

DATE: March 5, 2026

TO: Joliet Plan Commission

FROM: Planning Staff

SUBJECT: A-4-25: Annexation of Approximately 795 Acres Surrounding S. Rowell Road and Bernhard Road, Classification to I-1 (Light Industrial) Zoning

PUD-8-25: Preliminary Planned Unit Development and Preliminary Plat of Joliet Technology Center Subdivision

GENERAL INFORMATION:

APPLICANT: PowerHouse Hillwood Holding, LLC

STATUS OF APPLICANT: Contract Purchaser

OWNER: Bernhard Farms, Inc., Bernhard Family Land Trust, Leo E. & Lois I. Bernhard, Leonard E. Bernhard, Jean R. Smith, Joan E. Long, Joy C. and Ray M. Garza, James E. Bernhard

REQUESTED ACTION: Approval of zoning classification to I-1 (Light Industrial) zoning upon annexation, and approval of a preliminary planned unit development

PURPOSE: To allow for development of a future data center campus

EXISTING ZONING: County A-1 (Agricultural)

LOCATION: 795 Acres Surrounding S. Rowell Road and Bernhard Road

SIZE: 795 Acres

EXISTING LAND USE: Farmland/Undeveloped

SURROUNDING LAND USE & ZONING:

NORTH: Rural Residences/Farmland, County A-1 and A-2 (Agricultural/Rural Residence)
SOUTH: Farmland, County A-1 (Agricultural)
EAST: Farmland and a Paving Contractor, I-1 (Light Industrial) and County A-1 (Agricultural)
WEST: Route 66 Raceway, Farmland and a Warehouse, I-1 (Light Industrial)

SITE HISTORY: The subject properties have been farmland throughout their history. The City's 2007 South Side Comprehensive Plan prescribed industrial land use for the majority of land within the subject property, with the exception of two commercial hubs at the northwest and northeast corners of both the Rowell Road and Millsdale Road and the Ridge Road and Millsdale Road intersections. The proposed I-1 (light industrial) zoning designation generally aligns with the land use direction from the South Side Comprehensive Plan.

GENERAL SITE AND PROPOSAL INFORMATION: Data Center facilities are buildings that are used for the storage, management, processing, and transmission of digital data, which house computer network equipment, systems, servers, appliances, and other associated components related to digital data operations. These facilities often include air handlers, power generators, closed-loop cooling, storage facilities, utility substations, and other associated utility infrastructure to support sustained operations at the Data Center. The buildings that house Data Center infrastructure often resemble the size, design, and massing of other light industrial warehouse, commercial, or office facilities.

The petitioner, PowerHouse Hillwood Holding, LLC, intends to annex the 795-acre assemblage and develop a Data Center campus in four future phases. The subject Preliminary Planned Unit Development covers the entire 795-acre assemblage. Future final planned unit development petitions and final plats would be required for each phase of development. The petitioner intends to include one six-building cluster in each future phase of development, resulting in a total of 24 principal data center buildings, with an approximate total buildout square footage of 6,936,000 gross square feet. Stormwater management would be sized with each future phase of development as generally shown on the Preliminary PUD Plan set. Electrical substations of approximately 6 acres in size would accompany each future phase of development. A larger, 25-acre switching station would be situated on the development's west side, west of S. Rowell Road. Depicted as Lot 3 on the Preliminary Plat, this lot would eventually be conveyed to ownership by

Commonwealth Edison (ComEd). This switching station would be buffered by the existing Route 66 Raceway complex to the north, and future planned phases of the Data Center campus to the east and south. The developer does not have plans to utilize the excess land located in the northeast portion of the annexation assemblage. Any future changes to the PUD that would result in development of this portion of the property assemblage would require an amended Preliminary Planned Unit Development approval.

Future right-of-way dedications to S. Rowell Road and S. Ridge Road would be required to meet the City's roadway standards. The applicant is proposing a vacation of the existing Bernhard Road right-of-way between S. Rowell Road and S. Ridge Road. This would become a private road for internal circulation, if the vacation is approved. Vacation of Bernhard Road will require a future right-of-way vacation approval process. A future extension of W. Millsdale Road between the western property line and S. Ridge Road would also be required as the lower three campus clusters are developed. Landscaping easements with grass berming at a 3:1 slope would be provided along all arterial roads that are improved. An additional landscaping buffer would be required between the northernmost campus cluster and the existing residential properties that front W. Schweitzer Road. Landscaping plans would be verified when the Final Planned Unit Development Plats are submitted for the respective phases. Individual sites would be required to meet the City's lighting and glare regulations. The developer would also be responsible for the cost of extending water and sewer infrastructure to the future campus sites.

