SAMPLE DATA CENTER ORDINANCE VERSION 1.0

Note: This is a sample ordinance to regulate the development and operation of data centers within a township. These provisions may not suit the unique aspects of your township or may regulate too much or too little for your area. **Adopting this ordinance without considering changes to fit your community is strongly discouraged and may have negative legal consequences. Please consult with your township attorney.** Additionally, new information continues to come out often, so please check back periodically to see if there are newer versions of this sample.

TOWNSHIP OF _____

ORDINANCE NO. _____

ADOPTED: _____

EFFECTIVE: EIGHT DAYS AFTER PUBLICATION AFTER ADOPTION

An Ordinance to amend the Township Zoning Ordinance to authorize Data Centers; to provide regulations and standards for Data Centers; to repeal all ordinances or parts of ordinances in conflict herewith, and to provide an effective date.

TOWNSHIP OF _____
_____ COUNTY, MICHIGAN

ORDAINS:

DATA CENTER ORDINANCE AMENDMENTS TO TOWNSHIP ZONING ORDINANCE

SECTION I
DEFINITIONS ADDED TO SECTION _____

The following definitions shall be added to Section _____ of the Township Zoning Ordinance, and shall be inserted into said Zoning Ordinance so that all definitions are in alphabetical order:

Cooling System: Any system, equipment, or apparatus used to regulate temperature and/or humidity within a Data Center, including but not limited to air conditioning units, cooling towers, and liquid cooling systems.

Data Center: A facility or operation consisting of computer systems and associated equipment designed, constructed, and operated for the primary purpose of intake, processing, storage, and/or distribution of computer data and electronic information. Associated equipment shall include all buildings, structures, and components used in the operation of the Data Center, including but not

limited to servers, routers, switches, storage devices, cooling systems, backup power systems, electrical distribution systems, and telecommunications equipment.

Sensitive Land Uses: A land use that includes educational facilities (Pre-K through 12), college dormitories, commercial child care facilities, hospitals, long term care facilities, nursing homes, retirement homes, campgrounds, parks (excluding linear trails), and dwellings.

SECTION II
ADD A NEW SECTION _____, TITLED "DATA CENTERS"

A new Section _____, titled "Data Centers" is hereby added to the Township Zoning Ordinance to read as follows:

Section _____. Data Centers.

I. PURPOSE

The purpose of this Section is to establish minimum requirements and regulations for the construction, location, operation, and decommissioning of data centers. This Section is designed to ensure that data centers are constructed and operated in a manner compatible with nearby uses of land, the natural environment, and the capacities of public services and facilities. It is also designed to mitigate nuisance impacts and to avoid adverse impacts on important areas such as farmland, Sensitive Land Uses, or valuable natural resources.

II. GENERAL STANDARDS

The following requirements shall apply to all Data Centers in addition to the other generally applicable standards found in the Zoning Ordinance and to the extent of a conflict this Section shall apply:

A. **Site Selection.** Data Centers shall only be allowed as a special land use in the Industrial District [customize to fit individual municipal industrial districts by reference].

B. **Lot Coverage.** Data Centers shall not exceed the maximum lot coverage allowed in the Industrial District.

C. **Placement and Setbacks**. Data Centers shall be arranged, designed, and constructed to be harmonious and compatible with the site and surrounding properties. Data Centers shall be sited to minimize the visual impacts of the bulk of the building on a line-of-sight basis from adjacent public streets and Sensitive Land Uses and to minimize the impacts to natural resources. Data Centers shall comply with the minimum setbacks applicable to the Industrial District except as otherwise provided in this Section.

1. Cooling System components including chillers, fans and compressors must

be surrounded by full height sound attenuation screening that must be designed to blend with the architectural style, materials, and color of the building:

i. If roof mounted, there must be a 1,500-foot minimum setback from the sound attenuation screening to the closest Sensitive Land Use lot lines. This distance is measured from the nearest part of the sound attenuation screen to the property line of the Sensitive Land Use.

ii. If ground mounted, there must be a 1,000-foot minimum setback from sound attenuation screening to the closest Sensitive Land Use lot lines. This distance is measured from the nearest part of the sound attenuation screen to the property line of the Sensitive Land Use .

