



Conway Township Planning Commission
Monday, September 11, 2023 | 7:00pm

Conway Township Hall | 8015 N. Fowlerville Road, Fowlerville, Michigan 48836

1. **CALL TO ORDER / PLEDGE**
2. **ROLL CALL**
3. **CALL TO THE PUBLIC**
4. **APPROVAL OF PLANNING COMMISSION MEETING September 11, 2023 AGENDA**
5. **APPROVAL OF THE August 14, 2023 MEETING MINUTES**
6. **COMMUNICATIONS**
 - a. Zoning Administrator's Report
 - b. Livingston County Planning Commission Update/Report
7. **PUBLIC HEARING**
 - a. Zoning Ordinance Amendment No. 2023-05: Ordinance to Amend the Zoning Ordinance to Define and Regulate Cargo Containers
8. **OLD BUSINESS**
 - a. Zoning Ordinance Amendment No. 2023-05: discussion and recommendation on proposed Ordinance to Amend the Zoning Ordinance to Define and Regulate Cargo Containers
 - b. Zoning Ordinance on Windmills Update – Meeting with Mike homier on 9-6-23 to go over language related to the windmill ordinance.
 - c. 2023 Proposed Zoning Ordinance
 - i. LCPC #Z-24-23 | Solar Amendment
9. **NEW BUSINESS**
 - a. Two vacant PC board member positions available
 - b. Selection of Planning Commission Vice-Chair
10. **PLANNING COMMISSION MEMBER DISCUSSION**
11. **2nd CALL TO THE PUBLIC**
12. **ADJOURNMENT**

Any person may speak for up to 3 minutes during the public comment period.

***Meeting will be Monday, October 9, 2023
This is Columbus / Indigenous People Day – We will still meet.***



Conway Township Planning Commission Meeting Minutes
 Monday, August 14th, 2023 | 7:00pm EST
 Conway Township Hall | 8015 N. Fowlerville Road, Fowlerville, MI 48836

Agenda	Items Discussed	Actions to be Taken
Attendees	PC Members Present: Jeff Klein, Dave Whitt, George Pushies - Ex-Officio, Shawn Morrison, Lucas Curd, and Kayla Poissant Absent: Meghan Swain-Kuch Zoning Administrator: Gary Klein Livingston County Planning Commissioner: Dennis Bowdoin Township Attorney: Abby Cooper, JD Absent: Michael D. Homier	None
Call to Order/Pledge	PC Vice Chair, L. Curd called the Conway Township Planning Commission meeting to order at 7:00pm and led the Pledge of Allegiance.	None
Approval of Agenda	Motion to accept the meeting agenda as amended for August 14 th , 2023. Motion by D. Whitt. Support G. Pushies. Motion Approved.	Motion Approved
Approval of July 2023 PC Minutes	Motion to accept meeting minutes from July 10 th , 2023. Motion by S. Morrison. Support by G. Pushies. Motion Approved.	Motion Approved
Call to the Public	Steve Smith- Robb Rd.- He stated that it wasn't clear on the agenda if the PC was going to address the LCPC meeting notes on the Solar Ordinance, and that several members of the public attended. He said that there was a lot of discussion at the LCPC meeting that was not included in their notes. He encouraged an open discussion tonight so that members of the public that attended that meeting to speak on the issues discussed but not included in the notes. He proceeded to give an example of how the minutes of that meeting reflect something different than what he had spoke about. He is concerned about the wording of the inverters and that it may be interpreted differently. He would also like to see studies and experts hired by the township and not the	None

developer. He also stated that he is concerned on the enforcement of the rules. He stated that has some information about wind projects which he would address in the 2nd Call to the Public.

Mike Brown- Sober Rd- He wanted to discuss about why the agenda was not out at the start of the meeting, and why the PC Packet was not posted on the website. L. Curd responded that the packet was sent out to the members of the PC on August 10th. Mr. Brown asked about whether the members had enough time to review the packet in time for the meetings.

Steve Weiss- Sober Rd- He was wondering about the agenda, and if the PC was going to discuss the LCPC meeting and information sent to the PC. He wanted to know when the Solar Ordinance was going to be discussed as it wasn't on the agenda. He stated that the Solar Ordinance is a big issue that has been worked on and it needs to be addressed.

Kennedy Parker- Hayner Rd- She stated that she thought that since the LCPC sent their review back that the PC would address their review. L. Curd stated that Solar Ordinance is going to be reviewed and it was under line-item D. Mrs. Parker stated that there was not line-item D, and that there is a communication error between the parties. G. Pushies stated that there were two emails on the same day and that the Solar Ordinance was placed on the second email. Mrs. Parker stated that the PC should know who puts the information out. L. Curd stated that M. Swain-Kuch puts out the information, but he doesn't know who puts the information on the website. Mrs. Parker stated that it is disappointing that the Solar Ordinance wasn't on the agenda.

Sarah Porter- Sober Rd- She stated that the absence of the PC at the LCPC was noticed, and that there was discussion that took place at the LCPC that wasn't not conveyed or mentioned in the review sent to the Conway PC. G. Pushies asked if she was inferencing that there was information not included in the review, and she responded that she wasn't inferencing but verifying that there was missing information. She then mentioned a concern that Mr. Bowdoin brought up in the LCPC meeting, that was never mentioned in the review. She stated she took notes which could verify the missing discussions. She stated that she has emailed numerous

	<p>times and asked about how everyone can work smarter and not harder, and if a sit-down meeting can occur to discuss some important information not included in the original draft. She also stated that she doesn't want to just hear that we have an airport which excludes the wind projects, and that the airport could shut down any day which then would allow them in the township.</p>	
Communications	<p>a. Zoning Administrator Report: G. Klein stated that there was one reroofing permit, and one land-use permit for a house addition.</p> <p>b. Livingston County Planning Commission Report: D. Bowdoin stated that the LCPC was going to be reviewing Cohoctah's and Genoa's Solar Ordinance at their next meeting, and that there was a Brown Bag Lunch coming up.</p>	<p>None</p> <p>None</p>
Old Business	<p>a. Shipping Containers [Accessory/Principal Use]-</p> <p>L. Curd stated that a new draft was provided in the packet, and asked for any discussion. D. Whitt stated that he believed it was well written. G. Pushies stated that he had an issue with number 5 referring to electrical not being allowed. He stated that he disagrees with that portion, and doesn't know how would the township enforce it. D. Whitt mentioned that solar lighting and other lighting types could be used instead of hard-wiring electrical in.</p> <p>Motion to remove number 5- No electricity or plumbing may be run or connected to a cargo container. Motion by G. Pushies. Support by J. Klein.</p> <p>Discussion- K. Poissant stated that she was fine with removing the electricity part of number 5, but believed that the plumbing should stay. A. Cooper stated that number 5 was regarding all containers, not just permanent ones. There was discussion on the how to enforce it.</p> <p>Motion amended to have number 5 state "No plumbing may be run or connected to a cargo container" striking out the word electricity. D. Whitt opposed. Motion Approved.</p> <p>K. Poissant asked about whether the number of cargo containers allowed on a property was in the ordinance as she didn't see anything regarding it. It was discussed that</p>	<p>Motion Approved</p>

	<p>cargo containers weren't a taxable outbuilding, and not affixed to the property. G. Klein stated that on a two acres parcel, homeowners could have 150% of the square footage, or about two accessory buildings in the Accessory Building ordinance.</p> <p>Motion to accept the Shipping Container ordinance as amended and to set a Public Hearing for September 11th, 2023. Motion by L. Curd. Support by K. Poissant. Motion Approved.</p> <p>Roll Call Vote-</p> <p style="padding-left: 40px;">J. Klein- Yes D. Whitt- Yes S. Morrison- Yes K. Poissant- Yes G. Pushies- No L. Curd- Yes</p> <p>b. Zoning Ordinance on Windmills Update</p> <p>L. Curd stated that the Wind Ordinance was included in the packet. D. Whitt stated that the Wind Ordinance was not included in his packet. G. Pushies asked about whether an overlay district was feasible with how they are set-up. D. Bowdoin stated that an overlay would be difficult, but not impossible as the wind turbines are spread out. K. Poissant stated that she would like to see the FAA be added to the list of organizational rules to follow. G. Pushies agreed.</p> <p>Motion to open the floor on wind energy to the public on. Motion by G. Pushies. Support by J. Klein. Motion Approved.</p> <p>It was discussed that the packet wasn't posted on the website so the general public didn't have access to the wind ordinance. K. Poissant asked about whether an open meeting could be set to allow the public to comment and review the ordinance. Sarah Porter mentioned a lot of particular situations missing in the wind ordinance.</p> <p>Motion to set an Open Meeting/Public Hearing on Wind Energy between August 28th to September 10th with the attendance of the Foster Swift law firm. Motion by G. Pushies. Supported by J. Klein. Motion Approved.</p>	<p>Motion Approved</p> <p>Motion Approved</p> <p>Motion Approved</p>
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	<p>c. 2022 Proposed Zoning Ordinances- Event Barns, Accessory Dwelling Units</p> <p>Event Barns- K. Poissant stated that she comments on the 20 acres required and that there is only a 500 ft buffer, and whether the buffer was enough. She also mentioned access drives to the accessory building and allowing access drives between the principal building and the accessory building. It was clarified that the access drives are just not allowed on private easements. K. Poissant brought up the definition of a solid surface and whether that could be misinterpreted. G. Pushies brought up the ADA requirements, and whether the ordinance should state paved rather than solid surface. A. Cooper stated that solid surface is mentioned in another portion of the ordinance referring to public road access. She also stated that if it is not defined in the ordinance, it would take on the ordinary meaning of the term. K. Poissant stated that she would like to remove the “dancing” portion relating to only allowing dancing in the building. G. Pushies brought up the noise ordinance, and that was a way to control the noise level. K. Poissant referred to the capacity of the buildings is the allowable number of people on the property. K. Poissant also stated to allow portable restrooms and tents on the property. D. Whitt stated that tents are allowed at the event, and K. Poissant stated that it stated that tents were only allowed during the “wedding ceremony” which could be viewed differently. K. Poissant mentioned changing the word ceremony to the word event. A. Cooper brought up the current noise ordinance, and that there are hours of operation which may need to be worked on. She stated that there is no decibel rating in the ordinance, and G. Klein stated that he can not enforce that ordinance with no equipment to measure it. The LCPC comments were discussed in reference to the noise.</p> <p>Motion to remove the word “dancing” from letter m, to allow portable restroom on the premises under letter n, and change the word “ceremonies” under letter p to “event”. Motion by K. Poissant. Support by L. Curd. Motion Denied.</p> <p>Motion to recommend approval of ordinances LCPC #Z-07-22, LCPC #Z-08-22, and LCPC #Z-10-22 regarding Event Barns as drafted to the Township Board. Motion by D. Whitt. Support by G. Pushies. S. Morrison and K. Poissant Dissent. Motion Approved.</p>	<p>Motion Denied</p> <p>Motion Approved</p>
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	<p>Accessory Dwelling Units- No Discussion.</p> <p>Motion to recommend approval of LCPC #Z-18-22 regarding Accessory Dwelling Units as drafted to the Township Board. Motion by G. Pushies. Support by J. Klein. Motion Approved.</p> <p>d. 2023 Solar Ordinance for the Solar Amendment-</p> <p>Motion to open the floor to the Public. Motion by G. Pushies. Support by S. Morrison. Motion Approved.</p> <p>L. Curd stated that the PC received feedback from the LCPC. A public member asked on how difficult it would be to make an amendment if something were to come up. Another member of the public stated that there were things discussed at the LCPC that should be reviewed and discussed by Mr. Homier before approval. The special meeting voted on was in reference to wind energy, not solar. It was discussed that it wasn't decided to have Mr. Homier review the LCPC comments, but that it could be decided. It was again discussed that the PC should attend the LCPC to hear the discussion their discussion as not all of that information is included in their findings. It was discussed whether a special meeting was needed to review the findings, or whether everything could be done at the next scheduled PC meeting.</p> <p>Motion to send the draft Solar Ordinance with the LCPC comments and including Mr. Steve Smith's and Mrs. Sarah Porter's notes to Mr. Homier or a Foster Swift associate for commentary and feedback at the next scheduled PC meeting. Motion by G. Pushies. Support by K. Poissant. Motion Approved.</p> <p>A member of the public stated that he is concerned about information not being communicated properly between the chain of command. He brought up the PC meeting agenda being the wrong agenda. He also mentioned that the LCPC minutes are a fraction of what was actual discussed. He would like to see the flow of communication get better.</p>	<p>Motion Approved</p> <p>Motion Approved</p> <p>Motion Approved</p>
New Business	None at this time.	None
Commission Discussion	G. Pushies asked who would make sure the information gets to the proper people. It was discussed that the	None