COMMUNITY BENEFITS: Data Centers are growing rapidly throughout the country, due in large part to a surge in meeting today's digital demand as artificial intelligence (AI) technologies require an enormous amount of computing power and associated infrastructure. Several economic benefits have been associated with the development of data center campuses. The facilities result in the creation of high-paying, permanent jobs in addition to a large volume of temporary construction jobs associated with the build-out of the data center campus. The developer has committed to a project labor agreement and has strong labor union support. Approximately 7,000 - 10,000 union jobs would be created for the construction of this development. At full buildout, the project would create approximately 700 permanent jobs operating within the site's 24 buildings with staff on-site 24 hours per day. The developer is committed to partnerships with local educational institutions to expand technical training programs aligned with construction and technology careers, and will work closely with these educational institutions, community groups and others to target local residents to fill these roles.

Property tax revenues generated at the local level can also be substantial. The subject development is expected to generate approximately \$310,000,000 in property taxes over

30 years, plus about \$40,000,000 in utility taxes, in addition to standard industrial water and sewer rate revenues. Developments of this scale provide stable, recurring revenue that supports essential City services such as police, fire protection, and infrastructure while strengthening Joliet's financial stability and expanding the commercial tax base—helping fund services without increasing the burden on homeowners. The City of Joliet will not be providing economic incentives or tax abatements for this project.

COMMUNITY IMPACTS: The City is aware that larger Data Center campuses have the potential to produce several negative quality of life impacts, if not properly mitigated. The following sections outline how the applicant's proposal and the City's Zoning Ordinance addresses these impacts.

NOISE AND LIGHTING: Noise pollution that originates from cooling equipment and backup generators has been cited as a chief negative quality of life impact for adjacent property owners. Noise from data centers is often cited as most audible within 3,000 feet of the point source, with a potential to be audible from up to two miles from the point source. The surrounding land that is located within one mile of the subject property is largely vacant or under development for light industrial uses, though there are several preexisting farmstead residences scattered throughout the area in addition to a lower density single-family residential neighborhood south of Spangler Road, outside of the city limits. The Illinois Pollution Control Board's Rules and Regulations for Noise Pollution would cap a proposed Class C use between 40 and 75 decibels at property lines of adjoining residences, depending on the octave band center frequency. Model data center ordinances typically call for a maximum decibel level between 60 and 70 at the property line. The applicant has stated that it believes it can stay under a maximum decibel level of 65 decibels at the property line. The volume at this level is comparable to loud conversation or a running dishwasher. The noise generated by data centers of the kind proposed in Joliet is produced largely by the exercising of the generators. These generators are proposed to be built within the interior of the site, so that any noise produced would be mitigated by the structures themselves, as well as by the landscape berms that must be installed.

The Preliminary Plat shows the approximate projected distances between the future data campus buildings and the closest property line. Buildings that would be situated within the northernmost cluster would have the shortest distance to a property line and to existing residences along Laraway Road at approximately 179 feet of separation distance. Other data center buildings would be at least 200 feet away from the nearest property line, with several buildings in excess of 300 feet from the property line. The nearest residential structure is 0.66 miles from the proposed site. Modern data centers have implemented several techniques to buffer sound more effectively, such as putting

acoustic walls around mechanical yards, providing enhanced sound protection equipment on building exteriors and parapet walls, and adding increased vegetation and landscaping within natural buffers to adjacent properties.

Should the subject use be declared a public nuisance due to complaints regarding excessive noise, the City would require the operator to implement noise reduction methods to meet Illinois Pollution Control Board regulations.

Each future building that would be built would be required to meet the criteria listed in Zoning Ordinance Section 47-14.11 pertaining to glare and lighting restrictions for buildings in an Industrial zone. The quantity of luminance of lighting visible from neighboring properties shall not be of such magnitude as to cause hazards, annoyance, or interference to the users and uses of neighboring properties. The maximum illumination on adjacent or nearby residential and R-B (restricted business) districts, without the property owner's consent, would not be allowed to exceed 0.5 horizontal footcandles measured at the property line. The proposed data center development would use minimal nighttime lighting. All fixtures would be focused downward and softly/minimally lit for safety purposes. Unlike a warehouse that may be busy with loading activities in the overnight hours, a data center has very little need for outdoor nighttime activity on the site.

