

CITY OF HARMONY – 6th DRAFT

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE CITY CODE TO ESTABLISH REGULATIONS GOVERNING DATA CENTER DEVELOPMENT WITHIN THE CITY OF HARMONY.

SECTION 1. PURPOSE AND INTENT

The purpose of this ordinance is to establish clear regulatory standards governing the development and operation of data center facilities within the City of Harmony; protect public health, safety, and welfare; preserve Harmony's rural character and environmental resources; ensure responsible management of water, air, and land resources; and provide transparent regulatory standards for developers, utilities, and the public.

SECTION 2. APPLICABILITY

This ordinance applies to data centers, data center campuses, cryptocurrency mining facilities, and associated data center utility infrastructure located within the City of Harmony. Such facilities shall be permitted only within the Industrial Technology (IT) zoning district established by this ordinance.

SECTION 3. DEFINITIONS

Data Center: A facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, systems, servers, appliances, and other associated components related to digital data operations. The facility may also include air handlers, power generators, cooling or temperature-control systems, utility substations, and other associated infrastructure necessary for sustained operations.

Data Center Campus: a facility comprised of more than one principal Data Center, and includes any Data Center accessory structures or uses, and other systems, equipment, piping, conduit and other ancillary equipment, structures, and other appurtenances that are incidental to and/or needed for the construction, support, operation, repair, maintenance, or security of the Data Center(s) or the data center campus.

Data Center Energy Systems: means energy generation and storage systems, including electrical generators or engines, electric substations, transformers, back-up power generators, battery energy storage systems, used or intended to be used as sources of electrical power during normal operations, or as back-up temporary power when the main source of power is interrupted; electric transmission and distribution lines; and pipelines.

SECTION 4. INDUSTRIAL TECHNOLOGY ZONING DISTRICT

4.1 Purpose

Data center uses are highly variable in size, scope, impact, and potential issues, and all such variables may have differential impacts on existing and future land uses, or on the City's land use plans and regulations. Data center uses also often entail significant electrical demand and specialized infrastructure requirements. The purpose of the Industrial Technology zoning district is to provide for, and regulate, data center development in appropriate locations, specifically within areas zoned as Industrial Districts.

4.2 Applicability

All data center or data center campus development within the City of Harmony shall be regulated by this section.

4.3 Permitted Principal Uses and Structures.

Permitted principal uses and structures within the Industrial Technology District are those permitted principal uses and structures identified in Section 604.1 for Industrial Districts.

4.4 Permitted Accessory Uses and Structures.

Permitted accessory uses and structures within the Industrial Technology District are those permitted accessory uses and structures identified in Section 604.1 for Industrial Districts.

4.5 Conditional Uses.

The following are conditional uses in the Industrial Technology District and require an Industrial District Conditional Use Permit meeting the procedural and performance standards of this ordinance, and all generally applicable standards of the Harmony Zoning Ordinance:

- (a) Data Center
- (b) Data Center Campus
- (c) Cryptocurrency mining facilities of any size.
- (d) Expansion of an approved conditional use that results in an increase in electrical demand, square footage, or infrastructure capacity.

4.6 Approval Criteria, Conditional Use Permit.

No Conditional Use Permit within the Industrial Technology District shall be approved unless the land has been zoned Industrial Technology. Application for rezoning to Industrial Technology District and for a Conditional Use Permit may run concurrently.

No permit for work within the Industrial Technology District as approved by the Conditional Use Permit may be issued until the applicant has demonstrated compliance with all of the Industrial Technology District Performance and Design Standards and has met the assigned conditions of approval to the satisfaction of the City.

4.7 Environmental Review

If an EAW, EIS or AUAR is applicable for the proposed Industrial Technology District project under State law, such review must be completed. Individual components of an Industrial Technology development which may require separate environmental review as regulated by State law may be completed after application.

SECTION 5. INDUSTRIAL TECHNOLOGY DISTRICT CONDITIONAL USE PERMIT APPLICATION REQUIREMENTS

Proposals for an Industrial Technology District Conditional Use Permit shall include at least the information below to be considered complete. All costs of application and preparation of submission materials, including required studies, are borne by the applicant.