	<p>meeting packet needed to be done the Monday the week before the meeting. K. Poissant mentioned that all she could say was that the information she received was given to her on August 10th. K. Poissant mentioned that Mr. Homier stated he was not going to be in attendance at this meeting, and G. Pushies asked when an email or text came in regarding his absence. K. Poissant stated the email was posted the Thursday before. D. Whitt also mentioned M. Swain-Kuch's text stating that she had just received the information included.</p>	
<p>Last Call to the Public</p>	<p>Steve Smith- Robb Rd- He explained a situation when MDOT was spraying an X in his barn driveway. He said that the man was measuring the ground elevation there because that was the distance from the airport necessary for wind mills, and the man gave him some advice. The man stated that he has seen a lot of wind mills being built and then not used, as well as planes, mostly crop dusters, flying into weather monitoring stations being used for the wind mills. Mr. Smith stated that if he had received a warning letter with a \$500 fine, he would be shocked, but a company like DTE wouldn't be shocked.</p> <p>Don Smith- Hidden Circle- He stated that he lived in a condo, and was concerned about the shipping containers. He was concerned about them being around his house, and that although there were bylaws for his area. K. Poissant and G. Pushies both stated that the township's ordinance would not override the bylaws of his condo. K. Poissant went on to state that the bylaws state that the outbuildings allowed in the Association must be in harmony with the principal building, and that a shipping container could not meet that standard. Mr. Smith then brought up portable restrooms and how they are not helpful for someone with a disability, as well as a gravel driveway isn't easy for someone in a wheel chair. He would like to see some work on this area to make sure things are suitable for those with disabilities. He then stated it isn't easy to change a baby in a portable restroom. He mentioned his time in the military, and how getting around in a wheelchair isn't easy.</p> <p>Jim Dannemiller- Chase Lake Rd- He stated that while golf one day he ran into a DTE worker, and the worker stated that a couple of solar farms are costing more to run them than the profit they are receiving out of it. He stated to keep this in mind going forward.</p>	<p>None</p>

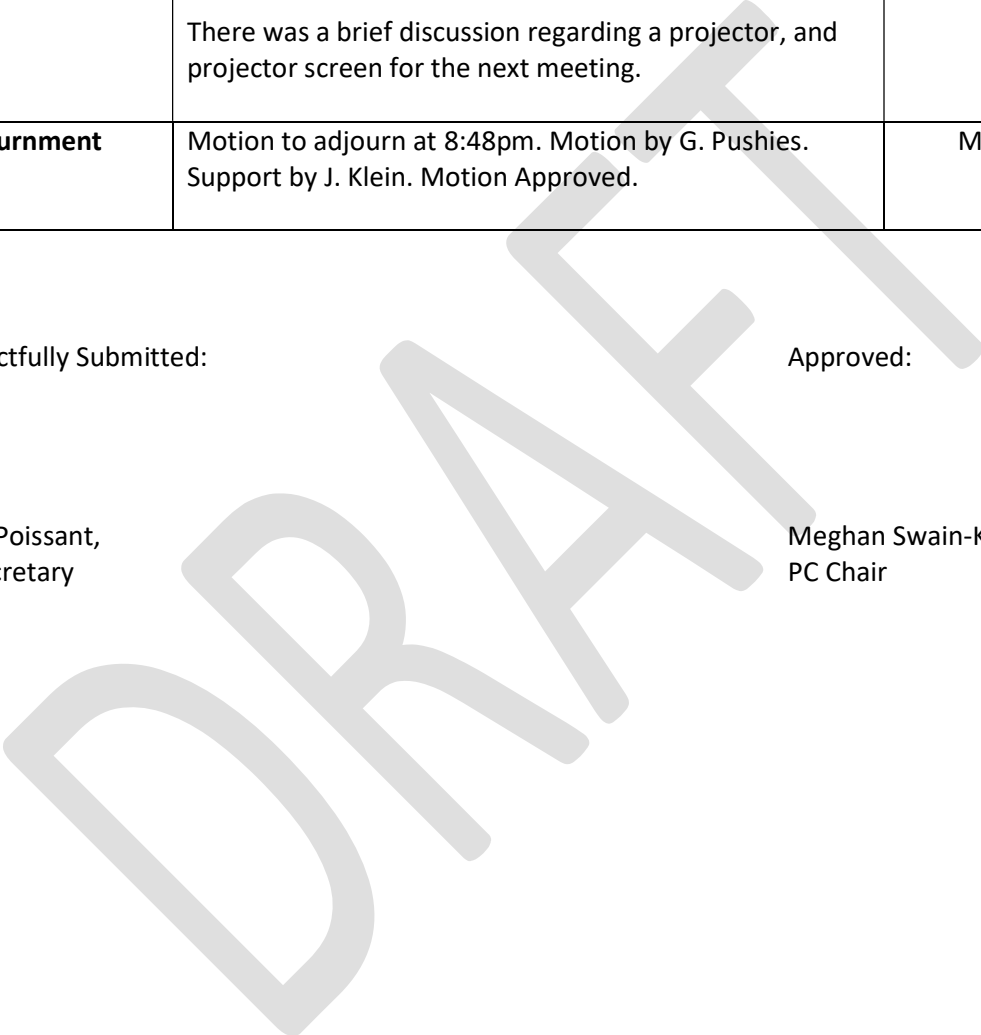
	<p>Sarah Porter- Sober Rd- She stated that she apologized for snapping earlier in the meeting. She mentioned that the whole situation is a lot to deal with. She asked if the PC could email her when the meeting is scheduled for wind energy. G. Pushies asked if L. Curd or K. Poissant could make sure the information gets posted and passed to the PC Board. L. Curd also apologized for his joke, and didn't mean to offend her. It stated that these matters are important to the PC.</p> <p>There was a brief discussion regarding a projector, and projector screen for the next meeting.</p>	
Adjournment	Motion to adjourn at 8:48pm. Motion by G. Pushies. Support by J. Klein. Motion Approved.	Motion Approved

Respectfully Submitted:

Approved:

Kayla Poissant,
PC Secretary

Meghan Swain-Kuch,
PC Chair



CONWAY TOWNSHIP
ORDINANCE NO. 2023-05

**AN ORDINANCE TO AMEND THE ZONING ORDINANCE
TO DEFINE AND REGULATE CARGO CONTAINERS**

The Township of Conway ordains:

Section 1. Addition of Definitions to Article 2 of the Township Zoning Ordinance

The following definitions are added to Article 2 of the Township Zoning Ordinance, consistent with the existing ordering of definitions in that section:

Cargo Container. Any metal or primarily metal container designed or constructed to ship, store, or handle bulk goods or items, or which appears substantially similar to such containers in appearance. Such containers include reusable steel boxes, freight containers, and bulk shipping containers; originally, a standardized reusable vessel that was designed for and used in the parking, shipping, movement, transportation or storage of freight, articles of goods or commodities; generally capable of being mounted or moved on a rail car, or loaded on a ship.

Portable Storage Container. A portable or moveable, weather resistant receptacle designed and used for the storage or shipment of household goods, wares, valuables or merchandise (ie. PODS or MODS), and which is typically leased on a short-term basis for temporary storage purposes.

Section 2. Addition of New Section 6.18, entitled “Cargo Containers and Portable Storage Containers.”

New Section 6.18, currently designated as “Reserved,” entitled “Cargo Containers and Portable Storage Containers,” is added to the Township’s Zoning Ordinance and reads as follows:

Section 6.18 — Cargo Containers and Portable Storage Containers

A. Cargo Containers. Cargo containers are permitted as an accessory use in all zoning districts subject to the requirements of this Section. The following regulations apply to all cargo container use:

1. Cargo containers shall not be stacked above the height of a single container device.
2. Cargo containers shall meet all required setbacks.
3. Cargo containers shall be located in rear yards with the exception that cargo containers may be allowed in the side yard but not forward of the front building.
4. Cargo containers must be screened so as to not be visible from the street or nearby buildings, drives, and roads.
5. No plumbing may be run or connected to a cargo container.

6. Cargo containers shall not be used to store hazardous materials, as defined by the Michigan Fire Prevention Code, 1941 PA 207, MCL 29.1 *et seq.*
7. Cargo containers shall not occupy required off-street parking, fire lanes, loading or landscaping areas.
8. No cargo container shall be placed in a location which may cause hazardous conditions or constitute a threat to public safety.
9. No cargo container may be used as living quarters.
10. No structural modifications may be made to cargo containers.
11. No livestock or pets may be stored in cargo containers.

B. Cargo Containers for Permanent Storage. Cargo containers may be permanently placed on the property for storage purposes upon issuance of a land use permit from the Zoning Administrator. The following regulations shall also apply:

1. All applicable building regulations are followed.
2. A solid foundation (road base material/gravel or better) is required.
3. Cargo containers shall be painted in solid colors (colors which blend into the surrounding area).
4. Cargo containers shall not be used for any advertising purpose and shall be kept clean of all alpha-numeric signage and writing.
5. Any writing or graffiti that may be placed on the container is the responsibility of the property owner and shall be promptly removed.

C. Cargo Containers for Temporary Use. Property owners will be required to obtain a temporary land use permit (Section 6.09) from the Zoning Administrator for the temporary use of cargo containers. The following regulations shall also apply:

1. Cargo containers shall be removed from the property within 180 calendar days from the date of initial placement. Property owners are allowed one additional period of up to 180 days.
2. Cargo containers associated with an approved building construction project shall be permitted to remain on-site until the earlier occurrence of approval of the project's final building inspection or the expiration of the building permit.

D. Portable Storage Containers. Portable storage containers are permitted as an accessory use in all zoning districts upon issuance of a temporary land use permit (Section 6.09) from the Zoning Administrator and shall adhere to the following restrictions:

1. No portable storage container may be stacked on top of another or on top of any other object.
2. Portable storage containers shall not be used to store hazardous materials, as defined by the Michigan Fire Prevention Code, 1941 PA 207, MCL 29.1 *et seq.*
3. No electricity or plumbing may be run or connected to a portable storage container.
4. Portable storage containers used in a residential district or associated with a residential use must be placed on a driveway or paved area.

