

Site Design

Accessory structures, such as power substations shall be screened and located away from adjacent properties

Consolidate and share service areas and loading

Parking and circulation are to be discretely located and screened

Frontages along public rights-of-way shall be preserved and maintained - refer to setback and buffering requirements

Heavy landscape & buffering are required between large structures residential areas & rural viewsheds - refer to Buffering Requirements

PIRT facilities with multiple buildings should be designed as a campus with shared amenities and open space

Stormwater management facilites are encouraged to incorporate planted bioretention & rain gardens to appear more natural & blend with the landscape.

Primary facades must have entry features and articulated facades

A Pedestrian Zone shall be located along public road frontages with shade trees, a 10' multiuse path, and fencing.

Viewsheds and frontages along public rights-of-way shall be preserved, maintained, and enhanced with landscape buffering.

Heavy landscape & buffering are required to offer very limited views of the buildings and ancillary equipment.

Screening for waste and recycling should include walls, fences and/or landscaping that blend with the site.

PIRT facilities with multiple buildings should be designed as a campus with shared amenities and open space

Security Fences and other non-decorative type fences shall be black or a dark color located between and the principal structure(s) on the property.

Site Design & Screening

PIRT facilities with multiple buildings should be designed as a campus with shared amenities and open space

Natural landscapes and viewsheds are to be preserved and maintained at the periphery of the properties and may include light agriculture accessory uses and fencing types consistent with a rural landscape.

Preservation of woodland and of existing vegetation and/or natural topography may be substituted for the buffering requirements. The Landscape and Shade Tree Commission will determine if the existing vegetation can provide screening at the density, depth, and height equivalent to the buffering standards.

Parking and circulation are to be discretely located and screened.

Buildings within a courtyard or campus are encouraged to consolidate and share waste facilities and loading areas and equipment to the extent practicable.

Loading docks, solid waste facilities, recycling facilities and other service elements shall placed in visually unobtrusive locations with minimum impacts on view. Screening should be achieved through the use of walls, fences and/or landscaping.

Pedestrian Zone

The Pedestrian Zone shall be located on the property, parallel to all public road frontages between an intersection and another intersection or a property line. The Pedestrian Zone shall encompass the first twenty feet (20') of the property starting at the Right-of-Way.

Shade trees shall be required to be planted within the Pedestrian Zone between the road and the trail/walkway following the provisions of §312-40 of the Subdivision and Land Development Ordinance.

A minimum ten foot (10') wide pedestrian trail/walkway shall be constructed in the Pedestrian Zone between the row of Shade Trees and fence row in accordance with the Township's standards.

Split rail/horse rail decorative fencing shall be constructed parallel to the trail/walkway as a visual barrier between the Pedestrian Zone and Buffer Zone.

A 10' wide pedestrian trail/walkway shall be constructed in the Pedestrian Zone between the row of Shade Trees and fence row.

White horse rail fencing is to be located along the edge of the required pedestrian zone in PIRT public frontage buffers.

The trail/walkway is to be constructed per the Township standards as used in parks and other areas of South Whitehall.

Passive recreation and pedestrian and bicycle, trails are permitted within the required buffer areas.

The Pedestrian Zone shall be located along public road frontages with shade trees, a 10' multiuse path, and fencing.

Buffer Zone

A minimum fifty-foot-wide (50') buffer zone shall be established and maintained along all lot lines between dissimilar types of uses (i.e., residential, commercial, industrial, or institutional).

The Buffer Zone shall be allowed within the required setback area.

Openings for driveways and Township-required access drives shall be permitted to cross buffer zones in a perpendicular direction. Plantings in the buffer zone shall be located as to not obstruct vision for traffic entering and leaving the site and shall be subject to the clear site triangle requirements of the Township Code.

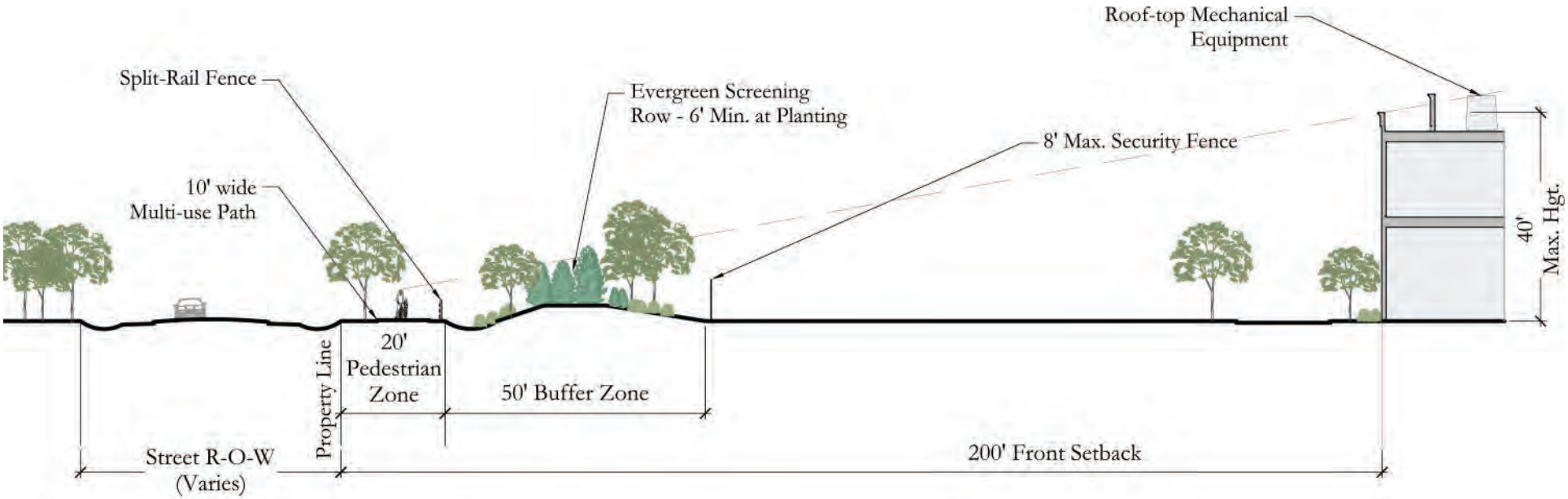
Buffer zones shall consist of a combination of dense hedges, evergreens, and shrubbery designed to provide adequate visual screening year-round between dissimilar uses. Trees shall be at least six feet (6') in height at planting and spaced close together to provide adequate screening.

The location of required buffers may vary between the lot line and the proposed structures provided the required plantings and berms meet the required width throughout the full length of the yard area.

Security Fences and other non-decorative type fences shall be located between the required buffering and the principal structure(s) on the property.

When necessary for site access, private roads and driveway entrances may cross the buffer in a generally perpendicular direction.

Passive recreation and pedestrian and bicycle, trails are permitted within the required buffer areas provided that the screening and planting requirements are met.

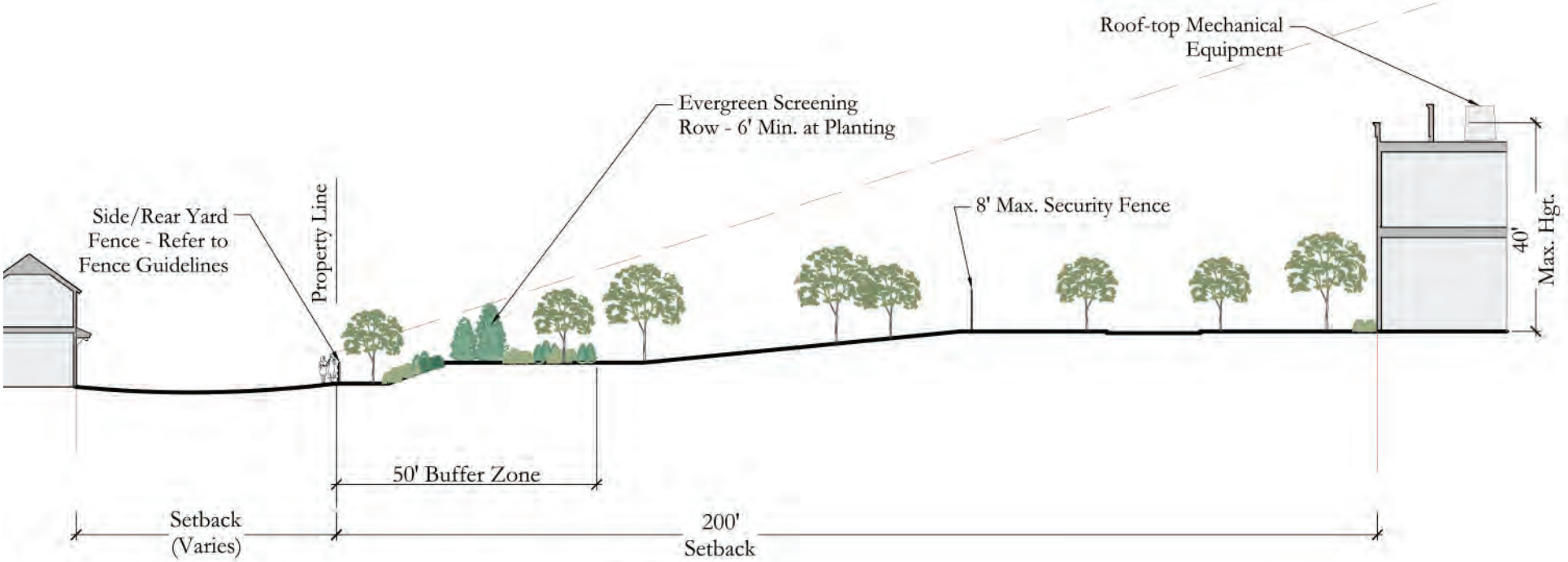


Buffering Examples: From Existing Public Roads

Scale: 1"=30'-0"

Buffer zones shall consist of a combination of dense hedges, evergreens, and shrubbery designed to provide adequate visual screening year-round

Split rail/horse rail decorative fencing shall be constructed parallel to the trail/ walkway as a visual barrier and to provide consistency to the streetscape.



Buffering Examples: Between Dissimilar Uses (Residential)

Scale: 1"=30'-0"

Façade Standards

Primary Facades will avoid long, monotonous, uninterrupted walls or roof planes. Primary Façades must have visual vertical breaks at a minimum of 75' of horizontal length. Some examples of vertical breaks may include, but are not limited to:

2' min. offset in façade plane
Green Walls and trellis (min. 20' width)
Change in façade material (min. 20' width)
Fenestration or entry elements (min. 8' width)

Buildings with multiple Primary Façades, the architectural treatment of those façades shall be consistent and should continue the major features on all applicable facades in style, materials, colors and details.

Primary Facades should have a defined base and cap. The cap of the building includes the building cornice, parapet or eaves at the top of the building wall. The cap and base shall have a change in material, color, and/or a projection to distinguish it from the main body of the façade.

Main Building Entries located on Primary Facades must either project or recess from the facade plane, and/or be distinguished from the remainder of the building façade by a change in building material.

Any Mechanical Equipment, including condensers, generators, and cooling equipment; attached to or mounted on the building façade must be completely visually screened from view at the ground level from all existing and planned public roads and adjoining residential parcels.

The screening can be used to create the required cap to Primary Facades. Taller parapet walls or screens of mesh, lattice, cladding, or grillwork or a combination of these elements can be applied to create the screening to the extent practicable to allow for code-compliant ventilation.

Accessory structures located outside of the required buffering (gatehouses, security, storage, utilities, etc.) are encouraged be designed to be architecturally consistent with the other structures on the property.

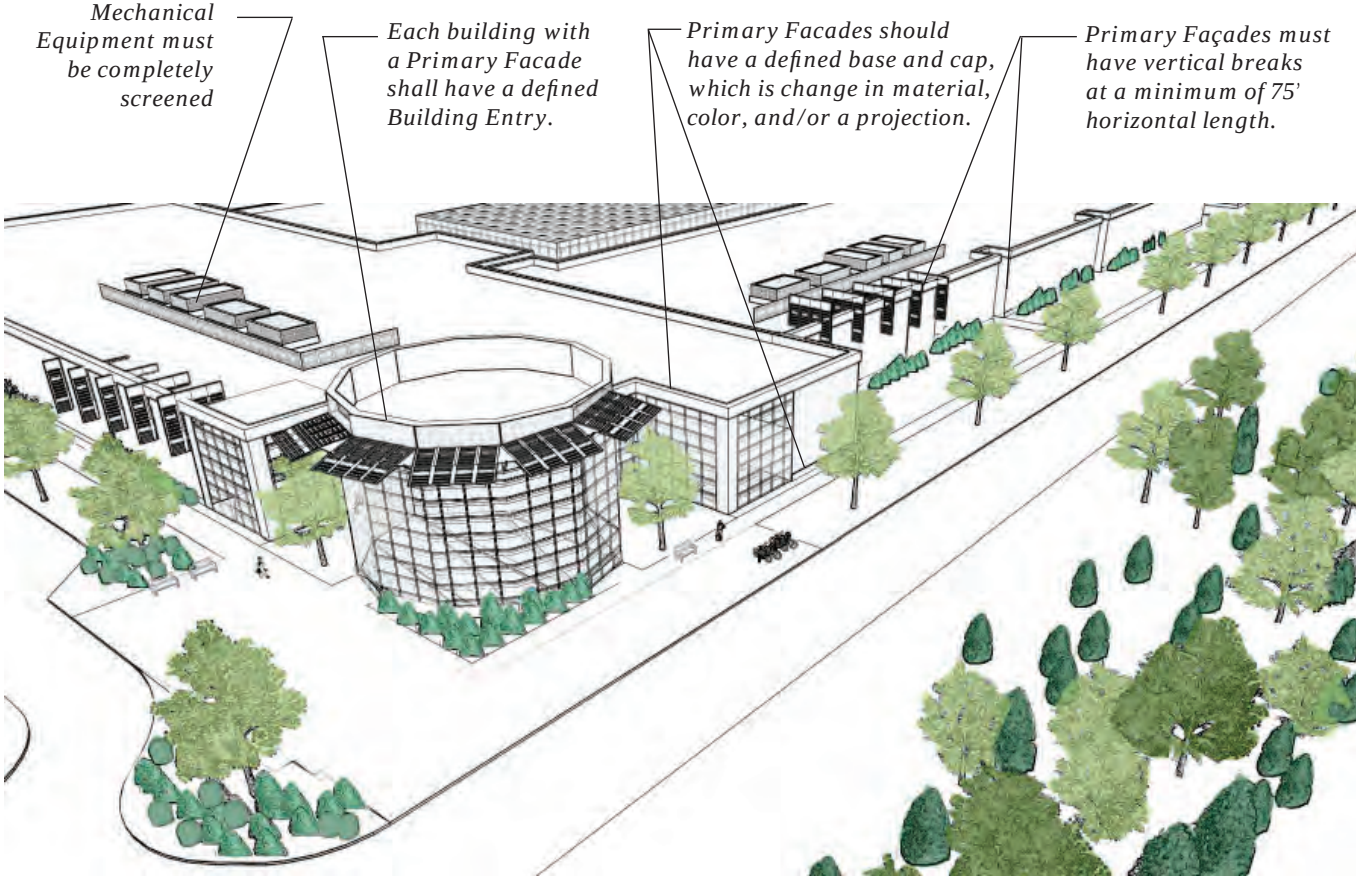
Primary Facades must have vertical breaks and avoid long, monotonous, uninterrupted walls or roof planes.

Primary Facades should have a defined base and cap with a change in material, color, and/or a projection to distinguish it from the main body of the façade.

Green walls are encouraged on Primary Facades to soften long walls and introduce natural elements.

Use of natural and subdued color palettes are encouraged to blend in the landscape.

Mechanical equipment must be blocked from view on Primary Facades using walls and screens.



Screening can be used to create the required cap to Primary Facades & allow for code-compliant ventilation.

The cap shall have a change in material, color, and/or a projection. Primary Façades must have with visual vertical breaks at a minimum of 75' of horizontal length.

Buildings with multiple Primary Façades, the architectural treatment of those façades shall be consistent and should continue the major features on all applicable facades in style, materials, colors and details.

Special Use Type - Data Centers

Data Centers have become a critical part of digital infrastructure for data storage and processing. Requiring larger sites and a high demand for energy consumption, locating and siting these facilities require special conditions. These special uses are to be separated by conserved open space and buffered from nearby agricultural, residential and mixed-use areas

A Data Center is an establishment engaged in the storage, management, processing, and/or transmission of digital data, and housing computer and/or network equipment, systems, servers, appliances, and other associated components related to digital data operations. As a special use type within the PIRT zone, Data Centers are to be sited and screened to maintain the scenic views and rural character.

Natural landscapes are to be preserved and maintained at the periphery of the properties and may include light agriculture accessory uses.

Refer to the PIRT District Design Guidelines for the particular requirements for Facade Design, Buffering, and Service Areas for Data Center uses.

PIRT Special Use Type - Data Centers

Minimum Lot Size	10 acres		
Minimum Lot Width	200'	Setbacks: Accessory Structure(s)	
Max. Building Footprint	500,000 sf	From Existing Public Roads (Front or Side)	200'
Max. Building Height (Principal Structures)*	50'	From New Roads (Front or Side)**	50'
Max. Building Height (Accessory Structures)	35'	From Industrial Uses (Front or Side)	25'
Max. Impervious Coverage	75%	From All Other Uses (Front or Side)	200'
Max. Building Coverage	65%		
		Setbacks: Ancillary Equipment (Ground-Mounted)	
Setbacks: Primary Use		From Existing Public Roads (Front or Side)	200'
From Existing Public Roads (Front or Side)	350'	From New Roads (Front or Side)**	50'
From New Public Roads (Front or Side)**	150'	From Industrial Uses (Front or Side)	25'
From Industrial Uses (Front or Side)	50'	From All Other Uses (Front or Side)	200'
From All Other Uses (Front or Side)	350'		

**Rooftop structures considered Ancillary Equipment may exceed the 50' height limitation subject to the provisions of §350-42(h).*

*** Public roads constructed as part of a development in the PIRT District shall be considered New Public Roads.*

Data Centers are special uses that are to be separated by conserved open space and buffered from nearby uses.

