Key for RRC suggested edits:

~~Red Struck Through & Highlighted Text~~ = RRC Suggested Text Removal
Green Highlighted Text = RRC Suggested Text Addition
Purple Text = RRC Note for Clarification (not suggested text addition)

Carlisle Wortman, Howell Twp High Impact Land Use Overlay District, Draft Date ~~5/7/26~~ 8/26/26

Draft High Impact Land Use Overlay District

Definitions proposed to be added to Section 2.02.

⅓ **Octave Band Analysis:** A frequency spectrum analysis where the unweighted sound levels of all frequencies in a sound sample are split into sections (octave bands) where the upper limit is twice the frequency of the lower limit, and each octave band is further split into three equal sections providing a more detailed analysis of the intensity and frequency composition of a sound.

~~***Air Chiller:*** a cooling and heat rejection system which utilizes fans to move ambient air over condenser coils to cool the water or refrigerant in a Closed Loop Cooling System.~~ Not used

Battery Energy Storage Systems (BESS): A storage system that collects energy from renewable and non-renewable sources in rechargeable batteries for later use.

Closed-Loop Cooling System: Any cooling system that constantly reuses and recycles an initial load of process fluid (water or chemical substance) within its operating components for cooling purposes, which is not directly exposed to the air or other cooling system components during heat rejection; this process fluid still requires periodic discharge and refill.

Cooling Tower: an industrial-scale heat exchanger that removes heat from the cooling process fluid by evaporating a portion of either process water in an Open-Loop Cooling System, or basin water in a Closed-Loop Cooling System, during the heat rejection process.

Open-Circuit Cooling Tower: A water-based evaporative heat-rejection system which does not utilize a Drift Eliminator, resulting in water loss ("drift") to the atmosphere.

Open-Loop Cooling System: a ~~heat rejection~~ cooling system where the warm process water is sprayed directly onto fill media, where it is then exposed to airflow to utilize evaporative cooling; these systems require frequent discharge and refill, consuming large amounts of water, due to the contamination of the process water during the heat-rejection phase.

Closed-Circuit Cooling Tower: ~~utilized in some Closed-Loop Cooling Systems;~~ A water-based evaporative heat-rejection system which utilizes a Drift Eliminator to capture evaporated water droplets and minimize water ("drift") loss. ~~basin water is sprayed over the closed-loop coils to utilize evaporative cooling. Basin water requires periodic discharge and refill.~~ The preceding definitions were adjusted for consistence and accuracy.

~~***Mechanical Draft:*** Open or Closed Circuit Cooling Towers may use Mechanical Draft, which uses fans to move air through the water to enhance the cooling process by accelerating evaporation and therefore heat transfer.~~ Not used

Computer Room Air Conditioners (CRAC): A type of Room-Level HVAC system utilized in computer server rooms/data centers to remove high-density heat generated by IT equipment; CRACs pull hot air from the entire room, and return cool air to the entire room, rather than cooling the IT equipment directly; utilizing refrigerant-based cooling. Commonly referred to as Computer Room Air Handlers when circulating chilled water instead of refrigerant.

***Cryptocurrency Mining Facility*:** A facility of any size that is dedicated to operating data processing equipment for cryptocurrency mining and the process by which cryptocurrency transactions are verified and added to digital ledgers. This includes data mining facilities.

Data Processing. The collection and manipulation of digital data to analyze and produce meaningful information.

***Data Center*:** A physical facility housing the people, hardware and software organized to provide information processing services. This includes data processing facilities, colocation centers, hyperscale facilities, server farms and artificial intelligence / "AI" data centers. Data centers are further defined by the Following: Added a couple qualifiers per Pittsfield

1) ***Ancillary Data Center:*** A data center~~s~~ that is ancillary to another primary use and a) ~~occupy~~ occupies no more than ten percent (10%) of the primary building's footprint, b) ~~are~~ is used to serve the enterprise functions of the on-site business and are not used to lease data storage and processing services to third parties, and c) are not housed in a separate, stand-alone structure on the parcel.

2) ***Minor Data Center:*** A data center that is ~~10,000~~ 25,000 total square feet or less for all buildings and structures on the site. If a minor data center requires an electrical substation and/or water treatment plant it shall be classified as a ~~medium~~ major data center.

~~3) ***Medium Data Center:*** A Data Center that is between 10,000 square feet and 99,999 total square feet (for all buildings and structures on the site).~~

~~4)~~ 3) ***Major Data Center:*** A Data Center that is ~~between 100,000 square feet and 499,999 total square feet (for all buildings and structures on the site).~~ greater than 25,000 total square feet in size for all buildings and structures on the site.Two sizing categories to mirror Green Oak Township's and Pittsfield Township's High Resource Demand Facility Ordinances. Left names as Minor and Major to minimize additional edits later in this document where those terms are utilized.

~~5) ***Data Center Campus:*** A Data Center Campus shall consist of more than one Data Center building and may be any combination of sizes of Data Center buildings, not to exceed a total of 750,000 total square feet (for all buildings and structures on the site).~~ New info found, the cap on size in a definition does not limit size and creates a potential loophole and should not be used.

Decibel, dB: A decibel (dB) is a common measure of sound intensity that is one-tenth of a bel (B) on the logarithmic intensity scale.

Decibel-dBA: Decibels measured in dBA are weighted to the frequencies in the middle of the range of human hearing, as a representation of the perceived overall loudness.

Decibel-dBC: Decibels measured in dBC are weighted to the low-frequency, sounds which travel and penetrate farther than treble sound, often a component of tonal noise.

Decibel-dBZ: Decibels measured in dBZ are unweighted to measure without frequency-based adjustments, for situations requiring a precise measurement of the sound's total energy and frequency content.

Direct Liquid Server Cooling: Server cooling technologies in which liquid coolant directly removes heat from electronic components through immersion or cold-plate contact, rather than through room air circulation.

Direct-to-Chip Cooling: A method of liquid cooling that utilizes coolant to dissipate heat directly from computer processing chips and greatly reduces electrical power and water consumption.

~~***Dry Cooler:*** a heat rejection system which utilizes fans to move ambient air over a cooling coil; commonly used in closed-loop cooling systems.~~ Not used

Drift Eliminator: A device utilized on cooling towers to trap evaporated water droplets and return them to the cooling tower/system, rather than escaping into the atmosphere. Minimizes environmental contamination from cooling system chemicals and bacteria. Added

Electrical Substation: An electric system facility that converts higher voltages to lower voltages within or separate from a ~~data center~~ high impact land use to generate sufficient power at maximum efficiency; can operate independently for dedicated sites once directly connected to the transmission line.

Equipment Cooling: Cooling for equipment, including but not limited to machinery, computer component cooling, processor cooling, server cooling, rack cooling, generator cooling, electrical component cooling.

Facility Cooling: Cooling for the facility/structure itself, not for equipment, machinery or components located therein and/or on the property. This includes HVAC cooling.

Generator: A machine that converts one form of energy into another.

High Impact Land Use: A term that refers to a) an industry or business with higher than average consumption/use of resources, typically of electricity and/or water~~,~~; and/or b) characterized by continuous or near-continuous operation; and/or c) significant mechanical, electrical, or cooling infrastructure including but not limited to private power substations or switch stations and water treatment facilities; and/or d) an industry or business with operations that are highly impactful from the standpoint of noise, vibration, type of power potentially used (such as battery storage systems, nuclear, etc.), ~~utilization of private power substations, or switch stations,~~ potential onsite ~~fuel~~ combustible, flammable, or hazardous material storage, and potential negative impacts on health, water, ~~and~~ or air quality. ~~This~~ High Impact Land Uses include data centers, data processing facilities, server farms, “AI” artificial intelligence, cryptocurrency mining facilities, and digital currency mining.

Multiple buildings, modules, or phases located on the same site or on contiguous parcels under common ownership or control shall be aggregated for purposes of determining HILU status. Revisions based on CW’s language in the Pittsfield Township High Resource Demand Facility Ordinance draft

Hydrogen Fuel Cell: An electrochemical device that combines hydrogen and oxygen to produce electricity.

Infrasound: A low frequency sound below a frequency of 20Hz that is typically sub-audible to humans and often perceived as vibrations.

Liquid Immersion Cooling: A method of liquid cooling that utilizes submerging equipment in fluid that does not utilize large volumes of water and greatly reduces electrical power consumption and offers an option for use of plant based biodegradable non-flammable oil.

Megawatt: A unit of power output equal to 1,000,000 watts or 1,000 kilowatts, used to measure power consumption.

Octave Band: A method of splitting the frequency spectrum into sections where the upper limit is twice the frequency of the lower limit, identified by the center frequency.

Power Usage Effectiveness (PUE): a ratio that describes how a ~~High Impact Land Use~~ data center uses energy; specifically, how much is used by the IT equipment compared to total power consumption. Calculated by dividing total facility energy by IT equipment energy. Note that PUE is a

method of energy use assessment created specifically for data center facilities (this orig. said only "data center"). At the very least pick one or the other, but not both: "high impact land use" OR "data center".

Renewable "Green" Hydrogen: Renewable or "Green" Hydrogen is used for Hydrogen Fuel Cells and is sourced from water, using sustainable electricity sources such as solar or Wind.

Sensitive Receptors: Sensitive receptors are locations where people, communities, environmental resources, or facilities may be particularly vulnerable to adverse effects from noise, air pollution, odors, vibration, light, hazardous materials, or other project- related impacts. ~~These include~~ Sensitive receptors include ~~S~~schools, preschools, daycares, health facilities such as hospitals, long-term care facilities, retirement and nursing homes, community centers, places of worship, playgrounds, parks, ~~campgrounds,~~ prisons, dormitories, ~~hotels, motels,~~ and any ~~parcels zoned agricultural residential, single-family residential and multi-family residential.~~ dwelling with a residential zoning designation. Options: Some temporary uses such as hotels/motels/campgrounds could be removed from the sensitive receptor list to help provide larger set back and distancing options for dwellings. Including them may negatively impact the use of the best possible parcels for HILU in the overlay, and optimal use of the parcels in the overlay that are farthest from residential dwellings should be prioritized; -or- have different setbacks and distancing for interior overlay parcels vs. those parcels that comprise the perimeter/closest to dwellings.
Standalone Modular Data Center / Cryptocurrency Mining Facility: Pre-engineered, prefabricated, temporary and standardized buildings, including shipping containers, ~~designed~~ utilized to house computer servers and network equipment.

Tonal Noise: A noise characterized by a distinct, recognizable frequency, which stands out significantly against the background broadband noise, considered a nuisance due to the human auditory system's sensitivity to pure tones, especially when they are continuous.