5. Portable storage containers used in a non-residential district or associated with a nonresidential use shall not occupy required off-street parking, loading or landscaping areas.
6. No portable storage container shall be placed in a location which may cause hazardous conditions or constitute a threat to public safety.
7. No portable storage container may be used for living quarters.
8. No livestock or pets may be stored in a portable storage container.
9. Portable storage containers may not be placed on a vacant lot, unless that lot is associated with an approved building construction project.
10. Time Limits.
 - a. Portable storage containers shall be removed from the property within 180 calendar days from the date of initial placement. Property owners are allowed one additional period of up to 180 days.
 - b. Portable storage containers associated with an approved building construction project shall be permitted to remain on-site until the earlier occurrence of approval of the project's final building inspection or the expiration of the building permit.

E. Referral to Planning Commission. At any time after receipt of an application for a cargo container or portable storage container pursuant to this Section, the Zoning Administrator may elect to refer the application for review and approval by the Planning Commission at no additional cost to the applicant.

Section 3. Validity and Severability.

If any portion of this Ordinance is found invalid for any reason, such holding will not affect the validity of the remaining portions of this Ordinance.

Section 4. Repealer.

All other ordinances inconsistent with the provisions of this Ordinance are hereby repealed to the extent necessary to give this Ordinance full force and effect.

Section 5. Effective Date.

This Ordinance takes effect seven days after publication as provided by law.

CONWAY TOWNSHIP
ORDINANCE NO. _____
AN ORDINANCE TO AMEND THE ZONING ORDINANCE
TO REGULATE WIND ENERGY SYSTEMS

The Township of Conway ordains:

Section 1. Adoption of New Section _____, Wind Energy System Overlay District

New Section _____, entitled "Wind Energy System Overlay District," is added to the Zoning Ordinance and reads as follows:

Section _____ Purpose and Findings

A. **Purpose.** The Wind Energy System Overlay District (the "District") is intended to provide suitable locations for utility-scale wind energy systems that are otherwise authorized under state law and the Township's Code of Ordinances and Zoning Ordinance to meet a reasonable demonstrated need for this land use in the Township. It is the intent of the Township to permit these systems to the extent a demonstrated need exists for the land use by regulating the siting, design, construction, operation, monitoring, modification, and removal of such systems to protect the public health, safety, and welfare, and to ensure compatibility of land uses in the vicinity of wind energy systems. The Township seeks to preserve its rural character and agricultural heritage. To these ends, the lands included in this District are within reasonable proximity to existing electric power transmission infrastructure.

B. **Findings.** In establishing this overlay district, the Township of Conway finds as follows:

1. It is necessary and reasonable to permit utility-scale wind energy systems in the Township to the extent that there is a demonstrated need for that land use.
2. Land use for utility-scale wind energy systems beyond a reasonable and legitimate demonstrated need to provide for the Township's energy needs would have needless adverse effects on surrounding businesses and residences, and be detrimental to the health, safety, welfare, and prosperity of the Township and its residents.
3. The Township wishes to preserve its existing topography and rural character, maintain property values, and protect and preserve the quality and pace of rural life of its residents while preserving the environment and protecting wildlife.
4. Wind Energy Systems can adversely impact the health, safety, welfare, and prosperity of that community, including existing property values, especially when in proximity to farms, forests, and residential properties.
5. Wind Energy Systems shall be carefully managed to reduce the adverse long-term effects such land use can have on the productivity of farmland. See University of Michigan Graham Sustainability Institute & Michigan State University Extension, "Planning & Zoning for Wind Energy Systems."
6. Several Michigan communities have suffered, or are suffering, from fiscal uncertainty due to litigation and rule changes concerning taxation arising from rural renewable energy production.

7. Conway Township contributes significant storm water runoff into adjacent municipalities because of relative elevations, and therefore the Township values low-impact development to better manage its stormwater runoff.

8. Impervious surfaces such as wind turbines channel stormwater runoff, and support posts and trenching are likely to damage drain tiles. Thus, Utility Scale Wind Energy Systems must be carefully sited, designed, and limited in scope.

9. The Township adopts these land use regulations to balance any demonstrated need for utility-scale wind energy systems in the Township with the public, health, and safety impacts identified above.

Section ____ Delineation of the Wind Energy System Overlay District

A. The Wind Energy System Overlay District overlays existing zoning districts delineated on the official Conway Township Zoning Map. The boundaries of the Wind Energy System Overlay District are depicted on Map A, incorporated herein by reference, and are generally described as follows:

An area of land consisting of approximately ____ acres, comprised of the following:

[INSERT AREA DESCRIPTION HERE]

Section ____ . Permitted Uses.

There are no uses permitted by right in the Wind Energy System Overlay District, other than uses permitted by right in the underlying zoning districts.

Section ____ . Special Land Uses.

The following uses are permitted following approval by the Planning Commission as a Special Land Use in the Wind Energy System Overlay District as regulated by Article 13 (special land uses) and Article 14 (site plan review).

Utility-Scale Wind Energy Systems

Section 2. Amendment of Section 6.01 of the Zoning Ordinance Section

6.01 of the Zoning Ordinance, entitled "Establishment of Districts," is amended to read as follows:

For purposes of innovative and flexible development, Conway Township has established the following overlay district:

Overlay District

WES Wind Energy System

Commented [AL1]: Draft language in the event the Township decides to do an Overlay Zoning District as discussed at the May PC Meeting.

Section 3. Addition of Definitions to Article 2 of the Township Zoning Ordinance

The following definitions are added to Article 2 of the Township Zoning Ordinance, consistent with the existing ordering of definitions in that section:

A. Adverse Sound Character: Sound that causes building rattle, is impulsive, tonal, includes amplitude modulation, or has a low-frequency bass rumble.

B. Ambient: Ambient is defined as the sound pressure level exceeded 90% of the time over a 96-hour measurement period with daytime/nighttime division.

C. Anemometer Tower: A freestanding tower containing instrumentation such as anemometers that is designed to provide present moment wind data for use by the supervisory control and data acquisition (SCADA) system which is an accessory land use to a Utility Scale Wind Energy Conversion System.

D. ANSI: the American National Standards Institute.

E. dBA: The A-weighted sound level.

F. FAA: The Federal Aviation Administration.

G. GIS: Geographic Information System and is comparable to GPS (global positioning system) coordinates.

H. IEC: The International Electrotechnical Commission.

I. ISO: The International Organization for Standardization.

J. LMax (LAMax or LCMMax): The maximum dB(A) or dB(C) sound level measured using the “fast response” setting of the sound meter (equivalent to 0.125 second exponential averaging time).

K. NEC: National Electrical Code.

L. Noise: A sound that causes disturbance that exceeds 40 dBA Lmax or 35 dBA Lmax.

M. Non-Participating Property: A property that is not subject to a Utility Scale Wind Energy System lease or easement agreement at the time an application is submitted for a Special Land Use for the purposes of constructing a Utility Scale Wind Energy System.

N. Owner/Operator: A person or entity that owns or operates a Utility Scale Wind Energy System. The person, firm, corporation, company, limited liability corporation or other entity, as well as the Applicant’s successors, assigns and/or transferees, which applies for Township approval (permit) to construct a WECS and/or WECS Testing Facility. An Applicant must have the legal authority to represent and bind the Participating Landowner, or lessee, who will construct, own, and operate the WECS or Testing Facility. The duties and obligations regarding a zoning approval for any approved WECS or Testing Facility shall be with the WECS or Testing Facility owner, and jointly and severally with the owner, operator, and lessee of the WECS or Testing Facility if different than the WECS owner. “Owner/operator,” even when used in the singular, may refer to more than one person or entity if there are multiple owners or operators, or the Utility Scale Wind Energy System is owned and operated by different entities. “Owner/operator” includes any successor to the original owner/operator. “Owner/operator” may or may not be the same as the applicant.

O. Participating Property: A property that participates in a lease or easement agreement, or other contractual agreement, with or that is owned by an entity submitting a Special Land Use Permit application for the purpose of developing a Utility Scale Wind Energy System.

P. Private Wind Energy System: A Wind Energy System used exclusively for private purposes and not used for any commercial resale of any energy, except for the sale of surplus electrical energy back to the electrical grid.

Q. SCADA (supervisory control and data acquisition): A computer system that monitors and controls WECS units.

R. Shadow Flicker: Alternating changes in light intensity caused by the moving blades of wind turbines on the ground and stationary objects, including but not limited to a window of a dwelling.

S Sound level meter: An instrument for the measurement of sound levels that meets the ANSI requirements of S1.4-1983 (or later revision) for Type 1 or 2 instruments. For frequency analysis, octave and 1/3 octave filters shall conform to ANSI S1.11-1986 (or later revision).

T. Sound Pressure: An average rate at which sound energy is transmitted through a unit area in a specified direction. The pressure of the sound measured at a receiver.

U. Sound Pressure Level: The sound pressure mapped to a logarithmic scale and reported in decibels (dB).

V. Strobe Effect: The effect resulting from the flashing of reflected light, which can be visible from some distance, from the surface finish of turbine blades.

W. Tip Height: The height of the turbine with a blade at the highest vertical point.

X. Utility-Scale Wind Energy System: A Wind Energy System in which the principal design, purpose, or use is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.

Y. Wetland: As used in this Ordinance, wetland shall mean the areas defined as such by Michigan law (see Part 301 Inland Lakes and Rivers and Part 303 Wetlands Protections of the Natural Resources and Environmental Protection Act, last revised effective 3-29-19), and regulated by the Michigan Department of Natural Resources, and the Michigan Department of Environment, Great Lakes, and Energy.

Z. Wind Energy Conversion System (WECS): Any part of a system that collects or stores wind radiation or energy for the purpose of transforming it into any other form of usable energy, including the collection and transfer of heat created by wind energy to any other medium by any means. Wind Energy Conversion System (WECS): Any combination of the following: A mill or machine operated by wind acting on oblique vanes or sails that radiate from a horizontal shaft; A surface area such as a blade, rotor, or similar device, either variable or fixed, for utilizing the wind for electrical or mechanical power; A shaft, gearing, belt, or coupling utilized to convert the rotation of the surface area into a form suitable for driving a generator, alternator, or other electricity-producing device; The generator, alternator, or another device to convert the mechanical energy of the surface area into electrical energy; The tower, pylon, or other structure upon which any, all, or some combination of the above are mounted. Any other components not listed above but associated with the normal construction, operation, and maintenance of a wind energy conversion system.

AA. Wind Energy Conversion System (WECS) Testing Facility: A structure and equipment such as a meteorological tower for the collection of wind data and other meteorological data and transmission to a collection source, shall not be deemed to be a communication tower.

BB. Wind Energy Facility: Clusters of two or more utility scale Wind Energy Conversion Systems, placed upon a lot or parcel with the intent to sell or provide electricity to a site or location other than the premises upon which the Wind Energy Conversion Systems are located. Said Wind Energy

Conversion Systems may or may not be owned by the owner of the property upon which they are placed.

Section 4. Addition of New Section _____, entitled “Wind Energy Systems”

New Section ____, entitled “Wind Energy Systems,” is added to the Township’s Zoning Ordinance and reads as follows:

Section _____s Wind Energy Systems.