Transition Zones preserve existing viewsheds, farmland, natural landscapes where possible.

Landscaped buffers screens the buildings, parking and service areas of Data Centers.

Data Center Buffering Standards

Pedestrian Zone

Data Centers shall be required to include a Pedestrian Zone – refer to the PIRT Pedestrian Zone requirements.

Transition Zone

The Transition Zone is intended to preserve existing viewsheds, farmland, natural landscapes, and/or to provide pollinator habitat between the Pedestrian Zone and the Buffer Zone. The Transition Zone shall prioritize preserving existing farmland wherever possible.

Where preserving farmland is not possible, the Transition Zone shall be designed as a Managed Natural Area as identified in the 2024 South Whitehall Landscapes plan.

Plant material shall consist of diverse species native to Pennsylvania.

Landscaping shall be designed in a way to maintain natural resources and provide visual aesthetics from the Pedestrian Zone. i.e. wildflower meadows, grasslands, woodlands, constructed wetlands, or natural stormwater management systems.

Buffer Zone Option A–Landscaping

Where space allows, a landscaped buffer shall be required to screen the nearest Principal Structure from the Pedestrian Zone or the property line where a Pedestrian Zone is not required.

The landscaped buffer shall provide a visual barrier of at least eighteen feet (18') higher than the elevation of either the Pedestrian Zone or property line through one of the following ways:

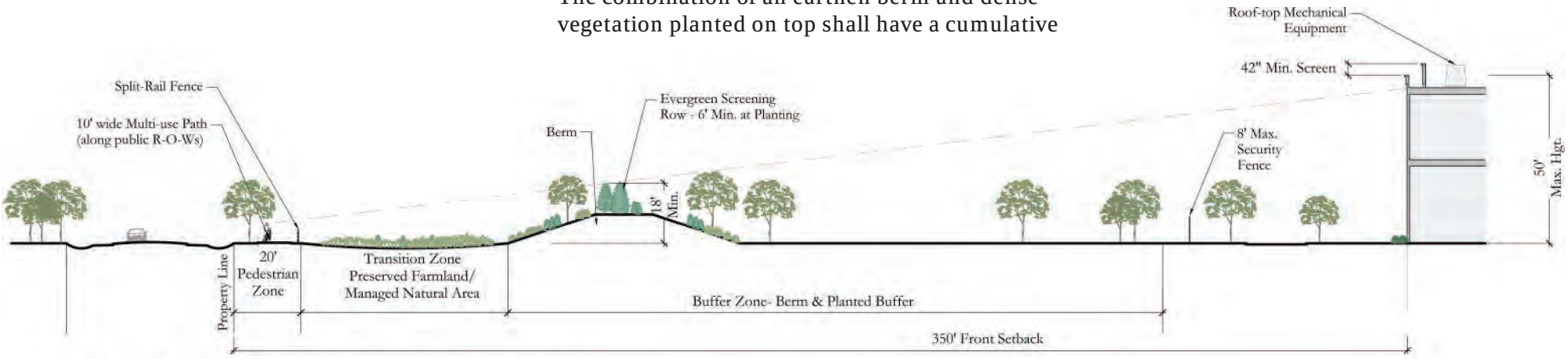
Existing topography and vegetation subject to the approval of the Township Landscape and Shade Tree Commission.

The combination of an earthen berm and dense vegetation planted on top shall have a cumulative height of both the berm and vegetation being at least eighteen feet (18') or higher. For example, a six foot (6') tree planted on a twelve foot (12') berm or an eight foot (8') tree planted on a ten foot (10') berm.

Dense vegetation planted without a berm if natural topography or the size of the vegetation at planting provides a visual barrier of at least eighteen feet (18').

All new plant material shall be of nursery stock, and grown under the same climatic conditions at the development site within the appropriate hardiness zone.

Two staggered rows of evergreen trees at least six feet (6') in height at time of installation shall be planted, either on top of a berm or at the rear of the Buffer Zone. Rows shall be offset in order to achieve maximum visual screening and trees within a row shall be spaced at an interval of one tree per fifteen feet (15') or less.



Data Center Buffering Example: Buffer Zone Option A – Landscaping

Scale: 1"=30'-0"

Canopy trees shall be planted interspersed along the front face of the berm or in front of the evergreens if a berm is not included.

Ornamental or "flowering" trees shall be planted between the canopy trees and either the Pedestrian Zone or the property line. Trees shall be at least two inches (2") in caliper when planted and spaced at an interval of one tree per forty feet (40'), either in a row or staggered.

Shrubs shall be dispersed throughout the Landscaped Buffer to break up the visual plan. Shrubs shall be a combination of evergreen and deciduous species, with a minimum of 50% being evergreen.

Buffer Zone Option B – Retaining Wall

Where space is limited between either the property line or Pedestrian Zone and the Principal Structure, a combination of retaining walls and landscaping may be utilized as a buffer.

Any retaining or landscape walls shall be located as close to the Pedestrian Zone or property line as possible.

A decorative split rail or horse rail fence shall be erected at the top of the retaining wall as required by code.

Dense evergreens or shrubs shall be planted behind the split rail fence as vegetative screening.

The combination of retaining wall and vegetative screening shall cover at least eighteen feet (18') above the elevation of either the adjacent Pedestrian Zone or property line

Perimeter Fences and Walls.

Security fences and associated infrastructure shall be permitted within the building setback behind the Buffer Zones.

Security fencing shall be a maximum of eight feet (8') high and made of dark metal material.

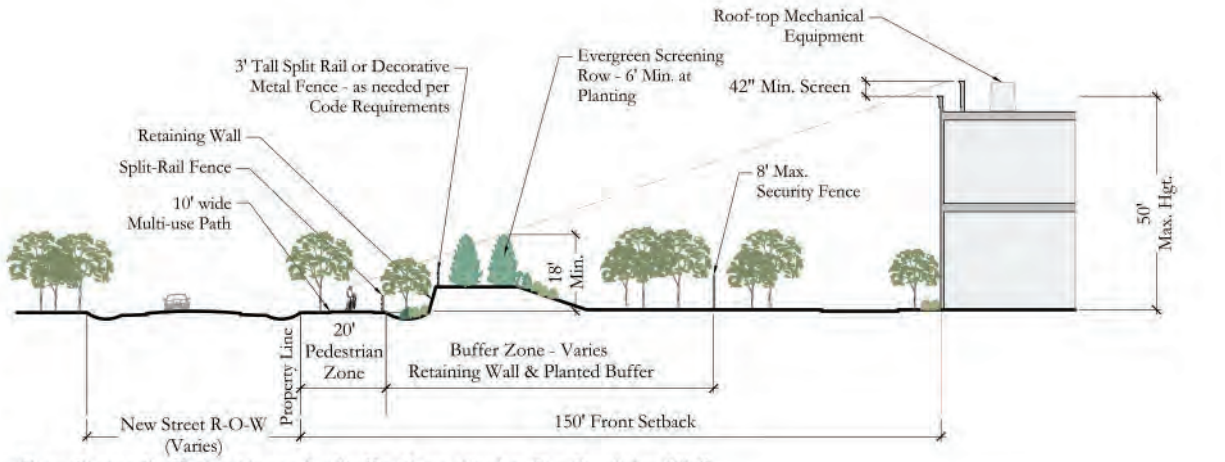
Portions of fence that are visible from a public road (i.e. near the entrance gate to the facility) shall not include barbed wire or razor wire.

In lieu of or in addition to security fencing, solid security/perimeter walls shall be permitted.

Security/Perimeter walls visible from public roads or thoroughfares shall be constructed ofeither stone or masonry.

Entrance gates visible from a public road shall not include barbed wire or razor wire.

Bioretention, rain gardens, and other forms of vegetative stormwater management improvements are permitted within buffering provided that the screening and planting requirements are met.



Data Center Buffering Example: Buffer Zone Option B – Retaining Wall

Scale: 1"=30'-0"

Cornices and parapets can be used as a cap and should be an accent element with materials and colors.

Caps on a Primary Façade shall include a decorative roof parapet to help visually screen rooftop equipment.

Facades

Data Centers are to comply with all base design requirements in the PIRT District Design Guidelines for Site Design, Buffering, and Facade Design.

The Primary Façade refers to the main exterior or wall of a building that faces a public road, public thoroughfare, or dissimilar land use (i.e. residential, commercial, etc.).

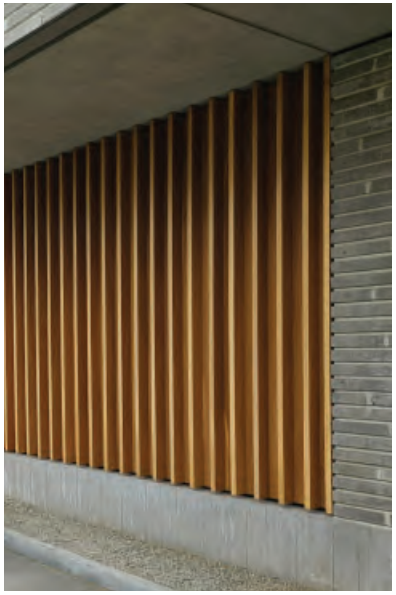
Primary Facades shall include a visual vertical break at least every 150 linear feet.

Primary Facades shall have a defined base and cap, with a change in material, color, and/or projection to distinguish it from the main body of the façade.

The roof edge on a Primary Façade shall include a decorative roof parapet of at least forty-two inches (42”) in height to help visually screen rooftop equipment.Decorative roof parapets shall be exempt from the maximum building height specified in the dimensional table.

Main building entries located on Primary Facades shall either project or recess from the façade plane or feature a change in building material.

Buildings with multiple Primary Facades shall utilize consistent architectural treatments, styles, materials, colors, and details.



Use of natural wood accents are encouraged to reflect the rural character of the Township.

Main building entries shall project and/ or feature a change in building material.

Primary Facades shall include a vertical break or change in massing at least every 150 linear feet.

Site Design & Ancillary Equipment

All ground-level Ancillary Equipment shall be located behind the Buffer Zone as to not be visible from a public road or thoroughfare.

Any ground level Ancillary Equipment (including substations) that cannot be hidden behind the Buffer Zone shall be screened from public roads or thoroughfares through the use of a vegetative buffer or screen wall.

Dense evergreens may be used as a buffer and shall be planted in a manner that provides eight feet (8') or higher screening around three sides of the Ancillary Equipment.

In lieu of plantings, a decorative screen wall of either a natural material or made to look like a natural material shall be erected in a manner that provides eight feet (8') or higher screening around three sides of the Ancillary Equipment.

Loading docks, dumpsters, waste facilities, and/or utilities shall be located behind the Buffer Zone.

Any rooftop mechanical equipment, including, but not limited to condensers, generators, and/or cooling equipment shall be visually screened using a solid or louvered sound wall containing soundproofing materials designed to absorb noise. Rooftop sound walls shall incorporate consistent styles and/or colors of the Primary Façade.

Rooftop sound walls shall be reviewed as Ancillary Equipment when considering height limitations.

Primary Facades on Data Centers are to comply with all base design requirements in the PIRT District Design Guidelines.

Screening should be achieved through the use of walls, fences and/or landscaping.

Bioretention, rain gardens, and other forms of vegetative stormwater management improvements are encouraged.

Decorative screen walls provide eight feet (8') or higher screening around three sides of the Ancillary Equipment.

PALMER TOWNSHIP
NORTHAMPTON COUNTY, PENNSYLVANIA
ORDINANCE NO. 2025-___

AN ORDINANCE OF PALMER TOWNSHIP, NORTHAMPTON COUNTY, PENNSYLVANIA AMENDING CHAPTER 190 BY CREATING A NEW USE FOR DATA CENTERS AND DATA CENTER CAMPUSES; BY CREATING A NEW DEFINITION FOR SAID USES; BY ADDING ADDITIONAL REGULATIONS FOR SAID USES; AND BY AMENDING ALL QUICK SHEETS AND TABLES OF USES TO PROVIDE FOR SAID USES

The Board of Supervisors of Palmer Township, upon recommendation of the Township Planning Commission and the Lehigh Valley Planning Commission, hereby enacts and ordains the following Ordinance:

ARTICLE I. DEFINITIONS

Chapter 190, Article 2, Section 202 relating to definitions shall be amended with the inclusion of new definitions for the terms "Data Center" and "Data Center Campus." The terms shall be added alphabetically within Chapter 190, Article 2, Section 202 and shall read as follows:

Data Center

A use, either on-premise or co-location, which is occupied primarily by computers and/or telecommunications and related equipment, including supporting equipment, where information is processed, transferred and/or stored; this shall also include cryptocurrency mining, blockchain transaction processing, and server farms. A data center may include data center equipment.

Data Center Accessory Uses/Structures

Ancillary uses or structures associated with data centers including but not limited to: utilities; utility lines; administrative, logistical, fiber optic, storage, and security buildings or structures; electrical substations; domestic and non-contact cooling water and waste-water treatment facilities; water holding facilities; pump stations; water towers; environmental controls (air conditioning or cooling towers, fire suppression, and related equipment); redundant data communications connections; and security features, provided such data center accessory uses/structures are located on the same tract or assemblage of adjacent parcels developed as a unified development for a data center campus.

Data Center Campus

An integrated development of multiple data centers, whether initially or cumulatively, that may include data center accessory uses/structures and data center equipment. The definition of data center campus shall also include: a) the development of related individual

data centers that are located within 500 feet of a parcel that contains an existing data center, b) the cumulative development of individual data centers on one parcel, and c) the cumulative development of individual data centers on individual parcels under the same ownership.

Data Center Equipment

outdoor mechanical equipment adjacent to a data center that provides redundant power capacity to a data center

Data Center Campus Master Plan

A plan for land development for a data center campus as set forth in Article IX

ARTICLE II. DATA CENTER USE REGULATIONS

Chapter 190, Zoning, of the Palmer Township Code is hereby amended with the creation of a new §190-989, entitled "Data Center" which shall read as follows:

A. Data Center Development. Data centers and/or data center campus development shall be permitted by right in the NEB North End Business District subject to compliance with this section and all applicable local and state ordinances.

B. Accessory Uses/Structures. Data center equipment shall be permitted by right in support of a data center and/or data center campus. Data center accessory uses/structures shall be permitted by right in support of a data center and/or data center campus. For purposes of the minimum distance between buildings, data center equipment and unoccupied data center accessory structures shall be deemed as auxiliary buildings that are not subject to the 25-foot set back between buildings.

C. Sound. Section 190-510 shall apply to a data center or data center campus development. Sound shall be measured 1.5 meters above ground at the property line per ANSI S1.13-2020 (American National Standard – Measurement of Sound Pressure Levels in Air). The applicant shall provide a sound assessment with its land development plan application for a data center or master plan application for a data center campus establishing how it will comply with the above sound standards. The sound assessment will be performed by a professional acoustic engineer that can demonstrate qualifications by delivery of a resume to the Township. Notwithstanding the foregoing provisions of this Section, all sound produced by: (i) required periodic testing of data center equipment, and (ii) emergency use of data center equipment are exempt from the requirements of this Section and the Zoning Ordinance.

D. Parking. No parking for a data center shall be located within fifty (50) feet of a property line abutting a residential district or having a residential use.

E. Off Street Loading. A minimum of 1 off-street loading space/dock shall be provided for a data center.

F. Utility Review. The proposed use shall be serviced by public utilities. The applicant shall provide the Township:

   a. A will-serve letter by a public utility provider and/or a written assessment by a certified professional in the field of engineering and utility design has been made of the potential electrical, water, and/or sewer consumption of the proposed use which ensures that there is sufficient capacity available to serve the proposed use as well as the projected service needs for future growth.

   b. If the above-mentioned assessment identifies a detrimental impact or threshold where utility capacity is not sufficient, the applicant shall provide, at their own expense, the necessary system improvements necessary to mitigate any limits or system constraints to accommodate the proposed use. The necessary system improvements shall conform to all specifications, procedures, and timelines required for the public utility such as the relevant provisions of the Palmer Township Code, including but not limited to Chapter 145, Individual Sewage Disposal Systems, and Chapter 184, Water Supply. If the necessary system improvements are determined by both the Township Engineer and the respective public utility provider to be infeasible, then on-site utility methods may be considered in compliance with all Township ordinances.

   c. The applicant shall provide proof of review and approval from the Delaware River Basin Commission for water withdrawals from ground water, impoundments, or running streams of 100,000 gallons per day or more over a 30-day average and for importation of water into or exportation of water out of the Delaware River Basin whenever the design capacity is 100,000 gallons per day or more.

G. Utility Lines. To the extent practical, utility lines, including but not limited to electronic, fiber optic, cable, and telephone lines, from substations to a data center shall be placed underground. This requirement shall not apply if the utility company requires above-ground lines, or the placement of under-ground lines is not feasible. Utility lines to the substations from off-site may be placed above ground.

H. Emergency Access. It shall be demonstrated that there is an adequate second means of ingress and egress suitable for emergency access to the site. Written approval from the Fire Commissioner shall be provided demonstrating there is adequate emergency access, truck turning, fire suppression, fire hydrant availability on the site.

I. Height. Data centers shall not exceed 70 feet in height. For purposes of determining the height of a data center or a building associated with data center accessory uses, projections through the roof of the building for items such as elevator towers, heating or cool units, parapet walls to screen rooftop equipment and protrusions, and other such items shall not be counted.

J. Outdoor Lighting. Section 190-513 shall apply to a data center or data center campus development. Outdoor lighting shall not exceed 30 feet unless a variance is obtained.

