

Definitions proposed to be added to Section 2.02.

1/3 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.

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 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: A water-based evaporative heat-rejection system which utilizes a Drift Eliminator to capture evaporated water droplets and minimize (“drift”) loss.

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.

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 center, hyperscale facilities, server farms and artificial intelligence / “AI” data centers.

Data Center, Ancillary: A data centers (See also Data Center) that is ancillary to another primary use and a) occupies no more than ten percent (10%) of the building’s footprint, b) are 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.

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.

Drift Eliminator: A device utilized on cooling towers to trap evaporative water droplets and return them to the cooling towers/systems, rather than escaping into the atmosphere, and minimizes environmental contamination from cooling systems chemicals and bacteria.

Electrical Substation: An electric system facility that converts higher voltages to lower voltages within or separate from a 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., potential onsite combustible, flammable, or hazardous material storage and potential negative impacts on health, water or air quality. High Impacts Land Uses includes 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. **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 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.

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.

Standalone Modular Data Center / Cryptocurrency Mining Facility: Pre-engineered, prefabricated, temporary and standardized buildings, including shipping containers, 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

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

- Article 12 – IF Industrial Flex Zone – Section 12.03
- Article 13 – I Industrial District – Section 13.03

Amend Section 14.45 PERFORMANCE STANDARDS to removed exemptions for sites with background noise that exceeds requirements.

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 there is existing background noise that exceeds the maximum permitted levels specified in Table 14-1.

Amend ARTICLE XVI SPECIAL USES to add revocation provisions

Section 16.X REVOCATION

The revocation of a Special Use Permit may occur if its recipient fails to abide by its terms, conditions, or development agreement. The revocation procedure is as follows:

- A. If the Township receives credible information that the Special 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 Township.
- 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.

- 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 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 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 at the hearing;
 - 5. A statement that the parcel owner has the right to be represented by legal counsel at the hearing.
- 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.
- 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 Use Permit and the conditions of approval has been committed by a parcel owner or that, even if no violation has been demonstrated, 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.
 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.

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, natural resources, and the area's rural character. The intent of this ordinance is to permit only uses having performance characteristics which will not create a nuisance or negatively affect community health, safety, welfare, natural resources, and the area's rural character due to noise, vibration, smoke, dust, dirt, glare, toxic materials, offensive odors, gases, or electromagnetic radiation. 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.
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.
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 any type of data center, 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 with the application along with applicable fees.
3. All developments subject to this section shall require an application of a special land use subject to the requirements of Article 16.
4. Approval is contingent upon the applicant demonstrating conformance to the requirements of this section, any other provisions of the Zoning Ordinance, all other

applicable Township Ordinances, and the requirements of any other regulatory authority with jurisdiction. Where conflicts exist between this section and other provisions, this section governs. Where silent, other applicable provisions apply.

5. The applicant must enter into a development agreement with the Township. Such development agreement shall be designed to ensure compliance with the requirements of this Section and all applicable Township requirements.
6. All developments subject to this section shall be required to have a performance guarantee as outlined in Section 20.15.
7. The Township Board shall establish fees for administering this Article to include fees for the initial application review as well as fees for ongoing monitoring reports to be paid at the time of application. All such fees shall be added to the fee schedule.
8. The Township may hire third-party, independent consultants chosen by the township, to be funded by the developer through an escrow account to review all elements of this section including but not limited to noise, energy efficiency, water consumption usage, air quality review, renewable energy implementation, and green building practices.

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, or as a Principal Special Use with Conditions in the Industrial Flex District or Industrial District and 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.