2. Generators shall be located within full acoustic enclosures to the maximum extent possible. Enclosures must be designed to blend with the architectural style, materials, and color of the building and cannot be located within 1,000 feet of any Sensitive Land Use, measured from the nearest part of the enclosure to the property line of the Sensitive Land Use . Roof mounted generators are prohibited.

D. **Height**. The height of a Data Center, except for electric distribution and transmission poles, shall not exceed the maximum height permitted for structures in the Industrial District.

E. **Visual Screening**. Views of a Data Center shall be minimized from public rights of way, adjacent properties, and Sensitive Land Uses, to the extent reasonably practicable using architectural features, earth berms, landscaping or other screening methods that will harmonize with the character of the property and surrounding area. The Planning Commission may require reasonable measures to minimize visual impacts by preserving existing natural vegetation, requiring new vegetative screening, or other appropriate measures on a site- specific basis. In making this determination, the Planning Commission is specifically authorized to consider whether additional visual screening measures are appropriate where a Data Center is proposed to be located on property adjoining or within the view of a Sensitive Land Use..

F. **Sound**. The Data Center must comply with all federal and state regulations related to noise thresholds and any Zoning Ordinance Industrial District noise limitation. In addition, except as otherwise allowed in this Section, noise levels shall not exceed the following noise thresholds as measured at the Data Center property line shared with any non-industrial use or the property line of the closest Sensitive Land Uses as follows:

1. No sound shall exceed 55 dB(A) weighted (Laeq-10 min) between the daytime hours of 7am to 7pm.

2. No sound shall exceed 45 dB(A) weighted (Laeq-10 min) between the nighttime hours of 7pm to 7am.

3. No source of steady tonal sound shall exceed 65 dB(C) weighted (Lceq-10 min) at any time.

4. Octave Bands (dBz) will be maintained at acceptable levels.

G. **Lighting**. The Data Center must implement dark sky-friendly lighting solutions, and all lighting must be designed to direct light downward. The facility must produce zero footcandles of light at the property line.

H. **Vibrations**.

1. No Data Center shall be operated, maintained, or tested in a manner that generates a ground-borne vibration level exceeding a Peak Particle Velocity (PPV) of 0.01 inches per second (in/s) at any point along the Data Center's property line. This limit applies across all vibration frequencies between 1.0 Hz and 100 Hz. The 0.01 in/s PPV threshold applies to measurements taken in any of the three mutually perpendicular axes (vertical, longitudinal, or transverse). If any single axis exceeds 0.01 in/s, the Data Center is in violation.

2. Generators must be equipped with vibration isolation and mitigation systems.

3. Data Centers must have continuous vibration monitoring at spacing of no less than 500 feet along all property lines which sit within 1,000 feet of the property line of any Sensitive Land Use.

I. **Water Usage Standards.** A Data Center shall maintain a Water Usage Effectiveness of no more than two tenths (0.2). As used in this Section, “Water Usage Effectiveness” or “WUE” is defined as the ratio of total annual building water consumption (liters) to information technology equipment energy consumption (kilowatt-hour). Evaporative cooling is prohibited.

J. **Energy Usage.**

1. Data Center facilities must be designed to maintain a Power Usage Effectiveness of no more than one and two-tenths (1.2). As used in this Section, “Power Usage Effectiveness” or “PUE” is defined as the ratio of total facility energy consumption divided by the total IT equipment energy consumption (servers, switches, storage devices, etc.). Total facility energy includes all power entering the building, such as cooling systems, lighting, power delivery components, and IT equipment. IT equipment energy

includes only the power used by computers, servers, storage, and networking devices.

2. Data centers must be designed and operated in compliance with the energy code requirements specified in whichever of the following is most stringent:

   i. The latest adopted Michigan Energy Code;

   ii. The latest published ASHRAE Standard 90.4; or

   iii. Michigan-specific data center energy code requirements adopted by rule, which may include more detailed criteria.