K. Environmental Impacts. Environmental impacts associated with a Data Center shall be mitigated by demonstrating compliance with the following standards:

a. Air pollution controls. All uses shall comply with the standards of the Air Pollution Control Act, 35 P.S. §§ 4001 through 4015, as amended, and the following standards:

i. Visible emissions. Visible air contaminants shall not be emitted in such a manner that the opacity of the emissions is equal to or greater than 20% for a period or periods aggregating more than three minutes in any one hour, or equal to or greater than 60% at any time, and shall comply with Pennsylvania Code Title 25, Chapter 127A(7), or its most recent update.

ii. Hazardous air emission. All emissions shall comply with National Emissions Standards for Hazardous Air Pollutants promulgated by the United States Environmental Protection Agency under the Federal Clean Air Act (42 U.S.C. § 7412) as promulgated in 40 CFR 61, or its most recent update.

iii. Dust, dirt, smoke, vapor, gas and odor control. *See* Section 190-512.

b. Vibration control. *See* Section 190-511.

c. Glare or heat control. Any operation producing intense glare or heat shall be performed within an enclosed building or behind a solid fence in such manner as to be completely imperceptible from any point beyond the lot lines. *See* Section 190-513.

d. Electrical power. Every use shall be designed and operated so that the service lines, substation, etc., shall conform to the most acceptable safety requirements recognized by the Pennsylvania Bureau of Labor and Industry, shall be so constructed, installed, etc., as to be an integral part of the architectural features of the plant or, if visible from abutting residential properties, shall be concealed in accordance with the landscaping requirements herein.

L. Construction Hours. Construction and related operation of heavy machinery, operating or permitting the operation of any tools, equipment or heavy machinery used in construction, drilling, or demolition work for a data center campus may occur between the hours of 7:00 a.m. and 10:00 p.m. on Monday through Saturday, or at all times if, and only if, all land that would receive the noise created by construction, as measured in accordance with Subsection C, is developed or zoned Industrial. The Township may permit additional construction hours by administrative modification upon request by an applicant.

M. On-Site Energy Generation. Any form of on-site energy generation, including substations and fuel cell power stations, shall be approved by the Township Fire Commissioner. The applicant shall submit a safety plan for the on-site energy generation use to the satisfaction and approval of the Palmer Township Fire Commissioner. The property owner shall annually recertify the safety plan and allow for a site inspection by the Fire Commissioner or his designee to identify any emergency response vulnerabilities and to identify compliance with the safety plan. On-site energy generation shall comply with Section 190-987 and 190-988.

N. Phased Development. A data center campus may be developed in one or more phases.

O. Data Center Campus Master Plan. Data center campus development shall be subject to a data center campus master plan which covers the full site. For any development that meets the definition of land development under the Pennsylvania Municipalities Planning Code, a data campus center master plan shall be submitted with a land development application for purposes of developing a data center campus, akin to a preliminary plan for a multi-phased subdivision. The process and procedures for data center campus master plan application shall follow the land development process under Chapter 165 of the Palmer Township Code.

P. An individual site plan for each data center identified on the data center campus Master Plan or each phase of the development of the data center campus demonstrating compliance with the data center campus master plan shall be submitted to the Township prior to the issuance of a building permit. Copies of any applicable third-party permits shall be submitted to the Township prior to the issuance of a building permit. Applicable third-party permits may include, but are not limited to, highway occupancy permits, NPDES permits, and ESCGP permits.

Q. An individual site plan for each data center or each phase of the development of the data center campus shall be found to be consistent with the approved data center campus master plan if it is clearly identified in the approved data center campus master plan or if the site plan is found to be a minor modification to the approved data center campus master plan. The procedure for a major modification to the approved data center campus master plan shall be the same as a new master plan under this section.

    a. A minor modification to an approved data center campus master plan is development that results in any of the following:

        i. A rate of stormwater discharge and runoff from the site equal to or less than rates identified in the stormwater management plan approved in connection with the data center campus master plan.

        ii. Minor shifts in building locations that do not substantially deviate from the originally approved plans.

        iii. Addition or relocation of data center accessory uses/ structures or data center equipment within the approved development area.

        iv. Adjustments to internal road layouts that do not substantial modify overall traffic patterns or materially alter ingress and egress access points.

        v. Adjustments to utility line routes within the approved development area.

        vi. Building adjustments that increase the square footage of a data center or accessory uses/structures by up to 5% or any adjustment that decreases or eliminates the square footage of a planned data center or data center campus.

        vii. Any adjustment to the approved plan required by a third-party governmental agency including but not limited to PennDOT or DEP necessary for approval under their permitting process.

b. A major modification to an approved data center campus master plan is any modification to an approved data center campus except as listed above. Major modifications shall require review by the Planning Commission and approval from the Board of Supervisors as a modification of an approved plan.

c. The applicant may submit to the Township (either with the site plan or at the request of the Township) any additional plans, studies, or reports demonstrating that individual site plan for each data center or each phase of the development of the data center campus is a minor modification of the data center campus master plan.

ARTICLE III. ZONING DISTRICTS

1. Chapter 190, Section 411(B) of the Palmer Township Code related to principal uses permitted by special exception in the IOC Industrial/Office/Commercial District shall be amended to include both Data Center and Data Center Campus.
2. Chapter 190, Section 411(E) of the Palmer Township Code related to principal uses permitted by special exception in the IOC Industrial/Office/Commercial District shall be amended to include Data Center.
3. Chapter 190, Section 412(A) of the Palmer Township Code related to principal uses permitted by right in the NEB North End Business District shall be amended to include both Data Center and Data Center Campus.
4. Chapter 190, Section 412(D) of the Palmer Township Code related to accessory use permitted by right in the NEB North End Business District shall be amended to include Data Center.

ARTICLE IV. REPEALER

All Ordinances or parts of Ordinances which are inconsistent herewith are hereby repealed.

ARTICLE V. SEVERABILITY

If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality, or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts of this Ordinance. It is hereby declared as the intent of the Board of Supervisors of Palmer Township, that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid sentence, clause or section or part thereof not been included therein.

ARTICLE VI. EFFECTIVE DATE

This Ordinance shall become effective five (5) days after enactment.

PALMER TOWNSHIP
NORTHAMPTON COUNTY, PENNSYLVANIA
ORDINANCE NO. 2025-___

SIGNATURE PAGE

ENACTED AND ORDAINED BY THE TOWNSHIP OF PALMER, NORTHAMPTON COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 2025

_____
Michael Brett, Chairman

_____
Jeffrey Young, Vice-Chairman

_____
K. Michael Mitchell, Member

_____
Joseph Armato, Member

_____
Charles E. Bellis, III, Member

Attest:

_____
Robert Williams
Township Manager

TOWNSHIP OF UPPER MACUNGIE
Lehigh County, Pennsylvania

ORDINANCE #2025-_____
(To be considered, and if appropriate, Duly Adopted December 4, 2025)

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE TOWNSHIP OF UPPER MACUNGIE, LEHIGH COUNTY, PENNSYLVANIA, AMENDING CHAPTER 27 (ZONING) OF THE CODE OF THE TOWNSHIP OF UPPER MACUNGIE, KNOWN AS THE UPPER MACUNGIE TOWNSHIP ZONING ORDINANCE AND THE SECTIONS OF CHAPTER 27 AS HEREINAFTER SET FORTH. SPECIFICALLY, THIS ORDINANCE ADDS A NEW DEFINITIONS; AMENDS THE USE TABLE AND ADDS ADDITIONAL REQUIREMENTS ALL RELATED TO PROVIDING FOR AND REGULATION OF "DATA CENTERS" ALL OF WHICH ARE FULLY SET FORTH IN THE BODY OF THIS ORDINANCE AND ALL OF WHICH ARE IN ACCORDANCE WITH THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, ACT 247 OF 1968, P.L. 805, NO. 247, AS REENACTED AND AMENDED, 53 P.S. §10609.

WHEREAS, Upper Macungie Township is a thriving community having a well-balanced blend of agricultural, residential, commercial, and industrial properties within its borders; and

WHEREAS, Upper Macungie Township is a community that enjoys a quality of life that people want to invest in and where they want to live and raise a family coupled with an attractive area for business and job growth; and

WHEREAS, the Upper Macungie Township Board of Supervisors, from time to time, finds a need to regulate certain new and innovative uses in the Township in order to preserve the quality of life and to promote, protect and facilitate the public health, safety and welfare; and

WHEREAS, the Upper Macungie Township Board of Supervisors has concluded that the recent surge of development of Data Centers and similarly associated facilities in the Commonwealth has generated the necessity to amend Chapter 27 (Zoning) to provide for and regulate these facilities in order to preserve the quality of life and to promote, protect and facilitate the public health, safety and welfare; and

WHEREAS, Section 27-108 of the Upper Macungie Township Zoning Ordinance provides that "the Board of Supervisors may amend, challenge or repeal any or all portions of this Chapter on its own motion or upon agreeing to hear a written request for any person, entity or the Planning Commission."; and

WHEREAS, pursuant to Section 609 of the Municipalities Planning Code, 53 P.S. § 10609, the Township of Upper Macungie is authorized and empowered to enact amendments to the Upper Macungie Township Zoning Ordinance after public hearing thereon pursuant to public notice; and

WHEREAS, the Board of Supervisors of the Township of Upper Macungie has conducted a public hearing pursuant to public notice concerning the following amendments to the Upper Macungie Township Zoning Ordinance; and

WHEREAS, after public hearing pursuant to public notice, the Board of Supervisors of the Township of Upper Macungie desires to ordain and enact the amendments to the Upper Macungie Township Zoning Ordinance set forth hereinafter.

NOW, THEREFORE, BE IT HEREBY ENACTED by the Board of Supervisors of Upper Macungie Township as follows:

SECTION 1. DELETIONS, AMENDMENTS, INSERTIONS AND CHANGES

The following Sections denoted by Section numbers are amended, with such amendments being denoted by bold underlining. (**bold underlining**)

The following Sections or parts thereof denoted by Section numbers are added, with such additions being denoted by the word "NEW" preceding the addition which shall be denoted by bold text. (**"NEW"**)

The following Sections or parts thereof denoted by Section numbers are deleted, with such deletions being denoted by brackets and strikethrough ([~~strikethrough~~]).

For purposes of Codification, all Sections noted herein follow the Sections as set forth in the Code of Ordinance of the Township of Upper Macungie, revised through November 2, 2023

SECTION 2. BODY OF THE ORDINANCE

Part 2 DEFINITIONS

§ 27-202 Terms Defined.

"NEW" DATA CENTER - A building or buildings which are occupied primarily by computers and/or telecommunications and related equipment where digital information is processed, transferred and/or stored, primarily to and from offsite locations. 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. This use shall also include cryptocurrency mining, blockchain transaction processing, and server farms. Data Center shall include Data Center Equipment.

"NEW" DATA CENTER EQUIPMENT – Equipment including but not limited to: utilities; utility lines; administrative, logistical, fiber optic, storage, and security buildings or structures; electrical substations; domestic and non-contact cooling

water and waste-water treatment facilities; water holding facilities; pump stations; water towers; environmental controls (air conditioning or cooling towers, fire suppression, and related equipment); redundant data communications connections; and security features, provided such Data Center Equipment are located on the same tract. This use includes outdoor mechanical equipment adjacent to a Data Center that provides redundant power capacity to a Data Center. This use also includes structures associated with Data Center Equipment.

"NEW" SENSITIVE RECEPTOR – Sensitive Receptor includes residential uses, schools, preschools, daycare centers, in-home daycares, long-term care facilities, retirement and nursing homes, community centers, places of worship, parks (excluding trails), campgrounds, and dormitories.

Part 3 DISTRICTS

Section §27-306 Table of Permitted Uses by District.

Types of Uses	Business Districts					
(See definitions in Part 2)	NC	HC	LI	LI(L)	GI	RT
Industrial Uses						
"NEW" Data Center	**N**	**N**	**N**	**N**	**C**	**C**

KEY:

P = Permitted by right (zoning decision by Zoning Officer)

C = Conditional use (decision by the Board of Supervisors with review by Planning Commission)

SE = Special exception use (decision by Zoning Hearing Board)

N = Not permitted

Part 4 ADDITIONAL REQUIREMENTS FOR SPECIFIC USES

Each of the following uses shall meet all of the following requirements for that use:

"NEW" Section §27-402.PPP. Data Center.

(1) Setbacks

(a) Data Centers and Data Center Equipment shall meet the building setback requirements as set forth in § 27-307 – Table of Lot and Setback Requirements by District, except:

1) Data Centers and Data Center Equipment shall be set back 200 feet from the boundary of a residential zoning district or the lot line of any property containing a Sensitive Receptor.

(2) Buffers

(a) Data Centers and Data Center Equipment shall meet the Buffer Yard requirements as set forth in § 27-803.4.

1) In addition to the requirements of § 27-803.4, any Data Center and Data Center Equipment that are visible from beyond the exterior lot lines of the use shall be separated from such lot lines by an earthen berm. Such berm shall meet requirements for Earth Berms as set forth in § 27-803.G.

(3) Noise

(a) The applicant shall provide a sound study produced by a professional acoustical expert to demonstrate that the Data Center and Data Center Equipment will conform with the requirements of Chapter 10 Part 2: Noise. A sound study shall be conducted at the following phases:

1) A preliminary sound study for the Data Center and associated Data Center Equipment shall be conducted as part of the Conditional Use process. The preliminary sound study shall recommend the sound reducing materials or systems to meet the aforesaid sound limits using generally accepted criteria.

2) An interim sound study shall be conducted during the building permit process based upon the proposed user or users of the Data Center and Data Center Equipment depicted on the building plans. The sound reducing materials or systems recommended by the interim sound study shall be incorporated into the construction plans for the Data Center.

3) An as-built sound study shall be conducted six months after issuance of the Certificate of Occupancy for any Data Center and

associated Data Center Equipment prior to the final escrow release for any Data Center land development phase. An as-built sound study may also be required thereafter by the Township upon request. If it is determined by the as-built sound study that there is a violation of the aforesaid sound limits, then the owner or occupant of the Data Center shall promptly remediate the violation into compliance with the aforesaid sound limits.

4) The requirement for an as-built sound study conducted six months after issuance of the Certificate of Occupancy for any Data Center and associated Data Center Equipment shall not relieve the applicant from continuous compliance with the requirements of Chapter 10 Part 2: Noise.

(4) Water and Sewer

(a) If the use will be served by a public water supply, the applicant shall submit documentation from the Lehigh County Authority certifying that the Authority will supply the water needed.

(b) If the use is to rely upon nonpublic sources of water, the applicant shall provide a water feasibility study. The purpose of the study is to determine if there is an adequate supply of water for the proposed use and to estimate the impact of the use on existing wells, groundwater, and surface waters in the vicinity. No Data Center shall be approved unless the water feasibility study demonstrates that the anticipated water supply yield is adequate for the project and that the proposed water withdrawals and discharges will not endanger or adversely affect the quantity or quality of groundwater supplies or surface waters in the vicinity. The water feasibility study shall include the following information at a minimum:

1) The projected water demands of the Data Center; and

2) The source of water to be used; and

3) A description of how water will be used, including the amount or proportion of water to be used for each purpose (e.g. cooling, humidity control, fire suppression, and domestic usage); and

4) The long-term safe yield of the water source; and

5) A description of the amount or portion of water withdrawn that will be recycled or discharged and by what means; and

6) A geologic map of the area with a radius of at least one mile from the site; and

7) The location of all existing and proposed wells within 1,000 feet of the property boundary, with a notation of the capacity of all high-yield wells; and

8) The location of all surface waters, including perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps, and estuaries, within 1,000 feet of the property boundary; and

9) A determination of the effects of the proposed water supply system on the quantity and quality of water in nearby wells, surface waters, and the groundwater table; and

10) A statement of the qualifications and the signature(s) of the person(s) preparing the study.

(c) The applicant shall provide proof of review and approval from the Delaware River Basin Commission for projects proposing:

1) Water withdrawals of 100,000 gallons per day (gpd) or more over a 30-day average from any source or combination of sources within the Delaware River Basin; or

2) Any consumptive water use of 20,000 gpd or more over a 30-day average from any water source.

(d) The applicant shall demonstrate that adequate means of wastewater disposal, including domestic wastewater and wastewater used for cooling or industrial purposes, have been provided and approved by the Sewage Enforcement Officer and/or the Pennsylvania Department of Environmental Protection.

(5) Power Supply

(a) If the applicant proposes to connect the Data Center to the electric grid, the applicant shall provide documentation from the applicable electric service provider certifying that that the necessary capacity is available and that the electric service provider will serve the Data Center. An assessment identifying any detrimental impacts on electric rates or availability for other uses directly attributable to the Data Center project shall be provided to the Township.

(b) If the above-mentioned assessment identifies a detrimental impact or threshold where utility capacity is not sufficient, the applicant shall provide, at their own expense, the system improvements necessary to mitigate any limits or system constraints to accommodate the proposed use. The necessary system improvements shall conform to all specifications, procedures, and timelines required for the public utility. If the necessary system improvements are determined by both the Township Engineer and the respective public utility provider to be infeasible, then on-site utility methods may be considered in compliance with all Township ordinances.

(6) Emergency Planning

(a) The applicant shall submit an Emergency Response Plan (ERP) prepared by a qualified professional. The ERP shall:

1) Be reviewed and accepted by the Township's Bureau of Fire as part of the Conditional Use process; and

2) Include detailed procedures for fire suppression, containment, ventilation, and evacuation for the Data Center and Data Center Equipment; and

3) **Include an evaluation of the access roads and hydrant locations within the site to demonstrate suitable access for emergency equipment within the site; and**

4) **Ensure that all first responders receive adequate training specific to the installed system; and**

5) **Include provisions for required annual fire safety inspections demonstrating compliance with current fire code standards.**

SECTION 3. EFFECTIVE DATE

This Ordinance shall become effective immediately upon adoption.

SECTION 4. SEVERABILITY

In the event that any provision, section, sentence, clause, or part of this ordinance shall be held to be invalid, such invalidity shall not affect or impair any remaining provision, section, sentence, clause, or part of this ordinance, it being the intent of this Township that such remainder shall be and shall remain in full force and effect.

SECTION 5. REPEALER

All other Ordinances or parts of Ordinances inconsistent herewith shall be and the same expressly are repealed.

ENACTED AND ORDAINED the 4th day of December, 2025 by the Board of Supervisors of the Township of Upper Macungie, Lehigh County, Pennsylvania, in lawful session duly assembled.

ATTEST

UPPER MACUNGIE TOWNSHIP BOARD OF SUPERVISORS

_____
JAZMIN VAZQUEZ, Secretary

_____
JEFFREY FLEISCHAKER, Chairman

_____
SUNNY GHAI, Vice-Chairman

_____
JAMES M. BRUNELL, Member

4.06.02 Data Centers

A. **Applicability.** Section 4.06.02 applies to Data Center Uses. In addition to any other applicable requirements of Chapter 10, applicants must submit materials at the time of submission of a Site Plan that include any information necessary to evaluate conformance with standards in Section 4.06.02. Conditional or final Site Plan approval is contingent upon the applicant demonstrating conformance to standards in Section 4.06.02 and other standards of the Zoning Ordinance.