1. A project narrative, including:
 - (a) Statement outlining the applicant's proposed objectives for the Data Center site, and public values that will be achieved by the project by phase (if applicable) including general projections for tax base, building valuation, sustainability in operations and site design, employment creation or other community benefits.
 - (b) Statement of how the project will meet each of the Performance and Design Standards as required by this ordinance.
 - (c) A narrative description of proposed Data Center site uses and operations, including anticipated or known accessory or temporary uses.
 - (d) If the proposed Data Center site is to be developed in phases, a proposed phasing of full proposed Data Center site development, including number of phases, development timeline for each phase and for the full proposed Data Center site.
2. A proposed site development plan, identifying and/or illustrating:

- (a) The proposed name of the project, contact information for the developer and individual preparing the plan, signature of the surveyor and civil engineer certifying the document, and date of plan preparation or revision.
 - (b) The legal boundaries of each separate parcel comprising the proposed site.
 - (c) The zoning classification for all lands within 1 mile of the external perimeter property lines of the proposed Data Center site.
 - (d) The location of proposed improvements, including but not limited to:
 - i. Data Center and accessory uses or structures
 - ii. Data Center Energy Systems
 - iii. Parking
 - iv. Lighting
 - v. Screening/buffering
 - vi. Perimeter fencing, and
 - vii. All ground-mounted equipment and utility infrastructure
 - (e) Evidence of compliance with all applicable setback requirements
 - (f) Estimated square footage calculation of full usable/buildable area within the Data Center site.
 - (g) Total maximum impervious surface coverage within the Data Center site.
 - (h) Easements and rights-of-way within or adjacent to the subject Data Center site property boundary, including detail on ingress and egress from the subject site to abutting or adjacent public right of ways.
 - (i) Location, width, and names of existing and proposed streets and rights of way within and immediately adjacent to the subject Data Center site property boundary and all connection points to public right of ways.
3. Delineation and functional assessment of wetlands and/or watercourses over the proposed Data Center site property and within 200 feet of the external perimeter property lines of the proposed Data Center site dated within the last five years.

4. Delineation of the ordinary high-water levels of all water bodies.
5. A Utility Impact Plan, which shall include:
 - (a) Identification of annual electricity demand, energy storage capacity (if applicable), and proposed back-up power.
 - (b) A site plan showing structures/facilities to be constructed to support operations, including water, wastewater, electric, natural gas, other infrastructure, and public utility service facilities.
 - (c) Identification and description of any existing or proposed transmission lines and other facilities that would be required in order to connect the proposed facilities to the grid, and any permits or other approvals needed to support such construction.
 - (d) Identification of any existing or proposed pipelines or gas transmission lines.
 - (e) A description of any power sources proposed to be constructed or sited and operated, including emissions profile, noise, copies of applications for any required state or federal air permits.
 - (f) Information concerning any proposed grid interconnection.
 - (g) Documentation, including written verification from the applicable service providers, demonstrating that:
 - i. Public utility capacity and related electrical infrastructure is or will be sufficient in size and capacity to ensure that the power requirements of the proposed project can safely be accommodated without adverse effect on the availability, reliability, quality, cost, or safety of the electric service to other customers.
 - ii. Any system designed for cooling and operation of the facility will meet all applicable standards of this ordinance as well as state and federal law.
 - iii. Water, stormwater, and wastewater management and treatment capacity is or will be sufficient to ensure that the requirements of the proposed project can be accommodated without adverse effects on the availability, reliability, quality, cost, or safety of the water, wastewater, and stormwater management and treatment services to other customers.
 - iv. Any enhancements or improvements required in order for such utility services to continue to be available without adverse effect or additional cost to existing customers will be in place before operation of the proposed project.