A. General Provisions. All Wind Energy Systems are subject to the following requirements:

1. All Wind Energy Systems, including towers, shall conform to the provisions of this Ordinance and all local county, state, and federal regulations and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI), Federal Aviation Administration (FAA), Michigan Airport Zoning Act, Michigan Tall Structures Act, Underwriter Laboratory (UL), National Electrical Code (NEC), National Fire Protection Association (NFPA), and the most current Michigan Uniform Building Code adopted by the enforcing agencies. An interconnected Utility Scale WECS shall comply with Michigan Public Service Commission (MPSC) and Federal Energy Regulatory Commission (FERC) standards.
2. If an applicant, operator, or landowner of a Wind Energy System fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke any approvals after giving the applicant notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township’s actual attorney fees and costs.

B. Private Wind Energy Systems.

1. Administrative Review. Except as provided in subsection (d) below, all Private Wind Energy Systems require administrative approval as follows:

a. Application to Zoning Administrator. An applicant who seeks to install a Private Wind Energy System shall submit an application to the Zoning Administrator on a form approved by the Township Board.

b. Application Requirements. The application shall include:

1. A site plan depicting setbacks, turbine size, and the location of property lines, buildings, fences, greenbelts, and road right of ways. The site plan shall be drawn to scale.
2. Photographs of the property’s existing condition.
3. Renderings or catalogue cuts of the proposed wind energy equipment.

4. A certificate of compliance demonstrating that the system has been tested and approved by Underwriters Laboratories (UL) or other approved independent testing agency acceptable to Township.

5. A copy of the manufacturer's installation directions.

c. Zoning Administrator Authority. The Zoning Administrator is authorized to approve, approve with conditions, or deny applications for Private Wind Energy Systems. An aggrieved party may appeal the Zoning Administrator's decision to the Zoning Board of Appeals pursuant to Article 6 of the Zoning Ordinance.

d. Exclusions from Administrative Review. Administrative review is not required for repair and replacement of existing wind energy equipment if there is no expansion of the size or area of the wind energy equipment.

2. Private Wind Energy System. Private Wind Energy Systems are permitted in all zoning districts as an accessory use, subject to administrative approval as set forth in this section and subject to the following requirements:

a. Safety. A Private Wind Energy System shall be installed, maintained, and used only in accordance with the manufacturer's instructions, and it shall comply with all applicable construction code and electric code including the most current version of the Michigan Uniform Building Code, [Federal Aviation Administration \(FAA\)](#), [Michigan Airport Zoning Act](#), [Michigan Tall Structures Act](#), and National Electrical Code adopted by the enforcing agencies.

b. Building Permit. A building permit is required.

c. Maximum Height. The total height of a Private WECS with the blade fully extended must not exceed 300 130 feet. The minimum clearance from ground level to the blade at its lowest point must be 30 feet. [Height is measured from the average grade at the base of the tower to the highest point of WECS when a blade is in its vertical orientation. This height allowance shall apply regardless of zoning district, and shall supersede any other height maximum in this Zoning Ordinance.](#)

d. Location. The minimum setback of a Private WECS from any property line or road right-of-way must equal three times the total height of the unit (with the WECS blade at its highest point).

e. Noise. Private WECS must comply with the noise limits set forth in this Ordinance.

f. Abandonment. If a Private Wind Energy System has been abandoned for a period of six months, the property owner shall remove it within three months after the date of abandonment. [The Zoning Administrator may request proof of power generation via utility bills for purposes of abandonment analysis.](#)

g. Inspection. The Zoning Administrator may inspect a Private Wind Energy System for compliance with this ordinance upon providing reasonable notice to the property owner or occupant.

h. Underground Transmission. All power transmission or other lines, wires, or conduits from a Private Wind Energy System to any building or other structure shall be located underground. If batteries are used as part of the Private Wind Energy System, they shall be placed in a secured container or enclosure.

i. Shadow Flicker. On-site WECS shall produce no shadow flicker on any parcel other than one where the WECS is located. Measures to eliminate all effects of shadow flicker on adjacent properties, such as programming the WECS to stop rotating during times when shadow crosses occupied structures, shall be required.

j. Exempt Towers and Wind Energy Conversion Systems (WECS). Communication towers, antennas, wind energy conversion systems (windmills, turbines) and related facilities located on the premises of a farm, home, or business and which do not primarily involve the sale of electricity or communication services off the premises shall be exempt from the requirements of section "Commercial Wind Energy Conversion Systems (WECS)" except for the requirement to comply with "Noise" sections 23 (a) and 23 (b). Such units shall be allowed as a permitted accessory use in all zoning districts, providing the electricity or communication services are primarily used on site for a farm, home or business. In the case of a WECS, the total height with the blade fully extended (Tip Height) shall not exceed eighty (80) feet, and the minimum clearance from ground level to the blade at its lowest point shall be twenty (20) feet. The minimum set-back from property lines and road right of way lines shall be equal to 3 times the Tip Height of the unit (WECS blade at its highest point).

C. Utility-Scale Wind Energy Systems. Utility-Scale Wind Energy Systems are permitted by Special Land Use approval in the Wind Energy System Overlay District and require a special land use permit under Article 5 and site plan approval under Article 4. Utility-Scale Wind Energy Systems are also subject to the following requirements:

1. Findings: This Ordinance has been developed with the intention of obtaining an appropriate balance between the desire for renewable energy resources and the need to protect the public health, safety, and welfare of the community and the character and stability of the Township's residential, agricultural, recreational, commercial and/or industrial areas and preserving and protecting the Township's important and sensitive environmental and ecological assets and areas, open space, viewscales and aesthetics, wetlands, and other ecological and environmentally sensitive areas .

Based on evidence presented in this State and others concerning the adverse secondary effects of wind energy systems on communities, including, but not limited to, findings from the Wind Turbine Health Impact Study: Report of Independent Expert Panel, prepared for the Massachusetts Department of Environmental Protection (2012); Strategic Health Impact Assessment on Wind Energy Development in Oregon, prepared for the State of Oregon (2012); Noise and Human Health: A Review of Scientific Literature, Wind Turbines, prepared for the State of Vermont's Department of Health (2017); Analysis of the Research on the Health Effects from Wind Turbines, Including Effects From Noise, prepared for the Maine Department of Health and Human Services (2012); Jeffrey et al, Adverse Health Effects of Industrial Wind Turbines, 59 Can Fam Physician 473-475 (2013); Salt, A., and Kaltenbach, J, Infrasound From Wind Turbines Could Affect Humans, 31(4) Bulletin Science, Technology and Society, 296-302 (2011), Sample Zoning for Wind Energy Systems, for Michigan State University Extension (March 2017), and Environmental Noise Guidelines for the European Region, prepared for the World Health Organization Regional Office for Europe (2018), the following are among the potential harmful secondary effects of wind energy systems:

- a. Falling ice or "ice throws" is physically harmful and measures should be taken to protect the public from the risk of "ice throws."
- b. Nighttime wind turbine noise can cause sleep disturbance. Generally, sleep disturbance can adversely affect mood, cognitive functioning and one's overall sense of health and wellbeing.

Chronic stress and sleep disturbance could increase the risk for cardiovascular disease, decreased immune function, endocrine disorders, and mental illness. In addition, possible health effects include increased heart rate, insomnia, fatigue, accidents, reduction in performance and depression.

- c. Sound from wind energy facilities could potentially impact people's health and wellbeing if it increases background sound levels by more than 10 dB(A) or results in long term outdoor community sound levels above 35-40 dB(A) Lmax.
- d. There is evidence that wind turbine sound is more noticeable, annoying and disturbing than other community industrial sounds at the same level of loudness, due to the adverse sound character.
- e. People who live near wind turbines are more likely to be impacted by wind turbine than would those far away.
- f. Alternating changes in light intensity caused by the moving blades of wind turbines on the ground and stationary objects, also known as shadow flicker, may cause health issues.
- g. The Township desires to protect ecological and environmentally sensitive areas in the Township including, but not limited to, habitats for endangered species or heavily used migration routes for species of waterfowl and other migratory birds (some of which are protected species), including eagles, tundra swans, and sand hill cranes. Thus, the Township has determined that wind development sites can adversely impact wildlife and their habitats and makes evaluation of proposed wind development sites essential. The Township finds that any wind development sites should have the lowest potential for negative impacts on wildlife resources and avoid locations with higher concentrations of migratory birds. Further, any wind development sites that would fragment sensitive habitat areas, like rivers, streams, and wetlands, should be avoided.
- h. The general welfare, health, and safety of the citizens of the Township will be promoted by the enactment of this ordinance.

2. Special Land Use Permit Application Requirements. In addition to the requirements of Article 5, the applicant for a Utility-Scale Wind Energy System shall provide the Township with all of the following:

- a. Application fee in an amount set by resolution or fee schedule approved by the Township Board.
- b. A deposit for an escrow account in an amount set by resolution or fee schedule approved by the Township Board. The escrow account is used to cover all costs and expenses associated with the special land use review and/or approval process, which costs can include, but are not limited to, review fees of the Township Attorney, Township Planner, and Township Engineer, as well as any reports or studies which the Township anticipates will be required during the review and/or approval process for the application. At any point during the review process, the Township may require that the applicant place additional monies into escrow with the Township if the existing escrowed funds on account with the Township will be insufficient, in the determination of the Township, to cover any remaining costs or expenses with the review and/or approval process. If additional funds are required by the Township to be placed in escrow and the applicant refuses to do so within 14 days after receiving notice, the Township will cease the zoning review and/or approval process until and unless the applicant makes the required escrow deposit. Any escrow

amounts in excess of actual cost will be returned to the applicant. An itemized billing of all expenses will be provided to the applicant upon request. The Township shall hire qualified professionals for each and any of the technical fields associated with the Special Use Permit, such as, but not limited to, electrical, acoustics, environment, economics, wildlife, health, and land-use.

c. Required Security Deposits. Following approval, but prior to the issuance of a Special Land Use Permit for the construction of any WECS, the following security deposits shall be deposited with the Township.