B. **Data Center Use-Specific Standards.** Data centers must meet the Façade Standards in Section 4.06.02.C and the General Site Design Standards in Section 4.06.02.D.

C. **Façade Standards.**

1. **Principal Façade.**

a. **Applicability.** Principal Façade requirements apply to all building façades that face adjacent existing or planned public roads or that face an adjacent property with existing residential development, an approved CDP, or plat, or plan showing residential development, or Zoning District permitting residential uses; and all building facades adjacent to or facing property with the following existing uses or an approved CDP, or plat, or plan showing the following uses:

1. Uses listed in Chapter 3 under the Residential and Lodging use classifications;
2. Uses listed in Chapter 3 under the Day Care, Financial Services, Food and Beverage Sales/Service, Government, Education, Arts, Entertainment, and Recreation, and Retail use categories; and
3. The following additional uses: civic, social, and fraternal meeting place, community center, standalone religious assembly, cemetery, farm winery, community garden, and limited brewery.

b. **Requirements.**

1. **Differentiated Surfaces.** Principal façades of a building must incorporate the following standards at horizontal linear intervals that may vary in frequency but must be no less frequent than every 150 horizontal linear feet or no less frequent than 3 times the average height of the building:
    a. Fenestration or Fenestration and (Optional) Green Wall; and
    b. A change in 1 of the following design elements:
        A. Building material;
        B. Pattern;
        C. Texture;
        D. Color; or
        E. Accent materials.
2. **Consistent Design.** When a building has more than 1 Principal Façade, the Principal Façades of such building must be consistent in terms of design, materials, details, and treatment.
3. **Fenestration.** Each Principal Façade of a building must include Fenestration as follows:
    a. **Fenestration Surface Coverage of the Façade.** Fenestration must comprise at least 30% of the total surface coverage area of the Principal Façade. **Distributed Fenestration Coverage.** Fenestration provided to meet the following:
        A. Each placement or bay may count towards no more than 7.5% of such total surface coverage area.
        B. Required 30% total surface coverage area of the Principal Façade must be located in separated, individual placements or clustered bays; and
    b. **Fenestration Coverage Pattern.** The placement pattern of individual or clustered bays of Fenestration must be distributed horizontally and vertically across the Principal Façade; and
    c. **Fenestration Consistent Design with Principal Façade.** The Fenestration must be compatible with the other design, materials, details, and treatment used on the same

Principal Façade.

2. **Green-Wall Treatment.**
    a. **Applicability.** A Green-Wall Treatment may be provided in lieu of up to half of the Fenestration Surface Coverage of the façade requirement of Section 4.06.02.C.1.b.3.a.
    b. **Requirements.** Green-Wall Treatments must provide the following:
        1. **Maintenance.** The owner, or the owner's agent, is responsible for the repair, replacement, and maintenance of the Green-Wall for the duration of the use;
        2. **Distributed Green-Wall Surface Coverage.** Green-Wall areas must be provided to meet up to half of the required 30% total surface coverage area of the Principal Façade of a building; and
        3. **Green-Wall Coverage Pattern.** The Green-Wall areas must be distributed horizontally and vertically across the Principal Façade.
3. **Data Center Mechanical Equipment Façade.**
    a. **Applicability.** If 2 Principal Façades are required on opposing sides of a building pursuant to Section 4.06.02.C.1, up to 1 Data Center Mechanical Equipment Façade pursuant to Section 4.06.02.C.3.b may be provided in lieu of 1 such required Principal Façade if such Principal Façade faces an adjacent existing or planned public road.
    b. **Requirements.**
        1. **Data Center Mechanical Equipment Façade.** Optional Data Center Mechanical Equipment Façades must provide the following:
            a. **Partial or Full Visual Screening of Data Center Mechanical Equipment.** Data Center Mechanical Equipment attached to or mounted on the building façade must be partially or fully visually screened from view at the ground level from all existing and planned public roads and adjoining parcels using mesh, lattice, cladding, or grillwork or a combination of these methods, or similar methods so as to ensure that the Data Center Mechanical Equipment is partially or fully screened to the maximum extent that permits necessary ventilation for any equipment; and
            b. **Differentiated Surfaces.** The Data Center Mechanical Equipment Façade, including any provided screening methods, must incorporate a change in at least one of the following design elements at horizontal linear intervals that may vary in frequency but must be no less frequent than every 150 horizontal linear feet or no less frequent than 3 times the average height of the building:
                A. Building material;
                B. Pattern;
                C. Texture;
                D. Color; or
                E. Accent materials.
4. **Main Entrance Feature.**
    a. **Applicability.** Each building containing a Data Center must include at least 1 Main Entrance Feature that meets the requirements of Section 4.06.02.C.4.b.
    b. **Requirements.**
        1. **Entrance Feature Design.** Main Entrance Features must either project or recess from the main building plane, and/or be differentiated from the remainder of the building façade by a change in building material; and
        2. **Foundation Plantings or Enhanced Landscaping.** Main Entrance Features must incorporate foundation plantings consisting of a mix of evergreen and deciduous shrubs, grasses, sedges, or rushes, and/or herbaceous perennials, ferns, or vines for a minimum of 50% of the length of the Façade. These foundation plantings are in addition to any required buffers and parking lot landscaping required by Section 7.04 and Section 4.06.02.D.11. Alternatively, in lieu of Foundation

Plantings, any required buffering and parking area landscaping may be provided at an enhanced rate of 20% of plant units greater than what is required pursuant to Section 4.06.02.D.11 and Section 7.04.06, respectively.

D. **General Site Design Standards.**

1. **Loading Bay Location.** Loading bays are permitted to be located on only 1 façade.
2. **Location and Screening of Data Center Mechanical Equipment.** All ground level and roof top Data Center Mechanical Equipment must meet the following standards: Data Center Mechanical Equipment must be shown on any proposed Site Plan and must be fully screened on all sides. Such visually solid screen must be constructed with a design, materials, details, and treatment compatible with those used on the nearest Principal Façade of a building;
    a. **Perforation for Ventilated Screening.** As determined by the Zoning Administrator, screening for Data Center Mechanical Equipment may incorporate perforated surfaces on screening walls as necessary to permit ventilation of Data Center Mechanical Equipment;
    b. **Separation from Residential.** Ground mounted Data Center Mechanical Equipment must be separated from adjacent property that has existing residential development, an approved CDP or plat or plan showing residential development, or Zoning District permitting residential uses, by a principal building, or is otherwise not permitted adjacent to property with existing residential development, an approved CDP or plat or plan showing residential development, or Zoning District permitting residential uses;
    c. **Ground Mounted Prohibited in Front Yards.** Ground mounted Data Center Mechanical Equipment must not be located in any required front yard; and
    d. **No Screening Requirements Adjacent to Industrially Zoned Property.** As determined by the Zoning Administrator, Data Center Mechanical Equipment located in a manner found to have no adverse impact on adjacent properties zoned IP, GI, or MR-HI is not required to be screened pursuant to Section 4.06.02.D.2, except that such Data Center Mechanical Equipment must be screened from any existing or planned public road.
3. **Refuse Collection and Loading Bay Area Screening.** Refuse collection areas must be fully screened on all sides and loading bays must be screened from view at the ground level from all adjacent parcels and existing or planned public roads.
4. **Utilities.** Data Centers are subject to Utilities requirements pursuant to Section 7.08.
5. **Transportation.** Except for the Mid-Block Passageway requirement pursuant to Section 7.07.03.C, which does not apply to Data Centers, Data Centers are subject to Transportation requirements pursuant to Section 7.07.
6. **LPAT Trails in RSCR Buffer Areas.** For any proposed Data Center use on a lot containing RSCR Buffer Areas or Adjacent Steep Slopes pursuant to Chapter 6, Trails must be provided as determined by the Department of Parks, Recreation, and Community Services in accordance with the LPAT Design Guidelines for a trail.
7. **Setbacks and Building Massing Adjacent to Residential.** The following requirements apply when a proposed Data Center is to be located on a property adjacent to property with existing residential development, an approved CDP or plat or plan showing residential development, or Zoning District permitting residential uses, including when the Data Center property and adjacent residential property are separated by a principal arterial or lesser designated roadway, per the Countywide Transportation Plan:
    a. **Minimum Parking Setback.** Parking must be setback at least 50 feet from the common property line, provided existing forest and other natural screening exists within 50 feet of the lot line, and such forest and screening remains undisturbed or enhanced in accordance with Chapter 7; or, if no forest or natural screening exists, berms are provided at least 10 feet in height constructed to a maximum 2:1 slope on either side of the crown edge, and 10-foot-tall fencing and plantings are placed on top of the berm;
    b. **Minimum Setback for Structures.** Structures must be setback at least 200 feet from the common property line;
    c. **Change in Building Height.** If a building is located within 400 feet measured from the property line adjacent to property with existing residential development, an approved CDP or plat or plan showing residential development, or Zoning District permitting residential uses, any building façade facing the

adjacent property must include a change in building height at a minimum interval no less frequent than every 150 horizontal linear feet or no less frequent than 3 times the average height of the building; and

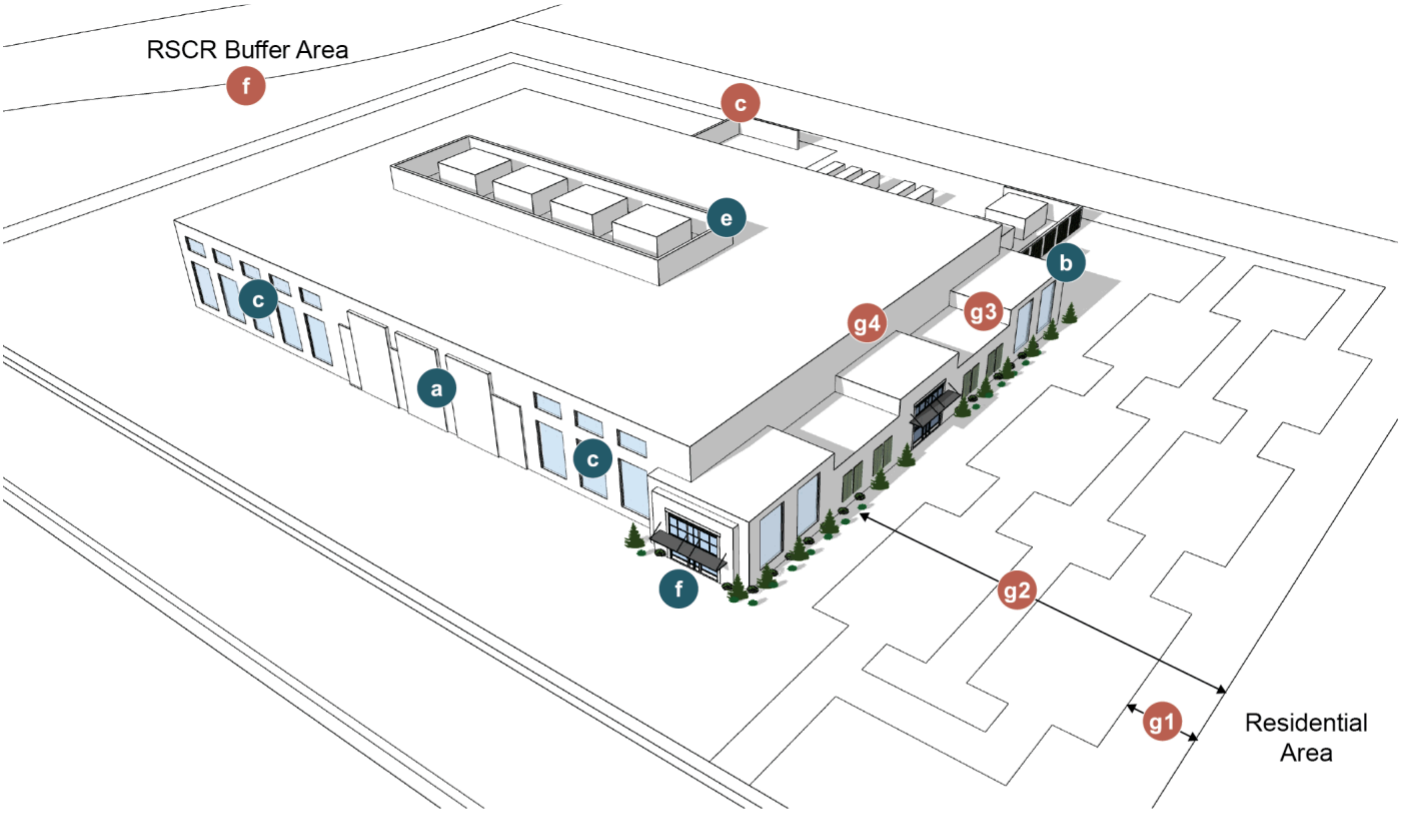
d. **Building Step-Back.** If a building is located within 400 feet measured from the property line adjacent to property with existing residential development, an approved CDP or plat or plan showing residential development, or Zoning District permitting residential uses, the building envelope must provide a step-back of no less than 15 feet from the building wall at a height point that begins at the top of the second story of the building or 40 feet, whichever of the 2 is lower.

8. **Generator Noise Adjacent to Residential.** For Data Centers on property adjacent to property with existing residential development, an approved CDP, or plat, or plan showing residential development, or Zoning District permitting residential uses, the following standard applies to generator testing, subject to Commonwealth regulations or permits issued for the property:
   a. Generator testing is limited to between 5:00 p.m. and 7:00 m. between May 1 and September 30;
   b. Generator testing is limited to between 11:00 a.m. and 5:00 p.m. between October 1 and April 30; and
   c. Except for generator testing or commissioning activities, generator use is limited to backup/emergency use only.
9. **Light and Glare.** In addition to the requirements of Section 7.05.02, Data Centers must meet the following standards:
   a. Data Centers must include a photometric plan that shows all exterior lighting, including any security lighting; and
   b. Maximum illumination under Section 7.05.02.B.3 includes any security lighting.
10. **Noise Studies and Soundproofing.**
   a. **Noise Studies.** Data Centers are subject to the Noise Study standards pursuant to Section 7.05.03.G.
   b. **Soundproofing.** For Data Centers on property adjacent to property with existing residential development, an approved CDP, or plat, or plan showing residential development, or Zoning District permitting residential uses, any Data Center Mechanical Equipment located on the property, whether on a roof top, on the ground level, or elsewhere on the exterior of the property, must be screened on all four sides by an acoustical barrier. For purposes of this section, acoustical barrier is defined as an exterior solid or louvred wall containing sound-proofing materials designed to absorb noise and protect neighboring properties from noise pollution.
11. **Landscaping/Buffering/Screening.** All applicable regulations for Landscaping, Buffers, and Screening pursuant to Section 7.04 apply except as follows:
   a. **Specific Plant Unit Composition Requirements.** In lieu of the requirements of Section 7.04.07.B.2, the following requirements apply to the plant types used to meet Section 7.04.03 Buffer requirements. Maximum percentages apply solely in determining the quantity of a given plant type that can be counted towards meeting a Plant Unit requirement and do not preclude the installation of additional plant material from that plant type, if desired.
      1. **Specific Plant Unit Percentages.** The following plant unit percentages apply to each property line where the buffer or road corridor buffer is required:
         a. A maximum of 20% of the required plant units may be a combination of shrubs, ornamental grasses, and perennials.
         b. A minimum of 40% and a maximum of 70% of the required plant units must be evergreen trees that are a minimum of 8 feet in height at the time of planting.
         c. A maximum of 30% of the required plant units may be small deciduous trees.
         d. A maximum of 30% of the required plant units may be large deciduous trees.
         e. Buffer Substitution Using Topography and Vegetation. Use of natural topography and preservation of existing vegetation, supplemented by new vegetation, if needed, may be substituted for the above requirements if determined by the Zoning Administrator in consultation with the County Urban Forester to provide screening at the density, depth,

and height equivalent to the Buffer Type C with earthen berm or Road Corridor Buffer Type 3 with earthen berm.

2. **Specific Buffer and Berm Requirements.** In lieu of the buffer required under Table 7.04.03-1, a Buffer Type C is required with the specified plantings and located on an earthen berm that has a minimum height of 6 feet and a grade lower than 2:1. Use of natural topography and preservation of existing vegetation, supplemented by new vegetation, if needed, may be substituted if determined by the Zoning Administrator in consultation with the County Urban Forester to provide an equivalent density, depth, and height to the required Buffer Type C and earthen berm.
3. **Road Corridor Buffer.** If a Gateway Corridor Buffer is required pursuant to Section 7.04.02, the Gateway Corridor Buffer standards of Section 7.04 apply.

Figure 4.06.02-1. Data Center Standards



Façade Standards

- a Differentiated Surfaces
- b Consistent Design Elements of Principal Façades
- c 30% Fenestration in Separated Placements
- e Mechanical Equipment Screened on all Sides
- f Main Entrance Feature & Foundation Plantings

Site Design Standards

- c Screening of Refuse Collection and Loading Bay Areas
- f LPAT Trails in RSCR Buffer Areas
- g1 50 ft Parking Setback Adjacent to Residential Area
- g2 200 ft Building Setback Adjacent to Residential Area
- g3 Change in Building Height when Adjacent to Residential Area
- g4 Building Step-Back when Adjacent to Residential Area

Exhibit C

[MUNICIPALITY][1]

[ALLEGHENY] COUNTY, PENNSYLVANIA

ORDINANCE NO. _____

AN ORDINANCE OF THE [GOVERNING BODY] OF [MUNICIPALITY], PENNSYLVANIA, TO AMEND THE [MUNICIPALITY] CODE OF ORDINANCES TO DEFINE AND ADD SPECIFIC REQUIREMENTS FOR DATA CENTERS AND DATA CENTER ACCESSORY USES.