6. A Water and Wastewater Management Plan, which shall include:
 - a. Projected daily and peak water demand.
 - b. The source(s) of the water supply, including certification from any public water supplier that it will supply the daily and peak water need and that the demand can be met without adverse effect on the availability, quality of service, potability of the water, or other qualitative or quantitative impacts on existing customers.
 - c. Documentation that the Data Center design and equipment has incorporated technology and best practices to minimize water waste, maximize efficiency of water use, and to reclaim and recycle water to the extent possible.
 - d. Documentation that any improvements to the water or wastewater utility infrastructure needed to serve the proposed Data Center will be paid for by the applicant.
 - e. Identification of all stormwater management plans and infrastructure required to manage stormwater and runoff associated with the Data Center development.
 - f. Documentation that only a closed-loop water or liquid cooling system or air-based cooling system will be used.
 - i. If a closed-loop water or liquid cooling system will be used, the applicant shall also provide:
 1. A description of the closed-loop system and technology that will be utilized, including identification of the type of cooling liquid and any chemical additives that will be used in the system.
 2. Description of the manner in which water may be required to operate or maintain the closed-loop system, and the expected amount of water required for the identified uses.
 3. Identification of any water or liquid discharge that will occur during the initial system infusion, start-up, and ongoing system maintenance and operation, and a description of how any discharge will be handled, treated and disposed.
7. A soils and geotechnical study, prepared by a third-party engineer, which shall include:
 - a. Soils engineering and engineering geologic characteristics of the Data Center site based upon on-site sampling and testing, including a description of the site geology and types, composition, permeability, stability, erodibility and distribution of existing soils on the site.

- b. Description of the depth and characteristics of groundwater on the Data Center site, including seasonal and historic high groundwater conditions.
 - c. Description of the nature and characteristics of underlying bedrock and other geologic conditions that may affect the proposed Data Center development.
 - d. Grading criteria for ground preparation, cuts and fills, and soil compaction.
 - e. A hydrogeological assessment and containment plan certified by a licensed professional engineer or geologist. This documentation must conclusively demonstrate that the design, operations, and spill-response protocols of the Data Center will prevent any hazardous substance, pollutant, or contaminant from discharging, leaching, or migrating into the groundwater.
8. An ambient noise study prepared by a third-party engineer, which shall include:
- a. Assessment of baseline ambient levels of noise before construction, measured in all directions at the external perimeter property lines on which the Data Center is proposed to be located and any related activity is proposed to be conducted, and at the nearest Noise Area Classification ("NAC") 1 receiver as defined in Minn. R. 7030.0050, subp. 2.
 - b. An acoustical study prepared by a qualified noise consultant showing:
 - i. Expected daytime and nighttime sound levels modeled at multiple distances and at the external perimeter property lines, including expected sound levels when all generators and other equipment are operated at full (100%) load.
 - ii. Specific recommended mitigation measures to ensure compliance with the Minnesota Pollution Control Agency ("MPCA") noise standards established in Minn. Rules Ch. 7030, and to minimize disturbance caused by low-frequency noise and vibrations.
 - iii. The study must include both A-weighted (dBA), C-weighted (dBC), and Z-weighted measurements, with full frequency spectra to identify low-frequency and tonal components.
 - iv. A 3D acoustic model using ISO 9613-2 or equivalent methodology that is sufficient to assess whether Data Center noise levels will comply with MPCA standards.
 - c. The City shall require the applicant to conduct a post construction compliance test, during operation, within six months of beginning operation to verify the actual sound levels and the effectiveness of constructed mitigation measures. The test must utilize the same methodology used for the initial acoustical study. If the review finds that post

construction noise exceeds the maximum permissible sound levels at any external perimeter property boundaries or the locations used during the initial acoustical study or mitigation measures to address low frequency noise or vibrations are inadequate, the applicant shall be required to develop and submit for review and approval, mitigation measures to bring noise levels within acceptable limits.

- d. The applicant shall complete an annual noise study, conducted by a third-party engineer, during peak operation of the Data Center facility. This annual noise study shall be submitted to the City as part of the annual operational report required under Section 7.

