

Hayes Township Data Center Advisory Group

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I. INTRODUCTION

The data center work advisory group was created to gather information and assess the potential for and the impact of the establishment of a Large/Hyper scale data center (DC) in Hayes Township. Specifically, attention was focused primarily on the former Big Rock Nuclear plant site, however the analysis applies to any and all parcels of a size large enough to potentially be used for such a center. The advisory group, composed of community members who bring varied expertise to the table, has no decision-making authority and the outcome of the group's activity is to be sent to the Planning Commission and ultimately the Board of Trustees for their action.

This group was formed after the township enacted a one-year moratorium and any application for the creation of a DC, even though there had or has been any such interest expressed to the township. Acting proactively as considered through the master plan process, the township is determined to be ahead of the curve on reviewing and establishing strategies that protect the township from any adverse impacts that a DC could reasonably create and ultimately result in the prevention of such a land use being approved.

TOPIC HISTORY

In the 2025/26 update of the township Master Plan the required review by the Charlevoix County Planning Commission resulted in the recommendation that we consider the issue of data centers and whether there are locations in the township that might be targets for potential development. This led to the inclusion of the topic into the final approved plan. A review of the township's current zoning ordinance suggested that the language in both the Commercial and Industrial zoning districts was vague enough that it potentially could be interpreted to allow an application for a special use permit to establish a DC. After consultation with the township's legal firm, it was suggested that the township establish a moratorium on any type of application for a DC for a period of one year to allow the township to analyze the situation and develop appropriate safeguards around the topic. This was done in early 2026. During this process reactionary citizens broadcast the issue across the State claiming that the Township was encouraging the development of a data center and raising the visibility of the potential site at the decommissioned Big Rock Nuclear plant site.

The committee met to organize itself and establish working relationships. After these initial meetings that committee has begun holding the committee meetings at the township hall open to all to attend. Advisory members have listened to and taken all public comments into consideration in preparation of this report.

PROJECT GOAL STATEMENT

It is believed that the work of this committee, as updated over the course of the planning process, will lead to establishment of a clear determination and supporting regulations which denies the development of a Large/Hyper scale DC, yet allows the reasonable use of information technology by commercial and industrial organizations in the township in their normal business functions. The following sections will outline our assessment of the current situation regarding the DC environment and lead to providing the Planning Commission and the Board of Trustees the information they need to act to best protect the township.

II. Data center definition and breakdown

DATA CENTER: The term “data center” means any facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be— (A) a free-standing structure; or (B) a facility within a larger structure.

- derived from 42 U.S. Code § 17112: <https://www.law.cornell.edu/uscode/text/42/17112>

TYPES OF DATA CENTERS

- *Edge data center.* An edge data center is a data center used by an organization to deliver locally-cached data to customers served by the organization, reducing load times of frequently-accessed online assets. Edge data centers are typically incidental to other structures and businesses.
 - Used for providing fast access to files and streaming. These sites are generally replicating data from Hyperscale datacenters elsewhere in the network.
 - Power consumption range of 50kW to 2MW ^{1,2}
 - Internet providers such as Trustream would likely be considered in this classification.
- *Modular data center.* A temporary facility that is used to augment the rising needs of a business to increase capacity for a short period of time while a more permanent solution is put in place. Typically a plug and play installation with self-contained infrastructure and only a few ingress and egress points for data transfer.
 - Used as a temporary stop-gap for computing. Could be implemented during construction, or disaster relief, or during periods of extended high demand.
 - Power consumption within the range of Enterprise to Edge, but varies considerably, based on need.
 - Temporary status is the key, as these structures are not designed with noise suppression in mind.
- *Enterprise data center.* An enterprise data center exists largely, or solely, to serve an organization's internal computing needs. Enterprise data centers are typically incidental to other structures and businesses.
 - These datacenters vary widely in power consumption, from a single 5kW rack, to a 5MW room of servers. ^{1,2}
 - These larger data centers are becoming smaller as more people adopt cloud computing, which puts more power draw at the Hyperscale, Colo, and Edge locations.
- *Colocation data center.* A commercial data center with the primary purpose of renting computing resources or rack space to retail customers. Colocation data center facilities are typically solely dedicated to their function as a datacenter.
 - Customers can rent rack space with their own equipment, taking advantage of communal cooling and reduced energy costs, or rent compute from the datacenter owner, allowing them to manage hardware.
 - Typical power consumption of a full colocation will range between 1 and 50 MW. ^{1,2}

- *Hyperscale data center*: A large-scale data center typically owned by an individual provider and used to power their large-scale computing workloads, store customer files, and host customer resources. Customer space is secondary, if available at all. Hyperscale data center facilities are typically solely dedicated to their function as a datacenter.
 - Greater than 30MW power draw ^{1,2}
 - These are the Amazon, Microsoft, Google, Oracle, IBM, etc datacenters. Used for massive workflows and serving customer needs around regions, and in some cases, globally.
- 1. How Much Power Does a Hyperscale Data Center Use? In-Depth Analysis, Josh Mahan; <https://cc-techgroup.com/how-much-power-does-a-hyperscale-data-center-use/>
- 2. Examining Data Center Energy Consumption and Power Sources, Enconnex; <https://www.enconnex.com/data-center-energy-consumption-and-power-sources/>

III. Political Landscape

The political landscape around data centers in America has changed dramatically over the last two years. What was once a relatively noncontroversial economic-development project is now becoming a major political issue at the local, state, and federal levels.

Why data centers are being built so aggressively

The explosion of artificial intelligence has created enormous demand for computing power. Major technology companies such as [Microsoft](#), [Amazon Web Services](#), [Google Cloud](#), [Meta](#), and [OpenAI](#) are investing hundreds of billions of dollars in new data centers to support AI services and cloud computing. Both Republican and Democratic leaders generally see AI infrastructure as strategically important for competing with China and maintaining U.S. technological leadership.