WHEREAS, Article VI of the Pennsylvania Municipalities Planning Code, 53 P.S. § 10601, *et seq.*, authorizes the [MUNICIPALITY] to enact, amend and repeal Zoning Ordinances within the [TOWNSHIP/BOROUGH/CITY]; and

WHEREAS, the [GOVERNING BODY] deems it to be in the best interest and general welfare of the residents of the [TOWNSHIP/BOROUGH/CITY] to update and amend provisions of the [MUNICIPALITY] Zoning Ordinance to provide for Data Centers and Data Center Accessory Uses; and

WHEREAS, the [GOVERNING BODY] of the [[MUNICIPALITY]/BOROUGH/CITY] desires to add provisions to the Zoning Ordinance relating to Data Centers and Data Center Accessory Uses;

NOW, THEREFORE, BE IT ORDAINED AND ENACTED, by the [GOVERNING BODY] of [MUNICIPALITY] as follows:

Section 1. Section [XXX] of the [MUNICIPALITY] Code of Ordinances, entitled Definitions, is amended to add the following definitions:

Data Center: A building or buildings which are occupied primarily by computers and/or telecommunications and related equipment where digital information is processed, transferred and/or stored, primarily to and from offsite locations. 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. This use shall also include cryptocurrency mining, blockchain transaction processing, and server farms. A Data Center may include Data Center Accessory Uses.

Data Center Accessory Use: Ancillary uses or structures secondary and incidental to a Data Center use, including but not limited to: administrative, logistical, fiber optic, storage, and security buildings or structures; sources of electrical power such as generators used to provide temporary power when the main source of power is interrupted; electrical substations; utility lines; domestic and non-contact cooling water and wastewater treatment facilities; water holding facilities; pump stations; water towers; environmental controls (air conditioning or cooling towers, fire suppression, and related equipment); security features, provided such data center accessory uses/structures are located on the same tract or assemblage of adjacent parcels developed as a unified development with a Data Center. The use shall not

[1] Where terms are in brackets, municipalities should select the appropriate term. Where text is highlighted, footnotes provide additional information about the provision.

include energy generation systems used or intended to be used to supply power to the Data Center during normal operations.[2]

Data center operator: The person or entity responsible for the post-construction operation of a data center.

Sensitive receptor:[3] any residential use, school, preschool, child or adult day-care center, hospital, assisted-living facility, long term care facility, nursing home, personal care home, retirement community, treatment center, community center, place of worship, park (excluding trails), campground, or dormitory.

Sustainable yield[4]**:** The amount of ground water that can be safely withdrawn from an aquifer annually without producing an undesirable result. Undesirable results include, but are not limited to, depletion of groundwater storage, the intrusion of water of undesirable quality, the contravention of existing water rights, excessive depletion of surface waters by induced infiltration, and land subsidence.

Section 2. [Language indicating zoning districts where Data Center uses will be allowed and level of zoning review required (permitted use, conditional use, special exception)][5]

Section 3. Section XXX (Standards for Specific Uses) is amended to add Section XXX, Data Centers and Data Center Accessory Uses, as follows:

XXX-XX – **Data Centers and Data Center Accessory Uses**

A. Data Centers shall be permitted by [RIGHT/CONDITIONAL USE/SPECIAL EXCEPTION][6] in the XXX Zoning District when approved in compliance with the procedures, standards, and criteria contained in this section.

B. **Dimensional Standards.** The dimensional standards of Data Centers and Data Center Accessory Uses shall be in accordance with [identify existing standards applicable to relevant zoning district, if applicable], with the following exceptions:

1. The minimum lot area shall be [X] acres.
2. The maximum building height for a Data Center shall be [45] feet, plus up to 15 additional feet for roof-mounted equipment such as cooling and ventilation systems, HVAC units, and cooling towers.
3. The maximum height of Data Center Accessory Uses shall be no greater than the height of the principal building, exclusive of roof-mounted equipment.

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[2] If a municipality does not already have such ordinances, PennFuture recommends a separate ordinance or ordinances governing power generation facilities such as gas-fired power plants, solar arrays, and wind farms. Given the potential that power generation facilities serving data centers will be very large, PennFuture does not believe it is appropriate to treat them as accessory uses.

[3] This list of uses can be adjusted if different terms are used in the municipality's existing zoning ordinance.

[4] This is a modified version of the definition found in the publication, *Examining Safe Yield and Sustainable Yield for Groundwater Supplies and Moving to Managed Yield as Water Resource Limits Become a Reality,* by S.J. Meyland of the Department of Environmental Technology at the New York Institute of Technology.

[5] PennFuture cannot make universal recommendations about where data centers should be located. Each municipality must make this determination based on the characteristics of its own community.

[6] PennFuture recommends that data centers be conditional uses or special exceptions in almost all cases but recognizes that there are limited circumstances where permitting the use by right may be acceptable.

4. Data Centers and Data Center Accessory Uses shall be set back a minimum of [XXX][7] feet from the boundary of [identify residential or other appropriate zoning districts] or the lot line of any property developed with a Sensitive Receptor.

5. Data Centers and Data Center Accessory Uses shall be set back a minimum of [XXX] feet from all other adjoining property lines and road rights-of-way.

C. **Landscape Buffer[8]; Fencing.** A landscape buffer is required between Data Centers and Data Center Accessory uses and any adjoining [residential zoning district], Sensitive Receptor, or public roadway. The landscape buffer shall comply with the following requirements:

1. The landscape buffer shall be at least [25] feet in width and may be part of the minimum setback distance.

2. The landscape buffer shall be free of structures, dumpsters, storage or display areas, signs, materials, loading or unloading areas, and vehicle parking.

3. The landscape buffer shall include plantings to achieve a dense, opaque, four-season screen and shall consist of native species planted as follows:

   a. One (1) large evergreen tree per 25 linear feet of buffer. The size of large evergreen trees shall be a minimum of eight (8) feet in height at the time of planting.

   b. One (1) deciduous canopy (shade) tree per 75 linear feet of buffer. Size of canopy (shade) trees shall be a minimum of 2½ inch caliper at the time of planting.

   c. One ornamental/flowering tree per 50 linear feet of buffer. The size of ornamental/flowering trees shall be a minimum of eight (8) feet in height for multi-stemmed varieties, or 2½ inch caliper at the time of planting for single-stemmed varieties.

   d. Five (5) shrubs per 25 linear feet of buffer. Size of shrubs shall be fully branched and minimum of three feet in height at the time of planting. Shrubs shall be a combination of evergreen and deciduous species, with a minimum of 50% being evergreen.

4. All plantings shall conform to the standards of the [municipality's] list of acceptable plant species[9], or shall be approved by the [governing body] upon recommendation by the [municipal] Engineer, and/or Pennsylvania-registered landscape architect, or certified arborist.

5. A variety of species shall be used in order to prevent monocultural plantings. American arborvitae and similar weak-stem plants shall not be used to meet the buffer yard requirements. If more than 20 evergreen plants are proposed, no more than 50% shall be of one species.

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[7] Each municipality must determine the appropriate setback distances in light of the possible location of the data center(s) and its relationship to the surrounding zoning districts and uses. Setbacks should be large enough to protect neighboring uses from negative impacts but cannot be so large as to create a *de facto* exclusion.

[8] Municipalities may cross-reference existing landscaping requirements or omit this section entirely if these standards already exist elsewhere in its ordinances.

[9] Omit this phrase if the municipality does not have a list of acceptable plant species.

6. A monotonous straight row of the same species shall not be permitted. A more naturalistic form of planting with a mix of species shall be provided.
7. In the event that existing topography and/or vegetation is adequate to meet the intent of the required buffer yard, such existing topography and/or vegetation may constitute all or part of the required buffer yard.
8. All buffer yard plantings shall be perpetually maintained by the property owner. Any plant material that dies, is removed, is diseased, or is severely damaged shall be replaced by the current property owner, on a one-to-one basis, as soon as is practical considering growing seasons, within a maximum of 150 days.
9. All buffer yard screening shall be assured by a performance guarantee posted with the [governing body] in an amount equal to the estimated cost of all such trees, shrubs, plantings, and installation. Such guarantee shall be released only after passage of the second growing season following planting.
10. Fencing of the property is permitted, provided that fencing along public and private roadways is not chain-link, with or without slatted inserts, and does not include barbed wire or other similarly visibly intrusive deterrence device. An applicant shall not be required to comply with this requirement if fencing is fully screened from view by one or more of the means identified in subparagraph 1 above.

D. **Equipment Screening**

1. To provide visual screening and reduce noise levels, ground-mounted and roof-mounted equipment used for cooling, ventilating, or otherwise operating the facility, including backup power generation equipment, that is located within [XXX] feet of a public roadway, [residential or other relevant zoning districts][10], or the lot line of any Sensitive Receptor must be fully enclosed, except where not mechanically feasible based on the manufacturer's specifications. If it is not mechanically feasible to fully enclose the equipment, it must be fully screened from view using one or more of the following means:
    a. The landscape buffer required by subsection (C) above.
    b. By existing vegetation that will remain on the property.
    c. By the principal Data Center building or an accessory building
    d. A berm averaging a minimum of five (5) feet in height above the adjacent average ground level with a maximum side slope of 3:1, provided that the berm shall be covered by a well-maintained all season natural ground cover and any required screening plantings shall be arranged on the outside and top of the berm.
    e. A visually solid fence, screen wall or panel, parapet wall, or other visually solid screen that shall be constructed of materials compatible with those used in the exterior construction of the principal building.

[10] The municipality should name appropriate zoning districts here.

E. **Noise and Vibration**

1. No Data Center or Data Center Accessory Use, or any combination of Data Center and Data Center Accessory Uses developed as part of a unified development, shall cause or contribute to sound levels in violation of the standards established by this section. Where there is a conflict between this section and any other section of this chapter, the provisions of this section shall apply.

2. **Definitions.** The following definitions shall apply to this section:

   a. **A-weighted fast response maximum sound level (L_{MAX}).** The maximum sound pressure level in decibels (dB) measured over a given period of time, with A-frequency weighting and fast response time-weighting applied.

   b. **Compliance metric:** L_{EQ}, L_{MAX}, L_{PK}, or L_{PTL}.

   c. **Daytime Hours:** the hours between 7:00 am and 6:00 pm on weekdays and between 9:00 am and 6:00 pm on weekends and holidays

   d. **Equivalent continuous sound level (L_{EQ}).** The steady sound pressure level in decibels (dB) which, over a given period of time, has the same total energy as the fluctuating noise measured over the same period of time.

   e. **Evening Hours:** the hours between 6:00 pm and 10:00 pm

   f. **Log Average Level (LAL_{xx})**: The logarithmic average of the interval measurements of a compliance metric, computed as follows:

$$LAL_{xx} = 10 \log_{10} \left[\frac{1}{nP_o^2} \sum_{k=1}^{n} P_o^2 \quad 10^{L_{xk}/10} \right]$$

$$= 10 \log_{10} \left[\left\{ 10^{\frac{L_{x1}}{10}} + 10^{\frac{L_{x2}}{10}} \ldots 10^{\frac{L_{xn}}{10}} \right\} / n \right]$$

   Where:

   LAL_{xx} = log average level in dBA or dB where L_{xx} represents either L_{EQ}, L_{MAX}, L_{PK}, or L_{PTL}.
   L_{x1} = level of the first interval measurement in dBA or dB
   L_{x2} = level of the second interval measurement in dBA or dB
   L_{xn} = level of the n^{th} interval measurement in dBA or dB
   n = the number of measurement intervals
   P_0 = standard reference pressure of 20 micro pascals

   A minimum of 20 intervals of one minute each measured over a single period of 24 hours shall be used, however, intervals need not be contiguous. Intervals with louder, and preferably the loudest noise, should be used.

   g. **Natural Environmental Sounds:** Environmental sounds that are inherent to the area and due to naturally occurring sounds such as insects, rustling leaves, wind, wild birds, wild animals, frogs, rain, lightning, or weather, but not including the noise of domesticated animals.

   h. **Normal Community Sound:** Sound that is inherent to and consistent with the norms of the community and which the average resident would reasonably expect

to occur in their community. Normal Community Sound may include, but is not limited to, children playing, occasional dog barks, domestic power tools, residential HVAC equipment, and reasonable transportation sounds that meet state, federal, and local noise requirements and limits.

i. **Nighttime Hours:** the hours between 10:00 pm and 7:00 am on weekdays and between 10:00 pm and 9:00 am on weekends and holidays.

j. **Pure tone:** A sound occurring at a discrete frequency as determined by a Fast Fourier Transform measurement (narrow band analysis) of a sound using a dynamic analyzer with at least 1 Hz and preferable 1/8 Hz resolution, a Hanning window, and sufficient averaging to determine the magnitude of the pure tone level that is exceeded 5% of the time (i.e. an exceedance rate of L_5).

k. **Pure Tone Level (L_{PTL}).** The magnitude in decibels (dB) of a pure tone, with no weighting applied.

l. **Receiving Property:** Real property impacted by noise generated by a Data Center and/or Data Center Accessory Uses. A Receiving Property need not be directly adjacent to the parcel or collection of parcels on which the Data Center or Data Center Accessory Use(s) are located but shall not include any real property incorporated as part of a unified design with the Data Center whose compliance is being evaluated.

m. **Un-weighted peak sound pressure level (L_{PK}).** The maximum instantaneous sound pressure level in decibels (dB) that occurs during a stated time interval, with no weighting applied.

3. **Sound level limits**.

a. For purposes of compliance with this subsection, sound shall be measured at the point, at any elevation, on the Receiving Property where the Log Average Level of the relevant Compliance Metric is highest.

b. LAL_{EQ} shall not exceed the following values:

Table 1: Equivalent Continuous Sound Level (L_{EQ}) Limits[11]

Zoning District	Daytime hours	Evening hours	Nighttime hours
Rural Residential, Low-Density Residential Districts, Properties containing Sensitive Receptors	50 dB	45 dB	45 dB
Medium- and High-Density Residential Districts	55 dB	50 dB	45 dB
Mixed Use, Commercial, Industrial Districts	65 dB	60 dB	55 dB

[11] The zoning districts and sound level limits used in this table are for example purposes only. Actual zoning district names and categories should be tailored to the municipality, and sound level limits should reflect the actual background noise levels of the relevant zoning districts. Additional/different categories may be necessary depending on the characteristics of the community. For example, a higher sound level limit may be appropriate along highway corridors.

c. LAL_{MAX} shall not exceed the decibel value of the Equivalent Continuous Sound Level (L_{EQ}) for the zoning district and time of day, as provided in Table 1, by more than 10 dB.

d. LAL_{PK} shall not exceed the decibel value of the Equivalent Continuous Sound Level (L_{EQ}) for the zoning district and time of day, as provided in Table 1, by more than 20 dB.

e. All LAL_{PTLs} shall be at least 10 dB below the nominal PTLxx curve at the corresponding frequency, as set forth in Table 2 below, where the value represented by "xx" is the L_{EQ} limit (in dB) set forth in Table 1 for the appropriate zoning district and time of day. Where the applicable L_{EQ} limit is not a multiple of 5, the PTL curve corresponding to the next highest 5 dB increment shall be used; interpolation between PTL curves is not permitted.

Each identified pure tone shall be evaluated independently, and where more than one pure tone is present, compliance shall be determined separately for each tone. Logarithmic averaging of tonal levels across frequencies shall not be used.

Table 2: Maximum allowable LAL_{PTL} in dB by Tone Frequency and L_{EQ} limit[12]

	Octave Band Frequency (Hz) of Pure Tone									
PTLxx curve	**16**	**32**	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
PTL70	101	96	91	86	81	76	72	68	64	60
PTL65	96	91	86	81	76	71	67	63	59	55
PTL60	91	86	81	76	71	66	62	58	54	50
PTL55	86	81	76	71	66	61	57	53	49	45
PTL50	81	76	71	66	61	56	53	48	44	40
PTL45	79	74	68	62	56	51	47	43	39	35
PTL40	78	71	64	58	51	46	42	38	34	30
PTL35	76	69	61	54	46	41	37	33	29	25
PTL30	74	66	58	49	41	36	32	28	24	20
PTL25	73	64	54	45	36	31	27	23	19	15
PTL20	71	61	51	41	31	26	22	18	14	10
PTL15	69	59	48	37	26	21	17	13	9	5
PTL10	68	56	44	33	21	16	12	8	4	0

[12] PLT curve rows that are not within 5 dB of any L_{EQ} value in Table 1 can be eliminated.

4. **Exceptions.** The above sound level limits do not apply to sound originating from:
   a. Motor vehicles operated legally and in compliance with the noise regulations of the Pennsylvania Department of Transportation
   b. Safety and protective devices where noise suppression would defeat the safety intent of the device when being used for its intended purpose
   c. Any device intended to provide public warning of potentially hazardous, emergency, or illegal activities such as commercial, residential, or vehicle burglar alarms; back-up signals on regulated and licensed motor vehicles; fire alarms; law enforcement and fire vehicles, and similar devices
   d. Emergency equipment and emergency work necessary in the interest of public health, safety, or welfare or law enforcement
   e. Emergency standby generators during emergency use. Routine testing of generators shall comply with the sound level limits unless such testing occurs between 7:00 am and 6:00 pm on weekdays and between 9:00 am and 6:00 pm on weekends and holidays, during which time generators may exceed the sound level limits by no more than 20 dBA (20 dB for L_{PK}) for up to one (1) cumulative hour per seven (7) calendar day period.
   f. Construction noise, including site preparation, assembly, erection, demolition, substantial repair, maintenance, alteration or similar action for structures or other site improvements, provided that such construction occurs during Daytime Hours and that reasonable noise controls such as proper muffling of all engines, motors, or turbine-driven equipment, and pneumatic devices; noise enclosed air compressors and generators; sound barriers; and lagging are employed.
5. **Measurement**
   a. Terminology and measurement practices shall follow applicable ANSI S1 & S12 standards. Compliance measurements shall be made using a calibrated ANSI Type 1 or Type 2 integrating sound level meter with a dynamic range of at least 60 dB. For each measurement, the signal-to-noise ratio shall be at least10 dB.
   b. The contribution of wind noise to each compliance measurement shall not exceed 5 dBA (or dB). Measurements shall be made with properly installed windscreens, and any measurement influenced by wind noise exceeding this limit shall be discarded or repeated under acceptable conditions.
   c. Measurements shall exclude significant effects of Natural Environmental Sounds and Normal Community Sounds. The signal-to-noise ratio of the combined effect of Natural Environmental Sounds and Normal Community Sounds shall be at least 5 dBA (or dB) and preferably at least 10 dBA (or dB).
   d. Impact or impulse-type sounds shall be measured with the un-weighted Peak Sound Pressure Level (L_{PK}) using a meter specifically designed for peak measurements and conforming to the applicable ANSI S1 standards. RMS (root mean square) measurements using the “fast” response setting or any legacy “impulse” function shall not be used.