- i. Where any noise study identifies greater than maximum permissible sound levels at any external perimeter property boundary, the City may, after reasonable notice and an opportunity to cure the conditions contributing to the exceedance, suspend or revoke the conditional use permit.

- e. In addition to the annual noise study required under Section 5(8)(d), the applicant shall conduct a quarterly noise verification study, conducted by a third-party engineer approved by City, confirming compliance with MPCA noise standards. This study shall be conducted at a time when all generators are operating at full-load. The applicant shall submit the quarterly study results to the City not later than April 30, July 31, October 31, and January 31 of each year, covering the immediately preceding calendar quarter.

- 9. A traffic study assessing the impact of the Data Center facility construction and operation on road and rail traffic to and within the Data Center site.

- 10. List all other permits and authorizations needed for construction and operation of the Data Center and include copies or links to the applications.

SECTION 6. INDUSTRIAL TECHNOLOGY DISTRICT PERFORMANCE AND DESIGN STANDARDS

Any development within the Industrial Technology District shall comply with the standards as follows and such standards shall be adopted as part of the ordinance. Any deviation from these standards requires approval of a variance.

6.1 Building Standards

- 1. **Minimum Lot Size.** Data Centers over 100,000 square feet in gross floor area shall have a minimum lot area of 30 acres.
- 2. **Maximum Height.** Data Centers and freestanding accessory structures or uses may not exceed 40 feet in height. The maximum height shall be inclusive of rooftop appurtenances and rooftop accessory uses.

3. Data Centers and all accessory uses and structures shall be arranged, designed, and constructed to be harmonious and compatible with the site and with the surrounding properties.
4. Data Center building exterior finishes shall consist of materials compatible in grade and quality to the following:
 - a. Metal.
 - b. Decorative rock face block.
 - c. Glass.
 - d. Cast in place concrete or pre-cast concrete panels.
 - e. Brick.
5. Accessory building exterior finishes shall consist of materials compatible in grade and quality to the following:
 - a. Metal.
 - b. Decorative rock face block.
 - c. Glass.
 - d. Cast in place concrete or pre-cast concrete panels.
 - e. Brick.
 - f. Exterior insulated finish systems.
6. All buildings must be constructed to minimize glare or reflection on adjacent properties and roadways and should use appropriate textured glass, anti-reflective coating, and screening.
7. Data Center equipment may be ground mounted or roof top mounted,
8. Shipping containers shall not be used as a building material or permanent component of any Data Center or accessory use or structure.

6.2 Parking

1. One parking space shall be required for each employee, based upon the number of employees projected to work during the largest shift, plus 5 spaces for visitors.

6.3 Electricity Demand

1. Total energy use for any Data Center or Data Center Campus shall not exceed 55 megawatts of power.

6.4 Water Use Standards

1. Data Center facilities must employ a closed-loop water or liquid cooling system, or an air-based cooling system, that results in zero net water withdrawal and no wastewater discharge. Data Center facilities must not employ evaporative or open-loop cooling systems.
2. For any closed-loop cooling system, water may be utilized as necessary for the initial infusion, start-up, and ongoing maintenance of the system.
3. Domestic water use shall not exceed 60,000 gallons per month unless approved by the City following verification that water is not used for cooling purposes other than the operation and maintenance of a closed-loop water or liquid cooling system allowed under Section 6.4(2).
4. Facilities shall install dedicated water meters and submit annual water consumption reports.

6.5 Noise Standards

1. Data Center facilities are subject to and must comply with all criteria outlined in Section 5(8) of this ordinance.
2. Noise levels from the operation of the Data Center or any accessory uses shall comply with Minnesota Rules 7030.0040 through 7030.0080 (L10 and L50 standards).
3. Data Center facilities shall be designed and built to incorporate sound mitigation methods to reduce sound levels emanating from the Data Center, or any appurtenant or accessory use.