Total Power-Usage Effectiveness (TUE): A metric similar to PUE but which includes IT power such as server fans and internal power distribution losses with infrastructure overhead, to provide a better metric of energy efficiency across the entire data center development. Calculated by dividing the total facility power usage by the compute power usage.

Water Usage Effectiveness (WUE): a metric that measures how efficiently data centers use water by comparing the total water used to the power used by its IT equipment.

Calculated by dividing annual water usage (liters) by IT equipment energy usage (kilowatts).

Amending Articles 5, 8-13 to allow data centers as Permitted Accessory Uses or Permitted Principal Special Uses with Conditions.

Ancillary data centers will be allowed as Permitted Accessory Uses in the following districts:

• Article 5– RT Research & Technology– Section 5.04
• Article 8– OS Office Service District– Section 8.04
• Article 9– NSC Neighborhood Service Commercial District– Section 9.04
• Article 10– RSC Regional Service Commercial District– Section 10.04
• Article 11– HSC Highway Service Commercial District– Section 11.04
• Article 12– IF Industrial Flex Zone– Section 12.04
• Article 13– I Industrial District– Section 13.04

Minor data centers ~~will~~ shall be ~~allowed as~~ Permitted as Special Principal ~~Special~~ Uses with Conditions, subjected to the standards of Section 16.23, in the following district ~~if also~~ and located only within the High Impact Land Use Overlay District: Reworded for consistency and clarity, per zoning ord. book Nov. 2025: Article 16 / item C: "solar energy farms shall be permitted as a special principal use…" Also see Article 3 / Section 3.07 / Item B: "Uses are permitted by right only if

specifically listed as principal permitted uses in the various zoning districts…Special uses are permitted as listed…and if the required conditions are met."
Combining the two terms "Permitted Principal" and "Special Use" need to be avoided, permitted and special may not be in same name or the township is inviting challenges on interpretation; where already existing in other areas of the zoning book this needs to be corrected.

~~• Article 12 – IF Industrial Flex Zone – Section 12.03~~
• Article 13 – I Industrial District – Section 13.03. Prohibited Elsewhere.
Applicants always have the ability to request a rezoning for the underlying parcel zoning. It is still felt that data centers of any size (except Ancillary) belong to the heavier-industrial zoning designation. The additional step of rezoning would also provide the township an extra layer of oversight which is an added benefit.

"Prohibited Elsewhere" added, based on Pittsfield Township.

~~Medium data centers will be allowed as Permitted Principal Special Uses with Conditions, subjected to the standards of Section 16.23, in the following district if also located within the High Impact Land Use Overlay District :~~

~~• Article 13 – I Industrial District – Section 13.03~~

Major data centers ~~will~~ shall be ~~allowed as~~ Permitted as Special Principal ~~Special~~ Uses with Conditions, subjected to the standards of Section 16.23, in the following district ~~if also~~ and located only within the High Impact Land Use Overlay District: See note on wording correction above

• Article 13 – I Industrial District – Section 13.03. Prohibited Elsewhere.
~~Campus-style data centers will be allowed as Permitted Principal Special Uses with Conditions, subjected to the standards of Section16.23, in the following district if also located within the High Impact Land Use Overlay District:~~

~~• Article 13 – I Industrial District – Section 13.03~~

Amend Section 14.45 PERFORMANCE STANDARDS to remove~~d~~ exe~~m~~e~~p~~tions for sites with background noise that exceeds require~~m~~ents.

Section 14.45
B. Noise.
4. Background Noise. All noise generated from any new uses shall conform to the specific levels in table 14-1 even if ~~Where~~ there is existing background noise that exceeds the maximum permitted levels specified in Table 14-1.; ~~The noise caused or created by a specific operation or activity may exceed the levels specified in the Table, provided that the sound level on property adjacent or in close proximity to the lot or parcel on which the operation or activity is located does not exceed the background noise level. For purposes of this subsection, background noise shall mean noise being produced by permitted uses conducted in a legally-accepted manner from all sources other than those occurring on the lot or parcel on which the operation or activity is located. Background noise levels shall be determined by measurement at substantially the same time and location as the noise levels caused or created by the complained-of operation or activity.~~

Amend ARTICLE XVI SPECIAL USES to add revocation provisions

Section 16.0X REVOCATION

The revocation of a Special ~~Land~~ Use Permit may occur if its recipient fails to abide by its terms, conditions, or development agreement. The revocation procedure is as follows: Verified it is a "special use permit" per Zoning Book of Ordinances, Article 16.

A. If the Township receives credible information that the Special ~~Land~~ Use Permit or conditions of approval have been violated, the Zoning Administrator or their designee must prepare a report in writing specifying (i) the specific factual details of such violation(s); and (ii) any other information or recommendation relevant to a proper determination by the Township Board as to the nature of such violation(s) and the appropriate action to be taken by the Tow~~o~~nship.

B. The Zoning Administrator or their designee, after the investigation and based on the facts discovered, will determine if the case goes forward. If the case does not go forward, the Zoning Administrator or their designee must give the approving body a written report as to why that determination was made. If the case goes forward, the process in subsections C-H below must be followed. Discussion: Should there be some criteria and/or parameters set for the reviewing of facts/"findings", that would determine whether a case moves forward? Something less substantial than Section H's criteria below, which is for the Board to make their determination, but some type of objective criteria? Such parameters would ensure an objective review of the facts and reduce the risk of lawsuits based on constitutional violations and vagueness (as noted in the MSU document provided at the 8/25/26 PC meeting).

C. The Zoning Administrator or their designee must file the original report outlining the violation and evidence of such violation with the Township Board and serve a copy of such report upon the owner of the parcel for which the Special ~~Land~~ Use Permit was granted or its authorized agent or employee, personally or by registered mail.

D. After the report has been filed with the Township Board the Zoning Administrator or their designee must set a date for a hearing before the Township Board on the alleged violation(s) for a determination by the Township Board as to revoke the Special Land Use Permit. Notice of this hearing must be served by the Zoning Administrator or their designee upon the owner of the parcel for which the Special Land Use Permit was granted or its authorized agent or employee, personally or by ~~registered~~ certified mail, not less than ten days before the scheduled hearing date, and such notice must contain the following:

1. Notice of proposed action;
2. Reason for the proposed action;
3. Date, time, and place of hearing;
4. A statement that the parcel owner may present evidence and testimony ~~and confront adverse witnesses:~~ at the hearing. See note below*
5. A statement that the parcel owner has the right to be represented by legal counsel at the hearing. See note below*

E. At all such hearings, the parcel owner has the legal right to defend against the allegations made by way of confronting any adverse witnesses, by being allowed to present live witnesses on their own behalf, by being allowed to present other evidence on their own behalf, and by being allowed to present arguments personally or through legal counsel in their own behalf. See note below*

F. The Township Board must prepare a written statement of its findings, which may be formal or informal in nature, after the conclusion of all such hearings. Such statement of findings may be embodied in a resolution adopted by the Township Board.

G. If the Township Board determines after due notice and proper hearing that competent, material, and substantial evidence exists that a violation of the Special ~~Land~~ Use Permit and the conditions of approval has been committed by a parcel owner or that, even if no violation has been ~~demonstrated~~ previously issued, nevertheless the interests of public health, safety, or welfare warrant that the Township Board revoke the Special ~~Land~~ Use Permit issued to the parcel, the Township Board may revoke the Special ~~Land~~ Use Permit.

H. Criteria for revocation. The Township Board may revoke the Special ~~Land~~ Use Permit, based upon competent material and substantial evidence presented at the public hearing, that any of the following exists:

1. Violation of the Special ~~Land~~ Use Permit, any of the conditions of the Special ~~Land~~ Use, and any provisions of a development agreement attached to the Special ~~Land~~ Use Permit.
2. Abandonment of the Special Land Use by the parcel owner for a period of six months. Should this be 12 mo, per decommissioning?
3. Maintenance of a nuisance upon the premises, including, but not limited to, any of the following:
    a. Existing violations of building, zoning, health, fire, or regulatory codes.
    b. A pattern of conduct on the parcel which violates the terms of the Special ~~Land~~ Use Permit.
    c. A pattern of conduct on the parcel creates a public nuisance.
    d. Perjury or any material misrepresentation of information in any application required or hearing held pertaining to the grant, renewal, or revocation of any license or permit.

***DISCUSSION:** The above Revocation Section feels as though it might be beyond the scope of a zoning ordinance, and is more aligned with Township policy or even a General Ordinance procedure. A standardized criteria for revoking any Special Use Permits is a good idea, but perhaps needs to be separated out from the more procedural elements? The objective criteria in sub-section H is liked, and it is suggested to combine it with language from MTA, Cohoctah Township, and Pittsfield Township. Please see the last section, "L. Monitoring and Compliance", for the revised, suggested language, which is more concise and may be better aligned with other ordinances' language.

Amend Section 18.02 OFF-STREET PARKING REQUIREMENTS

G. Off-street parking space requirements. The minimum required off-street parking spaces are set forth as follows:

Use Parking Space Requirements	Use Parking Space Requirements
High Impact Land Uses	One (1) space for each employee working at maximum shift plus 5 visitor spaces

Adding New Section 16.23: High Impact Land Use Overlay District

A. Purpose and Intent

The purpose of this ordinance is to establish a clear and thoughtful regulatory framework that addresses the unique characteristics of high impact land uses for the suitable zoning, siting, design, construction, operation, compliance and decommissioning of high impact land uses including but not limited to data centers and cryptocurrency mining facilities. These regulations are intended to guide the placement and design of high impact land uses to balance stable local economic growth with the protection of community health, safety, welfare, interests, natural resources, and the area's

rural character. The intent of this ordinance is to permit only uses having performance characteristics which emit a minimum of noise, vibration, smoke, dust, dirt, glare, toxic materials, offensive odors, gases, electromagnetic radiation, or any other physically adverse effect to the extent that they are abnormally discernible or potentially harmful beyond the lot lines of the parcel or site upon which the use activity is located. This is achieved by:

1. Directing high impact land uses to areas where industrial uses are currently permitted ~~or planned~~ and that would have minimal impact on residents and surrounding properties with the use of a clearly designated high impact land use overlay district located over the designated existing and planned Industrial area.The highlighted green text was missing from the previous draft, leaving an incomplete sentence. The highlighted red struck through text was just moved to the last sentence of this item, where it seems to more clearly imply the industrial area already designated on the future land use map.