6. **Vibration.** No source of mechanical vibration or acoustically induced vibration shall cause or induce vibration on any property or in any structure (ground-borne or structural vibration) that exceeds the ISO 2631-2 Residential Day criteria. Vibration shall be measured as particle velocity in any one-third octave band and shall not exceed 200 μm/s RMS in any band.
7. **Sound and vibration study.** The applicant shall demonstrate through a sound study conducted by a professional acoustical expert that the sound and vibration generated by a Data Center and/or Data Center Accessory Uses comply with the requirements of this section. The sound study shall be conducted using generally accepted methodology in the following phases:
    a. A sound modeling study shall be conducted to demonstrate that the proposed use will comply with applicable noise requirements of this section. The sound modeling shall be performed according to ISO 9613-2 series methods or other generally accepted engineering methods for outdoor sound propagation. All significant noise sources associated with the proposed Data Center and Data Center Accessory Uses(s) shall be included. The sound modeling study shall be submitted with the [conditional use/special exception/land development application].
    b. An as-built sound study shall be conducted six months after issuance of the certificate of occupancy and prior to the final escrow release for any land development phase. An as-built sound study may also be required thereafter by the [municipality]. If it is determined by the as-built sound study that there is a violation of the aforesaid noise limits, it shall be considered a violation of this Ordinance.

F. **Water Supply –Water Feasibility Study.** No Data Center shall be approved unless the applicant demonstrates that there is an adequate supply of water for the proposed use and that proposed water withdrawals and discharges will not endanger or adversely affect the quantity or quality of groundwater supplies or surface waters in the vicinity.
    1. **Public water supply.** If the use will be served by a public water supply, the applicant shall submit documentation from the public authority certifying that the public authority will supply the water needed.
    2. **River basin commission approval.**[13] If the use is to rely upon nonpublic sources of water and satisfies either of the below conditions, the applicant shall provide proof of review and approval from the [Delaware/Susquehanna] River Basin Commission and shall not be required to provide an additional water feasibility study.
        a. Water withdrawals of 100,000 gallons per day (gpd) or more over a 30-day average from any source or combination of sources within the Delaware/Susquehanna River Basin; or
        b. Any consumptive water use of 20,000 gpd or more over a 30-day average from any water source.

[13] This provision is applicable only for municipalities located in the Delaware and Susquehanna River Basins and should be deleted otherwise. The other river/lake commissions do not review or approve withdrawals.

3. **Water Feasibility Study.** If the use is to rely upon a nonpublic groundwater source and will withdraw [50,000] gallons per day (gpd)[14] or more over any consecutive 30-day period, or is to rely on surface water withdrawal, the applicant shall provide a water feasibility study. The purpose of the water feasibility study is to determine if there is an adequate supply of water for the proposed use and to estimate the impact of the use on existing wells, groundwater, and surface waters in the vicinity.
4. **Contents of water feasibility study.** The water feasibility study shall include the following information at a minimum:
    a. The projected water demands of the Data Center, including both average and peak daily consumption;
    b. The source of water to be used;
    c. A description of how water will be used, including the amount or proportion of water to be used for each purpose (e.g. cooling, humidity control, fire suppression, and domestic usage);
    d. A description of the amount or portion of water withdrawn that will be recycled or discharged and by what means and at what temperature;
    e. A topographic map of the area with a radius of at least one-half mile from the site including;
        i. The location of all existing and proposed wells within 3,000 feet of the property boundary, or, in the case of an assemblage of parcels, 3,000 feet of the exterior lines of the assemblage of parcels, including test wells and monitoring wells, with a notation of the capacity of all high-yield wells. This distance shall be increased to encompass the diversion and recharge areas of the proposed groundwater source if the hydrological setting analysis required by subsection (5)(a) below indicates either area will extend beyond 3,000 feet from the property boundary;
        ii. The location of all existing and proposed on-lot sewage disposal systems as well as all sewage treatment system surface water discharges;
        iii. The location of all surface waters, including perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps, and estuaries and the use classification thereof (Cold Water Fishes, High Quality, Exceptional Value, etc.), if applicable, as set forth in Chapters 93 and 105 of Title 25 of the Pennsylvania Code;
        iv. Any known or potential habitats for threatened or endangered species; and;

[14] This threshold can be adjusted as the municipality sees fit. For reference, 10,000 gpd is roughly equivalent to 75 residential units, 20,000 gpd is roughly equivalent to 150 residential units, and 50,000 gpd is roughly equivalent to 375 residential units.

v. The information applicable to groundwater withdrawals or surface water withdrawals, as appropriate, as required by subsections (5) and (6), below.

vi. A statement of the qualifications and the signature(s) of the person(s) preparing the study.

5. **Groundwater withdrawals.** For groundwater sources, the water feasibility study shall include a hydrogeologic report prepared by a registered professional geologist licensed by the Commonwealth of Pennsylvania analyzing the long-term sustainable yield of the water source. The hydrogeologic report shall include:

a. A hydrological setting analysis which includes a hydrogeologic cross section, delineation of the portion of the aquifer through which water is diverted to the well (area of diversion), delineation of the area providing groundwater recharge to the diversion area (recharge area), and identification of water resources located within the diversion and recharge areas.

b. The results of an aquifer test conducted in accordance with Pennsylvania Department of Environmental Protection, Bureau of Safe Drinking Water, Document No. 394-2125-001, *Aquifer Testing Guidance for Public Water Systems*[15], or other generally accepted methodology. Data shall include, at a minimum, precipitation data, static water levels immediately prior to yield testing, linear hydrographs of water levels and test responses of all monitoring points through background, testing, and recovery monitoring periods, residual drawdown graphs and logarithmic hydrographs of the production well and any monitoring points that had observable drawdown as a result of operating the production well. Field notes showing original observations, water levels and flow readings and the time readings were taken shall be included.[16]

c. Analysis and interpretation of the aquifer test data, including a determination of the aquifer's hydraulic conductivity and specific capacity; aquifer transmissivity and storage coefficient;[17] estimation of the horizontal extent of the cone of depression; and determination of a safe yield for the well, including analysis of the effects of 180 days of pumping with no recharge; and a groundwater availability analysis providing potential availability in a one-in-ten year drought.

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[15] DEP Document No. 394-2125-001, pertains to public water supplies but details the contents of a hydrogeologic report. The process it describes includes a stepped-rate test, a background test, a constant-rate aquifer test and a recovery test. It also includes water quality testing for temperature, pH, conductivity, and turbidity.

[16] This language is taken from the ordinance adopted by Penn Forest Township, Carbon County.

[17] Hydraulic conductivity measures the ease with which water can move through the aquifer. Transmissivity is the rate at which the aquifer can horizontally transmit water. Both essentially measure how well the aquifer can transmit water. Specific capacity is the rate of discharge from a well per unit of drawdown. The storage coefficient is the volume of water an aquifer releases from storage per unit surface area of the aquifer per unit change in head

d. Test results from any wells tested in accordance with Section G, below

e. A determination of the effects of the proposed withdrawal on the quantity and quality of water in wells, surface waters, and the groundwater table within the horizontal extent of the cone of depression and how those impacts will be mitigated or remediated.

6. **Surface water withdrawals.** SEE SUPPLEMENTARY SHEET AT THE END OF THIS DOCUMENT [18]

G. **Water Supply – Pre-construction well testing**

1. If the use is to rely upon a nonpublic groundwater source and will withdraw and/or discharge 50,000 gallons per day (gpd)[19] or more over any consecutive 30-day period, the applicant shall notify each property owner within 3,000 feet of the **property** boundary or within the horizontal extent of the any production well's cone of depression, as determined by the hydrogeologic study, whichever is greater, of the proposed project and shall offer to test the owner's well for baseline water quality, total depth of the well, static water level and operating pumping water level.

2. If the property owner grants permission to allow for water quality and well testing, the applicant shall hire and pay the full cost of a certified lab and professional geologist with a focus on hydrogeology to collect the laboratory samples and well information. Alternatively, the property owner may elect to hire a certified lab and professional geologist of his own choosing to collect the laboratory samples and well information, in which case the applicant shall pay the full cost of such services.

3. Notifications shall be sent via certified mail, shall include the name and contact information of the person to whom to respond, and shall allow sufficient time for property owners to respond and for testing to be conducted prior to commencement of the constant-rate aquifer test.

4. The applicant shall include all test results obtained pursuant to this section in the water feasibility study.

H. **Water Supply – Post-construction monitoring and reporting**

1. For purposes of this section, area of influence (AOI) shall mean the greater of the horizontal extent of the production well(s)' cone of depression, as determined by the hydrogeologic report, or the area within 3,000 feet of the property boundary of the proposed project, or, in the case of an assemblage of parcels, within 3,000 feet of the exterior lines of the assemblage of parcels.

2. **Groundwater monitoring plan.**[20] The applicant shall submit a Groundwater Monitoring Plan prepared by a professional licensed hydrogeologist with expertise

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[18] Penn Future has devised surface water withdrawal provisions specific to each of Pennsylvania's major river basins based on The Nature Conservancy's Ecosystem Flow Recommendations. They are included in a supplemental section at the end of this document. Municipalities should incorporate the relevant river basin standard and omit the others.

[19] This threshold should match the threshold that triggers the need for a feasibility study.

[20] Language in this section is based in part on 25 Pa. Code § 89.34, 25 Pa. Code § 273.282, 25 Pa. Code § 110.501, and wetland monitoring conditions incorporated into certain NPDES permits.

in groundwater resource planning and management or another qualified professional or professionals approved by the [municipality]. The Groundwater Monitoring Plan shall include:

a. An inventory of existing wells, springs, and other groundwater resources within the AOI, including information on the location, ownership, depth to water, and usage for all wells;

b. Description of a groundwater monitoring system that ensures accurate characterization of groundwater flow, groundwater quantity and quality, and flow systems within the AOI. The system shall consist of the following at a minimum:

   i. At least one monitoring well at a point hydraulically upgradient from the point(s) of withdrawal in the direction of increasing static head that is capable of providing representative data of groundwater not affected by the facility, except when the facility occupies the most upgradient position in the flow system. In that case, sufficient downgradient monitoring wells shall be placed to determine the extent of adverse effects on groundwater from the facility; and

   ii. At least three monitoring wells at points hydraulically downgradient in the direction of decreasing static head from the point(s) of withdrawal.

c. Benchmark data collected prior to commencement of water withdrawal against which the impact of the water withdrawal may be compared in the future. Benchmark data shall include groundwater levels in all monitoring wells recorded as a distance from the elevation at the well head referenced to mean sea level based on United States Geological Survey datum.

d. Any additional information the [municipality] deems necessary to effectively assess the impact of the proposed development on groundwater supplies.

3. **Inspection of wells.** The Data Center Operator shall inspect monitoring wells, including water level loggers, at least monthly to ensure that they are not damaged and are functioning properly. If a damaged or malfunctioning well is identified, the [municipality] shall be contacted immediately in writing, and the well shall be restored to its design specifications within two weeks, unless weather conditions do not permit and/or this period is extended in writing by the [municipality]. In the event that the water table falls below the bottom of a monitoring well and the water level logger in that well becomes inoperable, the well shall be inspected at a minimum of once every two weeks and the data logger shall be re-installed once the water table is again observed in the well.

4. **Reporting.** The Data Center Operator shall submit to the [municipality] quarterly reports on forms and in a manner prescribed by the [municipality]. Reports shall include the following:

a. The quantity of all withdrawals, measured by means of a continuous-recording device, flow meter, or other method accurate to within 5% of actual flow, on a daily basis or such other frequency as may be approved by the [municipality];

b. Groundwater levels at all monitoring wells; measured on a daily basis or such other frequency as may be approved by the [municipality];

c. Precipitation data, measured on a daily basis or such other frequency as may be approved by the [municipality];

d. Certification of the accuracy of all measuring devices and methods to within 5% of actual flow;

e. Any loss of measuring or recording capabilities that occurred during the reporting period;

f. A running comparison of monitoring data comparing the data for the recording period to the data for the same period in each of the previous five years;

g. Any additional information the [municipality] deems necessary to determine whether the data center's water withdrawal adversely impacts water supply.

I. Adverse Groundwater Impacts; Presumptions; Hearing[21]

1. **Adverse Impacts.** The Data Center shall not cause an adverse impact to the water rights or water supply of others, including, but not limited to, by reducing the existing rate of flow of wells, causing contamination of wells, or depleting surface water resources of surrounding properties.

2. **Process for Complaints.**

   a. Any owner of a well or other person who believes a Data Center in the [municipality] has caused an adverse impact to such person's water rights or water supply may file a complaint in writing with the [municipality] on a form prescribed by the [municipality].

   b. Upon receiving a complaint pursuant to paragraph (a), the [municipality] shall notify the Data Center Operator in writing within five (5) business days.

   c. Within 60 days from the date of receipt of the complaint, the [municipality] shall decide whether the Data Center has caused the alleged adverse impact unless the complainant has agreed in writing to an extension of time or a hearing has been requested pursuant to paragraph (e), in which case the timelines set forth in paragraph (4) shall govern.

3. **Presumptions; burdens.** The following presumptions shall apply to the [municipality's] decision:

   a. A Data Center Operator shall be presumed to be responsible for any adverse impacts to any water supply well within the AIO that occurs within 60 months

[21] These provisions are based on the Jim Thorpe Borough, Carbon County, Code of Ordinances § 500-112, and the Buckingham Township, Bucks County, Well Ordinance (No. 2003-06).

following the date any production well is put into full production and shall have the burden of proving otherwise.

b. The Data Center Operator shall not be presumed to be responsible for any adverse impact to any well that is located outside the AIO or which takes place more than 60 months from the date the well or wells are put into full production. In such cases, any person claiming adverse impacts shall have the burden of proving said adverse impacts and that they are caused by the data center's withdrawal.

4. **Hearing.**

a. A Data Center Operator who asserts that an alleged adverse impact is not caused by the Data Center's well(s), any owner of a well outside the AIO who alleges an adverse water supply impact, and any owner of a well within the AIO who alleges an adverse impact more than 60 months from the date the data center's well or wells are put into full production, may request a hearing to be held before the [governing body] pursuant to the Pennsylvania Local Agency Law, 2 Pa. C.S.A. § 551, et seq., to overcome the presumption(s) set forth in Paragraph 3 by offering such evidence as they believe rebuts the presumption(s).

b. If the complainant requests a hearing, such request shall be made at the time of the filing of the complaint. If the the Data Center Operator alleged to have caused the adverse impact requests a hearing, the request shall be made within 30 days of the mailing of the notice required by paragraph 2(b). The hearing request shall include proof of service thereof on either the Data Center Operator or upon the complainant, as the case may be.

c. The [governing body] shall schedule and conduct a hearing and make a decision in accordance with, and pursuant to the timeline set forth in, Section 908 of the Pennsylvania Municipalities Planning Code, 53 P.S. § 10908,[22] except references therein to the zoning hearing board shall be construed as references to the [governing body].

5. **Decision.**

a. The [governing body] shall decide, based on presumptions set forth in Paragraph 3, and the testimony and evidence presented at any hearing conducted pursuant to Paragraph 4, whether the Data Center has caused the alleged adverse impact.

b. Each decision shall be accompanied by written findings of fact and conclusions based thereon, together with the reasons therefor. Conclusions based on any provisions of any ordinance, rule or regulation shall contain a reference to the

[22] Alternatively, this provision can cross-reference existing local ordinance provisions governing hearings, so long as such provisions include adequate information about notice, the timing of the hearing, party status, and a timeline for decision-making.

provision relied on and the reasons why the conclusion is deemed appropriate in the light of the facts found.

6. **Remediation.** In the event that the [governing body] determines pursuant to the provisions of this Section that a Data Center is responsible for an adverse impact to the water supply of others, the Data Center Operator shall alleviate the adverse impact, at no expense to the affected property owner(s), so as to furnish reasonable quantity and quality of water. Remediation may include deepening the impacted well, drilling a new well, connecting the affected property to a public water supply, or any other measures as the [municipality] may approve as just and equitable under the individual circumstances.

J. **Enforcement**

1. In the event that that the Data Center Operator does not commence to remedy the adversely impacted water supply within [5] days of when the [governing body] finally determines that the Data Center Operator is responsible for an adverse impact, the [municipality] may draw down the financial security posted pursuant to this Section and apply such security as the [municipality] deems necessary to cure the problem. In the event that the financial security is not sufficient to cure the problem, the Data Center Operator shall be responsible for any additional expense, including legal, engineering and administrative costs, which are incurred in curing the problem.
2. The [municipality] may at its option, in addition to any other remedies available to it, institute an action in equity to enjoin, or any other appropriate action or proceedings, to restrain or prevent any violation of the provisions of this Section.

K. **Financial Security**

1. The Applicant shall deposit with the [municipality] at the time of land development approval financial security in an amount determined by multiplying $5,000 [23]by the number of all other groundwater wells within the Hydrologic Environment. The security shall be in the form of a term bond or the deposit of funds in escrow or a federal- or commonwealth-chartered lending institution irrevocable letter of credit and restrictive or escrow accounts.
2. Sixty (60) months after the date that the Data Center Operator's well(s) reaches full production, the [municipality] shall return to the Applicant all financial security posted pursuant to this Section upon written request, except such security as may be necessary to remedy any pending claims of adversely impacted wells which have not been finally determined.

L. **Power Supply**

1. If the applicant proposes to connect the Data Center to the electric grid, the applicant shall provide documentation from the applicable electric service provider certifying that that the necessary capacity is available and that electric service

[23] This number may be adjusted to reflect an appropriate cost to remedy adverse impacts to wells.

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.