1. Sufficient funds to decommission and remove the WECS in the event of abandonment.

2. Sufficient funds to repair the anticipated damage to roadways during construction of the WECS.

3. A \$15,000 escrow account to cover the costs of complaint investigation, mitigation, and resolution.

d. A map including all parcel numbers that will be used by the Utility-Scale Wind Energy System; documentation establishing ownership of each parcel; and any and all lease or option agreements (including "good neighbor" agreements), easements, or purchase agreements for the subject parcels, together with any attachments to such agreements or easements.

e. An operations agreement setting forth the operations parameters, the name and contact information of the certified operator, the applicant's inspection protocol, emergency procedures, and general safety documentation.

f. Federal Employer Identification Number for current owner/operator is required at the time of application.

g. A written emergency response plan detailing the applicant's plan for responding to emergencies, including fire emergencies, and analyzing whether adequate resources exist to respond to fires and other emergencies. If adequate resources do not exist, the applicant shall identify its plan for providing those resources. The emergency plan shall include identification of potential hazards to adjacent properties, public roadways, and to the community in general that may be created, as well as plans for immediate cleanup, long-term monitoring, and continued mitigation efforts following an emergency.

h. A written description of the fire suppression system that will be installed, which shall identify the manufacturer of the fire suppression system and generally describe its operations and capacity to extinguish fires.

i. A written description of specialized training and/or equipment necessary for handling fires and/or other emergencies at the Utility Scale Wind Energy System site. All training and/or equipment will be paid for by the owner/operator. The training plan must include, at a minimum, mandatory annual emergency response training for local firefighters and other local emergency personnel at the site of the Utility-Scale Wind Energy System.

j. A complete set of photographs, video, and topography map of the entire Participating Property prior to construction.

k. A copy of any power purchase agreement or other written agreement that the applicant has with an electric utility or any agreement or approval for interconnection between the proposed Utility-Scale Wind Energy System and an electric utility or transmission company.

l. A written plan conforming to the requirements of this ordinance for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management.

m. A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Utility-Scale Wind Energy System, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the Utility-Scale Wind Energy System and restore the subject parcels to as near as possible to the condition the subject parcels were in prior to being used as a Utility-Scale Wind Energy System.

n. Financial security that meets the requirements of this ordinance.

o. A plan for resolving complaints regarding but not limited to noise, glare, maintenance, [shadow flicker, strobe effect, vibrations, ice throws, lighting](#), and drainage from the public or other property owners concerning the construction and operation of the Utility-Scale Wind Energy System.

p. Identification of and a plan for managing any hazardous waste.

q. A transportation plan for construction and operation phases, including any applicable agreements with the [Livingston](#) County Road Commission and Michigan Department of Transportation.

r. An attestation that the applicant and owner of the subject property will indemnify and hold the Township and its officials, elected or appointed, harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Utility-Scale Wind Energy System.

s. A copy of the manufacturer's directions, instruction manual, and specification sheets including any unredacted safety manuals and Safety Data Sheets (SDS), for installing, maintaining, and using the Utility-Scale Wind Energy System [for each model of turbine without distribution restraints to be kept at the Township Hall and other locations deemed necessary by Planning Commission and/or local first responders. The Manual should include standard details for an industrial site such as materials, chemicals, fire, access, safe distances during WECS failure, processes in emergencies, etc.](#)

t. A ground cover vegetation establishment and management plan that complies with this ordinance.

u. Proof of environmental compliance, including compliance with:

i. Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.);

ii. Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances;

iii. Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.);

iv. Part 303, Wetlands (MCL 324.30301 et. seq.);

v. Part 365, Endangered Species Protection (MCL324.36501 et. seq.);

and any other applicable laws and rules in force at the time the application is considered by the Township.

v. Any additional information or documentation requested by the Planning Commission, Township Board, or other Township representative.

w. Insurance. Proof of the owner/operator's public liability insurance shall be provided at the time of application. If the applicant is approved, proof of insurance shall be provided to the Township annually thereafter. The policy shall provide for bodily injury, property damage, livestock damage, and future earnings loss and shall name Conway Township and each Participating Property owner as an additional insured with the right to be notified of cancellation and/or significant reduction of coverage. The owner/operator shall insure for liability for the utility scale wind system until removed for at least \$25,000,000 per occurrence to protect the owner/operator, Township, and Participating Property owner. Proof of a current policy is required annually and shall be provided each year to the Township prior to the anniversary date of the Special Land Use Permit. Aggregate policies are allowed if minimum coverage per WECS is satisfied and coverage is provided for every site where owner/operator's equipment is located.

x. Compliance with the Michigan Uniform Building Code and National Electric Safety Code: Construction of a Utility Wind Energy Facility shall comply with the most current version of the Michigan Uniform Building Code and National Electrical Code adopted by the enforcing agencies as a condition of any Special Land Use Permit under this section.

y. Conceptual plan. A graphical computer generated depiction of how the Utility-Scale Wind Energy System will appear from all directions.

z. The Applicant shall also submit a written explanation of the design characteristics and the ability of the structure(s) and attendant facilities to withstand winds, ice and other naturally occurring hazards, as well as information regarding health, welfare and safety in areas including, but not limited to, noise, vibration, shadow flicker, and blade ice deposits. This information shall also address the potential for the WECS to structurally fail or collapse, and what results should be expected in such an event.

3. Site Plan Application Requirements.

a. Contents of Site Plan. In addition to the requirements in Article 4, the applicant shall, at its expense, provide a detailed application and site plan drafted to a scale of 1 inch = 200 feet with the following:

1. Location of all proposed structures, turbines, equipment, transformers, and substations.

2. Location of all existing structures or dwellings on the parcel and location of all existing structures or dwelling on adjacent Non-Participating Property within 1000 feet of the property lines of any Participating Properties.

3. Depiction of all setbacks, property lines, fences, signs, greenbelts, screening, drain tiles, easements, flood plains, bodies of water, proposed access routes, and road rights of way.
4. Indication of how and where the system will be connected to the power grid.
5. Plan for any land clearing and grading required for the installation and operation of the system.
6. Plan for ground cover establishment and management.
7. Anticipated construction schedule and completion date. As a condition of any special land use or site plan approval, hours of construction shall be limited to Monday through Friday from 7:00 a.m. to 5:00 p.m. with no construction on Saturday, Sunday, or any federally recognized holiday.
8. Sound modeling study including sound isolines extending from the sound sources to the property lines.
9. Any additional studies requested by the Planning Commission, including but not limited to the following:
 - a. Visual Impact Assessment: A technical analysis by a third-party qualified professional that is acceptable to the township, of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscaping and other screening measures), a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project.
 - b. Environmental Analysis: An analysis by a third-party qualified professional that is acceptable to the township, to identify and assess any potential impacts on the natural environment including, but not limited to, removal of trees, wetlands and other fragile ecosystems, wildlife, endangered and threatened species. If required, the analysis will identify all appropriate measures to minimize, eliminate or mitigate adverse impacts identified and show those measures on the site plan, where applicable.
 - c. Stormwater Study: An analysis by a third-party qualified professional that is acceptable to the township, studying the proposed layout of the Utility-Scale Wind Energy System and how the spacing, row separation, and slope affects stormwater infiltration, including calculations for a 100-year rain event. Percolation tests or site-specific soil information shall be provided to demonstrate infiltration on-site without the use of engineered solutions.
 - d. Glare Study: An analysis by a third-party qualified professional that is acceptable to the township, to determine if glare from the Utility-Scale Wind Energy System will be visible from nearby airports, air strips, residences, and roadways. The analysis will consider the changing position of the sun throughout the day and year and its influences on the utility-scale wind energy system.
 - e. Optional Conceptual Layout Plan. Applicants shall submit an optional conceptual layout plan for review prior to submission of a formal site plan. The

conceptual site plan shall be reviewed by the Planning Commission to allow for discussion and feedback.

f. Background Sound Analysis. A background (ambient) sound analysis shall be performed by an independent third-party acoustician that is acceptable to the Township and a report provided which indicates Leq 1 second, L10, and L90 sound levels using A-weighting and C-weighting. Data shall be collected at midpoints along property lines of adjoining Non-Participating and Participating Landowners. Measurement procedures are to follow the most recent versions of ANSI S12.18 and ANSI S12.9, Part 3 guideline (with an observer present). Measurements shall be taken using an ANSI or IEC Type 1 Precision Integrating Sound Level Meter. The study must include a minimum of four four-day (96 hour) testing periods, include one Sunday, and divide data by daytime and nighttime. One of the four-day testing periods must occur between December 1 and March 1, one must occur between March 1 and June 1, one must occur between June 1 and September 1, and one must occur between September 1 and December 1. The sound background study shall report for the period of the monitoring topography, temperature, weather patterns, sources of ambient sound, and prevailing wind direction.

g. Economic Impact: The Applicant shall fund and provide an economic impact analysis performed by an independent third-party that is acceptable to the Township, for the area affected by the WECS project. Such a study shall include probable financial impact regarding jobs, tax revenue, lease payments and property values at a minimum and average set-backs distances. Business and residential growth potential shall be considered.

h. Wind Assessment Analysis. A wind assessment analysis conducted within a potential project area shall be completed within 18 months of the date of application for a WECS and shall be performed by an independent third-party that is acceptable to the Township. The study must show analysis for a period of time no less than one (1) year. The height of an anemometer (or similar) device measuring wind availability shall be placed within the potential vertical swept blade area of the proposed WECS. Temporary (one-year) installation of said device may be applied for through the Township site plan approval process and may be approved for a height acceptable to determine feasibility of a WECS height allowed by this ordinance. The anemometer shall be decommissioned in accordance with this ordinance, including the provision of a security bond covering decommissioning costs.

i. Shadow Flicker Impact Analysis. A copy of a shadow flicker analysis shall be performed by an independent third-party that is acceptable to the Township at Non-Participating Parcel property lines to identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sunrise to sunset over the course of a year. The site plan shall identify problem areas where shadow flicker may affect the owners and/or occupants of the Non-Participating Parcels and show measures that shall be taken to eliminate the problems.

j. A copy of a site suitability analysis by a third-party qualified professional acceptable to the Township to identify and assess any potential impacts to or hazardous conditions resulting from proximate existing uses and conditions. The suitability analysis must include:

(i) A flight pattern analysis and impact statement.

(ii) A subsurface mine analysis and impact statement.

(iii) An oil and gas lease analysis and impact statement.

(iv) Other local site conditions identified by Planning Commission.

10. Approvals from Other Agencies. Final site plan approval may be granted only after the applicant receives all required federal, state and local approvals, including any applicable approval by the state historic preservation office. Applicant shall provide copies of all review letters, final approved plans, and reports issued by any other governing agencies to the Township.

11. The site plan must show the existing topographical grades in two-foot intervals and conditions of all Participating Property at the time of application.

12. A baseline soil test including Cation Exchange Capacity (CEC) shall be provided to the township prior to any construction.

13. A written description of how the applicant will address dust control during construction. Such plan shall, at a minimum, consist of water applications at least three times per day unless it has rained in the preceding three hours of the planned application.

14. Water Usage and Cleaning. The applicant shall detail the methodology planned for cleaning the wind turbines, frequency, and listing of any and all detergents, surfactants, chemical solutions used for each cleaning, and sources of water used to facilitate turbine restoration and maintenance.

15. Repair Documentation: Applicant must provide a detailed policy and process book for the repair, replacement, and removal of malfunctioning, defective, worn, or noncompliant WECS. Sections of the process book should consider any ordinance requirement or WECS performance deficiency. The process book shall also include a detailed maintenance schedule.

16. Documentation that noise emissions, construction code, tower, and safety requirements have been reviewed by the appropriate third-party professional and the submitted site plan is prepared to show compliance with these issues.

17. A description of the routes to be used by construction and delivery vehicles and of any road improvements that shall be necessary in the Township to accommodate construction vehicles, equipment or other deliveries, and an agreement or bond which guarantees the repair of damage to public roads and other areas caused by construction of the WECS.

18. Access Driveways: GIS location of WECS and Testing Facility access driveways together with details regarding dimensions, composition, and maintenance of the proposed driveways and be filed with the township and recorded at the Livingston County Register

of Deeds as an easement. The site plan shall include traffic routes, time of the year use, staging areas, and any other physical sites related to WECS. Construction of the Access Driveway that serves a WECS or Testing Facility is required to protect the public health, safety, and welfare by offering an adequate means by which governmental agencies may readily access the site in the event of an emergency. All such roads shall be constructed to allow access at all times by any emergency service vehicles, such as fire, police, and repair. Access driveways must meet Fowlerville Township Fire Department regulations and grant permanent access easement to the Township to be recorded at the Livingston County Register of Deeds.

19. All new infrastructure above and below ground related to the project, including transmission line locations.

20. A contact person/address to which any notice of complaint, as defined by this ordinance, may be sent.

21. Building Siting: GIS locations and height of all proposed buildings, structures, electrical lines, towers, guy wires, guy wire anchors, security fencing, and other aboveground structures associated with the WECS.