2. Minimizing, avoiding, and mitigating impacts such as noise, vibration, light/glare, air pollution and emissions, and water pollution through requiring the use of minimally impactful machinery, equipment, and systems.

3. Ensuring the efficient consumption and use of public utilities, such as water and electricity, prioritizing cooling systems and facility designs that enable facilities to meet strict usage effectiveness metrics ~~renewable energy and conservation~~.

4. Promoting context-appropriate architectural design and effective visual screening to ensure a visually cohesive design and compatibility with the surrounding land uses and the desired rural character of the area.

5. Establishing clear expectations and a predictable review process for developers, to encourage efficient and well-planned designs, while retaining local control over development.

6. Ensuring compatibility with adjacent land uses and the Township's Master Plan.

7. Ensuring compliance with responsible regulations for construction, operation, compliance, decommissioning and site restoration.

B. Applicability

1. This section shall apply to high impact land uses including all types of data centers Ancillary, Minor, ~~Medium~~, Major, ~~and Data Center Campuses~~, and cryptocurrency mining facilities.

2. A complete preliminary site plan for all phases of the development that meets the requirements in Article 20 shall be included ~~in~~ with the application along with applicable fees. Is this intended to basically say "HILU's are (still/also) subject to Article 20? Because this is worded as an application requirement, not additionally-applicable ordinances. If so, wouldn't point 4 cover this? (Review and discuss Article 20 in full).

3. All developments subject to this section shall require an application of a special land use permit subject to the requirements of Article 16. Would "HILU's are subject to the Special Use regulations in Article 16" be the goal- since this is "applicability", not "application"? Is this even needed, since the HILU ordinance lives within Article 16? If its just the application requirements in 16, that defers to Article 20.

4. Approval is contingent upon the applicant demonstrating conformance to the requirements of this section, any other provisions of the Zoning Ordinance, and all other applicable Township Ordinances.

5. The applicant must enter in a development agreement with the Township.

6. All developments subject to this section shall be required to have a performance guarantee as outlined in Section 20.15.
    - Would it be a good idea to specify that the Performance Guarantee in 20.15 is intended *only* for the portions of development that benefit the community, and not to ensure completion of the full development?
    - 20.15 allows the *developer's* project engineer to determine how much the bond can be reduced by as the work progresses… wouldn't it be in the township's best interest to have their own engineer make this determination? If so- should 20.15 be amended, or should this distinction be made only within the HILU ordinance, so that it only applies to HILUs?

7. The township board shall establish a fee for all ~~hi~~ high impact land uses applications to be added to the fee schedule. Should there be an interval set for this specific fee to be reviewed, something like "to be reviewed by the board no more less than once every 2 years"? Also in regard to an escrow account for upfront costs, is the wording in section 20.15 on performance guarantees adequate to cover a large complex escrow account for HILU - review is recommended.

8. Where conflicts exist between this section and other provisions, this section governs. Where silent, other applicable provisions apply (e.g. lighting, landscaping, stormwater, and performance standards). Language in 8 from CW's Pittsfield Township ordinance, Sec B.4. This would reconcile any differences between Article 16/20, and this one.

C. Districts Permitted

High impact land uses including data centers and cryptocurrency mining facilities shall only be developed in districts where permitted as an Accessory Use~~, Principle Use~~ or in Industrial zoning as a Principal Special Use~~s~~ with Conditions, only if the property is located within the High Impact Land Use Overlay District on the Township's Official Zoning Map. All non-accessory High Impact Land Uses and Data Centers are prohibited elsewhere. Per Pittsfield.

D. Required Engagement Steps (minimum standards)

1. Pre-application conference (mandatory)
    a) Applicants shall meet with planning staff prior to submitting an application.
    b) Staff shall identify expected engagement topics, impacted stakeholders, and the required contents of the Community Engagement Plan. Discussion: NDA's are a huge community concern with this step. Green Oak Township intends to disallow NDA's *within* their data center ordinance (via amendment); so, especially with the addition of this section, and given the purpose of community engagement, (to provide transparency for the community), NDA's should be clearly prohibited within this ordinance section, OR the township should pass a ban on NDA's prior to adopting this HILU ordinance.

2. Community Engagement Plan (CEP) (required with application)
    a) A CEP shall be submitted as part of the application package and must include:
        - Project overview (site, size, phasing, anticipated construction timeline);
        - Draft public information materials (fact sheet, FAQs);
        - Engagement schedule and methods;
        - Proposed meeting formats and locations (including virtual option);
        - List/map of stakeholders and the Engagement Area;
        - Languages and accessibility accommodations;
        - Communication channels (project website, email list, hotline);
        - Process for documenting comments and responses; and

- Proposed Risk Mitigation

b) The Zoning Administrator shall determine whether the CEP is complete prior to scheduling public hearings.

3. Neighborhood meeting(s) (mandatory, prior to first public hearing)

a) The applicant shall hold at least one neighborhood meeting no fewer than 21 days and no more than 60 days prior to the first public hearing.

b) Notice shall be given to all property owners and addresses (if different) within ~~500~~ 1500 feet of the proposed project site. If a property is within ~~500~~ 1500 feet and is part of a subdivision, homeowners, or business owners association, all members of the association shall be notified.

c) Additional neighborhood meetings may be required if:

- There are significant amendments, based upon determination of the Zoning Administrator, to the plan between Planning Commission or ~~City Council~~ Township Board reviews; or
- The Planning Commission or ~~City Council~~ Township Board directs additional engagement due to public interest.

d) Meeting requirements:

- Held at an ADA-accessible location within ~~the City of Howell~~ Howell Township or a neighboring community and scheduled after 5:00 p.m. on a weekday or on a weekend;
- Virtual participation option must be provided;
- Applicant must provide interpreters upon request with at least 7 days notice; and
- Meeting must include a Q&A segment and accept written comments.

4. Report

a) After each neighborhood meeting, the applicant shall submit a report to the ~~City~~ Township providing at a minimum, the following meeting details:

1. Meeting details (location, time, etc)
2. Meeting sign in sheet
3. Meeting minutes
4. Written comments received, with response on intended plan of action to address any concerns raised, both in written and oral comments.

~~D.~~ E. Application Requirements

The MTA sample ordinance includes the following application requirements. While some of them do contain elements that appear in the Township's site plan requirements, MTA's suggestions go further. Given that HILU is essentially a level of potential impact beyond typical Special Uses (which carry potential impacts beyond regular permitted uses), the Township may wish to opt for the additional provisions as they appear in the MTA language, provided below. If the "where provisions conflict/where silent" is incorporated, as suggested above, there should be no confusion. Reiterating that language may be beneficial:

In addition to the requirements for a Special Use application (Article 16.03) and Site Plan requirements (Article 20), the following shall apply: Consider re-stipulating "where provisions conflict/where silent" language here? (No conflicts were identified).

1. The name, address, and contact information of the applicant, and proposed operator of the High Impact Land Use, if different from the applicant. Language from MTA-stipulates proposed operator; Article 16/20 does not. Note Haslock Trucking conflict.
2. Address and parcel number of each property to be used, including demonstrated proof of ownership, lease, or easement permitting all proposed construction on said property. Article 16/20 does not require proof of ownership etc., MTA's does
3. A description of the expected uses of the High Impact Land Use. Not in Article 16/20
4. 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. Not in Article 16/20

5. A description of each standard described in this High Impact Land Use 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 (ie sound studies and modeling, vibration studies and modeling, environmental studies, etc) Not in Article 16/20

6. A Community Engagement Plan, as required in Section D.2. Added per new section, below

~~2~~.7. A preliminary site plan, meeting the requirements in Article 20, and showing the location, height, and design of all components of the High Impact Land Use, 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. The additional items detailed beyond "…Article 20…" are not in Article 20; This language is straight from MTA's sample, with the addition of "meeting the…Article 20"

8. A site plan depicting all proposed means of ingress and egress which demonstrates compliance with any applicable fire or emergency response regulations. Compliance demonstration not in Article 20

9. A landscape plan depicting all proposed changes to the landscape of the existing site, including grading, vegetation removal, fencing and vegetative screening. "Including…" is not in Article 20. All of the above is from MTA; 7 & 8 can possibly be combined

10. A map of any existing wells within two thousand (2,000) feet, and a detailed analysis explaining:
    a. How any construction activities, including dewatering, may potentially impact wells
    b. How water usage may potentially impact wells
    c. What contamination risks exist from discharged water, and any leaks or spills of Hazardous Materials (including PFAS and bacterial contamination)
    d. A detailed Well Protection Plan for how the applicant will remediate any such damages, and a signed Developer Agreement that the applicant will be financially responsible for remediating contamination, repairing or replacing any impacted wells, or for the interconnection fee for the affected property owner to be connected to municipal water instead, if applicable. The above protection is a primary community concern. Is there a way to incorporate monitoring/protection for MHOG water users' water pressure too?

11. ~~In addition to the required information for a site plan in Article XX and~~ ~~A~~applicant shall provide the following impact studies to accompany any application:
    a. Projected maximum possible power use.
    b. Projected maximum possible water use.
    c. Projected maximum possible natural gas use.
    d. Plans for any onsite power generation as permitted in this ordinance. Added, because the ordinance says NO onsite power generation, except renewables- but even renewables have some prohibitions.
    e. Projected PUE, TUE and WUE with supporting documentation.
    f. Serviceability statements that fully disclos~~ing~~e whether any utility needed has current capacity to service the needs of the facility at time of full commissioning, and if not: a plan for what is needed with a signed Infrastructure Development Agreement verifying all costs for needed upgrades will be the developer or operator's responsibility.
    g. Serviceability statements from local emergency providers, fire, EMS and police fully disclosing their ability to provide services for all phases of construction and upon full commissioning, and if not: ~~a plan for what is needed~~ An analysis including identification of any specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate deficiencies with a signed Emergency Services Training and Equipment Plan to

be incorporated into the Development Agreement verifying that all costs for needed upgrades, staffing, training and equipment will be the applicant's ~~owning parent company's~~responsibility.

h. A Fire and Emergency Response Plan for all phases of construction and operation containing, at a minimum, all of the following:
   - Site Layout
   - Backup generator and Long Duration/Battery Energy Storage System locations, risks, and emergency protocols
   - Contact information for security and facility management
   - A description of all chemicals, regulated substances, or hazardous materials that will be used during the construction or operation of the facility and describe their purpose, storage/location within the facility, and discharge/waste management plans.
   - 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
   - A description of all electrical, fire, smoke, and similar environmental risks, their likelihood, and mitigation measures both before and after an emergency.
   - 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.
   - A description of if and how the Township and public shall be notified of emergencies at the High Impact Land Use to the extent that such emergencies have the potential to result in impacts to the Township or the public.
   - 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 Marshall or other local emergency manager.
   - A description of all on-site equipment, fire suppression, and alarm systems to be provided to prevent or handle fire emergencies.
   - A commitment to review and update the plan with fire departments, first responders, and county emergency managers at least once every three (3) years.
   - Other information the applicant finds relevant or wishes to present to the Township. From MTA; Pittsfield has a less robust version as well

~~h.~~i. Projected noise levels (dBA, dBC and dBZ), vibration levels, noise mitigation features/plan and noise monitoring plans for the facility based on being fully operational and for the construction period.