WATER USAGE: Data Center campuses have been known for consuming vast amounts of water to cool its equipment. Advances in recent technology have led to a decreased dependence on water, as certain facilities have provided alternative means of cooling such as using recycled graywater or using air cooling techniques in lieu of formerly utilized evaporative cooling techniques. The proposed data center campus would utilize a closed-loop system that recycles water and significantly reduces overall water usage. The City is comfortable that the planned water use will not strain the local system. Staff recommends capping average daily consumption to 150,000 gallons per day. Staff recommends capping the average amount of daily discharge into the City's sanitary sewer system at 50,000 gallons per day. The City will require approval of a pre-industrial treatment permit prior to discharge of any non-domestic waste into the City's sanitary sewer system.

Staff recommends allowing potable water to be used for common uses such as fire suppression, domestic use, humidification, irrigation of landscaped areas, and initial flushing and filling of a closed-loop system at a date, time, and flow-rate approved by the Director of Public Utilities. Potable water will not be allowed to be used for evaporative cooling or other manufactured processing. Average daily potable water consumption, calculated on an annual basis, will not be allowed to exceed 150,000 gallons per day.

This water use is less than that planned for in the City's planning studies, which planned for this area to develop as light industrial with an average demand of 264,000 gallons per day and a maximum daily demand of 330,000 gallons. For comparison, the proposed water use for the data center is significantly less than the water demands for a single-family residential subdivision, which would use approximately 1.25 million gallons per day for the same acreage. If the Project exceeds the peak daily use or average daily use limits, the property owner would be required to pay three times (3x) the applicable rate for water service charges with respect to such excess.

POWER USAGE: Strain on the local power grid is another primary concern from Data Center development. The developer estimates that at full buildout, the proposed project would require an annual electricity consumption of 1,800 megawatts (MW). ComEd has identified and planned a series of transmission and system upgrades that will allow the data center to operate without reducing reliability for existing residential or business customers. All required transmission and infrastructure improvements associated with the project will be funded by the developer. This includes construction of dedicated infrastructure that would separate electric service from the local service network that serves existing ComEd customers. This isolation from the broader ComEd network would simplify service delivery to the development site while preventing complications associated with integrating the projected large energy load with the loads of existing ComEd customers. The Regional Transmission Organization (RTO) that coordinates the movement of wholesale electricity throughout the local grid is PJM Interconnection LLC. PJM must approve all proposed generation assets and large loads before they are allowed to connect to the regional grid to deliver or withdraw power. As part of the interconnection process, PJM and ComEd have evaluated the impact of the development at full buildout on the reliability of the regional grid and local network and determined that extending service to the proposed data center campus site will not cause blackouts to ComEd customers. The development will have backup power generation but will rely on the local regional electrical grid for its electricity supply.

The data center will secure and pay for its own electricity, independent of residential or small-business service. Electric rates in Illinois are regulated by the Illinois Commerce Commission, which sets prices based on overall system costs and formal review processes—not the energy use of any single project. The proposed data center campus must secure its own electricity supply through either the ComEd Basic Electric Service-Hourly rate or through a bilateral agreement with a retail electricity supplier. Neither of these options can cause existing ComEd customers to subsidize the energy supply costs of the proposed data center campus.

TRAFFIC: The developer obtained a Traffic Impact Study from Kimley-Horn and Associates, Inc to assess the impact of the full site buildout to traffic in the surrounding area. The study found that site-generated traffic is not expected to materially impact nearby intersections. Most intersections in the immediate area would experience a Level of Service (LOS) rating of C or higher, meaning traffic streams would be generally stable, with some restricted movement. At the intersection of Route 53 and Schweitzer Road, the eastbound and westbound approaches would operate at LOS F during peak AM and PM hours; however, this is a similar service level to a no-build scenario at this intersection.

Truck bays shown on the site plan would only be used for equipment changes and would not be a source of daily trucking operations. The applicant is requesting a deviation from the standard loading dock requirement for a building in the I-1 zone from six docks to just two docks per building.

EXCEPTIONS/VARIATIONS/DEPARTURES: The developer has requested the following exceptions, variations, and/or departures from the strict regulations of the Zoning Ordinance and the Subdivision Regulations:

Lots 1 and 2 (Data Center):

- A deviation from I-1 reflects a reduction in the number of required loading dock parking per building from 6 to 2.
- A deviation from I-1 parking requirements exists as data center uses are currently undefined.
 - 2.1. Data center use parking requirements currently undefined.
- A deviation from I-1 reflects an allowance for 40' driveway aprons.
 - 3.1. I-1 Light Industrial maximum driveway width currently undefined (max. 30' for commercial).
- ±5,180 linear feet of W. Bernhard Rd. is intended to be made private.
- ±5,430 linear feet of S. Rowell Rd. to be improved.
- Multiple buildings are permitted on a single lot as shown on the Preliminary PUD Plan.