6.6 Setback, Buffer and Screening Standards

1. Setback Requirements. All Data Centers and accessory uses or structures, other than transmission and distribution powerlines, pipelines delivering electricity or natural gas to the property, and ingress/egress for road and rail traffic, shall be located:
 - a. At least 300 feet from all external perimeter property lines of the Data Center regardless of the zoning classification of the adjacent property.
 - b. At least 400 feet from agricultural property lines or the boundary of any Agricultural District.
 - c. At least 500 feet from residential property lines or the boundary of any Residential District.
 - d. Where necessary to ensure compliance with the noise limits provided in Section 6.5 at the external perimeter property boundary, or to minimize visual impact, the City may require a greater setback distance.
2. Buffer and Screening Requirements.

- a. Buffer areas shall include vegetative screening, berms, fencing, or other visual barriers as required by the City.
- b. All Data Centers and accessory uses or structures, other than transmission and distribution powerlines, pipelines delivering electricity or natural gas to the property, and ingress/egress for road and rail traffic, shall be screened on all sides from all existing public roads, as well as adjoining properties, utilizing a mixture of screening materials, berms, and landscaping. Screening shall be designed to provide year-round visual buffering, and may be accomplished using any combination of the following:
 - i. Vegetative buffers
 - ii. Berms
 - iii. Fencing
 - iv. Architectural walls
 - v. Landscape screening
- c. Trees or shrubs used for screening must block visibility by at least eighty (80) percent throughout the entire year. The effective screening height of the trees or shrubs shall be at least four (4) feet in height at the time of planting.
- d. Rooftop and wall-mounted equipment shall be fully screened when viewed from a comparable grade from adjoining properties and from public roads via screening walls or parapets which match the building materials of the building on which they are located.
- e. Fencing or walls shall be constructed of maintenance-free vinyl fencing or ornamental metal such as wrought iron or comparable brick, stone, masonry, or decorative stamped and colored concrete, which mimics brick, stone or masonry.
- f. Chain-link fencing may be used for security purposes and shall be black or black-coated vinyl and shall not include slats.
- g. The owner and operator of any Data Center shall have an affirmative and continuing duty to ensure that all buffering/screening standards and requirements are maintained on an ongoing basis.

6.7 Lighting Standards

All exterior lighting associated with Data Centers or accessory uses or structures shall comply with the following standards:

- 1. Exterior lighting levels measured at the external perimeter property line shall not exceed one (1) foot-candle. Lighting levels shall be measured using standard photometric methods at ground level along the property boundary

2. Lighting shall be designed and installed to minimize glare, light trespass, and skyglow.
3. All exterior lighting fixtures shall be fully shielded and directed downward.
4. Lighting shall be designed to illuminate only the intended area and shall not spill onto adjacent properties or public rights-of-way.

6.8 Generator Operation Standards

1. Permitted Generator Use. Backup generators may only be operated for the following purposes:
 - a. Backup or emergency electrical supply when the primary source of electricity is interrupted or unavailable. Continuous generator use outside of power outages or interruptions is prohibited.
 - b. Routine maintenance or readiness testing of generator equipment.
2. Testing Restrictions.
 - a. Generators shall be tested no more than once per week per generator, and testing shall be capped at 100 hours per generator per calendar year.
 - b. Testing shall only occur during the hours of 8:00 A.M. to 4:00 P.M., Monday through Friday.
 - c. The City may require additional restrictions where testing creates noise impacts to adjacent properties.
3. All generator systems shall comply with applicable Minnesota Pollution Control Agency (MPCA) and U.S. Environmental Protection Agency (EPA) emissions standards. All backup diesel generators shall meet Tier 4 EPA emission standards.
4. The City shall be permitted to conduct an annual inspection of all backup or emergency generators as needed to verify the total annual hours of operation for each generator.

6.9 Compliance Monitoring and Inspection Costs

1. All costs associated with testing, inspection and monitoring to verify or enforce compliance with this Ordinance, including independent, third-party engineer or consultant fees, shall be the responsibility of the Data Center developer or operator.