~~i.~~ j. ~~Emergency and disaster plan for all phases, including construction.~~ Decommissioning and site restoration plan, meeting all the requirements in section K.

k. Traffic study for all phases, including construction.

l. Public facility, utility, and service impact assessment conducted by a licensed professional engineer.

~~m. All exterior building elevations for each structure.~~

~~n.~~m. Mechanical plans for the overall site, including type, size, and location of all rooftop and other onsite energy storage and backup power generation, and whether and how such equipment is to be tested.

~~o. Rooftop mechanical and electrical plans.~~

~~p.~~n. Electrical plan for the overall site including any existing and planned overhead and underground major facilities/lines for electric, gas, telecommunications transmission within the facility and surrounding area. ~~underground lines~~

~~q.~~o. Preliminary project timeline with estimated durations for each stage of work, including site prep, and detailed schedule for any pile driving.

~~r.~~p. Equipment cooling system specifications, including type, size, and location, and analysis with proof of capacity on public water and sewer systems to support the proposed intake and discharge of water.

~~s~~. ~~List of regulated substances, including any cooling solutions.~~

~~t.~~ q. ~~Construction plan. Site lighting plan,~~ Lighting plan including evidence of how the development will meet the lighting requirements in this ordinance. ~~including lighting plan for during the construction phase.~~

~~u.~~r. Construction plan, including:

- Expected duration of construction
- Description of construction phases
- Proposed timeline for construction of each structure or major component
- Description of any areas where future expansion is anticipated
- Lighting plan for the construction phase.
- A Construction Logistics and Traffic Management Plan, identifying haul routes, delivery windows, worker parking, and dust/mud control.

Additional construction plan details per MTA and Pittsfield Twp

~~v.~~s. An economic impact analysis.

~~w.~~t. A projected job creation report

u. Operations Report, outlined in Section H.2.c.

v. Heat Recovery/Reuse Feasibility Analysis, outlined in Section H.2.d.

w. Environment and Community Impact Analysis: A high impact land use shall provide, at time of application for special land use permit, detailed analysis by qualified individuals of the use'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. Environmental impacts should include impact to 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.Language in w. Is from MTA's sample.

12. Risk Mitigation Plan: Adapted from Pittsfield Township

a. Because HILU's and Data Centers can generate community's impacts and service demands related to energy consumption, water use, stormwater, noise, traffic/road wear, visual impacts and aesthetics, public safety coordination, and long-term site management, a Risk Mitigation Plan shall be required for any new High Impact Land Use or Data center with the Special Use Permit application, that ensures:
   i. Mitigation of impacts that are reasonably attributed to the facility;
   ii. Transparent, measurable commitments that support Township goals; and
   iii. Clear enforcement and reporting mechanisms.

b. The Planning Commission may deem an application incomplete until the Plan is provided in a form sufficient to evaluate compliance with this Section.

c. Required contents of the Risk Mitigation Plan: The Risk Mitigation Plan shall include, at minimum:
   i. The contents of Section D 1-11
   ii. Risk Mitigation Commitments. The applicant shall provide commitments meeting all baseline requirements in Section 12.D. Each commitment must include:
      - A measurable deliverable (e.g., dollar amount, number of trainees, percentage, kWh, gallons, acres, etc.);

- a timeline/milestones;
- the responsible party
- reporting method; and
- proposed remedies if the commitment is not met.

d. Requirements: As a condition of approval, the applicant shall commit to the following requirements, in a form acceptable to the Township:
   i. Local Workforce and procurement
      - Good-faith local hiring and contracting plan, including outreach to Livingston-area unions/trades, community colleges, and workforce programs; and
      - Annual reporting of construction hours and permanent jobs by residency (to the extent permitted by law) and contracting spend by geography.
   ii. Public Safety coordination and preparedness
      - Pre-occupancy coordination meeting(s) with Township Fire/EMS and code officials;
      - Facility emergency response information provided to Township (site contact list, shutoffs, hazard inventory, access plan)
   iii. Environmental performance
      - A water stewardship plan (efficiency, leak detection, and, if applicable, reuse/recycling strategies);
      - A noise and lighting management plan demonstrating ongoing compliance and complaint response procedures; and
      - A sustainability/energy plan describing how the facility will minimize emissions and peak-load impacts (e.g., efficiency measures, demand response participation, renewable procurement strategy), to the extent within the applicant's control.
   iv. Community access and transparency. Public-facing reporting dashboard; community advisory meetings during construction; neighborhood hotline with response times; third-party audits of key metrics (energy, water) where feasible.
   v. Infrastructure improvements. Roadway, non-motorized, transit, or signal improvements proportionate to traffic and construction impacts; utility upgrades directly serving or mitigating impacts;
   vi. Environmental enhancements. On-site habitat restoration, tree canopy targets, native landscaping, green infrastructure, carbon reduction commitments, or renewable energy support.

e. Review standards and Findings
   i. The Township Board shall approve, approve with conditions, or deny the application based on the Special Use with Conditions Findings in Section 16.06 and whether the Risk Mitigation Plan:
      - Contains all required elements in subsections C and D;
      - Provides clear, measurable commitments;
      - Demonstrates that commitments are reasonably related to anticipated impacts and Township objectives; and
      - Includes enforceable mechanisms for implementation and reporting.
   ii. Approval may include conditions to ensure commitments are proportional, administratively feasible, and consistent with the standards specified in the zoning ordinance.

f. Development Agreement; Security; Enforcement
   i. Incorporation into approval. All commitments in the approved Risk Mitigation Plan shall be conditions of approval and shall be incorporated into the Development Agreement, as determined by the Township.
   ii. Annual Reporting. The operator shall submit an annual report to the Township documenting compliance with each commitment for the prior calendar year. Reports shall be made publicly available except for proprietary or security-sensitive information.

iii. Noncompliance. If the Township determines a material commitment is not being met, the Township may pursue the remedies outlined in Section K.7.

~~2.~~ 12. The Township Board Shall adopt fees for a High Impact Land Use site plan application.

13. The Township Board shall determine initial and minimum escrow balances, for the purposes of independently reviewing all application materials, studies, and analyses as well as to fund ongoing monitoring and compliance.

14. Development Agreement; To ensure continued compliance with required standards, a Development Agreement shall be required and:
    a. Shall contain the following: Community Engagement Plan (D.2), Community Well Protection Plan (E.10), Infrastructure Development Agreement (E.11.f), Emergency Services Training and Equipment Plan (E.11.g), Fire and Emergency Response Plan (E.11.h), Construction Plan (E.11.r), Risk Mitigation Plan (E.12), Hazardous Material Plan (I.6.b), Lighting Plan (I.8.a), Decommissioning Plan and Agreement (K)
    b. May also 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 an 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.
    c. Shall bind all successors, heirs, and assigns.Developer Agreement language above (b) is from MTA's sample ordinance, and incorporates all the elements (a) within this ordinance that specifically mention a signed developer agreement. Language in c comes from MTA's decommissioning plan verbiage- may need revision, but is intended to ensure any lessees, future owners/operators, etc are bound to the same agreement.

~~E.~~ F. Dimensional Standards and Siting Requirements

Table X below outlines the dimensional regulations and siting Requirements for data centers and cryptocurrency mining facilities within the High Impact Land Use Overlay District. Where the regulations in table X are different from the requirements in Section 3.17 the more stringent requirements shall apply.

Table X: Dimensional Regulations and Siting Requirements for within the High Impact Land Use Overlay District

Facility Type	Allowable Facility Size Rances in Square Feet	Internal Setbacks from all Property Lines	**Interior HILU Overlay Parcels:** Required Distance in Feet from Residential and Sensitive Receptor Parcels	**Outer HILU Overlay Parcels** (one property line for the parcel is also the overlay boundary line): Required Distance from Residential and Sensitive Receptor Parcels
Ancillary Data Center	Not to exceed 10% of the associated Principal Use's building footprint	~~200 feet~~ 100'	___	___
Cryptocurrency Mining	Not to exceed 5,000	~~200 feet~~ 100'	~~Greater than 900 feet~~	No more than ten (10) dwellings that are zoned residential, and no other sensitive receptor parcels, can be located within 500* feet of the proposed HILU outer overlay property line.
Minor Data Center	25,000 sq ft or less	~~400 feet~~ 100'	~~Greater than 1,200 feet~~	No more than ten (10) dwellings that are zoned residential, and no other sensitive receptor parcels, can be located within 500* feet of a proposed HILU outer overlay property line.
Major Data Center	Greater than 25,000	~~400 feet~~ 200'	~~Greater than 1,400 feet~~	No more than ten (10) dwellings that are zoned residential, and no other sensitive receptor parcels may be located within 1000* feet of a proposed HILU outer overlay property line.

*The distances provided in the above table are estimated; these estimated distances need to be reviewed and verified, or adjusted to the maximum distances possible, by the planner/township to ensure the ability to implement a high impact land use overlay district over the existing industrial area and not exclude all undeveloped parcels within it from being able to be utilized for a high impact land use.

1. The internal parcel setbacks the RRC suggested in Carlisle Wortman's previous draft were 100', there is uncertainty on where the 200' and 400' numbers included above originated from (perhaps Pittsfield Twp's ordinance draft, as their setbacks are 400 and 200? Or earlier drafts at some point?) The 100' setbacks should have been what was evaluated for feasibility in the most recent Carlisle Wortman assessment maps provided (separately); it is suggested if this is still a concern, they be re-run with the 100' internal setbacks, and with grouping contiguous, vacant parcels together.

   An alternate option for discussion: CW's draft for Pittsfield Township provides for differing internal setbacks depending on the adjacent property lines' use, as follows:
   -HRDF/Large-Scale: 400' from any Sensitive Receptor, or 200' from all other parcels
   -Small-Scale: 100' from any Sensitive Receptor, or 75' from all other parcels

It is the intent to make the internal setbacks reasonable, and adjust them to ensure an overlay district in the existing industrial zone can be implemented. Should an overlay district not be opted for, then it is imperative that much more robust internal setbacks and residential distancing numbers be set instead of the numbers as outlined above.