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.
2. Community Engagement Plan (CEP) (required with application)
 - a. A CEP shall be submitted as part of the application package and must include:
 - i. Project overview (site, size, phasing, anticipated construction timeline);
 - ii. Draft public information materials (fact sheet, FAQs);
 - iii. Engagement schedule and methods;
 - iv. Proposed meeting formats and locations (including virtual option);

- v. List/map of stakeholders and the Engagement Area;
 - vi. Languages and accessibility accommodations;
 - vii. Communication channels (project website, email list, hotline);
 - viii. Process for documenting comments and responses; and
 - ix. 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 1,500 feet of the proposed project site. If a property is within 1,500 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:
 - i. There are significant amendments, based upon determination of the Zoning Administrator, to the plan between Planning Commission or Township Board reviews; or
 - ii. The Planning Commission or Township Board directs additional engagement due to public interest.
 - d. Meeting requirements:
 - i. Held at an ADA-accessible location within Howell Township or neighboring community and scheduled after 5:00 p.m. on a weekday or on a weekend;
 - ii. Virtual participation option must be provided;
 - iii. Applicant must provide interpreters upon request with at least 7 days notice; and
 - iv. 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 Township providing at a minimum, the following meeting details:
 - i. Meeting details (location, time, etc)
 - ii. Meeting sign in sheet
 - iii. Meeting minutes

iv. Written Comments Received.

E. Application Requirements

1. In addition to the required information for a site plan in Article XX an applicant shall provide the following impact studies to accompany any application:
 - a. A written description of all elements of the proposed use.
 - b. A written narrative describing how the proposed use will comply with the standards and required findings in Section 16.06.
 - c. A Community Engagement Plan, as required in Section D.2.
 - d. Projected maximum possible power use.
 - e. Projected maximum possible water use.
 - f. Projected maximum possible natural gas use.
 - g. Existing well map and impact analysis according to Section G.11.b.
 - h. Plans for any onsite power generation.
 - i. Projected PUE, TUE and WUE with supporting documentation.
 - j. Serviceability statements that fully disclose 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.
 - k. 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: 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 responsibility.
 - l. A Fire and Emergency Response Plan for all phases of construction and operation containing the information required in Section K.5
 - m. A sound study in accordance with Section G.3.e.
 - n. Environment and Community Impact Analysis.
 - o. Decommissioning and site restoration plan meeting all requirements of Section M.
 - p. Traffic study for all phases, including construction.

- q. Public facility, utility, and service impact assessment conducted by a licensed professional engineer.
- r. All exterior building elevations for each structure.
- s. 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.
- t. Infrastructure plan for any existing and planned overhead and underground lines for electric, gas, telecommunications transmission, within the facility and surrounding area.
- u. Preliminary project timeline with estimated durations for each stage of work, including site prep, and detailed schedule for any pile driving.
- v. Equipment cooling system specifications including type, size, and location.
- w. List of regulated substances, including any cooling solutions.
- x. Risk Mitigation Plan meeting all requirements of Section I.
- y. An economic impact analysis.
- z. A job creation report
- aa. Construction plan that complies with the requirements of section L.

F. Dimensional Standards and Siting Requirements

1. 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 within the High Impact Land Uses

Facility Type	Allowable Facility Size Ranges in Square Feet	Setback from overlay district Boundary	Setbacks from all property lines
Ancillary Data Center	Not to exceed 10% of the associated Principal Use's building footprint	Minimum district standard	Minimum district standard

Facility Type	Allowable Facility Size Ranges in Square Feet	Setback from overlay district Boundary	Setbacks from all property lines
Cryptocurrency Mining	Regulated by lot coverage	200 Feet	Minimum district standard
Data Center	Regulated by lot coverage	200 Feet	Minimum district standard

2. Lot Coverage and Setbacks Requirements

- a. Lot coverage shall comply with district regulations.
- b. Setbacks: Minimum setback requirements for all structures, equipment and storage yards shall comply with Table X except.
- c. Building height: 50 feet, including all accessory structures, outdoor equipment, and all rooftop equipment, which shall be concealed by a parapet wall.

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 where the project abuts a non industrial use.
- d. The 200 foot buffer around the perimeter of the overlay district shall be improved with undulating earth berms, which shall be constructed to a minimum height of six (6) feet above the mean elevation of the center line of the public highway adjacent to the property, or six (6) feet above the general level of terrain along property lines. These berms shall have slopes not in excess of one

(1) foot vertical to four (4) feet horizontal, and shall be planted with grass, trees, and shrubs that meet at a minimum the requirements of section 28.03A3.

e. Additional 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.