SECTION 7. ANNUAL OPERATIONAL REPORTING

Data Center operators shall submit an annual operational report to the City on or before February 27th, each calendar year, which includes the following:

1. Annual electricity consumption as reported by MiEnergy
2. Peak electricity demand levels as reported by MiEnergy
3. Total generator runtime
4. Annual water consumption
5. Emissions inventory
6. Annual noise study

If the operator fails to comply by the set annual reporting deadline a late-fee in an amount set by the City will be assessed.

SECTION 8. COMMUNITY BENEFIT AGREEMENT

The City shall require an applicant for a conditional use permit to enter into a Community Benefit Agreement (“CBA”) intended to offset the impacts and costs of Data Center development on City resources and infrastructure including, but not limited to environmental resources, emergency responders (fire, emergency medical services and police), roadways and transportation infrastructure, water and sanitary sewer systems, and local government administration. To facilitate this intended purpose, the terms of the CBA may include, but are not limited to:

1. Public infrastructure improvements.
2. Creation of or improvements to public park and recreation facilities.
3. Donation of first responder equipment or training.
4. Protection or preservation of natural resources, including, but not limited to, farmland, undeveloped forest or grassland, or waterways.
5. Monitoring of environmental conditions on and around the Data Center site.
6. Mitigation of community impacts identified in any environmental review, or study, plan or assessment.
7. Costs of City staff or consultants associated with the technical review of application or permitting materials, or monitoring of Data Center facility development and operation.
8. Fees in lieu of any of the foregoing items.

SECTION 9. PERMIT REVOCATION AND DEFAULT

9.1 Default.

A conditional use permit holder shall be considered in default if any of the following occur:

1. Failure to comply with conditions of the conditional use permit.
2. Failure to comply with any provision of this ordinance.

3. Failure to comply with any applicable state, county or federal law, rule or regulation, including, but not limited to, the suspension or revocation of any required state, county or federal permit, approval or authorization.
4. Failure to maintain financial assurance, escrow accounts, or required reporting.
5. Failure to correct violations within the timeframe specified by the City.

9.2 Notice of Violation.

If the City determines that a violation has occurred, the City shall issue a written notice of violation identifying:

1. The nature of the violation
2. The required corrective actions
3. Timeframe for compliance

The notice of violation shall also inform the recipient of the right to request a hearing before the City Council to appeal the notice of violation. An appeal request pursuant to this Section must be submitted in writing to the City within seven (7) days of the date of the notice of violation. A hearing on the requested appeal must be held by the City Council within thirty (30) days of the date of the notice of violation.

9.3 Corrective Action.

The conditional use permit holder shall have thirty (30) days from the date of the notice of violation to correct violations unless the City determines, in its sole discretion, that immediate corrective action is necessary to protect public health, safety, and welfare. In the event, an appeal is requested, the 30-day time-period for corrective actions shall not begin until a decision is issued by the City Council on the appeal.

9.4 Enforcement Actions.

If the conditional use permit holder fails to correct a violation within the timeframe specified herein, the City may take enforcement action following a public hearing to be held by the City Council. Such enforcement actions may include:

1. Civil penalties or fines
2. Order to suspend of operations
3. Revocation of the conditional use permit
4. Legal action to enforce ordinance requirements

The City shall be entitled to recover all attorneys' fees and expenses incurred in connection with any successful enforcement action brought by the City pursuant to this Section.

9.5 Revocation.

Following a public hearing held by the City Council, the City may revoke a conditional use permit if violations identified in the required notice of violation are not corrected or if continued operation of the Data Center facility poses a risk to public health, safety, or welfare. Upon revocation, the operator shall cease operations and initiate decommissioning procedures in accordance with the approved decommissioning plan.

9.6 Fines.

The City shall be authorized to establish and set fines that may be assessed for violation of any of the provisions herein.

SECTION 10. Transparency

City staff and officials, including City Council, Board or Commission members, shall not enter into any confidentiality or non-disclosure agreement regarding Data Center proposals, including Data Center applications or permits, that limit lawful public transparency and compliance with the Minnesota Government Data Practices Act.