Lot 3 (substation):

- No minimum accessory off-street parking or loading is required for an electrical substation use.
- Transmission structures and electrical equipment depicted conceptually and are provided for reference only.

- Conceptual depiction of substation area and enclosure subject to engineering refinement.
- Taller fence posts supporting new fence and other security functions may be required up to 18'-0" tall. Locations subject to future confirmation.
- Substation static masts up to 86' tall may be installed for safety.
- A Tree Preservation Plan is not required for Lot 3 notwithstanding 47-15E.2F. Trees greater than 6" in diameter may be removed notwithstanding anything to the contrary in 47-15A.2A.
- The prohibition on chain-link style fencing in 47-15E.10 does not apply within Lot 3 due to public utility security requirements. Substation fencing is exempt from fence height limits and front yard prohibitions described in 47-17.6. An expanded metal fence of 11 feet in height plus 12" of y-shaped barbed wire may be installed on the exterior of any electrical substation situated within Lot 3, including that portion of the electrical substation facing east.
- Substation areas within Lot 3 may be comprised of gravel and are not required to be paved. Driveway aprons on Rowell Road must be paved but driveways within the boundaries of Lot 3 may be gravel consistent with safety and reliability standards.
- Section 5.4-B-2 of the Subdivision Ordinance requires all driveways to be paved with concrete. A public utility owner of Lot 3 must pave driveway aprons but not the portion of the substation driveways themselves lying outside the public right-of-way due to the potential need to quickly access underground electrical ducts which are often buried beneath the various driveways.
- Section 5.9-A, which requires all utility facilities within a subdivision to be placed underground.
- Section 5.9-B, which requires a 10-foot public utility easement along all rear lot lines. That kind of public utility easement is incompatible with a secure substation property.
- Section 5.6-C, which requires fire hydrants to be placed within 350 feet of any structure. The distance from the proposed principal equipment enclosure to the nearest existing hydrant along Rowell Avenue will be determined in final engineering design.

SUMMARY: Staff finds that the petitions meet all required standards for approval and recommends approval of Annexation, Zoning Upon Annexation to I-1 (Light Industrial) district, Preliminary Planned Unit Development and Preliminary Plat, with the described exceptions/variations/departures, subject to the conditions of approval below. The subject petitions are to be reviewed and voted on for final action at a future City Council Meeting. The developer will be required to obtain City Council approval of Final PUD Plans and Final and Recording Plats for each future phase of development.

CONDITIONS OF APPROVAL: Staff recommends the following conditions of approval:

1. The project should implement noise reduction methods to meet Illinois Pollution Control Board regulations. The developer should use industrial-scale berms and other natural buffers, setbacks and modern building techniques to reduce noise levels.
2. That a photometric plan be submitted with each future phase of development and that all proposed lighting meets the requirements of Section 47-14.11 of the City's Zoning Ordinance pertaining to the quantity of luminance of lighting visible to and from neighboring properties.
3. Average daily discharge to the City's sanitary sewer system, calculated on an annual (calendar year) basis, should not exceed 50,000 gallons per day. Peak daily flow should not exceed 300,000 gallons per day, not including operation and testing of fire suppression systems or Lot 3 restroom facilities for substation.
4. Potable water supplied by the City may be utilized for the following uses:
 - Fire suppression in accordance with City building codes and any applicable fire protection insurance requirements;
 - Domestic use;
 - Humidification for climate control purposes;
 - Initial flushing and filling of a closed-loop cooling system at a date, time, and flow rate approved by the Director of Public Utilities;
 - Limited maintenance of the closed-loop cooling system as approved by the City; and
 - Irrigation of landscaped areas.

Potable water supplied by the City shall not be utilized for the following uses:

- Evaporative cooling; or
- Other manufacturing processing.

Average daily potable water consumption, calculated on an annual basis, should not exceed 150,000 gallons per day. Peak daily use should not exceed 300,000 gallons per day, not including operation and testing of the fire suppression system or to any Lot 3 restroom facilities for substation.

5. Unless there is a power interruption, generators should only be exercised one hour per month and no longer than 12 hours per year. Generator exercise should be during daytime business hours (9:00 a.m. – 5:00 p.m.)