The main political divide

The debate is no longer "Should America build data centers?" but rather:

Supporters say:

- Data centers bring investment and tax revenue.
- AI is a national-security and economic-competitiveness issue.
- The U.S. needs domestic computing infrastructure rather than relying on foreign countries.
- Construction creates jobs and can attract related industries.

Critics say:

- Data centers consume huge amounts of electricity and water.
- Local residents often see little long-term employment benefit.
- Utility bills could rise if infrastructure costs are shifted to ratepayers.
- Projects can create noise, land-use conflicts, and environmental concerns.
- Communities often feel decisions are made without sufficient local input.

A rare bipartisan issue

One of the most interesting political aspects is that opposition cuts across traditional party lines.

You can find:

- Conservatives opposing projects because of land use, property rights, and local control.
- Progressives opposing them because of environmental and energy concerns.
- Rural communities and suburban communities often making similar arguments despite differing politics.

This has led to unusual alliances between environmental activists, local homeowners, and politicians from both parties. In some states, lawmakers have proposed temporary moratoriums or stricter regulations on new data-center construction.

The biggest issue: Electricity

The central political question in 2026 is who pays for the power.

Data centers require massive amounts of electricity. State governments increasingly worry that ordinary households could face higher utility bills to support grid upgrades needed for AI facilities. As a result, many politicians now argue that data-center operators should build or finance their own power generation and transmission infrastructure.

Governors and regulators in states such as Texas, Ohio, and Pennsylvania are debating rules requiring developers to bear more of those costs rather than passing them on to consumers.

Public opinion

Recent polling suggests Americans are increasingly skeptical of rapid data-center expansion:

- A Reuters/Ipsos poll found strong concern about electricity costs and local impacts.
- Majorities oppose having large AI data centers built near their own communities.
- Concerns are especially focused on power consumption, water usage, and transparency.

Federal Politics

The federal government generally favors faster AI infrastructure development. The Trump administration has pushed policies intended to accelerate AI-related projects and streamline permitting. At the same time, some lawmakers have proposed stricter oversight or even temporary pauses on large data-center projects until broader AI regulations are established.

To sum it up...

The current political debate is essentially "**AI competitiveness versus local costs.**" Most high-profile elected officials want America to build more data centers, but the fight has shifted to who pays for the electricity, how quickly projects should be approved, and how much control local communities should have over where those facilities are built. Rural communities like Hayes Township are especially protective over their land and resources, and are understandably protective about their environment and the potential harm that may accompany the construction of a data center.

IV. Environmental Concerns

Data Centers have numerous impacts on their local environments, considerations for which would need to be weighed as part of the process of drafting any rules outside of the null option or outright ban. A number of these rules would be specific to Hayes Township and Charlevoix County as well.

1 - Watershed impacts

Depending on their cooling design, datacenters can withdraw and consume massive amounts of water, with daily consumption in large facilities (i.e., *hyperscalers* and *colocation* centers) often reaching into the millions of gallons per day. The degree to which water is lost due to evaporation varies based on method, as does the potential for harm from discharge back into the environment:

1. *Open-loop evaporative cooling*: This method draws water from the local environment (often municipal supplies or, in the case of our area, likely from groundwater sources) that is run through chillers or cooling towers to absorb heat from servers and evaporate it. This method requires constant water withdrawal.
2. *Closed-loop water cooling*: Water is drawn from the local environment into sealed systems that circulate water around servers through piping networks, drawing off heat before re-chilling the water. This still requires some continual withdrawal to account for losses, but is far less consumptive. Initial draw is variable depending on the size of the facility, but is often estimated to be 10 gallons per ton of equipment to be cooled.

Water can end up being returned to local watersheds in either situation, often at an increased temperature that can kill local species and plant life, damaging local watersheds and upsetting ecological balance. While not common, data center water can also be chemically treated; if returned to the environment further harm can occur.

2 - On-site power generation impacts

Hayes Township lacks the robust electrical infrastructure to support even a moderately-sized hyperscale or colo datacenter, which would make on-site power generation a necessity were such a facility to be constructed.

In Hayes Township this would likely not include a nuclear reactor for a couple of reasons:

1. Small modular nuclear reactors (SMRs) of the type that datacenter operators have been discussing for behind-the-meter deployment at datacenters are still in the development phase. No working, grid-scale (or even experimental) SMRs have been constructed in the US. Only a single company has had their design approved by the Nuclear Regulatory Commission, and even they have yet to build a working reactor.
2. Holtec, who is responsible for the Big Rock spent nuclear fuel storage site, has stated they have no interest in building a datacenter on their property, a smaller chunk of the much larger Big Rock site. Building a datacenter on the location would require removal of the fuel casks, which would have already been done if the US recycled spent nuclear fuel in any appreciable amount - maintaining the casks is expensive.

With that in mind, on-site power generation at a hypothetical Hayes Township data center would likely rely on the same choice made by other datacenters throughout the US: Gas turbines.

Gas turbines used to power datacenters, whether as a backup for periods of grid strain or as a primary colocated power generation source, are noisy and contribute to significant air pollution. Air quality concerns have been the subject of numerous lawsuits, including a high-profile one targeting xAI's Colossus data center in Memphis, TN, which relies exclusively on colocated gas turbines and has been accused of destroying air quality in nearby neighborhoods. According to reports on Colossus, xAI promised to use turbines that emitted less pollution, but the company hasn't followed through on that pledge, instead installing cheaper, more polluting turbines.

In addition to on-site power generation, data centers often employ large battery systems in case of power outage or demand spike. These systems can be serious environmental hazards, with damaged batteries leaking chemicals into the local environment and watershed.

3 - Noise pollution

Colocated power generation can be incredibly noisy, as can data center facilities themselves. Excepting power generation, cooling operations and server racks themselves can contribute to the average hyperscale or colo data center generating upwards of 65dB audible at nearby locations.