2. Please note the distancing from Residential and Sensitive Receptor Parcels was a concept we provided at the same time as the Overlay district, not knowing if an overlay would be opted for; we noted then, and have reiterated that:
   a) the distances provided to date have been rough estimates, and needed review and editing by the township and/or planner, and
   b) that the distances provided required adjusting in order to prevent excluding any actual development

While the distances we suggested have been reviewed, feasible alternatives have yet to be provided. More modest distancing may prove reasonable and feasible. However, because the Subcommittee and Planning Commission seem to like the Overlay approach, the distances may not be needed for the internal overlay parcels (but should still be considered for the outer parcels). Further discussion is needed. For reference, Pittsfield Township incorporates distancing AND setbacks; their distancing is phrased: “A HRDF…shall not be located on any parcel that is within 500 feet of any [Sensitive Receptor]”.

3. Discussion about overlay approaches: Blanket vs. only specific parcels (eg, Green Oak). Consider removing the outlet mall, and perhaps the parcels directly along Grand River from the overlay area (to allow more community-centered future development along the major community corridor instead of HILU).

~~F.~~ G. Site, Design and Use Standards

1. Screening and Landscaping Requirements.

a. All ground level equipment (including HVAC, generators, transformers, and cooling towers) shall be fully screened by masonry walls, architectural panels, or landscaped berms that contain staggered rows of evergreen landscaping material so that said screening shall achieve 100% opacity and exceed the vertical height of the equipment being screened by at least six (6) inches within two (2) years of planting.

b. All rooftop mechanical equipment shall be fully screened behind parapet walls, which shall not exceed the maximum building height restriction.

c. A minimum 25-foot greenbelt shall be provided along all property lines.

~~c.~~ e. Additional ~~l~~landscaping requirements are subjected to Section 28.03.A.

2. Parking requirements

a. Parking requirements shall follow the standards of Section 18.02 for Data Centers.

~~b. Employee and visitor parking lots shall be set back at least fifty (50) feet from all property lines.~~

3. Noise, Sound and Vibration Requirements

Intent for Noise, Sound and Vibration Requirements: Additional noise, sounds and vibration requirements are imposed on High Impact Land Uses because they are known to produce lower frequencies. Unlike standard dB(A) measurements, which primarily detect mid-range sounds like speech and traffic, dB(C) measurements capture deeper, low-frequency noises such as infrasound from heavy machinery. These sounds can travel farther and penetrate

walls, making them more disruptive in residential areas even when the source of the noise is in a non-residential district. Adding dB(C) limits ensures that noise enforcement addresses all types of sound, improving fairness and effectiveness in line with the intent of this ordinance. Including
dB(Z) limits ensures that noise enforcement aligns with the intent of the ordinance and protects the community from potential health impacts in addition to nuisance.

a. Sound levels shall not exceed 55 dBA, 55dBC and 70dBZ at any high impact land use parcel. Generators shall not exceed 65 dBA, 55dBC and 70dBZ at the high impact land use parcel property line. All octave bands and frequencies 200 hertz (Hz) and below shall not exceed 60dBZ at any time. Discussion suggested to review Pittsfield and MTA ordinance noise levels and see if we would like to further limit ours based on their examples, which do go lower.

b. In the event pre-construction sound studies document pre-existing sound levels for A, C, and Z weightings that exceed the limits in this ordinance, then the background noise shall be removed from any sound studies to ensure only the HILU's noise is being measured and studied. However, the sound study should demonstrate that any pre-existing sound levels shall not be ~~exceeded or~~ amplified.

c. Vibrations ~~shall not exceed limits outlined in Section 14.45.C of the Township Ordinance.~~

i. 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 axis (vertical, longitudinal, or transverse). If any single axis exceeds 0.01 in/s, the Data Center is in violation.

ii. Generators and cooling systems must be equipped with vibration isolation and mitigation systems.

iii. 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.

iv. Vibration monitoring logs shall be reported annually. The language above is taken from the MTA sample ordinance. Their parameters exceed the standards of Howell's current standards in 14.45. It is suggested to opt for higher standards, as that is the purpose of Special Use zoning, and vibrations are one of the primary impacts from HILU's.

d. Noise and vibration limits apply to all equipment on site including but not limited to HVAC systems, equipment cooling systems, mechanical yards, substations, chillers, renewable energy systems, and generators, any of which may need to utilize additional sound-dampening enclosures, modifications and/or isolation pads to mitigate noise and vibration.

~~i. Applicant shall submit documentation of seasonal HVAC maintenance for any facility cooling systems to ensure quiet equipment operation.~~

e. Noise/Sound Studies: A noise attenuation, or sound modeling study shall demonstrate compliance with maximum sound levels and must be submitted prior to the approval of a final site plan. This study must be specific to the proposed site topography, layout, and building type, scale, height, and construction proposed. This study must show noise conditions at the site at locations determined by the township prior to the project development, and must

provide model-predicted noise conditions resulting from the proposed project post-development to demonstrate anticipated compliance with the noise ordinance.

i. The sound study must be prepared by a professional sound/acoustical engineer ~~chosen by the Township and be~~ licensed in accordance with ISO 9613 standards and shall be reviewed by the township's consultants, to be funded via the escrow account. The Township should not be financially liable for the cost of reviewing the study, so language stipulating such review should be incorporated somewhere.

ii. All sound studies shall include measurements and reporting for dBA, dBC and dBZ wavelengths, and shall include a full, unweighted one-third (1/3) octave band frequency spectrum analysis.

iii. Sound modeling studies must include recommendations for sound mitigation measures, if they are necessary for the use/facility to comply with sound level requirements. These mitigation measures, if applicable, must be reflected on the site plan and incorporated into conditions of the site plan approval. If mitigation measures are building related, they must be included in the building plans, and if they are landscaping related, they must be included in the landscaping plan prior to issuance of the Special Use permit(s).

iv. Sound study/routine sound surveillance schedule and additional requirements: a sound study must be submitted to the Township within 60 days of issuance of a certificate of occupancy for each phase of development and upon the facility becoming fully operational. Sound monitoring reports, conducted by independent professional acoustical engineers selected by the township and paid for by the applicant via escrow, shall be provided monthly for the first year to establish seasonal baselines, as weather conditions affect how sound travels. Additional sound studies ~~may~~ shall be required at the time modifications of any kind are made, and at the time of any township-verified noise complaints are received at the discretion of the Township.Discussion needed: if, for example, server density is increased (CPU's swapped out for GPU's), then cooling demands will likewise increase and in turn noise, which is why it is recommended sound studies be provided to prove compliance anytime such significant upgrades are made. Likewise, if the township receives a noise complaint and the township verifies the complaint, the owner/operator should be required to fund an independent full-spectrum frequency analysis as described above.

Suggested language added to the (CW) new language to reflect that the township needs to retain control of who is conducting the sound monitoring, regardless of who is paying for it.

How can the township verify noise violations on a noise complaint? Do they have the ability to remove background noise from a sample they take? If not- can the Dev. Agreement require the applicant to provide the sound equipment needed (and training?), like with fire equipment and training?

v. All sound studies must be conducted at a time known for peak facility~~,~~ use~~,~~ and cooling system operations. In the event the study shows that the facility or use exceeds maximum allowable levels, the operator must immediately undertake all necessary efforts to comply.

4. Generator Use Requirements

a. Generator use is limited to emergency backup power generation during area power outages only, shall operate 50% or less of the total facility operations, for no more than

12 hours a day (8am-8pm), with occurrence for use not to exceed three (3) consecutive days without a twenty four (24) hour continuous break/off period.

b. Generators shall be connected to utility provided natural gas only.

c. Generator testing hours: Testing of generators shall be limited to 9am-1pm weekdays only, except for holidays, not to exceed occurrence on more than ten (10) days per each calendar month. The facility shall provide a generator testing schedule, posted on a website for public access, updated 60 days in advance.

~~d. Generator fuel storage requirements.~~

~~i. Fuel storage tanks shall not be within the required setbacks.~~

~~ii. Fuel storage tanks shall be placed underground or be screened on all four (4) sides with a fence or wall following the requirements of Sections 14.26 and 28.08.~~

~~iii. Fuel storage tanks shall have a maximum capacity of two thousand five hundred (2,500) gallons.~~ If generators are required to use utility-provided natural gas, then there is no need for this section.

5. Electrical Infrastructure and Utility Lines

a. All ~~electrical and~~ utility lines shall be placed underground~~.~~; Other than transmission or distribution lines for interconnection to the electrical 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. Language from MTA

b. On-Site Substation/Switchyard (if provided):
i. Shall be located to minimize visual and noise impacts and shall provide evergreen screening and security fencing consistent with utility standards.
ii. Transformers shall include integral secondary containment sized per state rules.
Language from Pittsfield Twp.

6. Lot Coverage and Setbacks Requirements

a. Lot coverage is limited to 50% for all impermeable and permeable surfaces. Switch stations and power substations should be calculated in total lot coverage as these are permanent / not temporary use.
b. Setbacks: Minimum setback requirements for all structures, equipment and storage yards shall comply with Table X except that employee and visitor parking lots may be set back no less fifty (50) feet from ~~all~~ any property lines.

7. Massing, Scale, Height and Orientation Requirements

a. Building mass, height, bulk, scale, and proportion shall maintain consistency with the existing character of the adjacent buildings.

b. Building design should employ coordinated massing to produce overall unity, scale, and interest.

c. Rooflines and pitches shall be proportionate to nearby structures so as to provide transition or mitigation of significant changes to scale.

d. Maximum height for all buildings is 50 feet, including all accessory structures, outdoor equipment, and all rooftop equipment, which shall be concealed by a parapet wall. The added language above got removed; it was the intent to ensure the height should apply to everything, not just the primary buildings.

e. Orientation shall prioritize utilization of buildings for sound mitigation and visual buffer(s):

i. Where multiple buildings exist they shall be oriented so that service areas face each other and the buildings are placed to surround any equipment, mechanical yards, substations, generators, etc. in order to utilize the buildings as a sound barrier and as a visual buffer between the loudest operations on the site and the site borders.

ii. If a site contains two or fewer buildings, the buildings shall be oriented to place any equipment, mechanical yards, substations, generators, etc. on the farthest side/greatest distance away from the highest number of nearby residential and sensitive receptor parcels, and the building(s) between as a sound barrier and as a visual buffer between the loudest operations on the site and the residential and sensitive receptor parcels.

iii. Any equipment, mechanical yards, substations, generators, and similar elements shall be fully enclosed whenever possible if located within one thousand five hundred (1,500) feet from any residential property line.