2. Any energy generation system designed or used to supply power directly to a Data Center during normal operations, including solar, wind, fossil fuel, or nuclear energy generating systems, shall not be considered part of the Data Center use. Such systems shall be considered a separate use and shall be approved according to the zoning regulations applicable to such use.

M. **Emergency Management**

1. The applicant shall submit an Emergency Response Plan (ERP) prepared by a qualified professional. The ERP shall:
   a. Be reviewed and accepted by the local fire department and emergency management services as part of the [conditional use/special exception/land development] process;
   b. Include detailed procedures for fire suppression, containment, ventilation, and evacuation;
   c. Include an evaluation of the access roads and hydrant locations within the site to ensure suitable access for emergency equipment within the site;
   d. Ensure that all first responders receive adequate training specific to the installed system;
   e. Include provisions for annual fire safety inspections demonstrating compliance with fire safety standards to be performed by a qualified professional on behalf of the Data Center.
2. Any Data Center use proposing battery storage or any other device or group of devices capable of storing energy in order to supply electrical energy at a later time, whether the energy is stored for use on-site or off-site, shall demonstrate compliance with National Fire Protection Association (NFPA) Standard 855, Installation of Stationary Energy Storage Systems, or similar standards and must include fire suppression systems designed specifically for battery storage.
3. No Data Center shall be approved unless the applicant demonstrates that procedures for fire suppression, containment, ventilation, and evacuation are sufficiently protective of public health, safety and welfare.

N. **Aesthetics**

1. Any Data Center and Data Center Accessory Use building façade that faces a road, [ZONING DISTRICT], or existing residential use must incorporate at least two of the following design elements every 150 horizontal feet:
   a. A change in building material, pattern, texture, or color;
   b. A change in building height;
   c. Building step-backs or recesses having a minimum depth of five (5) feet;

O. **Parking**

1. Data Centers are to be provided with at least one parking space per 8,000 square feet of floor area designed and intended to be accessible regularly by employees, or one parking space for every one employee, based upon the maximum number of employees on site during the largest shift, whichever is lesser.

Section 4: Severability. If any sentence, clause, section, or part of this Ordinance or of the Zoning Ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts hereof. It is hereby declared as the intent of the [GOVERNING BODY] that this Ordinance and the Zoning Ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included herein.

Section 5. Repealer. All Ordinances or parts of Ordinances conflicting with any provision of this Ordinance are hereby repealed insofar as the same affects this Ordinance.

Section 6. Codification. Pursuant to the [APPPLICABLE MUNICIPAL CODE] and the Pennsylvania Municipalities Planning Code, the [MUNICIPALITY] Zoning Ordinance shall hereby be codified to incorporate the above-referenced amendments.

Section 7. Effective Date. This Ordinance shall take effect five (5) days after its adoption.

SUPPLEMENT – SURFACE WATER WITHDRAWAL STANDARDS

SUSQUEHANNA RIVER BASIN

e. For surface water sources, the water feasibility study shall demonstrate that withdrawals will comply with the standards set forth in Table 1:

Table 1		
Parameter	**Drainage area of stream at point of withdrawal**	
	< 50 sq. mi	**>50 sq. mi.**
Floods	Maintain magnitude and frequency of 20-year, 5-year, and 2-year floods	
Monthly high flow	No greater than 10% change to magnitude of monthly high flow in any month	
Monthly median flow	Shall remain between 45th and 55th percentile for each month	
Upper monthly flow range	No more than 20% change for any calendar month	
Lower monthly flow range	No change for any calendar month	No more than 10% change for any calendar month
Monthly low flow	No change for any calendar month	

1. Terms used in Table 1 shall have the following meanings:

   i. **20-year flood**: Peak streamflow level having a 5% chance of occurrence in any given year

   ii. **5-year flood:** Peak streamflow level having a 20% chance of occurrence in any given year

   iii. **2-year flood:** Peak streamflow level having a 50% chance of occurrence in any given year

   iv. **Percent exceedance value.** The probability that a given flow will be equaled or exceeded in the stream at the point of withdrawal within a given month, expressed as Px. For example, the probability that the P75 flow for a given month will be exceeded at some point during the month is 75%.

   v. **Monthly flow duration curve**: a cumulative curve showing percent exceedance values for flows over a calendar month

   vi. **Monthly high flow:** flow having a percent exceedance value of P10

   vii. **Monthly median flow:** flow having a percent exceedance value of P50

   viii. **Monthly low flow:** For streams with drainage areas less than 50 miles, flow having a percent exceedance value of P75, for all other streams, flow having a percent exceedance value of P95

   ix. **Upper monthly flow range:** The area under the stream's monthly flow duration curve between P10 and P75

x. **Lower monthly flow range:** The area under the stream's monthly flow duration curve between P75 and P99

2. **Baseline streamflow calculation**.[24] Baseline streamflow statistics and flow duration curves shall be calculated using generally accepted methodology based on a minimum of ten (10) recent years of record, with representative wet, normal, and dry periods sufficiently represented.

3. **Use of reference stream gage.** Where data does not exist for the location from which withdrawal is proposed, data from an appropriate USGS reference stream gage shall be used to calculate baseline flow statistics. The reference stream shall be unregulated and of a similar drainage area size, physiographic province and geology, and mean annual precipitation and evapotranspiration, and ideally located on the same stream or on a nearby stream. Best professional judgment shall be used in selecting a reference stream that best represents the project site. Flow statistics from the reference gage shall be transferred to the project site using the drainage area ratio method.

4. **De minimis withdrawals**. An applicant is exempt from the requirement to demonstrate compliance with Table 1 if the feasibility study demonstrates that withdrawals will be *de minimis*. A withdrawal is *de minimis* if it does not exceed 5% of P95 for any calendar month for streams having a drainage between 10 and 1,000 square miles at the point of withdrawal or 10% of P95 for any calendar month for streams having a drainage area greater than or equal to 1,000 square miles at the point of withdrawal. No withdrawal shall be considered *de minimis* for streams having a drainage area less than 10 square miles at the point of withdrawal.

5. **Minimum passby flows.** Minimum passby flows must be maintained at all times, in accordance with Table 2. A passby flow is the prescribed quantity of water that must be allowed to pass the point of withdrawal at all times during which withdrawal is occurring.

Passby flow requirement	
Drainage area of stream at point of withdrawal	**Required monthly passby flow**
≤10 mi.	P70
10–49.9 mi.	P75
50–199.9 mi.	P80
200–999.9 mi.	P85
1,000–4,999.9 mi.	P90
≥ 5,000 mi.	P95

[24] Susquehanna River Basin Commission, TECHNICAL GUIDANCE FOR LOW FLOW PROTECTION RELATED TO WITHDRAWAL APPROVALS UNDER POLICY NO. 2012-11 at 6–7 (2012).

DELAWARE RIVER BASIN

e. For surface water sources, the water feasibility study shall demonstrate that withdrawals will comply with the standards set forth in Table 1:

Table 1			
Parameter	**Drainage area of stream at point of withdrawal**		
	<10 sq. mi.	**10–200 sq. mi**	**> 200 sq. mile**
Floods	Maintain magnitude and frequency of 20-year, 5-year, and 2-year floods		
Monthly high flow	No greater than 10% change in magnitude in any month		
Monthly median flow	No change	No greater than 10% change in magnitude in any month	
Monthly low flow	No change	No greater than 10% change in magnitude in any month	
Upper monthly flow range	No greater than 20% change in magnitude in any month		
Middle monthly flow range	No change	No greater than 10% change in magnitude in any month	No greater than 15% change in magnitude in any month
Lower monthly flow range	No change	No greater than 10% change in magnitude in any month	

1. Terms used in Table 1 shall have the following meanings:
   i. **20-year flood**: Peak streamflow level having a 5% chance of occurrence in any given year
   ii. **5-year flood:** Peak streamflow level having a 20% chance of occurrence in any given year
   iii. **2-year flood:** Peak streamflow level having a 50% chance of occurrence in any given year
   iv. **Percent exceedance value.** The probability that a given flow will be equaled or exceeded in the stream at the point of withdrawal within a given month, expressed as Px. For example, the probability that the P75 flow for a given month will be exceeded at some point during the month is 75%.
   v. **Monthly flow duration curve**: a cumulative curve showing percent exceedance values for flows over a calendar month
   vi. **Monthly high flow:** flow having a percent exceedance value of P10
   vii. **Monthly median flow:** flow having a percent exceedance value of P50
   viii. **Monthly low flow:** For streams with drainage areas less than 10 miles, flow having a percent exceedance value of P75, for all other streams, flow having a percent exceedance value of P90

ix. **Upper monthly flow range:** The area under the stream's monthly flow duration curve between P10 and P50

x. **Middle monthly flow range:** The area under the stream's monthly flow duration curve between P50 and P75

xi. **Lower monthly flow range:** The area under the stream's monthly flow duration curve between P75 and P99

2. **Baseline streamflow calculation**.[25] Baseline streamflow statistics and flow duration curves shall be calculated using generally accepted methodology based on a minimum of ten (10) recent years of record, with representative wet, normal, and dry periods sufficiently represented.

3. **Use of reference stream gage.** Where data does not exist for the location from which withdrawal is proposed, data from an appropriate USGS reference stream gage shall be used to calculate baseline flow statistics. The reference stream shall be unregulated and of a similar drainage area size, physiographic province and geology, and mean annual precipitation and evapotranspiration, and ideally located on the same stream or on a nearby stream. Best professional judgment shall be used in selecting a reference stream that best represents the project site. Flow statistics from the reference gage shall be transferred to the project site using the drainage area ratio method.

4. **De minimis withdrawals**. An applicant is exempt from the requirement to demonstrate compliance with Table 1 if the feasibility study demonstrates that withdrawals will be *de minimis*. A withdrawal is *de minimis* if it does not exceed 5% of P95 for any calendar month for streams having a drainage between 10 and 1,000 square miles at the point of withdrawal or 10% of P95 for any calendar month for streams having a drainage area greater than or equal to 1,000 square miles at the point of withdrawal. No withdrawal shall be considered *de minimis* for streams having a drainage area less than 10 square miles at the point of withdrawal.

[25] Susquehanna River Basin Commission, TECHNICAL GUIDANCE FOR LOW FLOW PROTECTION RELATED TO WITHDRAWAL APPROVALS UNDER POLICY NO. 2012-11 at 6–7 (2012).

OHIO RIVER BASIN

e. For surface water sources, the water feasibility study shall demonstrate that withdrawals will comply with the standards set forth in Table 1:

Table 1			
Parameter	**Drainage area of surface water**		
	<40 sq. mi	**40–200 sq. mi.**	**> 200 sq. mi.**
20-yr flood	Maintain magnitude and frequency for 20-year, 5-year, and 2-year floods		
Monthly high flow	No greater than 10% change in magnitude in any month		
Monthly median flow	No change	No greater than 10% change in magnitude in any month	No greater than 15% change in magnitude in any month
Monthly low flow	No change		No greater than 10% change in magnitude in any month
Upper monthly flow range	No greater than 20% change in magnitude in any month		
Middle monthly flow range	No change	No greater than 10% change in magnitude in any month	No greater than 15% change in magnitude in any month
Lower monthly flow range	No change	No greater than 10% change in magnitude in any month	

1. Terms used in Table 1 shall have the following meanings:

   i. **20-year flood**: Peak streamflow level having a 5% chance of occurrence in any given year

   ii. **5-year flood:** Peak streamflow level having a 20% chance of occurrence in any given year

   iii. **2-year flood:** Peak streamflow level having a 50% chance of occurrence in any given year

   iv. **Percent exceedance value.** The probability that a given flow will be equaled or exceeded in the stream at the point of withdrawal within a given month, expressed as Px. For example, the probability that the P75 flow for a given month will be exceeded at some point during the month is 75%.

   v. **Monthly flow duration curve**: a cumulative curve showing percent exceedance values for flows over a calendar month

   vi. **Monthly high flow:** flow having a percent exceedance value of P10

   vii. **Monthly median flow:** flow having a percent exceedance value of P50

viii. **Monthly low flow:** For streams with drainage areas less than 40 miles at the point of withdrawal, flow having a percent exceedance value of P75, for all other streams, flow having a percent exceedance value of P90

ix. **Upper monthly flow range:** The area under the stream's monthly flow duration curve between P10 and P50

x. **Middle monthly flow range:** The area under the stream's monthly flow duration curve between P50 and P75

xi. **Lower monthly flow range:** The area under the stream's monthly flow duration curve between P75 and P99

2. **Baseline streamflow calculation**.[26] Baseline streamflow statistics and flow duration curves shall be calculated using generally accepted methodology based on a minimum of ten (10) recent years of record, with representative wet, normal, and dry periods sufficiently represented.

3. **Use of reference stream gage.** Where data does not exist for the location from which withdrawal is proposed, data from an appropriate USGS reference stream gage shall be used to calculate baseline flow statistics. The reference stream shall be unregulated and of a similar drainage area size, physiographic province and geology, and mean annual precipitation and evapotranspiration, and ideally located on the same stream or on a nearby stream. Best professional judgment shall be used in selecting a reference stream that best represents the project site. Flow statistics from the reference gage shall be transferred to the project site using the drainage area ratio method.

4. **De minimis withdrawals**. An applicant is exempt from the requirement to demonstrate compliance with Table 1 if the feasibility study demonstrates that withdrawals will be *de minimis*. A withdrawal is *de minimis* if it does not exceed 5% of P95 for any calendar month for streams having a drainage between 10 and 1,000 square miles at the point of withdrawal or 10% of P95 for any calendar month for streams having a drainage area greater than or equal to 1,000 square miles at the point of withdrawal. No withdrawal shall be considered *de minimis* for streams having a drainage area less than 10 square miles at the point of withdrawal.

[26] Susquehanna River Basin Commission, TECHNICAL GUIDANCE FOR LOW FLOW PROTECTION RELATED TO WITHDRAWAL APPROVALS UNDER POLICY NO. 2012-11 at 6–7 (2012).

GREAT LAKES BASIN

e. For surface water sources, the water feasibility study shall demonstrate that withdrawals will comply with the standards set forth in Table 1:

Tributaries to the Great Lakes				
	July-October		**November-June**	
Drainage area of surface water	Withdrawal limit	Passby flow requirement	Withdrawal limit	Passby flow requirement
<50 sq. mi.	10% of P50	P50	10% of P50	P70
50–200 sq. mi	10% of P75	P70	10% of P75	P80
200–1,000 sq. mi.	15% of P75	P70	15% of P75	P80
> 1,000 sq. mile	20% of P75	P85	20% of P75	P80

1. Terms used in Table 1 shall have the following meanings:

   i. **Px - Percent exceedance value.** The probability that a given flow will be equaled or exceeded in the stream at the point of withdrawal within a given month, expressed as Px. For example, the probability that the P75 flow for a given month will be exceeded at some point during the month is 75%.

   ii. **Passby flow.** The prescribed quantity of water that must be allowed to pass the point of withdrawal at all times during which withdrawal is occurring.

   iii. Withdrawal limit. The maximum quantity of water that may be withdrawn at any time during which withdrawal is occurring.

2. **Baseline streamflow calculation**.[27] Baseline streamflow statistics and flow duration curves shall be calculated using generally accepted methodology based on a minimum of ten (10) recent years of record, with representative wet, normal, and dry periods sufficiently represented.

3. **Use of reference stream gage.** Where data does not exist for the location from which withdrawal is proposed, data from an appropriate USGS reference stream gage shall be used to calculate baseline flow statistics. The reference stream shall be unregulated and of a similar drainage area size, physiographic province and geology, and mean annual precipitation and evapotranspiration, and ideally located on the same stream or on a nearby stream. Best professional judgment shall be used in selecting a reference stream that best represents the project site. Flow statistics from the reference gage shall be transferred to the project site using the drainage area ratio method.

4. **De minimis withdrawals**. An applicant is exempt from the requirement to demonstrate compliance with Table 1 if the feasibility study demonstrates that

[27] Susquehanna River Basin Commission, TECHNICAL GUIDANCE FOR LOW FLOW PROTECTION RELATED TO WITHDRAWAL APPROVALS UNDER POLICY NO. 2012-11 at 6–7 (2012).

withdrawals will be *de minimis*. A withdrawal is *de minimis* if it does not exceed 5% of P95 for any calendar month for streams having a drainage between 10 and 1,000 square miles at the point of withdrawal or 10% of P95 for any calendar month for streams having a drainage area greater than or equal to 1,000 square miles at the point of withdrawal. No withdrawal shall be considered *de minimis* for streams having a drainage area less than 10 square miles at the point of withdrawal.

OTHER RIVER BASINS[28]

e. For surface water sources classified by PADEP as Exceptional Value (EV), High Quality (HQ) or Cold Water Fishes (CWF), the water feasibility study shall demonstrate using the Pennsylvania-Maryland Instream Flow Study (PA-MD IFS) model that withdrawals will not cause habitat loss in excess of the following:

1. For Exceptional Value and High Quality streams, withdrawal shall not cause annual instream habitat loss greater than 5%
2. For streams classified as Cold Water Fishes and as Class B wild trout streams by the PA Fish and Boat Commission, withdrawal shall not cause annual instream habitat loss greater than 10%
3. For streams classified as Cold Water Fishes and as Class C or D wild trout streams by the PA Fish and Boat Commission, , withdrawal shall not cause instream annual habitat loss greater than 15%
4. In no case shall passby flow in any stream be less than the lowest seven-day average flow that occurs on average once every ten years ($Q_{7\text{-}10}$) at the point of withdrawal
5. For surface water sources classified by PADEP as Warm Water Fishes (WWF), the water feasibility study shall demonstrate that passby flow shall meet or exceed 20% of annual average daily flow (ADF) for the surface water or the lowest seven-day average flow that occurs on average once every ten years (Q7-10) at the point of withdrawal, whichever is higher.

[28] This provision is appropriate for streams with drainage areas of less than 100 miles that are designated as Cold Water Fisheries, Hiqh Quality, or Exceptional Value and are located in the river basins not covered by the provisions above.