In addition to audible sounds, data centers can also produce "infrasound" at frequencies below what humans can hear. Those sounds can have effects on physical and mental health despite not being audible.

Data center sound levels can also fluctuate depending on workload - the more processing taking place the harder power and cooling systems will run, and the more noise they'll produce.

4 - Light pollution

Datacenters, as 24-hour operations, run lights constantly. This has led to an effect some have described as the "datacenter light dome" due to visible halos of light visible miles away from the datacenters themselves.

Charlevoix County is home to an international dark sky sanctuary at Beaver Island that, while 32 miles off the coast of Charlevoix, could still be impacted by a datacenter, especially one located on the coastal area of Hayes Township, not to mention its effect on locals living in the township itself.

V. Data Center Safety Requirements

Data center environments present vertical, compounding risks that our current municipal infrastructure was not originally designed to handle. Implementing these conditions protects our personnel, mitigates township liability, and ensures the developer bears the financial burden of their specialized safety footprint.

A local fire department and Emergency Medical Services (EMS) agency must significantly upgrade their specialized equipment, technical training, and on-site communications to handle a data center. Data centers present highly unique, compounding emergencies—combining megawatt-level electrical pathways, high-volume toxic gases, heavy automated clean-agent suppression zones, and massive outdoor equipment yard obstructions. A standard municipal fire response plan will not work. First responders require specialized preparations across four operational areas:

1. Highly Specialized Response Equipment

Traditional water-heavy firefighting techniques can cause explosive electrical arcs.

- **Thermal Imaging Cameras (TICs):** The department must upgrade to high-resolution TICs to accurately track thermal runaway through thick server rack enclosures, hot-aisle containment zones, and under-floor cable trays.
- **Massive Carbon Dioxide (CO₂) and Dry Chemical Extinguishers:** Crews must carry heavy-duty, non-conductive Class C extinguishing agents. They cannot rely on basic water hoses for early-stage localized electrical or server-rack fires.
- **Specialized Ventilation Fans:** Positive-pressure ventilation (PPV) fans must be rated to clear dense, toxic chemical smoke and heavy particulate matter without damaging neighboring data halls.

2. Advanced Technical Training

Firefighters and paramedics must understand data center architecture, industrial power schemes, and environmental risks.

- **Energized Electrical Firefighting:** Crews require advanced training on Class C fires and high-voltage grid systems. They must learn how to coordinate with facility engineers to utilize Emergency Power Off (EPO) switches before attempting to apply water or traditional fire tactics.
- **Clean Agent and Inert Gas Hazards:** Data centers use automated gaseous flooding systems (like Inergen, FM-200, or Novec 1230) to suffocate fires. Firefighters must be trained on how to enter these oxygen-depleted or chemically altered atmospheres safely using Self-Contained Breathing Apparatus (SCBA).
- **Lithium-Ion Battery Runaway:** Paramedics and firefighters need specialized training to handle Uninterruptible Power Supply (UPS) room failures. A lithium-ion battery fire produces off-gas (hydrofluoric acid and explosive hydrogen) and requires massive, continuous cooling that can last for hours.

3. Pre-Planning and Facility Integration

A data center layout can confuse responders during an emergency. Local departments must work directly with developers to integrate operations.

- Comprehensive Facility Walkthroughs: The department must conduct multi-shift tours to map out high-voltage switchgear rooms, massive outdoor cooling equipment yards, and localized hazardous materials storage.
- Radio Signal Upgrades: Data centers are built like heavily shielded concrete fortresses, which often completely block standard emergency radio frequencies. The township must force the developer to install an internal Bi-Directional Amplifier (BDA) / Emergency Radio Enhancement System so responders can talk to dispatch from deep inside the data halls.
- Strict Knox Box Placements: Secure outer perimeters, biometric access controls, and security turnstiles can delay emergency entry. Responders need specialized Knox Boxes containing master electronic access cards and physical keys at all main perimeter gates.

4. Specialized EMS Protocols

EMS crews must upgrade their medical readiness for data center worker injuries and environmental exposures.

- Heat-Related Illness Treatment: Technicians working in contained hot aisles are exposed to ambient temperatures exceeding 100°F (37.8°C). Paramedics must prepare for acute heat stroke and severe dehydration cases.
- Chemical and Inhalation Response: EMS must be equipped to handle severe chemical burns from lead-acid battery leaks, asphyxiation from clean-agent discharge, and hearing damage from industrial chiller or fan noise exceeding 90 dBA.
- Crush and Musculoskeletal Trauma: Moving industrial server racks weighing over 1,000 lbs increases the risk of crush injuries or severe entrapment, requiring crews to be proficient in heavy mechanical extrication.

VI. Technical Requirements for a Datacenter in Hayes Township

Executive Summary

Data centers require significant infrastructure to operate reliably, including high-capacity electric service, dedicated substation facilities, backup generation, uninterrupted power supply systems, large-scale cooling, and adequate land area. Based on the technical requirements outlined, Hayes Township's existing electric and utility infrastructure would likely need substantial upgrades before it could support a large data center facility. The most important considerations are electric capacity, transmission reliability, backup power, cooling water needs, permitting, and land availability.

Electric Service Requirements

A datacenter typically requires electric demand of at least 1 megawatt, equal to approximately 1 million watts of power. Loads of this size are generally served by a dedicated substation that feeds only the datacenter. These substations may require 10 to 40 acres of land and are normally supplied from the transmission system, typically at 138 kV or higher voltage.

The existing distribution system, which generally operates at medium voltages between 5,000 and 25,000 volts, is not capable of serving a load of this size and would not provide the level of reliability required for datacenter operations. High reliability would require a looped or multiple-source transmission feed to allow for maintenance outages and reduce the risk of service interruptions.

Hayes Township is currently served by radial 138 kV and 69 kV transmission systems and has two existing distribution substations. Because of this configuration, transmission system upgrades would likely be required. The former Big Rock site has an existing transmission right-of-way easement, but additional easements and rights-of-way would need to be secured for any new transmission lines.