8. Architectural Design and Building Materials

a. Facade variation. Wall designs must provide a minimum of three of the following elements, in addition to transparency requirements, occurring at intervals no greater than 25 feet horizontally and 10 feet vertically:

i. Expression of structural system and infill panels through change in plane not less than three inches.

ii. System of horizontal and vertical scaling elements, such as belt course, string courses, cornice, pilasters.

iii. System of horizontal and vertical reveals not less than one inch in width/depth.

iv. Variations in material module, pattern, and/or color.

v. System of integrated architectural ornamentation.

vi. Green screen or planter walls.

vii. Translucent, fritted, patterned, or colored glazing.

viii. Transparency as required in Section 16.23(F)(2)(b).

b. Transparency

i. Windows for building sides shall be concentrated toward the front edge of the building, in locations most visible from an urban open space or public right-of-way.

ii. Transparency alternatives. The following alternatives may be used singularly or in combination for any side or rear facing facade which requires transparency. If

used in combination, they may count toward no more than 50% of the transparency requirement set forth in Section 16.23(F)(2)(b).

c. Architectural style shall not be restricted. Rather, evaluation of the appearance of a project shall be based upon compatibility and the quality of its design and relationship to surroundings.

d. Buildings within the same development should be designed to provide a unified and easily identifiable image. Methods to achieve this include using similar architectural styles and materials, complementary roof forms, signs, and colors.

e. Minimize monotony of expansive exterior walls by incorporating the following elements: staggering of vertical walls; recessing openings; providing upper- level roof overhangs; using deep score lines at construction joints; contrasting compatible building materials; use of variety and rhythm of window and door openings; use of horizontal and vertical architectural elements, use of horizontal bands of compatible colors; and providing changes in roof shape or roofline.

f. Facades shall provide visual interest from both vehicular and pedestrian viewpoints.

g. Entrances to individual buildings shall be readily identifiable to visitors through the use of recesses or pop-outs, roof elements, columns, or other architectural elements.

9. Cooling System Requirements

~~9.~~ Intent for Cooling System Requirements: There are specific requirements for cooling systems associated with High Impact Land Uses because these uses have a tendency to consume a disproportionally large amount of water and power in the community, and because the primary source of water consumption at High Impact Land Uses are related to cooling systems~~:~~. Therefore, in order to align with the intent of this ordinance, to protect and ensure the efficient consumption and use of public utilities and natural resources, any system designed for cooling of the facility and/or equipment shall not negatively impact the surrounding region by conforming to the following requirements:

~~a. Any system designed for cooling of the facility and/or equipment shall not negatively impact the surrounding region by conforming to the following requirements:~~
This is repetitive of the preceding language

~~b~~ a. In addition to facilitating all PUE, TUE, and WUE standards in Section H.2.a, equipment cooling systems shall utilize closed-loop, direct liquid server cooling, ~~with air movement limited to manufacturer-installed internal server fans used for auxiliary component cooling,~~ in the following order of preference:
The provision (b) below effectively ensures this, so this can be removed.

i. Utilization of liquid immersion cooling systems shall be prioritized, with preference for use of plant-based biodegradable non-flammable fluid over traditional dielectric fluid.

ii. If a proven incompatibility with liquid immersion cooling can be demonstrated and verified by an independent third party certified thermal engineer chosen by the Township, then utilization of ~~zero-water~~ direct-to-chip cooling systems may be approved for use as an alternate design option.

iii. If the applicant can provide documentation for another equipment cooling system which results in a better PUE, TUE, and WUE than liquid immersion cooling ~~another equipment cooling system which is equally or more efficient than liquid immersion cooling~~ and ~~zero-water~~ direct-to-chip cooling in terms of energy and water consumption, and equally or better at emitting a minimum of all

frequencies of noise, then the township may approve its use as an alternate equipment cooling system.

iv. If another equipment cooling system option proves to be more efficient in terms of energy and water consumption, and its heat-rejection equipment is equally or better at emitting a minimum of all frequencies of noise as liquid immersion cooling and ~~zero-water~~ direct-to-chip cooling, once verified by an independent third party certified thermal engineer that system shall be required as the first preference.

v. If a proven incompatibility can be demonstrated and verified ~~with~~ for any preferred equipment cooling system then the next preferred cooling system as outlined above will be the default alternate.

~~vi.~~ b. No room-level or facility air/fan-based cooling systems such as, but not limited to, Computer Room Air Conditioning or Computer Room Air Handlers shall be used as the primary means of heat removal.

~~vii.~~ c. Open-loop cooling systems and open-circuit cooling towers shall not be permitted.

~~viii.~~ d. Cooling towers shall be closed-circuit and utilize drift eliminators and be managed to prevent particulate emissions or microbial contamination.

~~ix.~~ ~~No Dry Coolers, Mechanical Draft, or Air Chillers shall be permitted.~~ Need to ensure enough flexibility in system design options to be able to meet performance standards as outlined.

~~x.~~ e. In order to emit a minimum of noise, as is the intent of this ordinance, cooling systems and towers shall utilize the following features:

~~a.~~ i. Sound-absorptive enclosures
~~b.~~ ii. Fans, motors, and pumps shall be mounted on vibration isolators
~~c.~~ iii. Intake and discharge/exhaust silencers
~~d.~~ iv. Aerodynamic fan noise reduction aids
~~e.~~ v. Water-splash/basin silencers for water towers.
~~f.~~ vi. Additional noise mitigation measures, especially for low frequencies and infrasound, may be required to ensure compliance with the noise limits in Section ~~E.2.~~G.3.a.

10. Accessory structure requirements:

a. Temporary or modular structures are not permitted.

b. Accessory structures shall be cohesive in design and color scheme to main structures on the parcel.

~~c. The use of intermodal shipping containers for storage and/or housing of any materials, substances or equipment is prohibited. Once the facility is operational, shipping containers are limited to shipping and receiving purposes only, shall not remain in place for longer than two (2) weeks at a time, and may not be located within set back areas nor within highly visible areas for any period of time.~~

Commented [PM10]: This is covered in the accessory structures ordinance recently adopted by the twp Section 14 and the chart under 14.07, C. should be reviewed, this may be sufficient but clarity is needed to be sure.

11. Detention ponds

1. Detention and retention ponds are only permitted as part of the site drainage and stormwater management plan.

2. Detention and retention ponds for discharged facility water holding or use related to cooling purposes are not permitted.

12. Water Withdrawals/Discharge

1. Water withdrawal or discharge shall comply with applicable state and county permits. Approval by the Township shall be contingent upon written confirmation from the applicable utility and regulatory agencies that the proposed withdrawal or discharge will not adversely impact existing users, system capacity, groundwater resources, or downstream infrastructure. There shall be no routine discharge of cooling water to the sanitary sewer/water treatment authority, or to surface waters. MTA; Pittsfield Twp- the last sentence
2. Township approval shall be conditioned upon a finding that the proposed withdrawal or discharge:
    i. will not exceed available system or aquifer capacity at full buildout;
    ii. will not displace or impair existing or reasonably foreseeable users;
    iii. will not require public investment or system expansion to serve the facility
    iv. will not result in stranded or oversized infrastructure in the event of facility closure or decommissioning.

Language from Pittsfield Twp

~~G.~~ H. Sustainability and Energy Use Requirements

1. Infrastructure Impact Statement: Applicants shall submit an Infrastructure Impact Statement at the time of rezoning, conditional rezoning, or ~~permitted~~ principal special use with conditions application, which must identify:

    a. Utility Capacity Impact Statement from ~~the following~~ all utility providers to confirm service adequacy.~~:~~

        ~~i. DTE or Consumers Energy~~
        ~~ii. Marion-Howell-Oceola-Genoa (MHOG) Water Authority~~

    b. Anticipated maximum electric power demand (~~MW~~ Kilowatts).

    c. Anticipated water usage for cooling and other operations (gallons per day).

    d. Waste heat recovery, reuse, or discharge methods.

    e. Planned on-site minimum backup generation capacity (~~MW~~ Kilowatts) ~~and associated fuel type(s) with fuel storage capacity and design~~.Per our previous note, if generators are to use utility-provided natural gas as required above, this provision is not needed.

    f. Anticipated natural gas demand.

    g. Anticipated utility infrastructure upgrades required to serve the facility, with an agreement that the developer will pay 100% of all required upgrades, per the Infrastructure Development Agreement in Section E.11.f.

2. Energy Efficiency

a. Data Centers must be designed to achieve a Power Usage Effectiveness (PUE) of 1.2 or lower, a Total Power-Usage Effectiveness (TUE) of 1.15 or lower, and a Water

Usage Effectiveness (WUE) of ~~0.5~~ 0.2 L/kWh or lower. Applicant shall provide a report detailing how these parameters will be met, to be verified by a 3rd party professional consultant chosen by the Township. Updated WUE to match MTA sample; PUE already matches MTA sample. MTA's PUE description attempts to address the issue of manipulative calculations, but TUE is still the superior metric for capturing the true "PUE" of modern facilities.

b. Facilities shall incorporate best practices for energy conservation, including but not limited to: high-efficiency HVAC systems, waste heat reuse, and variable-speed drives~~; and hot/cold aisle containment~~. If CRAH/CRAC cooling systems are not permitted, as stipulated above, then hot/cold aisle containment doesn't apply and this is not needed.

c. Applicant shall provide an operations ~~R~~report detailing anticipated power demand and redundancy systems.

d. Applicant shall provide a heat recovery or reuse feasibility analysis (waste heat for district energy)

3. Renewable Energy Integration

a. Applicants are encouraged to incorporate on-site renewable energy generation (e.g., solar, wind, geothermal, DAKET, Renewable "Green" Hydrogen Fuel Cells) ~~or to procure renewable energy from off-site sources~~. No on-site nuclear power generation shall be permitted. Decarbonized "Blue" Hydrogen and Traditional "Gray" Hydrogen are not permitted. We suggest removing this stricken language, as it imposes additional demand on other rural townships (including, possibly, Howell Township) for industrial solar development, which PA233 has stripped local authority over.