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.

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 High Impact Land Use's noise is being measured and studied. However, the sound study should demonstrate that any pre-existing sound levels shall not be amplified.

c. Vibration.

i. No High Impact Land Use 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 High Impact Land Use'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 High Impact Land Use is in violation.

- ii. Generators and cooling systems must be equipped with vibration isolation and mitigation systems.
 - iii. High Impact Land Use 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 parcels that are use or zoned for residential land use.
 - iv. Vibration monitoring logs shall be reported annually
- 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.
- 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 township's noise regulations.
 - i. The sound study must be prepared by a professional sound/acoustical engineer licensed in accordance with the most current ISO standards.
 - ii. Sound studies shall include 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.
 - iii. 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.
 - iv. 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 and development agreement. 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).

- v. 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, shall be provided monthly for the first year to establish seasonal baselines, as weather conditions affect how sound travels. Additional sound studies may be required at the time modifications of any kind are made, at the discretion of the Township.
- vi. 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.

5. Electrical and Utility Lines

- a. All 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.

- 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.

6. 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.
- 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 parcels that are used or zoned for residential land use, and the building(s) between as a sound barrier and as a visual buffer between the loudest operations on the site and the parcels that are used or zoned for residential land use.
 - 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.

7. Cooling System Requirements

Intent for Cooling System Requirements: Because High Impact Land Uses have a tendency to consume a disproportionately 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, 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. 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, in the following order of preference:
 - 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 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 and 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 a 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 any preferred equipment cooling system then the next preferred cooling system as outlined above will be the default alternate.
- b. No room-level or facility air/fan-based cooling systems such as, but not limited to, Computer Room Air Conditioning shall be used as the primary means of heat removal.
- c. Open-loop cooling systems and open-circuit cooling towers shall not be permitted.
- d. Cooling towers shall be closed-circuit and utilize drift eliminators.
- e. No Dry Coolers, Mechanical Draft, or Air Chillers shall be permitted.

- f. In order to emit a minimum of noise, as is the intent of this ordinance, cooling systems and towers shall utilize the following features:
 - i. Sound-absorptive enclosures
 - ii. Fans, motors, and pumps shall be mounted on vibration isolator
 - iii. Intake and discharge/exhaust silencers
 - iv. Aerodynamic fan noise reduction aids
 - v. Water-splash/basin silencers for water towers.
 - vi. Additional noise mitigation measures, especially for low frequencies and infrasound, may be required to ensure compliance with the noise limits in Section G.4
- 8. Accessory structure requirements:
 - a. Temporary or modular structures are not permitted except during construction.
 - b. Accessory structures shall be cohesive in design and color scheme to the principal structures on the parcel.
- 9. Detention ponds
 - a. Detention and retention ponds are only permitted as part of the site drainage and stormwater management plan.
 - b. Detention and retention ponds for discharged facility water holding or use related to cooling purposes are not permitted.
- 10. Water Withdrawals/Discharge
 - a. 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.
 - b. The applicant shall produce a map of any existing wells within two thousand (2,000) feet of the project, and a detailed impact analysis explaining:
 - i. How any construction activities, including dewatering, may potentially impact wells.
 - ii. How water usage may potentially impact wells
 - iii. What contamination risks exist from discharged water, and any leaks or spills of Hazardous Materials (including PFAS and bacterial contamination)

- iv. A detailed Well Protection Plan for how the applicant will remediate any such damages.
- v. The Developer Agreement shall indicate that the developer 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.
- c. 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.

H. Sustainability and Energy Use Requirements

1. Infrastructure Impact Statement

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

- a. Utility Capacity Impact Statement from all utility providers to confirm service adequacy.
- b. Anticipated minimum electric power demand (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 backup generation capacity (MW) and associated fuel type(s) with fuel storage capacity and design.
- 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.j.

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 0.2L/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.