Backup Power and Reliability Systems

Datacenters also require backup emergency generators to maintain operation during utility outages. The primary fuel options are natural gas and onsite diesel or oil. Natural gas generally has less stringent air-quality permitting requirements, but there are no sizable gas transmission pipelines in the Hayes Township area. Constructing new gas infrastructure would require additional easements and rights-of-way.

Diesel or fuel oil generation can be located onsite, but it is expensive to operate and maintain and typically faces more stringent air-quality permitting requirements. Fuel storage becomes a big concern along with safety standards and permitting from EAGLE. Backup generators would also require operating approvals from environmental regulators, including EGLE and the EPA.

In addition to generators, data centers use uninterruptible power supply systems. These battery backup systems allow the facility to ride through short interruptions and provide time for backup generators to start and stabilize. This means a data center would likely require a large quantity of batteries onsite.

Water and Cooling Requirements

Water is needed to cool servers and electronic equipment and to maintain optimal computer operating temperatures. Cooling can be provided through open-loop evaporative cooling or closed-loop water cooling.

Open-loop evaporative cooling requires a large supply of water and uses evaporative cooling towers, which may be located on rooftops or as standalone structures. These systems can create noise from large fans. Closed-loop water cooling uses a fixed supply of water and rooftop chiller units, with fans typically operating continuously. Closed-loop systems generally require more energy consumption than open-loop systems.

Land Requirements

Land needs vary depending on the type and scale of data center. Colocation facilities may require approximately 10 to 40 acres and often use traditional office-style building structures with standard security measures such as fencing and card access.

Hyperscale or large data centers may require approximately 200 to 500 acres. These facilities can include massive warehouse-style buildings, large cooling systems, evaporative towers, fan banks, large substations, backup generators with exhaust stacks, industrial structures, fencing, and staffed security.

Key Takeaways

- Data centers require high-capacity, highly reliable electric service that typically exceeds the capabilities of existing distribution systems.
- Hayes Township would likely need transmission upgrades, additional easements, and potentially looped or multiple-source feeds to support data center reliability needs.
- Backup generators, fuel infrastructure, battery systems, and environmental permitting are major planning considerations.
- Cooling systems require either significant water supply or higher energy consumption, depending on the cooling method selected.
- Land requirements can range from 10 to 40 acres for smaller colocation sites to 200 to 500 acres for hyperscale facilities.

VII. Ordinance Recommendations

1 - Environmental

Environmental considerations for a Hayes Township datacenter project are numerous and would need to involve local and state-level reviews of multiple potential issues if a developer wished to proceed. In addition to purely environmental worries, tribal rights would need to be respected as well, which would potentially involve an archeological survey of any potential site as well.

We recommend the following ordinances:

Section A: Water

- If water cooling is chosen, closed-loop cooling should be required in order to limit water draw.
- Annual water draw should be limited to a size based on the 10G/ton measurement in order to prohibit datacenters over a certain scale
- If amendments to water are made as part of a closed-loop system the operator should be required to conform to safety and anti-spill rules to prevent treated water from being leached into the environment.

Section B: Power

- Gas turbines being constructed on site must be best in class for emissions controls.
- On-site power generation should be a short-term option only (aside from necessary backup power generation), and datacenter operators should be required to sign an agreement to connect to the grid and decommission on-site fossil fuel facilities within a predetermined amount of time. All grid connection costs should be paid by the operator.
- On-site fossil fuel generation should require data center operators to pay into a pollution mitigation fund in order to protect the local environment.
- Operators should be required to conform to state and federal stationary battery fire risk management standards.
- Operators should be required to employ sensors to detect early signs of thermal runaway and other damage, automatic fire suppression systems, and designs that mitigate potential blast damage.
- Operators should be required to submit emergency operations plans to local officials and provide funding for first responder training to deal with battery emergencies.
- Battery recycling/disposal plans should be outlined by operators before construction.

Section C: Noise

- Datacenter operators should be required to conform to a maximum noise level of 50DB at the property line at any time of day. This should not be an average measurement and an operator should be required to meet this mark via continuous monitoring.
- Construction noise should be considered as well
- Rooftop chillers and other exposed systems should be required to be constructed in a way that directs noise away from residents. Shielding should also be required.

Section D: Lighting

- Operators should be required to keep lighting to the bare minimum necessary to ensure site security and safety. One possible standard for lighting levels are the IES roadway and parking recommendations, which state that parking lots need only 2 lux of illumination, and active transaction areas only require 10 lux during active operations and 2 lux post-curfew.
- Establish a lighting curfew during which lower levels of light are required.
- External lighting systems should be required to conform to an 80-degree cutoff angle that tightly targets beams toward the ground and away from the sky and horizon.
- Lighting systems should be “smart” and only activate when human presence requires it.

Section E: General environmental considerations

- Undertake environmental assessments at their own cost with EGLE, MPSC, DNR, and other applicable state and federal bodies
- Native American groups with cultural claim to any potential data center sites should be given access and funding to determine whether there are any preservation or archeological considerations (e.g., historical artefacts, burial sites, cultural importance, etc.)
- Datacenter operators should be required to post a bond to guarantee that any environmental design agreements made cannot be changed or abandoned at the last minute due to cost considerations, etc.
- Decommissioning agreements should be required. Those agreements should include strict requirements for not only mitigating the environmental impact of power facilities and other equipment, but should strongly regulate the potential environmental impact of the decommissioning process as well.

2 - Safety

Data center developments introduce complex, high-impact risks—including megawatt-level electrical pathways and hazardous suppression systems—that exceed the capabilities of standard municipal infrastructure. To mitigate township liability and protect personnel, the following safety mandates ensure the developer bears the financial and operational burden of their specialized footprint.