~~b. At least 25% of projected annual energy demand shall be demonstrated to be met through renewable energy sources, whether on-site or through power purchase agreements, renewable energy credits, or utility green power programs.~~ As above, the implications of PA233 make this requirement a burden on industrial solar "host" communities. Furthermore, the State-level tax incentives already have this requirement, is it necessary to have it here as well?

c. On-site solar generation components shall comply with the requirements for solar in section ___ of the ordinance. 16.19 Onsite Solar Energy Systems and Solar Energy Farms ?The Township's REO stipulates that any power generated by solar, which is then shared back to the grid, must only be located in the REO overlay… however, per the discussion point below d.v., there is good reason to want data centers to be able to send power back to the grid, for grid stabilization. As such, it would be best to either remove point c., or amend the Renewable Energy Ordinance to allow for solar as an accessory use for HILU's, to be able to send power back to the grid, and not be subjected to the RE Overlay.

d. Energy storage systems shall be limited to Long-Duration Battery Energy Storage ~~(LDES)~~ which meet the following parameters: ~~Battery Energy Storage Systems (BESS) are not permitted.~~

   i. Manufactured domestically
   ii. Do not utilize lithium or lead components
   iii. Prevent/have minimal-to-no risk of thermal runaway
   iv. Implement safety features that minimize air, water, and ground contamination risks in the event of a system failure.
   v. 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. The language in v. comes from MTA's sample ordinance. A resident approached one of the RRC members recently, asking what can be done to ensure the residents don't experience a

situation like what is currently happening in Gary, IN, where the residents have been without power for weeks while the nearby data centers are up and running. This provision might assist in a situation like that and if desired to be added then updates might be needed to the renewable energy ordinance to allow off site energy distribution for industrial zoning.

*e. BESS/LDES shall comply with NFPA 855, the Michigan Building/Fire Codes, and manufacturer's specifications.

*f. Setbacks: Outdoor BESS/LDES containers shall be set back a minimum of *100' from property lines and *300' from residential districts/uses, unless a greater distance is required by NFPA 855 based on technology and aggregate capacity.

*g. Protection: Applicant shall provide: vehicle impact protection, fire-rated separation where required, gas detection, ventilation, and emergency shut-offs.

*h. Applicant shall include a BESS/LDES- specific emergency response plan and data sheet package. Language from Pittsfield; should be discussed

4. Water Conservation

a. If approved as an alternate option, facilities using water-based cooling must demonstrate the use of recycled, reclaimed, or non-potable water sources to the maximum extent feasible.

b. No on-site wells shall be permitted.

5. Green Building Practices

a. Facilities shall be designed to achieve LEED Silver certification or an equivalent third-party sustainability certification, to be verified by an independent third party certified professional consultant chosen by the Township, and shall provide documentation of certification within two (2) years of construction for each building.

6. Air Quality

a. Regulatory Compliance: All generators, cooling systems, and other emission sources shall comply with federal Clean Air Act requirements and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) air quality rules.

b. Permitting: Facilities shall obtain and maintain any required Air Use Permit to Install (PTI) or other approvals from EGLE for stationary engines, cooling towers, or fuel storage.

c. No on-site baseload power generation shall be permitted with the exception of the renewable energy generation listed in section G.3.a.

d. Generator Emissions

i. Generators shall meet or exceed current EPA Tier 4 Final emissions standards.

ii. Generator Dispersion modeling ~~could~~ may be required to meet air quality requirements or if a facility is within 500 feet of any residential or sensitive receptor parcels.

e. Renewable “Green” Hydrogen Fuel Cells systems are permitted for backup power generation. Decarbonized “Blue” Hydrogen and Traditional “Gray” Hydrogen are not permitted.

f. Emissions Reporting: Applicants shall submit an annual statement to the Township confirming compliance with EGLE permits and reporting actual operating/testing hours of backup generators.

g. Thermal Emissions: The facility shall be designed and operated so that thermal emissions do not cause a sustained increase in ambient air temperature at any property line beyond the limits below, measured at 5 feet above grade:

i. Residential or mixed-use property line: not more than +2*F above ambient background, averaged over any 15-minute period

ii. Nonresidential property line: not more than +4*F above ambient background, averaged over any 15-minute period.

iii. No thermal emission shall create unsafe conditions on sidewalks, trails, roadways, or public spaces due to icing, fogging, or thermal plume interaction with winter conditions. From Pittsfield Twp; should an agricultural standard be set, as well? Since temperature directly affects crop yields.

7. Ongoing Reporting

This section should go in its own Bold-faced Section, as in Pittsfield Township’s Section J. Monitoring and Reporting, as much of the reporting is not limited to “Sustainability and Energy Use”.

a. Owners and operators shall provide ~~an~~ annual ~~sustainability~~ reporting to the Township, including:

i. Actual annual energy consumption (MWh).

ii. Actual annual water usage withdrawal and discharge (gallons).

iii. Energy efficiency performance ~~& progress toward renewable energy targets.~~ Not needed if the RE targets are removed above.

iv. Documentation of any energy efficiency, cooling system upgrades, and security upgrades.

v. Actual Power Use Effectiveness (PUE), Total Power-Usage Effectiveness (TUE) and Water Usage Effectiveness (WUE).

vi. Actual generator runtime/use logs (hours).

vii. Actual job numbers, including how many employees are Livingston County Residents.

viii. Greenhouse gas emissions and/or carbon intensity of energy consumed.

ix. Seasonal thermal emissions as outlined in Section H.6.g.

x. Emissions report as outlined in Section H.6.f.

xi. Annual Risk Mitigation report

xii. Vibration Monitoring logs

xiii. A report detailing the annual Emergency Response training opportunity/ies provided, as outlined in Section I.7.b.

b. Owners and Operators shall provide the following non-annual reports to the Township:

i. Community Engagement meeting reports, after each neighborhood meeting, as outlined in Section D.4.

ii. Sound studies within 60 days of issuance of a certificate of occupancy for each phase of development, and once fully operational, as outlined in Section G.3.e.iv.

iii. Monthly sound studies for the first year, as outlined in Section G.3.e.iv.

iv. Proof of LEED Silver (or equivalent) certification within the first two (2) years, as outlined in Section H.5.

v. Updated estimate of Decommissioning costs & proof of updated bond, provided every two (2) years, as outlined in Section K.4.c.

c. Failure to monitor and report may be grounds to revote* any Township approvals.
These are items that were listed throughout this ordinance as being required for reporting but were not on this list, added so that all reporting requirements are clearly listed in one place. Clarify revote vs. revoke in item c.

10. Use of Consultants and Cost Recovery

a. The Township may hire ~~third-party~~ qualified, independent consultants chosen by ~~resolution of~~ the township~~, to be funded by the developer through an escrow account~~ to review energy efficiency, water consumption/usage, air quality ~~review~~, renewable energy implementation, BESS/LDES safety, sound studies, stormwater, ~~and~~ green building practices or any other such standards within this ordinance.

b. All actual costs for these reviews shall be escrowed by the applicant.
Should Item 10 be its own Bold-lettered section, per Pittsfield Township's Section I? Re-worded to be similar to Pittsfield Twp's.

~~H.~~ I. Security & Emergency Access

Security and Emergency Access. Data Centers shall be designed and operated to protect the facility, surrounding community, and public safety resources.

1. Perimeter Security
   a. Data Centers shall be fully enclosed with a perimeter security system, which may include fencing, or walls that meet the requirements of Sections 14.26 and 28.08. All fences or walls shall not be less than eight (8) feet in height.

   b. Security barriers shall be designed to balance safety with community character; opaque fencing must be screened with landscaping where visible from public roads or residential areas.

2. Controlled Access

a. All site entrances shall include controlled access gates, guard stations, or equivalent security technology to prevent unauthorized entry.

b. Visitor and delivery access points must be separated from employee access points wherever feasible.

3. Emergency Access

a. A minimum of two (2) points of emergency vehicle access shall be provided, with clear signage and unobstructed pathways around the building.

b. Access drives shall be constructed to fire department standards, with sufficient load-bearing capacity for emergency apparatus.

c. Fire lanes shall be maintained free of obstructions at all times.

4. Camera Surveillance

a. Data Centers shall install and maintain a perimeter camera surveillance system capable of monitoring all vehicular and pedestrian access points, building entrances, and outdoor mechanical/equipment areas.

b. Cameras shall be positioned to minimize intrusion into adjoining residential properties and public rights-of-way, while still providing full coverage of the site.

c. Camera systems shall be continuously operational (24 hours per day, 7 days per week) and recordings shall be retained for a minimum of 30 days. SAME

d. A security plan, including camera layout, monitoring procedures, and data retention policies, shall be submitted as part of site plan review.

5. Fire Protection and Suppression.

a. Data Centers shall be equipped with an automatic fire detection and suppression system designed to protect both building occupants and sensitive equipment.

b. Suppression systems shall comply with National Fire Protection Association (NFPA) standards and be approved by the Fire Marshal.

6. Hazardous Materials Management.

a. Any use of hazardous materials (including fuels for backup generators, batteries, and chemicals for cooling systems) shall comply with federal, state, and local storage, reporting, and disposal requirements and detailed disposal plans.

b. Applicants shall provide a Hazardous Materials Management Plan identifying on-site materials, safety data sheets, storage methods, spill prevention measures, protocols to protect against discharge to the environment of any regulated material or substance, including cooling solutions, and emergency response procedures.

c. Applicant shall provide a fire protection plan, as in Section E.11.h. Added language per MTA

7. Emergency Response Coordination.

a. Applicants shall submit and comply with an Emergency Response Plan as outlined in Section E.11.h~~to the Township~~ at the time of ~~Site Plan review~~ application, which must include:

~~i. Site layout for emergency responders.~~
~~ii. Fire suppression and alarm systems description.~~
~~iii. Backup generator location and fuel storage details.~~
~~iv. Contact information for on-site security and facility management.~~

b. Operators shall provide annual training opportunities or site orientations to local fire, police, and emergency medical services as in Section E.11.g.Services, Training, and Equipment Plan is required with application (per MTA's recommendation), incorporated in Section E, is this section needed at all?

8. Lighting and Surveillance.

a. A lighting plan is required. The lighting plan shall include a photometric grid overlaid on proposed site plan showing light intensity (in foot-candles) on site and 25 feet beyond parcel lines. The above section appears entirely new yet it was not red/underlined; Discussion? (No RRC concerns)

i. Lighting shall adhere to Dark Sky principals—full-cutoff, directed downward, and shielded, with the use of motion sensors and timers where able. Illumination shall not exceed 0.1 footcandles onto adjacent properties measured three (3) feet from the ground. As above, the added language was not noted, and differs from the previous version. Discussion? (No RRC concerns).

b. Facilities shall incorporate continuous video surveillance of access points, perimeter fencing, and loading areas, with recordings maintained for a minimum of thirty (30) days.