22. Nearby Building Siting: GIS locations and height of all adjacent buildings, structures, and above ground utilities located within three (3) times minimum set-back distance for Non-Participating Landowners where the proposed WECS and WECS Testing Facility will be located. The location of all existing and proposed overhead and underground electrical transmission or distribution lines shall be shown, whether to be utilized or not with the WECS or Testing Facility, located on the lot or parcel involved.

23. Site Lighting: A lighting plan for each WECS and Testing Facility. Such plan must describe all lighting that will be utilized and documentation that FAA requirements are met. RADAR activated lighting shall be utilized if allowed by FAA. Such a plan shall include but is not limited to, the planned number and location of lights, light color, activation methods, effect on township residents and whether any lights blink. Due to complexity in describing lighting effects for health, welfare, and safety, Applicant shall, if available, provide example locations with product descriptions, where similar, or proposed, lighting solutions are currently deployed. Lighting shall be fully shielded from ground, be FAA compliant, and be of most current design, to minimize lighting blinking and brightness nuisance.

24. Supplemental: Additional detail(s) and information as requested by the Planning Commission.

4. Application Items as Substantive Requirements. The information, plans, documents, and other items identified as application requirements in this ordinance, including the site plan and special land use permit, are substantive requirements for obtaining approval for a Utility-Scale Wind Energy System. The Planning Commission and the Board of Trustees is to review the sufficiency of the application materials. If the Planning Commission and the Board of Trustees determines that the substance of any application item is insufficient to protect the public health, safety, and welfare, the Planning Commission and the Board of Trustees shall deny approval on that basis.

5. System and Location Requirements.

a. Utility-Scale Wind Energy Systems are to be located only in the Wind Energy System Overlay District.

c. Setback: The following setback, measured from the outside edge (the point furthest from the tower as it rotates horizontally) of the blades, not from the tower itself, shall be observed. The minimum setback, from any property line of a Non-Participating Landowner, any road right-of-way, or non-road right of way is 3,000 feet or five times the Tip Height of each turbine in the Utility-Scale WECS. Additionally, each turbine must be located at least 2.5 miles from the nearest lake or body of water. If a single Utility-Scale Wind Energy System is located on more than one lot, or if the adjacent parcel is owned by the same owner as the property on which the Utility-Scale Wind Energy System is located, then the lot line setbacks of this subsection do not apply to the lot lines shared by those lots.

d. The maximum height of a Utility-Scale WECS with the blade fully extended must not exceed 300 feet.

e. The minimum clearance from ground level to the blade at its lowest point must be at least 100 feet.

f. Blade arcs created by a Utility-Scale WECS must have a minimum of 100 feet of clearance over and away from any structure.

g. Each Utility-Scale WECS must be equipped with a braking or equivalent device, capable of stopping the Utility-Scale WECS operation in high winds with or without SCADA control. The braking system must be effective during complete grid power failure when Utility-Scale WECS are unable to communicate with SCADA control or receive power.

h. All turbines must be equipped with technology that automatically de-ices the turbine blades. The system must detect ice and heat the blades, such as through the use of built-in carbon heating mats or through the circulation of hot air.

i. The size of a single property, or a leased unit to be used for a utility-scale WECS shall be sufficient to comply with all setback requirements in this section.

6. Vibrations: Wind turbines shall not create vibrations that are detectable by humans on nonparticipating properties. No WECS shall generate or permit to be generated any vibration in the low-frequency range of 0.1 to 20 Hz, including the 1, 2, 4, 8, and 16 Hertz octave bands that is perceivable by human sensation or exceeds an rms acceleration level of 50 dB(unweighted) re 1 micro-g at any time and for any duration either due to impulsive or periodic excitation of structure or any other mechanism at a non-participating landowner's property line or at any point within a non-participating landowner's property.

7. Shadow Flicker: Zero hours of Shadow Flicker may fall on or in a Non-Participating Parcel or on public roads or highways. Site plan and other documents and drawings shall show mitigation measures to eliminate potential impacts from shadow flicker, as identified in the Shadow Flicker Impact Analysis. Measures to eliminate all effects of shadow flicker on all Non-Participating parcels beginning at the property lines, such as programming the WECS to stop rotating during times when shadow crosses property lines, shall be required.

a. Participating parcels shall not exceed 30 hours of shadow flicker on the ground or an unoccupied structure, or 5 hours of shadow flicker on occupied buildings, per calendar year.

8. Strobe Effect: No amount of Strobe Effect may fall on or in any parcel. Under no circumstances, shall a WECS or Testing Facility produce strobe-effect on properties.

9. Substations and accessory buildings: Structures related to a WECS shall be subject to the dimensional and locational standards of structures in the zoning district. Where structures are visible from adjacent properties, vegetation or manmade screening shall be required to minimize visual impact off-site.

10. Permits. All required local, county, state, and federal permits shall be obtained before the Utility-Scale Wind Energy System begins operating.

11. Appearance. All turbines and towers must be painted a non-obtrusive, neutral color, such as beige, gray, or off-white and must be non-reflective. All turbines bases and blades must be the same color and must be consistent with the color of other Utility-Scale WECS in the Township. No advertisements, graphics, or striping are permitted on the blades or towers. The applicant is encouraged to select anti-icing paint that prevents the formation of ice on the surface of the turbine's blades.

12. Lighting. Lighting of the Utility-Scale Wind Energy System is limited to the minimum light necessary for safe operation. Towers may be lit only to the minimum extent required by the FAA.

13. Security Fencing.

a. Security fencing may be required by the Planning Commission to be installed around all electrical equipment related to the Utility-Scale Wind Energy System, including any transformers. Fencing shall be at least seven feet tall and be composed of woven agricultural wire. Barbed and razor wire is prohibited.

b. A containment system shall surround any transformers in case of hazardous waste or oil spills.

c. Appropriate warning signs shall be posted at safe intervals at the entrance and around the perimeter of the Utility-Scale Wind Energy System.

d. Gate posts and corner posts shall have a concrete foundation.

e. Gates shall be the same height and constructed of the same material as the fencing. Access, such as Knox box, shall be provided for emergency responders.

f. The Township may allow or require a fence design to allow for the passage of wildlife upon a finding that adequate access control and visual screening will be preserved.

g. Security fencing is subject to setback requirements. The security fence shall be locked, and a self-locking device shall be used. Lock boxes and keys (may be electronic such as keypad opener, if the passcode is provided to the Township and central dispatch for 911 service) shall be provided at locked entrances for emergency personnel access. Electric fencing is not permitted. A safety plan shall be in place and updated regularly with the local fire department having jurisdiction over the Utility-Scale Wind Energy System.

14. Noise. All sound measurements are to be instantaneous and shall not be averaged. The noise generated by a Utility-Scale Wind Energy System shall not exceed the following limits:

a. 40 dBA Lmax, as measured at the property line, between the hours of 7:00 a.m. and 9:00 p.m.

b. 35 dBA Lmax, as measured at the property line, between the hours of 9:00 p.m. and 7:00 a.m.

c. The owner/operator of the Utility Scale Wind Energy System shall annually provide for a sound analysis or modeling, conducted by an auditory expert chosen by the Township, at the expense of the applicant.

15. Underground Transmission. All power transmission, communication, or other lines, wires, or conduits from a Utility-Scale Wind Energy System to any building or other structure shall be located underground. Burial depth shall be at a depth that causes no known environmental, land use, or safety issues. Depth shall be a minimum of 6ft below grade, be deeper than drain tile and be in compliance with current National Electrical Code standards, (except for power switchyards or the area within a substation), whichever depth is greater.

16. Road Damage: The Applicant and/or its contractor shall inform the Livingston County Road Commission (LCRC) and the Township of all the roads they propose to use as haul routes to each construction (including repair and decommissioning) site. This shall be done prior to beginning any construction (or decommissioning) at any site. A third-party road inspector will be retained, with mutual approval of the Township, the Applicant, and the LCRC or the Michigan Department of Transportation (MDOT) if a state highway is involved. The road inspector will determine any precautions to be taken (including videotaping and physical inspections) during the process, to determine any damage that may be caused by Applicant's contractor(s), and then determine the appropriate road standards and measures to be taken to repair the damage. The cost of the third-party road inspector and/or any other required third-party assistance, and of all repairs necessitated to restore the roads [and related property which may be damaged by the contractor(s)], shall be the responsibility of the Applicant and/or their contractor, and shall in no case be the responsibility of the Township.

17. Drain Tile Inspections. The Utility-Scale Wind Energy System shall be maintained in working condition at all times while in operation. The owner/operator shall identify and inspect all drain tiles at least once every two years by means of a robotic camera, with the first inspection occurring post construction but before the Utility-Scale Wind Energy System is in operation. The owner/operator shall submit proof of the inspection to the Township. The owner/operator shall repair any damage or failure of the drain tile within 60 days after discovery and submit proof of the repair to the Township. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection.

18. Fire Suppression. The Utility-Scale Wind Energy System shall include a fire suppression system that is specifically designed to immediately suppress and extinguish fires in any part of the Wind Energy System, including the turbines, electrical equipment, and transformers. The owner/operator shall provide documentation establishing the effectiveness of the fire suppression system and the results of a third-party independent inspection of the fire suppression system.

19. Battery Storage. Commercial grid storage batteries or capacitor banks storing or returning supplemental power to the grid are not permitted in the District. Use of Batteries in commercial applications is only permitted as emergency backup for safety lighting and related computer infrastructures.

20. A Utility-Scale WECS must not interfere with any radio, television, or other communication systems. If the Township or the applicant or operator of the Utility-Scale WECS receive a complaint about communication interference, the applicant or operator must resolve the interference immediately and provide proof that the interference has been resolved within 90 days.

21. Stray Voltage Assessments: No stray voltage originating from a Utility Scale Wind Energy System may be detected on any Participating or Non-Participating property. A preconstruction stray voltage test shall be conducted on all Michigan Department of Agriculture & Rural Development (MDARD) registered

livestock facilities located within a one-mile radius of the Participating Properties. The tests shall be performed by an investigator approved by the Township. A report of the tests shall be provided to the owners of all property included in the study area. The applicant/landowner shall seek written permission from the property owners prior to conducting testing on such owners' property. Applicants/landowners shall not be required to perform testing on property where the owners have refused to grant permission to conduct the testing. The owner of any Participating Property included in the list of project parcels shall not refuse the stray voltage testing if they have a MDARD registered livestock facility on the Participating Property.

22. Drainage. Drainage on the site shall be maintained in a manner consistent with, or improved upon, existing natural drainage patterns. Any disturbance to drainage or water management practices shall be managed within the property and on-site in order to not negatively impact surrounding properties as a result of the development. This shall be maintained for the duration of the operation and shall be able to be returned to pre-existing conditions following decommissioning. Any existing drainage tiles that are identified on the property shall be shown on the as-built drawings submitted following construction. Prior to the start of construction, any existing drain tile shall be inspected by robotic camera and the imagery submitted to the Township for baseline documentation on tile condition. Any damage shall be repaired, and a report submitted to the landowner and Township. While the facility is in operation, the owner/operator shall reinspect the drain tiles every **two** years by robotic camera for any damage and shall repair any damage within 60 days of discovery. The owner/operator shall report the inspection, along with any damage and repair, to the Township within 90 days after each **two**-year deadline. The Township reserves the right to have the Building Inspector or other agent present at the time of repair. Wind turbine support structures and/or foundations shall be constructed to preserve any drainage field tile or system.