We recommend the following ordinances:

Section A: Electrical Isolation & On-Site Expertise

1. Emergency Power Off (EPO) Architecture: The developer must provide detailed engineering schematics identifying all EPO switch locations. The EPO system must be capable of localized, zoned isolation to ensure firefighters can de-energize specific fire areas without cutting power to critical ventilation or facility life-safety systems.
2. 24/7 Qualified Personnel: The facility operator must maintain at least one (1) qualified, licensed industrial electrician or high-voltage certified technician on-site at all times (24/7/365) to assist the Fire Department Incident Commander with immediate infrastructure isolation during an emergency.

Section B: Battery Energy Storage Systems (BESS) & Hazardous Materials

1. Thermal Runaway Mitigation: If Lithium-Ion or other advanced chemistry Uninterruptible Power Supply (UPS) systems are utilized, the developer must install continuous off-gas detection (specifically calibrated for early hydrogen and carbon monoxide release) that integrates directly with the main building alarm system.
2. Mechanical Exhaust & Containment: Battery rooms must feature independent, dedicated emergency mechanical ventilation systems capable of purging toxic and flammable gases (such as hydrofluoric acid) to a safe, exterior location. Spill containment berms and automated neutralization systems must be engineered into the room flooring.

Section C: Fire Suppression & Building Systems

1. Clean-Agent Safety & Air Handling: The facility must utilize automated gaseous suppression systems (e.g., Novec 1230, FM-200, or Inert Gas) in all active data halls. The facility's HVAC system must be engineered to automatically close smoke dampers and switch to an emergency exhaust mode upon gaseous discharge to protect entering responders from oxygen-depleted or toxic atmospheres.
2. Water Supply Infrastructure: The developer must fund and construct a dedicated, on-site fire suppression water storage loop or tank capable of delivering [Insert Required GPM, e.g., 2,500 GPM] for a minimum duration of four (4) hours, ensuring municipal water mains are not depleted during a sustained outdoor infrastructure or generator yard fire.

Section D: Site Access, Communications, & Structural Integrity

1. Emergency Radio Reinforcement: The developer must fund, install, and permanently maintain an internal Bi-Directional Amplifier (BDA) or Distributed Antenna System (DAS). This system must be certified annually to ensure uninterrupted [Insert local frequency, e.g., 800 MHz] emergency radio communication for first responders inside all reinforced concrete data halls.
2. Secure Access Bypass: The developer must install high-security Master Key/Electronic Lock Knox Boxes at all primary perimeter vehicle gates, secondary security turnstiles, and main building access points to allow immediate, unassisted entry by emergency crews.

3. Apparatus Staging & Weight Load: All access roads, perimeter driveways, and staging pads surrounding the data structures must be engineered to support a minimum vehicle weight rating of [Insert local requirement, e.g., 80,000 lbs.] to safely accommodate the department's heaviest aerial ladder platforms and pumper trucks under maximum stabilization load.

Section E: EMS Readiness & Training Funding

1. Pre-Planning and Walkthrough Mandate: The developer/operator must grant the Fire Department full site access to conduct mandatory, multi-shift facility walkthroughs and pre-incident mapping prior to the issuance of the final Certificate of Occupancy.
2. Annual Training Escrow: The developer must establish a permanent safety training escrow fund, contributing [Insert Amount, e.g., \$10,000] annually to the Fire Department. This fund will directly cover the costs of specialized external training for local firefighters and paramedics, specifically focusing on Class C energized electrical firefighting, lithium-ion thermal runaway management, and confined-space rescue.

3 - Technical

A data center development in Hayes Township would require major planning and investment in electric transmission, backup power, cooling systems, water resources, land use, and permitting. The existing infrastructure is unlikely to support a large data center without substantial upgrades. Any proposal should include a detailed utility feasibility study, transmission impact review, cooling and water-use analysis, environmental permitting review, and land-use assessment before moving forward.

We recommend the following ordinances:

TBD

The intent of this strategy is to ensure that sufficient time and study is used to protect the townships health and safety. Among the many areas to be analyzed, utilizing the skills of contracted subject manner consultants as needed, are:

In the site plan criteria all environmental factors such as but not limited to; pollinator habitat, conservations coverage, forage, invasive plants, wildlife friendly fencing, historical artifacts and tribal heritage materials, setbacks, lot coverage, height, sound, air quality, vehicular access, parking, impervious surface, erosion and runoff control, landscaping and both visual and sound control buffers, emergency service plans and training, emergency equipment on site, disaster plans, decommissioning agreements and bonds or other insurance sufficient to cover the costs of decommissioning and removal of the facility and restoration of the property to original condition.

TOWNSHIP OF Hayes

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 Hayes
Charlevoix COUNTY,
MICHIGAN

ORDAINS:

DATA CENTER ORDINANCE AMENDMENTS
TO TOWNSHIP ZONING ORDINANCE

SECTION TBD
DEFINITIONS ADDED TO SECTION

The following definitions shall be added to Section _____ of the Hayes 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 servers, routers, switches, storage devices, cooling systems, backup power systems, electrical distribution systems, and telecommunications equipment, which maybe (A) a freestanding structure; or (B) a facility within a larger structure.

SECTION TBD
ADD A NEW SECTION _____, TITLED “DATA CENTERS”

A new Section _____, titled “Data Centers” is hereby added to the Hayes 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 freestanding ? 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 (I-1)
- 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. **Need to look at this max coverage.**

- D. **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.
- E. **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.
- F. **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 including G below.
- G. **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.
- H. **SMALL-SCALE OPERATION EXCEPTION**

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.

Setback distance shall be measured from the property line or road right-of-way to the closest point of any project components and as follows:

- A. One hundred (100) feet from any property line of a lot.
- B. One hundred (100) feet from any public or private right-of-way or easement.
- C. Three hundred (300) feet from any existing dwelling unit

D. One hundred (100) feet from a stream, river, pond, lake, wetland, drain, or lands located within a 100-year floodplain as identified by the Federal Emergency Management Agency.