- 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.
- c. Applicant shall provide an operations 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). No on-site nuclear power generation shall be permitted. Decarbonized “Blue” Hydrogen and Traditional “Gray” Hydrogen are not permitted.
- 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. Developers are encouraged to use rooftop mounted solar or parking lot canopy mounted solar to achieve this requirement.
- c. On-site solar generation components shall comply with the requirements for solar in section 16.15 of the ordinance.
- d. Battery Energy storage systems (BESS) utilized on site shall conform to the following:
 - i. Shall be limited to Long-Duration Battery Energy Storage
 - ii. 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.
 - iii. Shall comply with NFPA 855, the Michigan Building/Fire Codes, and manufacturer’s specifications.
 - iv. Setbacks: Outdoor BESS 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.
 - v. Applicant shall provide: vehicle impact protection, fire-rated separation where required, gas detection, ventilation, and emergency shut-offs.
 - vi. Applicant shall include a BESS/LDES- specific emergency response plan and data sheet package.

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 H.3.a.
- d. Generator Emissions
 - i. Generators shall meet or exceed current EPA Tier 4 Final emissions standards.
 - ii. Generator Dispersion modeling may be required to meet air quality requirements or if a facility is within 500 feet of any residential.
- 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.

I. Risk Mitigation Plan

Intent of Risk Mitigation Plan. Because High Impact Land Uses and Data Centers can generate community 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:

- a. Mitigation of impacts that are reasonably attributed to the facility;
 - b. Transparent, measurable commitments that support Township goals; and
 - c. Clear enforcement and reporting mechanisms.
1. The Planning Commission may deem an application incomplete until the Plan is provided in a form sufficient to evaluate compliance with this Section.
 2. Required contents of the Risk Mitigation Plan: The Risk Mitigation Plan shall include, at minimum:
 - a. Project overview. Site plan summary; construction phasing; expected operational date; anticipated employment (construction and permanent); and a description of on-site infrastructure (including electrical and water systems as applicable).
 - b. Risk Mitigation Commitments. The applicant shall provide commitments meeting all baseline requirements in Section I.4. Each commitment must include:
 - i. A measurable deliverable (e.g., dollar amount, number of trainees, percentage, kWh, gallons, acres, etc.);
 - ii. Timeline/milestones;
 - iii. The responsible party
 - iv. Reporting method; and
 - v. Proposed remedies if the commitment is not met.

3. Requirements: As a condition of approval, the applicant shall commit to the following requirements, in a form acceptable to the Township:
 - a. Local Workforce and procurement
 - i. Good-faith local hiring and contracting plan, including outreach to Livingston-area unions/trades, community colleges, and workforce programs; and
 - ii. Annual reporting of construction hours and permanent jobs by residency (to the extent permitted by law) and contracting spend by geography.
 - b. Public Safety coordination and preparedness
 - i. Pre-occupancy coordination meeting(s) with Township Fire/EMS and code officials;
 - ii. Facility emergency response information provided to Township (site contact list, shutoffs, hazard inventory, access plan)
 - c. Environmental performance
 - i. A water stewardship plan (efficiency, leak detection, and, if applicable, reuse/recycling strategies);
 - ii. A noise and lighting management plan demonstrating ongoing compliance and complaint response procedures; and
 - iii. 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.
 - d. 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.
 - e. Infrastructure improvements. Roadway, non-motorized, transit, or signal improvements proportionate to traffic and construction impacts; utility upgrades directly serving or mitigating impacts;
 - f. Environmental enhancements. On-site habitat restoration, tree canopy targets, native landscaping, green infrastructure, carbon reduction commitments, or renewable energy support
4. Review standards and Findings
 - a. 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:
 - i. Contains all required elements in Section E;

- ii. Provides clear, measurable commitments;
 - iii. Demonstrates that commitments are reasonably related to anticipated impacts and Township objectives; and
 - iv. Includes enforceable mechanisms for implementation and reporting.
 - b. Approval may include conditions to ensure commitments are proportional, administratively feasible, and consistent with the standards specified in the zoning ordinance.
5. Development Agreement; Security; Enforcement
- a. Incorporation into approval. All commitments in the approved Risk Mitigation Plan shall be conditions of approval and shall be incorporated into the Development Agreement required in Section B.5., as determined by the Township.
 - b. 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.
 - c. Noncompliance. If the Township determines a material commitment is not being met, the Township may pursue the remedies outlined in Section 16.X.