23. Access Routes. Access drives are subject to the approval of the [Livingston](#) County Road Commission to the extent of the Road Commission's jurisdiction. All access drives and roads within the site shall be adequately maintained for emergency vehicle use, including winter maintenance.

24. The owner/operator shall submit an As Built Drawing with dimensions relative to property lines of all new structures including turbines and buried cable both inside and outside fenced areas upon completion and before any power is supplied to the grid. The As Built Drawing shall be a scale of **1inch** =200 feet.

25. Signs. Signs are permitted but shall comply with Article 22. The lot shall include at least one sign identifying the owner and providing a 24-hour emergency contact telephone number.

26. Emergency Action Plan and Training. Before the Utility Wind Energy System is operational, the owner/operator shall provide the necessary training, equipment, or agreements specified in the application to Township or other emergency personnel.

27. Decommissioning and/or Abandonment.

a. If a Utility-Scale Wind Energy System is abandoned or otherwise non-operational for a period of six months, the owner/operator shall notify the Township and shall remove the system within six months after the date of abandonment. Removal requires receipt of a demolition permit and full restoration of the site in accordance with the provisions of this Ordinance and to the satisfaction of the Zoning Administrator. The site shall be filled and covered with topsoil and restored to a state compatible with the surrounding vegetation. The requirements of this subsection also apply to a Utility-Scale Wind Energy System that is never fully completed or operational if construction has been halted for a period six months.

b. The decommissioning plan shall be written to provide security to the Township for 125% of the cost to remove and dispose of all turbines, removal of all wiring, footings, and pilings, (regardless of depth), and restoration of the land to its original condition. The value of decommissioning shall be determined by a third-party financial consultant or engineer selected by the Township and paid for by the developer. The value shall not include the salvage values. The decommissioning security shall be paid in cash to the Township. Once the value of decommissioning is determined, it shall be updated on a periodic basis of not less than every 2 years and additional security shall be required based on the average inflation rate of the preceding 2 years.

The amount of each WECS security guarantee shall be the average of at least two independent demolition (removal) quotes obtained by the applicant and provided to the Township. The security guarantee shall be whichever of the following is larger: \$1,000,000 OR 150% of the cost for the removal of the first turbine, plus 120% of the removal cost for the second turbine, plus 100% of the removal cost for each additional WECS thereafter. Quotes shall be based on individual WECS removal and shall not group multiple WECS simultaneous removals together. Quotes shall be ordered and obtained by the Township from established demolition companies. Quotes shall not include salvage values. The security guarantee shall be updated every two (2) years at the rate of 1.5 times CPI (consumer price index) for each year.

c. All abandonment and decommissioning work shall be done when soil is dry.

d. The ground shall be restored to its original topography within three hundred sixty-five (365) days of abandonment or decommissioning. An extension may be granted if a good faith effort has been demonstrated and any delay is not the result of actions or inaction of the owner/operator.

e. If land balancing is required, all topsoil will be saved and spread evenly over balanced area according to the existing topography map provided at the time of application.

f. An annual report shall be provided to the Zoning Administrator showing continuity of operation and shall notify the Zoning Administrator if the use is to cease, prior to decommissioning, or abandonment.

g. Continuing Obligations: Failure to keep any required financial security in full force and effect at all times while a Utility Wind Energy System exists or is in place shall constitute a material and significant violation of the Special Land Use Permit, and this Ordinance, and will subject the Utility Wind Energy System owner/operator (jointly and severally, if more there is more than one owner or operator) to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use Permit.

h. The Township shall have the right to seek injunctive relief to effect or complete decommissioning, as well as the right to seek reimbursement from the owner/operator or landowner for decommissioning costs in excess of the amount deposited in escrow and to file a lien against any real property owned by the owner/operator or landowner for the amount of the excess, and to take all steps allowed by law to enforce said lien.

i. At the time of decommissioning, the Planning Commission may allow deviations from the above decommissioning requirements following notice and a public hearing in accordance with Section 103 of the Zoning Enabling Act.

28. Complaint Resolution. Utility Wind Energy Systems shall provide a complaint resolution process, as described below:

a. The site shall have signs posted with contact information to collect complaints related to the Utility Wind Energy System.

b. A log shall be kept by the owner/operator of all complaints received and shall be available to Township officials for review at the Township's request.

c. The owner/operator shall respond to complainants within ten (10) business days and shall provide notification to the Zoning Administrator.

d. Any resolution shall include lawful and reasonable solutions consistent with the Zoning Ordinance, which shall also be provided to the Zoning Administrator. If the mitigation plan is determined to be satisfactory, the Special Use owner and operator must implement the mitigation within 30 days.

e. If the WECS owner and operator fails to implement the mitigation plan, the Zoning Administrator shall hold a public hearing at the Planning Commission for the purpose of discussing a revocation of the Special Land Use Permit. The Special Use owner and operator shall be notified of the hearing. If the Special Use owner and operator implements the mitigation plan prior to the hearing date, the hearing shall be cancelled.

f. If the WECS owner and operator requests that the Zoning Board of Appeals review the matter, the Zoning Board of Appeals shall hold a public hearing and shall hear evidence from both the complainant, and the WECS owner and operator. Following the public hearing, the Zoning Board of Appeals shall make one of the following determinations:

1) The Special Use is in compliance with the Ordinance and all Conditions of Approval, and no further action is needed.

2) The Special Use is out of compliance with either the Ordinance, or the Conditions of Approval, or both, and the Special Use owner and operator must submit a mitigation plan to the Zoning Administrator within 60 days. If no mitigation plan is submitted, the Zoning Administrator shall notice a public hearing of the Planning Commission for the purpose of revoking the Special Use Permit. If the Special Use permit is revoked, the abandonment process shall begin.

g. The owner/operator or its assigns reserve the right to adjudicate any claims made against it, including residential claims, in a court of competent jurisdiction. An annual report shall be submitted to the Zoning Administrator and the Township Board that details all complaints received, the status of complaint resolution, and actions taken to mitigate complaints.

29. Required Escrow Account. The owner and operator of the WECS shall be required as a condition of the operation to fund an escrow account for investigation of complaints for but not limited to, noise, glare, maintenance, shadow flicker, strobe effect, vibrations, ice throws, lighting, stray voltage, signal interference, and drainage, in the amount of \$15,000 to be used at the discretion of the Township Board to pay for third-party investigative services. Such funds shall be deposited with the Township Treasurer, or with a third-party fiduciary, at the discretion of the Township. When the escrow account balance is below \$5,000 the Township shall notify the Applicant and the Applicant shall replenish the account in the amount of \$15,000 within 45 days.

30. Maintenance and Repair

a. Each Utility-Scale Wind Energy System shall be kept and maintained in good repair and condition at all times and the site shall be neat, clean, and free of refuse, waste, or unsightly, hazardous, or unsanitary conditions. All wind turbines damaged beyond repair or use shall be replaced and removed from the project site within seven (7) days and shall be disposed of off-site in accordance with any state or federal requirements.

b. If the Township Board or Zoning Administrator determines that a Utility Scale Wind Energy System fails to meet the requirements of this Ordinance or the Special Land Use Permit, the Zoning Administrator or Township Board shall provide notice to the owner/operator of the non-compliance, and the owner/operator has 14 days to cure the violation. If the violation is a safety hazard as determined by the Zoning Administrator or Township Board, then the owner and/or operator has 7 days to cure the violation. If the owner and/or operator has not remedied non-compliance issues in the aforementioned time periods, the owner/operator shall immediately shut down the Utility Scale Wind Energy System and shall not operate, start or restart the Utility Scale Wind Energy System until the issues have been resolved. If the owner/operator fails to bring the operation into compliance, the Township may seek relief at law or equity to abate the nuisance and may also issue a municipal civil infraction citation. Each violation for which the owner/operator are deemed responsible shall result in a \$500.00 fine.

c. The owner/operator shall keep a maintenance log on the wind turbine(s), which shall be available for the Township's review within 48 hours of such request.

d. General Maintenance Bond. At the time of the Special Land Use application, the owner/operator shall submit two (2) third-party contractor bids for construction of all fencing, landscaping, and drainage improvements associated with the utility scale wind energy system. A performance bond in the amount of 125% of the higher bid shall be provided to the Township to ensure completion. The Township may use the bond to complete or repair any landscaping, fencing, or drainage infrastructure (including drain tiles).

31. Extraordinary Events. If the Utility-Scale Wind Energy System experiences a failure, fire, leakage of hazardous materials, personal injury, or other extraordinary or catastrophic event, the owner/operator shall notify the Township within 8 hours.

32. Annual Report. The owner/operator shall submit a report on or before January 1 of each year that includes all of the following:

- a. Amount of electric generation;
- b. Current proof of insurance with the township and Participating Property owner(s) shown as named insured;
- c. Verification of financial security; and
- d. A summary of all complaints, complaint resolutions, and extraordinary events.

Additionally, a representative of the owner/operator shall appear before the Planning Commission annually to report on the Utility-Scale Wind Energy System and address questions or concerns from the Planning Commission.

33. Inspections. The Township may inspect a Utility-Scale Wind Energy System at any time by providing 24 hours advance notice to the owner/operator.

34. Transferability. A special use permit for a Utility-Scale Wind Energy System is transferable to a new owner. The new owner shall register its name, Federal Employer Identification Number, and business address 30 days prior to the transfer date with the Township and shall comply with this Ordinance and all approvals and conditions issued by the Township.

a. In the event of a sale or transfer of ownership and/or operation of the wind facility, the original security bond or escrow shall be maintained throughout the entirety of the process and shall not be altered. The estimated costs of decommissioning shall be resubmitted, and the security bond adjusted to account for the new estimate.

b. Any proposed changes to the operating procedure or approved site plan shall be amended and resubmitted for Township review according to the procedures for all WECS as outlined herein, including a public hearing.

35. Major and Minor Site Plan Amendments and Requests for Variance.

a. Major site plan amendments and requests for variance, shall require a public hearing at the Planning Commission and approval by the Board of Trustees for the purpose of discussing a revocation of the Special Land Use Permit. Major site plan amendments include those listed in Section _____ and any of the following:

1. Changes of the location of turbines, fencing, buildings, or ancillary equipment by 10 feet or more.

2. Any increase in the height of wind turbines.

3. Any variance request.

b. Minor site plan amendments include those listed in section _____ and any of the following:

1. Changes of the location of turbines, fencing, buildings, or ancillary equipment by less than 10 feet.

36. Remedies. If an owner/operator fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, shall revoke the special land use permit and site plan approval after giving the owner/operator notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

Section 5. Validity and Severability.

If any portion of this Ordinance is found invalid for any reason, such holding will not affect the validity of the remaining portions of this Ordinance.