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.

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.

Height of any structure shall comply with the schedule of regulations contained in the Hayes Township zoning ordinance, section 4.13.

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.

In addition, any application for a special use permit for a large data center also requires site plan review. All required fees and escrow funds shall accompany the application. An

incomplete application will not be accepted. In addition to the general application requirements for special use permits and site plan reviews the following must also be included:

- A. The complete name, address, and telephone number of the applicant.
- B. The name, address, and contact information of the proposed operator of the Data Center, if different from the applicant.
- C. 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.
- D. The planned date for the start of construction 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.
- E. A description of the expected uses of the Data Center
- F. 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
- G. 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).

- H. 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.
- I. 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.
- J. 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.
- K. 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.
- L. 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.

M. A decommissioning plan as described in this Section.

1. 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. This should indicate the location of all existing structures and shall identify such structures as occupied or vacant.

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

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

P. A description of the facility, including a site plan as described in Section 224 of the Clean and Renewable Energy Waste Reduction Act, 2008 PA 295, MCL 460.1224.

The following items must be shown on the site plan:

A map of all properties upon which any component of a facility or ancillary feature would be located, and all properties within two thousand (2,000) feet.

1. This should indicate the location of all existing structures and shall identify such structures as occupied or vacant.

2. Lot lines and required setbacks shown and dimensioned including horizontal and vertical elevation drawings that show the location and height of any part of the facility on the land and dimensions of the all parts of the facility.
3. Size and location of existing and proposed water utilities, including any proposed connections to public, or private community sewer or water supply systems.
4. The facility and all foundation elements shall comply with all applicable building and electrical code requirements, and any applicable federal/state regulations. The manufacturer's engineer or another qualified engineer shall provide written certification that the design, installation (including foundations), and interconnection is compliant with the manufacturer and industry standards, all applicable local construction and electrical codes, and any applicable federal/state regulations.
4. A map of any existing overhead and underground major facilities for electric, gas, telecommunications transmission within the facility and surrounding area
5. The location and size of all surface water drainage facilities, including source, volume expected, route, and course to final destination.
6. 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

7. A map depicting the proposed facilities, adjacent properties, all structures within adjacent properties, property lines, and the projected sound isolines along with the modeled sound isolines.
- Q. A description of the expected source of the energy required by the proposed facility.
- R. A data center with an aggregate energy utilization of more than 500 KW are subject to additional regulations in the applicable fire code, and required documentation shall be submitted along with the building/electrical permit applications.
- S. Expected public benefits of the proposed facility.
- T. The expected direct impacts of the proposed facility on the environment and natural resources and how the applicant intends to address and mitigate these impacts.
- U. Information on the effects of the proposed facility on public health and safety.
- V. A description of the portion of the community where the facility will be located.
- W. A statement and reasonable evidence that the proposed facility will not commence operation until it complies with applicable state and federal environmental laws, including, but not limited to, the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.101 to 324.90106.
- X. Written documentation of approval of the proposed facility, before submission of the application, by the Department of Environment, Great Lakes, and Energy and

other relevant state and federal agencies before submitting the application, including, but not limited to, the Department of Natural Resources and the Department of Agriculture and Rural Development to determine any potential additional permit requirements.

- Y. The Soil and Economic Survey Report under Section 60303 of the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.60303, for the county where the proposed facility will be located.
- Z. Interconnection queue information from the applicable regional transmission organization.
- AA. If the proposed site of the facility is undeveloped land, a description of feasible alternative developed locations, including, but not limited to, vacant industrial property and brownfields, and an explanation of why they were not chosen.
- BB. If the facility is reasonably expected to have an impact on television signals, microwave signals, agricultural global position systems, military defense radar, radio reception, or weather and Doppler radio, a plan to minimize and mitigate that impact is required. Information in the plan concerning military defense radar is exempt from disclosure under the Freedom of Information Act, 1976 PA 442, MCL 15.231 to 15.246, and shall not be disclosed by the planning commission or the electric provider or independent power producer except pursuant to court order.
- I. A stormwater assessment and a plan to minimize, mitigate, and repair any

drainage impacts at the expense of the applicant. All surface water runoff created by construction and operation of the project shall be effectively managed on-site. The applicant shall provide the approval of the stormwater management plan by the county drain commissioner before submitting the application and shall include the written approval in its application.

CC. A fire response plan and an emergency response plan.

1. The fire response plan (FRP) shall include:

- i. Written documentation of consultation or a good faith effort to consult with local fire department representatives to ensure that the FRP 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.
- ii. A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies.
- iii. A description of all contingency plans to be implemented in response to the occurrence of a fire emergency 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.

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

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.

- iv. A commitment to review and update the FRP with fire departments, first responders, and county emergency managers at least once every three (3) years. Submission of the review and changes to be submitted to the Township administration.
- v. An analysis of whether plans to be implemented in response to a fire emergency can be fulfilled by existing local emergency response capacity. The analysis should include identification of any specific equipment or

training deficiencies in local emergency response capacity and recommendations for measures to mitigate deficiencies.

vi. Other information the applicants finds relevant.

2. The emergency response plan (ERP) shall include:

- i. Written documentation of consultation or a good faith effort to consult with local first responders and county emergency managers to ensure that the ERP is in alignment with acceptable operating procedures, capabilities, resources, etc.
- ii. An identification of contingencies that would constitute a safety or security emergency (fire emergencies are to be addressed in a separate fire response plan);
- iii. Emergency response measures by contingency;
- iv. A description of all on-site equipment and systems to be provided to prevent or handle emergencies.
- v. A description of all contingency plans to be implemented in response to the occurrence of an emergency containing, at a minimum, all of the following:
 - v. 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.
 - vi. 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.

- vii. A description of all electrical, fire, smoke, and similar environmental risks, their likelihood, and mitigation measures both before and after an emergency.
- viii. A description of the current emergency and 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.