J. Ongoing Reporting

1. Owners and operators shall provide annual reporting to the Township, including:
 - a. Actual annual energy consumption (MWh).
 - b. Actual annual water usage withdrawal and discharge (gallons).
 - c. Energy efficiency performance & progress toward renewable energy targets.
 - d. Documentation of any energy efficiency, cooling system upgrades, and security upgrades.
 - e. Actual Power Use Effectiveness (PUE), Total Power-Usage Effectiveness (TUE) and Water Usage Effectiveness (WUE).
 - f. Actual generator runtime/use logs (hours).
 - g. Actual job numbers, including how many employees are Livingston County Residents.
 - h. Greenhouse gas emissions and/or carbon intensity of energy consumed.
 - i. Emission report as outlined in Section H.6.f
 - j. Seasonal thermal emissions as outlined in Section H.6.g.iii.
 - k. Annual risk mitigation report per Section I.

I. Vibration Monitoring logs

K. 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. 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.

5. Fire and Emergency Response Plan.

- a. Applicants shall submit a Fire and Emergency Response Plan for all phases of construction and operation containing, at a minimum, all of the following:
 - i. Site Layout
 - ii. Backup generator and Long Duration/Battery Energy Storage System locations, risks, and emergency protocols
 - iii. Contact information for security and facility management
 - iv. 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.
 - v. 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
 - vi. A description of all electrical, fire, smoke, and similar environmental risks, their likelihood, and mitigation measures both before and after an emergency.
 - vii. 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.
 - viii. 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.
 - ix. 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.
 - x. A description of all on-site equipment, fire suppression, and alarm systems to be provided to prevent or handle fire emergencies.
 - xi. A commitment to review and update the plan with fire departments, first responders, and county emergency managers at least once every three (3) years.

- xii. Other information the applicant finds relevant or wishes to present to the Township.
- b. Operators shall provide annual training opportunities or site orientations to local fire, police, and emergency medical services.

L. Construction Standards

Intent for construction standards. Because construction projects for High Impact Land Use developments have the potential to create nuisances due to the significant amount of time required for construction and may include intense activity such as off-site traffic and other activities that can potentially cause disruption to the community, it is the intent of this section to create regulations that protect the health safety and welfare of neighbors and the community at large during construction.

1. The applicant shall provide a construction plan that includes the following:
 - a. Expected duration of construction.
 - b. Description of construction phases.
 - c. Proposed timeline for construction of each structure or major component.
 - d. Description of any areas where future expansion is anticipated.
 - e. Location of any temporary structures.
 - f. a construction lighting plan for all phases that meets the requirements of Section 14.22.
 - g. A Construction Logistics and Traffic Management Plan, identifying haul routes, delivery windows, worker parking, and dust/mud control.
2. Applicants 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.
3. 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.
4. 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 may be approved by the Township Board upon request, 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. Interior work that does not generate additional light, noise, vibration, smoke, dust, dirt, glare, or offensive odors may be exempt from these time restrictions.
5. 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.

6. 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.

M. Decommissioning

Intent of decommission requirements. Because 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.

1. Decommissioning Plan Requirement. 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. Indicate the parties responsible for decommissioning including any successors.
2. The applicant shall enter into a Decommissioning Agreement with the Township to be signed by the applicant, operator, or party responsible for decommissioning and shall bind all successors, heirs, and assigns.
3. Triggers for Decommissioning
 - a. A high 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.

4. 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% 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.
- c. Estimates must be updated every 2 years and adjusted for inflation and the guarantee shall be adjusted accordingly.
- 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.

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 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.

- 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 M.5.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.

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.

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.