3. The Data Center shall have on-site energy storage capable of supplying not less than fifty percent (50%) of the facility's peak electrical demand for a minimum duration of fifteen (15) minutes, for purposes including grid stabilization, brownout mitigation, and peak-load support. Energy storage systems shall be configured to prioritize discharge during utility-declared peak events and grid emergencies to reduce localized voltage sag, transformer overload, and outage risk in surrounding neighborhoods.

4. The Data Center must demonstrate that it will supply the Center's energy needs independently of the current energy available within the Township and that it complies with all state and federal requirements for the provision of energy to supply its needs.

K. **Generators**. Testing and exercising activities of generators are limited to 9am to 5pm weekdays and are prohibited on any State holiday. No more than two (2) generators shall be tested simultaneously. The use of other backup power sources which serve to reduce or eliminate diesel generator noise and emissions shall be utilized to the maximum extent practicable. All generators must be U.S. EPA Tier 4 compliant.

L. **General Impacts**. Any use or activity producing air, dust, smoke, glare, exhaust, heat, or humidity in any form shall be carried on in such a manner that it is not perceptible at or beyond the Data Center property line.

M. **Public Safety**. All Data Centers must develop and comply with an Emergency Response Plan and Fire Response Plan that shall provide reasonable protection of the public health, welfare and safety during all phases of construction and operation.

N. **Signage**. The Data Center shall post all necessary signage to comply with any applicable electrical, building, and fire codes. Clearly visible warning signs shall be located at the base of any transformers, substations, or electrical components handling energy capable of causing harm to human beings. The Data Center

operation shall provide a 24-hour emergency contact signage visible at the access entrance.

O. **Access Drives**. The Data Center shall provide safe and convenient vehicular access to the site, including sufficient on-site queuing areas at the security gate. The Data Center shall include access drives sufficient to accommodate adequate emergency response to all components.

P. **Surface Water Runoff**. All surface water runoff created by construction and operation of the project shall be effectively managed on-site.

Q. **Building and Electrical Codes**. The Data Center and all associated equipment shall comply with all applicable building and electrical code requirements and any applicable federal or state regulations. A qualified engineer shall provide written certification that the design, installation, and any interconnections are compliant with manufacturer and industry standards, all applicable local construction and electrical codes, and any applicable federal or state regulations.

R. **Permits**. All Data Centers shall be required to apply for and obtain all necessary permits, including but not limited to building, electrical, plumbing, and mechanical permits.

S. **Transmission and Distribution Lines**. Other than transmission or distribution lines for interconnection to the electric power grid, all electrical wiring shall be buried underground; except where the manufacturer's engineer or a qualified engineer employed by the utility that owns/operates the electrical power grid to which the system shall be interconnected certifies an underground wiring installation is not permitted by an applicable code and/or applicable federal/state regulation, with attached complete documentation supporting any such certification.

T. **Transfer of Ownership.** No transfer in ownership of the Data Center shall occur prior to providing 60 days' notice to the Township and upon Township approval verifying that the new owner has the ability and means to carry out the terms of the special land use and site plan approval and agrees in writing to carry out such terms. Approval shall not be unreasonably withheld by the Township.

U. **Environment and Community Impact.** A Data Center shall provide, at time of application for special land use permit, detailed analysis by qualified individuals of the Data Center's impact on the environment of the site and surrounding area, and the impact on the community. All environmental impacts must be in compliance with Federal, State, and local standards.

V. **Construction Hours**. Construction Hours shall be limited to 7:00 a.m. – 7:00 p.m. Monday through Saturday unless otherwise approved by the Planning Commission.

W. **Decommissioning**. A Data Center must have a Decommissioning Plan and Agreement as provided in this Section.

III. APPLICATION REQUIREMENTS AND PROCEDURE

A. **Special Land Use Permit and Site Plan Application Requirements**. Any proposal for a Data Center shall require an application for special land use permit approval and for site plan approval. All required fees and escrow fund shall accompany the application. An incomplete application will not be accepted. The application shall be subject to the general special land use and site plan review requirements in addition to the following submission requirements:

1. The name, address, and contact information of the applicant.

2. The name, address, and contact information of the proposed operator of the Data Center, if different from the applicant.