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

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.

- vi. A commitment to review and update the ERP with fire departments, first responders, and county emergency managers at least once every three (3) years. Submission of the review and changes to be submitted to the Township administration.
- vii. An analysis of whether plans to be implemented in response to a fire or other emergency can be fulfilled by existing local emergency response capacity. The analysis should include identification of any specific

equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate deficiencies.

- viii. Evacuation control measures by contingency;
- ix. Community notification procedures by contingency;
- x. An identification of potential approach and departure routes to and from the facility site for police, fire, ambulance, and other emergency vehicles;
- xi. A commitment to review and update the ERP with fire departments, first responders, and county emergency managers at least once every three (3) years; Submission of the review and changes to be submitted to the Township administration.
- xii. An analysis of whether plans to be implemented in response to an emergency can be fulfilled by existing local emergency response capacity, and identification of any specific equipment or training deficiencies in local emergency response capacity; and
- xiii. Other information the applicants finds relevant.

4. **Fencing:** The proposed facility shall be secured with perimeter fencing to restrict unauthorized access. Perimeter fencing shall be seven (7) feet in height. All access doors to principal-use facility and related components and structures shall be locked to prevent entry by unauthorized persons. Fencing is not subject to setbacks as a component of the principal-use facility. The Planning Commission may require wildlife-friendly fencing with

openings that allow wildlife to traverse over or through a fenced area or Knox boxes and keys for emergency personnel access.

5. **Screening/Landscaping:** The Planning Commission shall require reasonable measures to minimize visual impacts by preserving existing natural vegetation, requiring new vegetative screening or other appropriate measures. The Planning Commission shall determine such visual screening measures as may be required on a site specific basis pursuant to the standards for Special Use Permits approval as specified in Article VI, Special Use Permit and Planned Unit Development, the landscaping and screening standards of Section 3.24, Landscaping, and/or the standards for site plan approval as specified in Section 5.03.5, Site Plan Review, of this the Hayes Township Zoning Ordinance, as most applicable to the circumstances. In making this determination the Planning Commission is specifically authorized to consider whether additional visual screening measures are appropriate where a system is proposed to be located on property adjacent to a residential use and/or a residential district zoning classification. All screening/landscaping shall be properly maintained throughout the life of the project including replacement of any dead landscaping within six months.

6. **Ground Cover:** A proposed facility shall include the installation of ground cover vegetation maintained for the duration of operation until the site is decommissioned. The applicant shall include a ground cover vegetation establishment and management plan as part of the site plan. Vegetation establishment must include invasive plant species (and noxious weed if local regulation applies) control. The following standards apply:

Project sites that are included in a brownfield plan adopted under the Brownfield Redevelopment Financing Act, PA 381 of 1996, as amended, that contain impervious surface at the time of construction or soils that cannot be disturbed, are exempt from ground cover requirements.

7. Lot Coverage: A proposed facility is subject to the maximum lot coverage or impervious surface standards for the district.

8. Land Clearing: Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the facility and to ensure sufficient all-season access given the topography of the land. Topsoil disturbed during site preparation (grading) on the property shall be retained on site.

9. Environmental Impact: The Planning Commission may use consultants to assist in the review of potential impacts on wildlife, water, and other environmental factors present on the site and may impose additional requirements to preserve and protect endangered species or prevent negative impacts to adjacent parcels, including but not limited to requirements of EGLE and/or US Fish and Wildlife Service. All surface water runoff shall be effectively managed on-site. All such review costs for such review to be paid by the applicant.

Historical Impact: Recognizing that the township has areas which have historical connection to indigenous peoples, studies of the potential for artifacts and protected sites must be completed prior to the application submission. Should such artifacts or protected sites be identified, the resolution of such issues must be approved in writing by all

applicable federal agencies and the tribal government and be contained in the application prior to the application submission.

Access Drives: New access drives within the proposed facility project shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the premises. The use of geotextile fabrics and gravel placed on the surface of the existing soil for the construction of temporary drives during the construction of the facility is permitted, provided that the geotextile fabrics and gravel are removed once the facility is in operation or completion of construction whichever occurs first.

11. **Wiring:** Facility wiring (including communication lines) shall be buried underground where practicable. Any above-ground wiring within the footprint of the proposed project shall be installed in accordance with all applicable codes and regulations.

12. **Lighting:** Principal-use facility lighting shall be provided in compliance with dark skies principles. Lighting is subject to the requirements of Section 3.20 of this ordinance. Light fixtures shall have downlit shielding and be placed to keep light on-site and glare away from adjacent properties, bodies of water, and adjacent roadways. Flashing or intermittent lights are prohibited.

13. **Glare:** All facility components shall be designed, maintained and operated to avoid glare and reflection of sunlight and other artificial lighting which may affect adjacent properties, navigation by air, water, and roadway. Facility designs shall comply with all Federal Aviation Administration siting requirements.

14. **Public Safety:** The ERP and FRP shall provide reasonable protection of the public health, welfare and safety including but not limited to an emergency shutdown procedure

in place and safety plans to include electrical, fire, smoke, and hazardous materials release, emergency response protocols and identification of typical hazards related to, electrical, fire, smoke and hazardous materials pertinent to the facility. All principal-use facilities shall provide first responder training at the site.

- i. 15. **Signage:** An area up to 120 square feet may be used for signage at the project site. Any signage shall meet the size, setback, illumination, and materials/ construction requirements of the zoning district for the project site. Signage limits may be adjusted to meet the requirements of NFPA Codes 1 and 855 or other regulatory agency requirements Safety Signage. The facility shall post signs in compliance with NFPA 70/70E or any applicable successor code in place at the time of application for approval. Additionally, signage shall be provided per NFPA 855 7.4.4, or any applicable successor code in place at the time of application for approval, including information on the system type and technology, special hazards, fire suppression system and 24-hour emergency contact information, including reach-back phone number. A clearly visible warning sign concerning voltage shall be posted as required.