~~I.~~ J. Construction Standards

1. Applicant shall have a community complaint resolution liaison available 24 hours a day beginning with construction. The contact information shall be posted in a visible location from the road frontage, as well as provided to the township to be published on the website.

2. All complaints shall be responded to within 24 hours, and if not completely resolved then a resolution plan shall be provided to the township and complainant within 5 business days. The Township reserves the right to halt construction should the complaint not be resolved, or if a resolution plan is not submitted on time.

~~Construction shall adhere to the hours in the Township OrdinanceSection 14.45. B.6.(a). No construction is allowed to take place outside of those hours.~~

~~3. On site work shall be conducted Monday through Saturday between the hours of 7am and sunset, and Sunday 10:00 am and 6:00 pm.~~ We don't recall the Subcommittee consensus- were they ok with the general construction standards? Or as we discussed, due to the nature of prolonged construction (often never-ending, as servers continually get upgraded and replaced), should HILU construction standards differ from the general ordinance standards? We suggested the following:

3. Exterior site work shall be conducted Monday through Friday between the hours of 7am and 6pm. 24 hour construction work is not permitted. Temporary weekend and after-hours site work is subject to approval by the planning commission, at a meeting open to public comment, and only good for a period of thirty (30) days at a time, with no work being permitted prior to 6am or past 10pm. Pittsfield Twp: 7am-7pm, Mon-Sat, unless otherwise approved.
4. Interior site work may be conducted according to the hours in the Township Ordinance Section 14.45.B.6.(a). Per the previous subcommittee discussion, we do recall that it was discussed and agreed that Interior construction may be less impactful, and therefore it may

be reasonable to allow them to follow the Township's general construction schedule standards.

~~4.5~~. ~~Construction Phase Requirements:~~

~~a. The developer or owner/operator will provide a full time onsite community liaison and 24 hour emergency line that will be available from the start of construction until full facility commissioning, this position shall have the authority to halt construction if necessary. Contact information for the community liaison shall be posted at the site on easily accessible / viewable signage and posted on the township website. All concerns and complaints shall receive confirmation of receipt within 24 hours and response within 5 business days.~~

~~4.~~5. The applicant shall submit a construction lighting plan that meets the requirements of Section 14.22. Perhaps reviewing 14.22 would be good, it does not specifically mention construction lighting and seems clear it applies to in-use facilities - will this be enforceable for the construction phase? Dark sky principals should be referenced for construction lighting as well.

~~b.~~ 6. A detailed schedule for any pile driving necessary and a complaint resolution plan shall be provided to the township prior to any construction work beginning.

7. Surface Water Runoff: All surface water runoff created by construction and operation of the project shall be effectively managed on-site. The language in 7 comes from MTA's sample ordinance.

~~c. On site work shall be conducted Monday through Friday between the hours of 7am and 6pm~~.

~~J.~~ K. Decommissioning

1. Decommissioning Plan Requirement. Because data centers and other High-Impact Land Uses are, by design, highly-specialized, and are therefore effectively single-purpose structures with low ceilings, specialized and segmented layouts, and lacking windows, prolonged vacancy of these facilities poses a blight risk due to the high cost of retrofitting and limited ability for repurposing as-is. As a condition of site plan and special use approval, the applicant shall submit a Decommissioning and Site Restoration Plan that addresses the following:
    a. Triggers for decommissioning.
    b. Methods for removal of structures, equipment, utilities, and impervious surfaces.
    c. Recycling and disposal of equipment and hazardous materials.
    d. Final grading, soil stabilization, and revegetation.
    e. Restoration of the site to a condition compatible with surrounding uses.
    f. Describes any other agreements pertaining to decommissioning, if the applicant and/or operator is not also the landowner.
    g. States the party responsible for decommissioning.

2. 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.

~~2~~.3. Triggers for Decommissioning

a. A ~~use with~~ high ~~resource~~ impact land use shall be considered abandoned if it ceases operations or construction on the project is stalled for a period of 12 consecutive months, unless the owner provides evidence of intent to resume operations.

b. A revocation of a special land use permit shall trigger decommissioning.

c. Decommissioning must begin within 6 months of abandonment and be completed within 12 months.

~~d. If at any time a high impact land use ceases operations for any amount of time, the structures and property, including landscaping and snow removal, shall be maintained at all times.~~ This language is duplicated below, where it appears more appropriate anyway.

~~3.~~4. ~~Performance~~ Decommissioning Guarantee / Financial Assurance

a. Prior to issuance of a building permit, the applicant shall post a financial guarantee in the form of a letter of credit, bond, or escrow account acceptable to the Township.

b. The amount shall equal ~~125%~~ 150% of the estimated decommissioning cost, as determined by an independent third-party, qualified engineer and approved by the Township. Salvage value shall not be included in the estimated cost of decommissioning. The financial assurance must be posted by the start of full commercial operation and continuously maintained for the period of the life of the High Impact Land Use. 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. % change per Pittsfield Twp.; Additional language per MTA.

c. Estimates must be updated every 2 years and adjusted for inflation. The Township may request additional financial guarantees based on the change in estimated cost.

d. The obligation to provide and maintain a financial guarantee is a continuing covenant that runs with the land and binds the owner, applicant, operator (if different), and all successors and assigns. No sale, conveyance, assignment, foreclosure, lease, or other transfer of any interest in the property shall impair or release the obligation to maintain the financial guarantee. The Township shall not release any financial guarantee unless the Township has confirmed in writing that the obligations secured thereby have been fully performed or that an acceptable substitute financial guarantee has been provided. Per Pittsfield Twp.

~~4.~~5 Removal Standards

a. All above-ground structures, including buildings, mechanical equipment, cooling towers, security fencing, and pavement not otherwise serving a reuse, shall be removed.

b. All Below-ground infrastructure, such as foundations and utilities, shall be fully removed to ~~a minimum depth of 36 inches below grade~~ unless otherwise approved.

c. Materials shall be recycled to the maximum extent practicable.

d. If the applicant requests, and the Planning Commission determines, based on independent, third- party contractor analysis and report paid for by the landowner in escrow, that existing primary buildings and/or office buildings have a viable use for other Permitted Principal Uses in the underlying zoning district, then the buildings identified may be exempted from being fully removed. Requires discussion: pros/cons of offering an alternative to complete removal.

Most other ordinances (MTA, Pittsfield included) only require removal, but there may be reason to consider alternatives.

i. The Planning Commission may allow the primary and office buildings to be renovated to be able to be repurposed for another viable Permitted Principal Use in the underlying zoning district.

ii. The owner/operator shall provide full building plans detailing the renovations, and shall provide the cost, in escrow, for an independent, third-party contractor chosen by the township to verify the viability of the renovations for reuse.

iii. All other specialized structures, mechanical yards, cooling equipment, and infrastructure that are not deemed to be repurposed for other, existing Permitted Principal Uses in the district shall be fully decommissioned according to section ~~H.4.a,b,and c.~~ K.4.a.,b., and c.

e. The facility and property shall be maintained at all times, including snow removal and landscaping, even when not operational including during and after decommissioning.

~~5.~~ 6. Site Restoration

a. The site shall be restored with topsoil, seeded or planted with native vegetation, and stabilized to prevent erosion.

b. The Township may approve alternate restoration plans if the site is proposed for redevelopment consistent with the Master Plan and zoning ordinance.

~~6.~~ 7. Failure to Decommission

a. If the owner fails to complete decommissioning in accordance with the approved plan, the Township may draw upon the financial guarantee to complete the work.

b. Any costs exceeding the financial guarantee shall remain the responsibility of the property owner. Alternative wording per Pittsfield Twp: “The Township reserves the right to seek recovery of any costs incurred in excess of the financial guarantee collected”.

~~K.~~ L. Monitoring and Compliance Requirements

This section was completely omitted; we are suggesting adding some of the sections back in, with language from the MTA sample ordinance. The section may require renaming, or perhaps the items can be “re-homed” in other sections of the ordinance.

1. Permits: All High Impact Land Uses shall be required to apply for and obtain all necessary permits, including but not limited to building, electrical, plumbing, and mechanical permits.
2. Transfer of Ownership: No transfer in ownership of the High Impact Land Use 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.
3. Insurance: All parties conducting business at the site shall maintain property/casualty insurance and business liability insurance in the appropriate amounts but for no less than five million dollars ($5,000,000) per occurrence with the township listed as an additional insured on the policy at all times. From Cohoctah’s Attorney Draft Ordinance
4. Extraordinary Events: In the event the facility experiences a failure, fire, leakage of hazardous materials/substances, person injury, or other catastrophic event, the applicant or

owner/operator must immediately notify local emergency services (fire, police, EMS) and the township. Notice to the public must be made as soon as possible but not to exceed twenty four (24) hours.

5. Commissioning Documentation: Prior to Certificate of Occupancy, Applicant shall submit commissioning results for mechanical/electrical systems and acoustical compliance.
6. *Annual Reporting (per the improperly-located section G.7 above).
7. Non-Compliance: If an applicant or owner/operator fails to comply with this ordinance the township may pursue any remedy or enforcement, including but not limited to:
    a. Require a corrective action plan with a defined cure period;
    b. Draw upon a performance security where applicable;
    c. Pursue civil remedies authorized by the zoning ordinance; and/or
    d. Initiate Special Use Permit revocation (copied from the CW proposed "REVOCATION" section, above; it is recommended the language be adjusted to match the style of the rest of the ordinance, and that the specific criteria be thoroughly discussed, analyzed, and revised as needed), which shall trigger decommissioning per Section K.
        i. ~~H~~. Criteria for revocation. The Township Board may revoke the Special Land Use Permit, based upon competent material and substantial evidence presented at ~~the~~ a public hearing, that any of the following exists:
        - Violation of the Special Land Use Permit, any of the conditions of the Special Land Use, and any provisions of a development agreement attached to the Special Land Use Permit.
        - Abandonment of the Special Land Use by the parcel owner for a period of six months.
        - Maintenance of a nuisance upon the premises, including, but not limited to, any of the following:
            1. Existing violations of building, zoning, health, fire, or regulatory codes.
            2. A pattern of conduct on the parcel which violates the terms of the Special Land Use Permit.
            3. A pattern of conduct on the parcel creates a public nuisance.
            4. Perjury or any material misrepresentation of information in any application required or hearing held pertaining to the grant, renewal, or revocation of any license or permit.

Severability and Repealer sections are in all other data center ordinance examples