3. The address and parcel number of each property to be used for the Data Center, including demonstrated proof of ownership, lease, or easement permitting all proposed construction on said property.

4. The planned date for the start of construction of the Data Center and the expected duration of construction, including a description of any construction phases for the Data Center, the proposed timeline for construction of each structure or major component, and a description of any areas where future expansion is anticipated.

5. A description of the expected uses of the Data Center.

6. A description of each Special Land Use standard under the Township's Zoning Ordinance, a detailed statement demonstrating compliance with each Special Land Use standard, and all information and supporting materials relied upon by the applicant in support of their statement of compliance.

7. A description of each standard described in this Section, a detailed statement demonstrating compliance with each standard, and all information and supporting materials relied upon by the applicant in support of their statement of compliance (i.e. sound studies and modeling, vibration studies and modeling, environmental studies, etc).

8. A preliminary electrical plan for the Data Center showing all underground and above ground wiring, the location of any electrical infrastructure, the location and capacity of any interconnections, and any electrical safety devices.

9. Information and supporting materials detailing the anticipated PUE,

electrical use, maximum possible electrical load, and pre-approval or authorization from applicable electricity service providers that such capacity is available to serve the Data Center.

10. Information and supporting materials detailing the type, size, and location of all Cooling Systems and water usage including the WUE analysis. Such analysis shall include proof of capacity on public water and sewer systems to support the proposed intake and discharge of water for the Data Center.

11. Information and supporting materials detailing the type, size, and location of all onsite energy storage and backup power generation, and whether and how such equipment is to be tested.

12. The expected direct impacts of the Data Center on the environment and natural resources and how the applicant intends to address and mitigate these impacts. The Applicant shall describe all environmental features of the proposed project site and surrounding area, including natural resources, waterways, flora and fauna which may be impacted by the proposed project. The description shall include the anticipated impacts on the environment and habitats and mitigation measures for such impacts.

13. A decommissioning plan as described in this Section.

14. A detailed site plan of the proposed Data Center, showing the location, height, and design of all components of the Data Center, including distances from all existing and proposed structures/buildings and fencing on the site to all lot lines including to all boundaries of a leased site, where applicable, and to all structures/buildings within 2,000 feet of the subject property.

15. A site plan depicting all proposed means of ingress and egress which demonstrates compliance with any applicable fire or emergency response regulations.

16. A landscape plan depicting all proposed changes to the landscape of the existing site, including grading, vegetation removal, fencing and vegetative screening.

17. A map of any existing overhead and underground major facilities for electric, gas, telecommunications transmission within the facility and surrounding area.

18. A fire response plan and an emergency response plan containing, at a minimum, all of the following:

    i. A description of all chemicals or hazardous materials that will be used during the construction or operation of the facility and describe their purpose and location within the facility.

ii. A detailed evaluation of any risk of intentional or inadvertent chemical or hazardous material discharge, the likelihood of such events, risk mitigation measures to prevent such events, and emergency notification and response plans in the case of such events.

iii. A description of all electrical, fire, smoke, and similar environmental risks, their likelihood, and mitigation measures both before and after an emergency.

iv. A description of the current emergency and fire response capacity and equipment available within the Township and the surrounding area, and whether such capacity and equipment is sufficient to address the risks described in the Plans. If the capacity or equipment is insufficient, the Plan must include a detailed description of such deficiencies and how the facility will attain sufficient emergency response capacity, whether by improvements to local emergency and fire authorities, private emergency management measures, or other means.

v. A description of emergency shutdown procedures, how such procedures are triggered, and any effects that an emergency shutdown may have on the operation, utilities, or emergency response plans.

vi. A description of if and how the Township and the public shall be notified of emergencies at the Data Center to the extent that such emergencies have the potential to result in impacts to the Township or the public.

vii. Evidence of consultation or a good faith effort to consult with local fire department representatives, first responders, and emergency managers to ensure that the Plan is in alignment with acceptable operating procedures, capabilities, resources, etc. If consultation with local fire department representatives is not possible, provide evidence of consultation or a good faith effort to consult with the State Fire Marshal or other local emergency manager.

viii. A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies.

ix. A commitment to review and update the plan with fire departments, first responders, and county emergency managers at least once every three (3) years.

x. Analysis should include identification of any specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate deficiencies.

xi. Other information the applicant finds relevant or wishes to present to the Township.