1.

16. **Sound:** The sound pressure level of a large data center and all ancillary equipment shall not exceed 55 dBA at the property line. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance

with this standard. Decibel modeling shall use the A- weighted scale designed by the American National Standards Institute.

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:

- a. No sound shall exceed 55 dB(A) weighted (L_{aeq}-10 min) between the daytime hours of 7am to 7pm.
- b. No sound shall exceed 45 dB(A) weighted (L_{aeq}-10 min) between the nighttime hours of 7pm to 7am.
- c. No source of steady tonal sound shall exceed 65 dB(C) weighted (L_{ceq}-10 min) at any time.
- d. A report detailing the sound modeling results along with mitigation plans to ensure that sound emitted from the facilities will remain below the 55 dB(A) weighted (L_{aeq}-10 min) between the daytime hours of 7am to 7pm, measured at the property line throughout the operational life of the facilities.
- e. Octave Bands (dBz) will be maintained at acceptable levels.

The Planning Commission may require the applicant to provide a sound records and sound studies as part of the special land use review process. Sound measurements are to be continual and not exceed the maximum allowable decibel level.

Vibrations.

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.

Generators must be equipped with vibration isolation and mitigation systems.

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.

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.

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.

17. Repowering and Back-up Power: The use of back -up power sources must be clearly identified in the application. Battery back-up power systems are subject to the requirements of the battery energy storage system section of the Hayes township Zoning ordinance. Alternative forms of back -up energy systems are subject to all the criteria of this ordinance. If the facility desires to change or update its power source or back-up power generation it must make a proposal to change the project scope of an existing facility which shall be considered a new application, subject to the site plan, application requirements, and review procedures contained in the Township Zoning Ordinance in effect at the time of the request. Legal services and other studies resulting from an application to modify a Facility will be reimbursed to the Township by the facility owner in compliance with established escrow policy to alter the scope of the facility.

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.

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.

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.

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.

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.

A. 18. **Decommissioning:** A decommissioning plan is required at the time of application.

If approved by the Planning commission the approved decommissioning plan shall be put into a recordable decommissioning agreement by the applicant that is acceptable to the township attorney. 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.

A. The decommissioning plan shall include:

State the anticipated life of the project;

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.

1. The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g., access drive, fencing), or restored for viable reuse of the property consistent with the zoning district. Pursuant to this requirement, the decommissioning plan shall include the removal any structures up to forty-eight (48) inches below-grade for disposal.
2. 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.
3. 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.
4. The projected decommissioning costs shall reflect the actual cost of decommissioning the project. Salvage value shall not be included in the cost to decommission the project. Describe estimated decommissioning costs in current dollars and provide that this figure will be updated every fourth (4th) year after commencement of operation of the system
5. The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond or cash deposit). 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 actual 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.

A review of the amount of the surety bond, based on inflation, and current removal costs shall be completed every 4 years, for the first 20 years of the life of the project, and from the 21st year on for the rest of the life of the project including decommissioning every 3 years, approved by the Planning Commission. A facility owner may at any time:

1. Proceed with the decommissioning plan approved by the Planning Commission, and remove the facility as indicated in the most recent approved plan; or
2. Amend the decommissioning plan with Planning Commission approval prior to proceeding according to the revised plan.
4. Describe the timeframe for completion of decommissioning activities;
5. Describe any agreement with the landowner regarding decommissioning; and state the party responsible for decommissioning.

C. Decommissioning of a data center must commence when the soil is dry to prevent soil compaction and must be complete within 18 months after abandonment. A data center that has not been operational for 12 consecutive months shall prompt an abandonment hearing.

1. Restoration shall include bringing soil and topography of the land to their pre-development composition to ensure permitted uses upon restoration. Soil tests shall be required as part of the decommissioning plan both before development and prior to and upon completion of the decommissioning.

19. Transfers. No transfer in ownership of the facility shall occur prior to providing 60 days' notice to the Township and upon Township approval verifying that the new owner agrees to carry out the terms of the special land use and site plan approval.

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.

AMENDMENT TO ARTICLE VII SUPPLEMENTAL SITE DEVELOPMENT STANDARDS FOR A HOST

COMMUNITY AGREEMENT.

Section 7.01 "Supplementary Site Development Standards" of the Hayes Township Zoning Ordinance is hereby amended by adding a Section 7.01.2X titled "HOST COMMUNITY AGREEMENT" to read as follows:

A principal-use data center facility special use permit holder shall enter into a host community agreement with the Township prior to the issuance of the permit. The host community agreement shall require that, upon commencement of any operation. The facility

owner must pay the Township _____. The payment shall be used as determined by the Township for police, fire, public safety, or other infrastructure, or for other projects as agreed to by the Township and the permit holder.

SECTION 5. AMENDMENT TO ARTICLE. 9 SECTION 9.05 "Fees"

Section 9.05. "Fees" is hereby amended to read as follows:

3. By resolution, the Township may establish an application fee and escrow policy to cover the Township's reasonable costs of review and processing of the site plan, including but not limited to staff, attorney, engineer, planning, environmental, or other professional costs.

SECTION 6. COMPLIANCE.

Applicant, developer and operator are required to comply with all applicable Federal, State and local ordinances permit requirements for the life of the project and decommissioning.

SECTION 7. SEVERABILITY OF INVALID PROVISIONS.

If any section, paragraph, clause, or provision of this Ordinance shall be held invalid, its invalidity shall not affect any other provisions of this Ordinance that can be given effect without the invalid section, paragraph, clause, or provision, and for this purpose, the sections, paragraphs, clauses, and provisions of this Ordinance are hereby declared to be severable.

SECTION 8. REPEAL.

All other ordinances, resolutions, orders, or parts of ordinances herewith in effect that are in conflict with this ordinance are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

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

Effective Date

. This ordinance shall take effect 8 days after publication after adoption.

DRAFT