Lehigh Valley Planning Commission

DR. CHRISTOPHER R. AMATO
Chair

CHRISTINA V. MORGAN
Vice Chair

ARMANDO MORITZ-CHAPELLIQUEN
Treasurer

BECKY A. BRADLEY, AICP
Executive Director

Planning for the Future of Lehigh and Northampton Counties at 615 Waterfront Drive, Suite 201, Allentown, PA 18102 ■ (610) 264-4544 ■ lvpc@lvpc.org ■ www.lvpc.org

November 6, 2025

Meredith Keller, Director of Community Development
Upper Macungie Township
8330 Schantz Road
Breinigsville, PA 18031

Re: Zoning Ordinance Amendment – Data Centers
Upper Macungie Township
Lehigh County

Dear Ms. Keller,

The Lehigh Valley Planning Commission (LVPC) will consider the subject application at its Comprehensive Planning Committee and Full Commission meetings, pursuant to the requirements of the Pennsylvania Municipalities Planning Code (MPC). Discussion on agenda items largely happens during the Committee meeting. Both meetings will be virtual, and we encourage your participation. A revised letter will be sent after the Full Commission meeting if Commissioners have any additional or revised comments.

- LVPC Comprehensive Planning Committee Meeting
  - November 18, 2025, at 12:00 PM
  - https://lvpc.org/lvpc-meetings
- LVPC Full Commission Meeting
  - November 20, 2025, at 7:00 PM
  - https://lvpc.org/lvpc-meetings

The proposal amends the Upper Macungie Township Zoning Ordinance by adding definitions, amending the use table, and adding requirements to provide for and regulate Data Center land uses including setbacks and buffers, noise, utility, and emergency requirements.

Data Centers are essential components of modern technological infrastructure, enabling everyday devices to send and receive digital data needed for video streaming, online shopping, cloud storage, and communicate with other devices. With the growth of digital device and technology usage, hyperscale data centers have been expanding across Pennsylvania and are an emerging land use in the Lehigh Valley. When sited appropriately and connected to adequate infrastructure capacity, data centers support the continuation of the region's technological evolution, economic base and resilience (of Policy 4.1). The Township's proposed ordinance both aligns with best practices and contains opportunities to further support public health, safety and welfare.

The following aspects of the proposed ordinance amendment align with best practices for regulating data centers:

- **Definitions:** The ordinance distinguishes between Data Centers and Data Center Equipment and includes a definition for Sensitive Receptors. The definition for Sensitive Receptors includes uses such as residences, uses for children or the elderly such as schools and care-centers, and public spaces such as parks or places of worship. Providing clear definitions encourages an efficient land development process and minimizes impacts of regionally significant land uses (of Policy 1.4).

- **Buffering:** Requiring Data Centers and Data Center Equipment to be set back 200 feet from property lines containing a Sensitive Receptor and requiring earthen berms to buffer any Data Centers and Data Center Equipment that are visible beyond exterior lot lines supports the use of 'context specific design solutions' and 'minimizes impacts of development to protect the health, safety and welfare of the public' (of Policies 5.4 and 3.2).

- **Utility and Power Infrastructure:** The amendment includes appropriate provisions for utility feasibility assessments and agreements with utility providers to serve potential data centers where applicable, which mitigates system constraints and enhances the long-term viability of assets (of Policy 1.3).

- **Emergency Planning:** The added provision requiring an Emergency Response Plan aligns with *FutureLV* by enhancing planning and emergency response capabilities (of Policy 5.1).

- **Conditional Use:** Permitting data centers as a conditional use allows the Township to evaluate project impacts on a case-by-case basis to determine community needs and sensitivities and balance those needs with the demand for modern technological infrastructure. This approach supports efficient development processes responsive to regional needs (of Policy 1.4).

The LVPC offers additional recommendations for the Township's consideration to further strengthen its regulations and promote public health, safety and welfare:

- **Noise:** Section § 21-402(3) refers back to Chapter 10 Section 2 of the Township's noise ordinance which states that the maximum permissible noise level at the sound source property line shall not exceed 65 decibels for commercial/industrial sources. To increase clarity and efficiency, it is recommended that this decibel-based threshold be explicitly stated as applicable to data centers within Section § 21-402(3).

- **Height Limits:** Data centers have been constructed in nearby regions at heights around 100 feet. The LVPC strongly recommends that the Township ensure clear height limitations for Data Center land uses are included that are compatible with

height limits in the General Industrial and Research Technology Districts to promote context-specific design solutions and promote development that complements existing industrial uses (of Policy 5.4).

- **Parking:** The LVPC recommends specifying parking standards for Data Center uses. Because data centers typically have fewer employees than other types of industrial uses, applying parking minimum standards that are typical of other types of industrial uses may lead to overbuilt, unused impervious surfaces that exacerbate stormwater impacts. Using contextual standards for parking is a best practice, such as 1 space per on-site employee, to match development intensity with appropriate infrastructure capacity (of Policy 1.1) and reduce impervious surfaces and protect water sources (of Policy 3.3).

- **Energy Generation:** The LVPC recommends including provisions for on-site power generation uses such as fuel-cell power stations, geothermal, and solar photovoltaics. These are viable alternative and supplemental energy options for technology-based land uses which are highly energy-consumptive. By regulating on-site energy generation, the Township can further 'integrate efficiency measures and emerging technologies' and 'improve the utility and mobility infrastructure of the region' (of Policy 1.1), 'minimize and mitigate the impacts of utility expansion associated with technological advancements, population and business growth' (of Policy 3.2) and 'promote energy conservation and efficiency' (of Policy 3.4).

Municipalities, when considering Zoning Ordinance Amendments, should reasonably attempt to be consistent with *FutureLV: The Regional Plan*, as required by the Pennsylvania Municipalities Planning Code (MPC) [Article 1§105, Article III§303, §304 & §306(a), Article VI§603(j)].

Sincerely,

Mary Grace Collins
LVPC Community Fellow

Jillian Seitz
Chief Community and Regional Planner

Lehigh Valley Planning Commission

DR. CHRISTOPHER R. AMATO
Chair

CHRISTINA V. MORGAN
Vice Chair

ARMANDO MORITZ-CHAPELLIQUEN
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November xx, 2025

Nate Jones, AICP, Township Planner
Lower Macungie Township
3400 Brookside Road
Macungie, PA 18062

Re: Zoning Ordinance Amendment – Administrative
Lower Macungie Township
Lehigh County

Dear Mr. Jones,

The Lehigh Valley Planning Commission (LVPC) will consider the subject application at its Comprehensive Planning Committee and Full Commission meetings, pursuant to the requirements of the Pennsylvania Municipalities Planning Code (MPC). Discussion on agenda items largely happens during the Committee meeting. Additional meeting information is available at https://lvpc.org/lvpc-meetings:

- LVPC Comprehensive Planning Committee Meeting: November 18, 2025, at 12:00 PM
- LVPC Full Commission Meeting: November 20, 2025, at 7:00 PM

The proposal amends the Lower Macungie Township Zoning Ordinance with a series of administrative text amendments with the intent of supporting better processes, interpretation and enforcement of the Township Zoning Ordinance. The proposed amendments include updated definitions, revising the names of certain commercial zoning districts, updating the administrative regulations, standards and requirements for Signs and Off-Street Parking, and updating conditional use procedures.

Among the proposed amendments is the addition of a 'Savings Clause' (§27-108), which specifies that any use not specifically provided for in the Zoning Ordinance shall be permitted as a conditional use. Municipalities are required by the MPC to provide for all land uses within their boundaries. It is widely acknowledged that identifying all conceivable uses in a zoning ordinance is impractical, and to safeguard municipalities against exclusionary zoning challenges, providing statements of "uses not provided for" is common practice and aligns with *FutureLV: The Regional Plan* by facilitating an efficient development process (of Policy 1.4).

Municipalities, when considering Zoning Ordinance Amendments, should reasonably attempt to be consistent with *FutureLV: The Regional Plan*, as required by the MPC [Article 1§105, Article III§303, §304 & §306(a), Article VI§603(j)].

Sincerely,

Jillian Seitz
Chief Community and Regional Planner

cc: Kris Russo, Township Zoning Officer

MICHAEL P. HANLON

Michael.Hanlon@allentownpa.gov
435 West Hamilton Street
Allentown, PA 18101
Phone: (610) 437-7555
Fax: (610) 437-7554

CITY CLERK

March 5, 2026

Vicky Kistler
Director – Community and Economic Development
City Hall, Allentown, PA 18101

Jill Seitz
Chief Community and Regional Planner
Lehigh Valley Planning Commission
615 Waterfront Drive, Suite 201
Allentown, PA 18102

Hello Vicky and Jill:

Bill 20 - Amending Part II General Legislation, Chapter 660 Zoning, Article 5 Uses, Table 660 - 4 Use Table and Section 660 - 38 Manufacturing & Industry Group, adding the use category Data Center Use; and Article 14 Measurements & Definitions, Section 660-135 Terms Beginning with "D" and Section 660-149 Terms Beginning with "R", adding the definition of Data Center, Data Center Accessory Use, and Renewable Energy was introduced at the March 4, 2026 City Council meeting. The bill, description of the definition, and Exhibit A.

This Bill is hereby referred to the Planning Commission and the Lehigh Valley Planning Commission for review and recommendations. I am attesting that these are true and correct copies of the proposals and the map.

Please submit your report to this office.

Very truly yours,

Michael P. Hanlon
City Clerk

Cc: Council
Mayor Matt Tuerk
Christian Brown, Chairman of the Planning Commission
Brian Borzak, Engineering
John F. Gross, City Solicitor
Megan Yarashas, Paralegal – County of Lehigh Department of Law (meganyrashas@lehighcounty.org)
John Misinco, Editor - The Morning Call, P.O. Box 1260, Allentown, PA 18105 (jmisinco@mcall.com)

Allentown Environmental Advisory Council

Kyle Ropski, *Chair*
Tinku Khanwalker, *Co-chair*
Maria Ocasio, *Past chair*
Peter Dent
Craig Beavers
Brandon Swayser
Susan Gilbert Zencka
atowneac@gmail.com

March 23, 2026

Allentown City Council
435 Hamilton Street
Allentown, PA 18101

Re: Zoning Ordinance Amendment – Data Center Use (Bill 20 – 2026)

Dear Mayor Tuerk and Members of Allentown City Council:

The Allentown Environmental Advisory Council (AEAC) has reviewed the final proposed language of Bill 20 – 2026, amending Chapter 660 of the Zoning Ordinance to define and regulate Data Center Use.

We appreciate the opportunity to provide advisory input during the development of this ordinance and recognize the Planning Bureau's responsiveness to several of the environmental considerations previously identified by the AEAC.

In particular, we acknowledge the inclusion and strengthening of provisions related to:

- Environmental Impact evaluations addressing air quality, water quality, groundwater, wildlife, and greenhouse gas emissions
- Requirements for Water Utilization Reports and documentation of infrastructure capacity
- Energy Management Plans and encouragement of renewable or clean energy sources
- Noise studies, including post-construction "as-built" sound verification
- Heat mitigation strategies
- Landscaping and buffering requirements

We also appreciate that the final ordinance expressly provides for referral of Data Center Use applications to the Allentown City Planning Commission and the AEAC for review and comment. This formal inclusion supports a transparent and comprehensive evaluation process and reinforces the City's commitment to environmental consideration in land use decisions.

The AEAC views the final ordinance language as establishing a structured framework to evaluate potential environmental impacts associated with data centers and to require mitigation where appropriate. The inclusion of professional studies, agency review, and third-party

consultation where necessary reflects an effort to ensure that impacts to infrastructure, neighborhoods, and natural resources are assessed prior to approval.

As an advisory body, the AEAC's role is to identify environmental issues, research solutions, and make recommendations to City Council and Administration. **We appreciate the collaborative process that has occurred in the drafting of this amendment and the incorporation of environmental safeguards into the final language.**

Thank you for your time and consideration. We look forward to continued collaboration on building a greener, more resilient Allentown.

Sincerely,

The Allentown EAC

Mr. Unger inquired as to the city comment and wanted direction on Façade appearance versus screening aspects. He stated whether it was more important for aesthetics of the building versus perceived buffers or landscaping from the building and visual elements from Riverside Drive or the Lehigh River. He stated his desire to build proper infill development to get it right. He stated a desire to work with the City on that condition. Kate Hartney opined that their desire would be to see some sort of mural reflecting the industrial past or green walls might be a worthwhile prusiut. Mr. Unger stated that he wasn't opposed to murals, but that they could have a legacy cost to maintain.

Mr. Hornung indicated his approval for the developer's commitment to the proposed green roof. He inquired as to if the applicant had considered greywater or solar energy considerations. Mr. Unger stated that a green roof and a solar roof would not necessarily be complimentary of each other due to the growth of the green roof and the sunlight required of solar installations. He stated that the analysis revealed that the green roof would be more beneficial, especially with infiltration, and they are committed to the green roof.

Mr. Brown inquired to the treatment of the multi-use pedestrian bike path fronting future Riverside Drive and access across the proposed. Driveways. Mr. Unger stated the path would be handled through a concrete apron to delineate the path from the paved driveway portions.

Public Comment: None

Action: Mr. Brown made a motion made a motion to approve conditional preliminary/final approval of the plan with the following conditions:

- Demonstrate how the applicant has considered all the summary of recommendations on page 9 of the city's staff report.
- Walkways must be provided to connect the building to the sidewalk.
- Incorporating elements of the city's architectural and historical past into the final design is encouraged (for example, colors, textures, metals, murals, etc.).
- Applicant must comply with the City Comment Letter dated April 9, 2026

Mx. Hartney seconded the motion. The motion passed unanimously 5-0 with one abstention.

Zoning Amendment – Public Meeting

Item #4 Description: The Allentown City Planning Commission will hold a public meeting to provide the public with an opportunity to comment on a proposed new zoning ordinance amendment for part II General Legislation, Chapter 660 Zoning, Article 5 Uses, Table 660-4 Use Table and Section 660-38 Manufacturing & Industry Group, adding the use category Data Center Use; and Article 14 Measurements and Definitions, Section 660-135 Terms beginning with "D" and Section 6610-149 Terms Beginning with "R", adding the definition of Data Center, Data Center Accessory Use, and Renewable Energy. Upon completion of its work, the planning agency shall present to the governing body the proposed zoning ordinance amendment along with any recommendations.

File: Bill 20-2026

Presentation:

Ms. Gomez provided an overview of Bill 20-2026 as a proposed amendment to the City Zoning ordinance to provide regulations for Data Centers. She opined that Data Centers are emerging use across the Valley and Country. She stated that the City did not have specific definitions for Data Centers or specific regulations and amending the ordinance would help mitigate any negative potential impacts to the City and community.

Ms. Gomez stated that the LVPC had recently been reviewing 16 other zoning amendments for municipality across the Lehigh Valley with some municipalities already enacting legalization. She stated that the City planners had used some of the enacted ordinances as reference for the City's proposed amendment. She also highlighted other guidance documents that staff incorporated into the amendment including from the Penn Future Data Model ordinance as well as the LVPC Industrial Land Use Guide.

Ms. Gomez also stated that the amendment had reviewed by many departments and bureaus, including CED, Public Works, Fire, Health, Sustainability was key to the Allentown Environmental Advisory Council/ she noted comments received at various steps out the way and incorporated that feedback and had sent the final draft to the solicitor's office for review on March 4th. That bill had been introduced and forwarded to the Planning Commission and LVPC for review and comment.

Ms. Gomez stated that the ordinance amendment review by the ACPC would be incorporated with reviews by the LVPC and any public comments. She indicated then the proposed amendment would go to the CED Committee at which a determination would be made to advertise the amendment for adoption by City Council as a pending Zoning doctrine.

Ms. Gomez highlighted the proposed updated Use Table which stated that a Data Center is permitted by special exception through Zoning Hearing Board approval. She also stated that a Data center would not be permitted by right and would be limited to the IG and IM Industrial Districts. She then highlighted the associated Zoning map detailing the locations where a Data Center would be allowed through special exception. She also stated that the new use category under the manufacturing and industry group which would include a description of the use supplemental regulations.

Ms. Gomez reviewed proposed setbacks from the right away from other uses like residential schools, those types of sensitive uses and for anything over 50,000 square feet. Which is considered large scale then will be limited to the larger lots. She noted that it would be defined within the IG as a 5 acre minimum and then within the IM as an 8 acre minimum.

Ms. Gomez informed the commission of the proposed required landscape buffers, including a narrative description of the use, an environmental impact, noise and vibration, study, water and sewer utilization report, power supply and energy management report, electronic waste, Thermal impact mitigation plan, emergency response plan, some light requirements for building aesthetics.

Ms. Gomez reviewed the approval process proposed and the various city reviewing agencies that would still be required, like any special exception that involved a change of site plan would come before the Planning Commission for recommendation to Zoning Hearing Board and then Planning Commission as well as the Environmental Advisory Committee and any applicable reviewing agency or department.

Mr. Brown applauded the staff for the review and for the comprehensive detail given to the amendment. He also requested some clarity to the path of the special exception and whether it would be required to come to the planning commission. Mr. Handzo stated given the industrial building stock of the city in some of these sites where a data center could be proposed without requiring some level of site improvement substantial enough to trigger land development.

Mr. Handzo opined that in most cases, if an applicant attempted to come in through zoning at minimum, It would be at the discretion of the City Director of Planning and Zoning to determine when a project has triggered the definition of land development under MPC at minimum. Mr. Handzo opined that there could be a hypothetical scenario where there might be some kind of white elephant building or something similar that could be retrofitted, although highly unlikely. Ms. Gomez stated that the Planning Commission would minimally get consulted before any special exception use, and through that process that the City would look at land development as well and whether that would need to be required

Mr. Brown opined that perhaps a registered landscape architect should be involved in the land preparation process. Ms. Gomez commented that the staff would look into that when they receive any feedback from the LVPC and how many changes would need to be made without changing the approval path. Mr. Handzo stated the core language of the Zoning ordinance had language would enable the Zoning review to require certain aspects of a landscape plan and professional licensure.

Public Comment: None

Action: Mr. Beavers made a motion favorably recommend the proposed Zoning amendment to City Council, and to consider a requirement of a landscape architect in the design, Mr. Hornung seconded the motion. The motion passed unanimously 6-0

Other Matters

None

Adjournment

Meeting adjourned at 1:33 pm