IV. DECOMMISSIONING AND REMOVAL

A. All Data Centers shall be required to provide a Decommissioning Plan and comply with said plan and the requirements of this Section for the lifetime of the project.

B. The Decommissioning Plan shall include all of the following:

1. State the anticipated life of the project;

2. Describe estimated decommissioning costs in current dollars and provide that this figure will be updated every fifth (5th) year after commencement of operation of the system;

3. Define the conditions upon which decommissioning will be initiated. At a minimum decommissioning shall be required if the Data Center is abandoned. Abandoned shall mean that the Data Center ceases operations for a period of 12 months, unless the current responsible party provides sufficient evidence and guarantee of the intent to resume operations to the Planning Commission.

4. State that decommissioning will allow the Data Center to be repurposed for general industrial use through the removal of aspects of the Data Center specific to use as a Data Center.

5. Describe the timeframe for completion of decommissioning activities;

6. Describe any agreement with the landowner regarding decommissioning; and

7. State the party responsible for decommissioning.

C. The Applicant shall further submit a Decommissioning Agreement to be signed by the applicant, operator, or party responsible for decommissioning and shall bind all successors, heirs and assigns.

D. Decommissioning shall begin within 6 months of abandonment or other trigger and shall be completed within 18 months.

E. The Decommissioning Plan shall include financial assurance in the form of a bond. The amount of the financial assurance shall not be less than the estimated cost of decommissioning the Data Center. Salvage value shall not be included in the estimated cost of decommissioning. The financial assurance must be posted in at one-hundred-and-twenty-five percent (125%) total decommissioning value by the start of full commercial operation and continuously maintained for the period of the life of the Data Center. During construction a financial assurance must be maintained in an amount to return the site to the original condition and such assurance shall be required until the full financial assurance is provided at the start of the full commercial operation.

V. DEVELOPMENT AGREEMENT.

A. The Planning Commission shall require a development agreement between the applicant/property owner and the Township to ensure completion of the approved site plan and continued compliance with required standards. The development agreement may address, but is not limited to, the following: The property's legal description; the zoning district in which the property is located; the site plan as approved; conditions of site plan approval; security for general improvements; compliance with standards during and after development; maintenance of the site during and after development; open area maintenance; stormwater management; roads and drives; sewer and water; Township engineer approval of construction plans; easements for and assignments of utility lines; pedestrian sidewalks; tree preservation; wetland preservation; landscaping; electricity and gas use; lighting; construction access; construction work schedule; performance guarantee; engineering plans and certifications; site grading and setbacks; monuments and markers; warranties; proceedings for failure to maintain repair or preserve development elements; reimbursable costs to the Township; enforcement procedures; duration of agreement; and construction oversight.

VI. SMALL-SCALE OPERATION EXCEPTION

A. The provisions of this Section shall not apply to a Data Center which is constructed and operated solely as an accessory and subordinate use to an existing principal use on a property, so long as that Data Center is (1) housed entirely within existing structures which conform to all zoning and other permit requirements, (2) creates no adverse impacts on adjacent land uses, and (3) requires no additional approvals from a utility provider with respect to electrical or water usage.

SECTION IV
AMEND SECTION _____

Section ____ of the Township Zoning Ordinance is amended to add the following use as a

special land use in the Industrial Zoning District:

- Data Center

SECTION VI
SEVERABILITY

The provisions of this ordinance are hereby declared to be severable and if any clause, sentence, word, section or provision is hereafter declared void or unenforceable for any reason by a court of competent jurisdiction, it shall not affect the remainder of such ordinance which shall continue in full force and effect.

SECTION VII
REPEALER AND EFFECTIVE DATE

All ordinances or parts of ordinances in conflict herewith are hereby repealed. This ordinance shall take effect 8 days after publication after adoption.