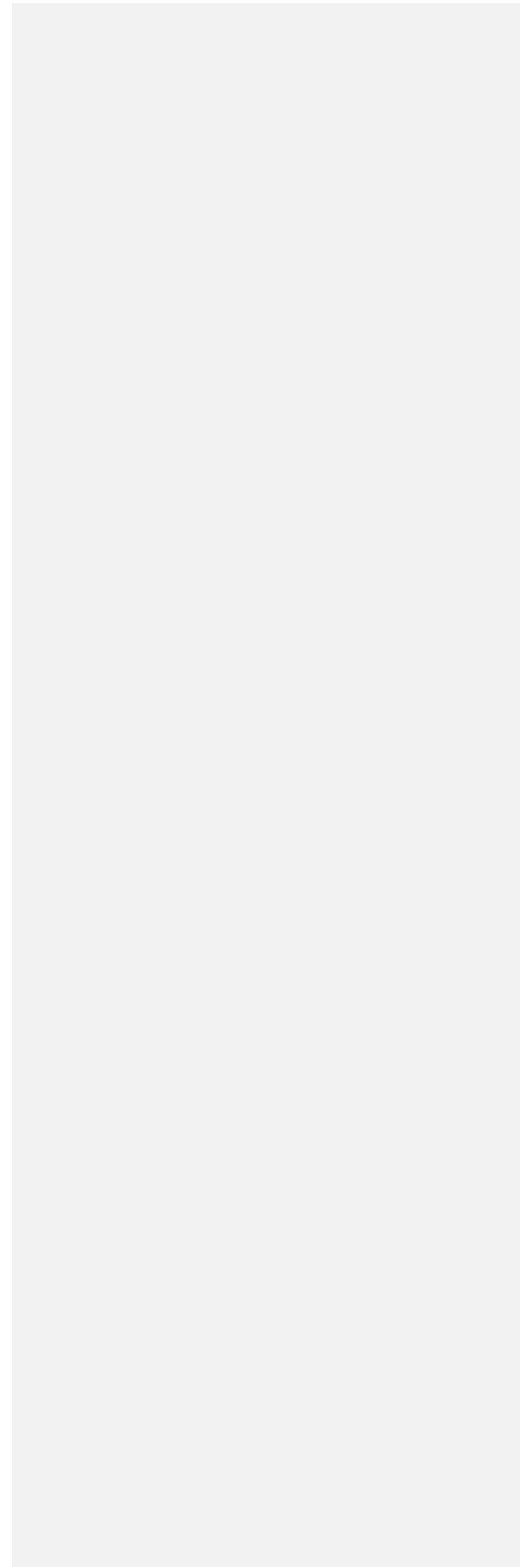
Section 6. Repealer.

All other ordinances inconsistent with the provisions of this Ordinance are hereby repealed to the extent necessary to give this Ordinance full force and effect.

Section 7. Effective Date. This Ordinance takes effect seven days after publication as provided by law.

MAP A
OVERLAY DISTRICT BOUNDARIES

99999:LDICKINS:7162985-1





Livingston County Department of Planning

July 20, 2023

Conway Township Board of Trustees
c/o Elizabeth Whitt, Clerk
8015 N. Fowlerville Road
P.O. Box 1157
Fowlerville Michigan 48836

Scott Barb
AICP, PEM
Director

Robert A. Stanford
AICP
Principal Planner

Martha Haglund
Principal Planner

Re: Livingston County Planning Commission Review of Zoning Ordinance Amendments:

Z-24-23: Text Amendment, Amendments to Zoning Ordinance Articles-Variou Articles: Solar Energy System Overlay District

Dear Board Members:

The Livingston County Planning Commission met on Wednesday, July 19, 2023, and reviewed the proposed Zoning Ordinance amendments referenced above. The Livingston County Planning Commissioners made the following recommendations:

Z-24-23: Take No Action, Encourage Further Review.

There are a few key elements as highlighted in the review that have remaining questions and clarifications which should be addressed before any final approval is given by the township. In addition, it is recommended that the township carefully consider all Staff comments noted throughout the review before proceeding with any final approval of the proposed amendments by the township as well.

Copies of the staff review and draft Livingston County Planning Commission meeting minutes are enclosed. Do not hesitate to contact our office should you have any questions regarding this county action.

Sincerely

Department Information

Administration Building
304 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

(517) 546-7555
Fax (517) 552-2347

Robert Stanford
Principal Planner

Enclosures

c: Meghan Swain-Kuch: Chair, Conway Township Planning Commission
Gary Klein, Zoning Administrator

Meeting minutes and agendas are available:
<https://www.livgov.com/plan/econdev/Pages/meetings.aspx>

Web Site
<https://milivcounty.gov/planning/>



Livingston County Department of Planning

LIVINGSTON COUNTY PLANNING COMMISSION MEETING

Wednesday, July 19, 2023 – 6:30 p.m.

Administration Building, Board of Commissioners Chambers

304 East Grand River, Howell, MI 48843

Please note that this is a hybrid meeting with County Planning Commissioners and staff meeting in-person. Audience participants are welcome to attend in-person or via Zoom by using the meeting link at the bottom of the agenda.

Scott Barb
AICP, PEM
Director

Robert A. Stanford
AICP
Principal Planner

Martha Haglund
Principal Planner

Agenda

1. Call to Order
2. Pledge of Allegiance to the Flag
3. Roll and Introduction of Guests
4. Approval of Agenda – July 19, 2023
5. Approval of Meeting Minutes – June 21, 2023
6. Call to the Public
7. Zoning Reviews
 - A. Z-24-23: Conway Township Text Amendment – Article 19 Solar Energy Systems Overlay District
 - B. Z-25-23: Handy Township Conditional Rezoning, Section 16 – Agricultural Residential to Neighborhood Service Commercial
8. Old Business
9. New Business
 - A. LCPC Visits to Local Planning Commissions:
10. Reports:
11. Call to the Public
12. Adjournment

Department Information

Administration Building
04 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

(517) 546-7555
Fax (517) 552-2347

Web Site

<https://milivcounty.gov/planning/>

Via Zoom (on-line meetings):

<https://zoom.us/j/3997000062?pwd=SUdLYVFFcmozWnFxbm0vcHRjWkVIZz09>

Via the Zoom app

Join a meeting, with meeting number: 399 700 0062

Enter the password: LCBOC (ensure there are no spaces before or after the password)

Meeting ID: 399 700 0062

Password: 886752

Meeting recordings may be made using a personal computer or laptop, after requesting ability

DRAFT
LIVINGSTON COUNTY PLANNING
COMMISSION MEETING MINUTES

July 19, 2023

6:30 p.m.

Hybrid In-Person and Virtual Zoom Meeting

Zoom Virtual Meeting Room Meeting ID: 399-700-0062 / Password: LCBOC
<https://zoom.us/j/3997000062?pwd=SUdLYVFFcmozWnFxbm0vcHRjWkVIZz09>

PLANNING COMMISSION			
COMMISSIONERS PRESENT:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> BILL ANDERSON MATT IKLE DENNIS BOWDOIN MARGARET BURKHOLDER </td> <td style="width: 50%; border: none;"> PAUL FUNK BILL CALL </td> </tr> </table>	BILL ANDERSON MATT IKLE DENNIS BOWDOIN MARGARET BURKHOLDER	PAUL FUNK BILL CALL
BILL ANDERSON MATT IKLE DENNIS BOWDOIN MARGARET BURKHOLDER	PAUL FUNK BILL CALL		
COMMISSIONERS ABSENT:	JASON SCHROCK		
STAFF PRESENT:	SCOTT BARB ROB STANFORD MARTHA HAGLUND		
OTHERS PRESENT:	BRUCE POWELSON, SARA PORTER, JOE RAICA, JENNIFER RAICA, STEVE SMITH, KEN CARMACK, STEVE WEISS, CLINT BEACH ZOOM ONLINE: VICTORIA, KR, RP, SHAWN		

1. **CALL TO ORDER:** Meeting was called to order by Planning Commissioner Anderson at 6:30 PM.
2. **PLEDGE OF ALLEGIANCE TO THE FLAG**
3. **ROLL AND INTRODUCTION OF GUESTS:** None.
4. **APPROVAL OF AGENDA**

Commissioner Action: IT WAS MOVED BY COMMISSIONER IKLE TO APPROVE THE AGENDA, DATED JULY 19, 2023, SECONDED BY COMMISSIONER CALL.

All in favor, motion passed 6-0.

5. **APPROVAL OF PLANNING COMMISSION MEETING MINUTES**

Commissioner Action: IT WAS MOVED BY COMMISSIONER FUNK TO APPROVE THE MINUTES, DATED JUNE 21, 2023, SECONDED BY COMMISSIONER BOWDOIN.

All in favor, motion passed 6-0.

6. **CALL TO THE PUBLIC:** None.

7. ZONING REVIEWS:

A. Z-24-23: CONWAY TOWNSHIP, AMENDMENTS TO ZONING ORDINANCE ARTICLES- VARIOUS ARTICLES: SOLAR ENERGY SYSTEM OVERLAY DISTRICT.

The Conway Township Planning Commission proposes to amend various articles in the Township Zoning Ordinance to regulate Solar Energy Systems. Principal Planner Stanford reviewed his report with key findings throughout the text including but not limited to:

- Overlay District of 136 acres: Location, proximity to transmission lines, owner notification
- Written description of the fire suppression system that will be installed as well as any specialized equipment necessary for emergency response.
- Submit Safety measures and user manual information to Emergency Management Director as well as the County Environmental Health Department Director for compliance, permanent filing, and reference.
- Be specific describing the qualifications for 'qualified individuals' completing all Impact Assessments.
- Develop a Special Land Use Documentation for Permit Transfer to run with the land.

Township Recommendation: Approval. The Conway Township Planning Commission recommended Approval of this set of zoning amendments at its June 12, 2023 meeting. There were public comments both for and against different aspects of the proposed ordinance language noted in the minutes.

Staff Recommendation: Approval with Conditions. The proposed amendments appear to be reasonable and appropriate. There are a few key elements as highlighted in the review that have remaining questions and clarifications which should be addressed before any final approval is given by the township. In addition, Staff would highly recommend that the township carefully consider all Staff comments noted throughout the review before proceeding with any final approval of the proposed amendments by the township as well.

Commission Discussion: Commissioner Call inquired about building permits by county or zoning administrator and how will the Township confirm abandonment. Commissioner Call also inquired about who will pay for the training for the emergency responders and if Township permits are required for solar developments. Commissioner Bowdoin stated that the Township Planning Commission and citizens have been supportive to create a cohesive ordinance for the community. Commissioner Bowdoin believes that the builder should be responsible for the emergency training of personnel. Commissioner Bowdoin asked if the proposed ordinance is too exclusionary with regards to the size of the proposed overlay district. Commissioner Ikle stated that the Township should be asking for an additional endorsement for the development and who asked for \$25 million for insurance. Commissioner Ikle also asked about the security bond and how it would not come with a new entity. The Township should also have the ability to deny an owner based on track record and other background information per attorney review. There are also no definitions on financial security and should be included in the ordinance. Commissioner Funk believes there is still lots of items that need to be reviewed. Commissioner Funk also stated concerns over roads and impacts upon infrastructure due to solar developments. There also needs to be some detail regarding conceptual plans and what is the minimum requirements. Commissioner Ikle suggested townships use a planner for development of ordinances.

Public Comment: Steve Smith, Conway Township, asked about inverters and the setback requirements. Brian Williams, Conway Township, suggested that solar developers are not truthful regarding their reasons for developments in certain areas. Sara Porter, Conway Township, wants additional studies for proposed developments and wants it included in the ordinance. Mike Brown, Conway Township, explained that the \$25 million requested by Township includes abandonment and decommissioning costs; would like comments included in county review to the township. Steve Weiss, Conway Township, stated that the township planner and attorney led them down the wrong path regarding their development of the solar ordinances.

Commission Action:

Commissioner Action: IT WAS MOVED BY COMMISSIONER BOWDOIN TO RECOMMEND NO ACTION, ENCOURAGE FURTHER REVIEW SECONDED BY COMMISSIONER FUNK.

Motion passed: 5-1 (Ikle-Nay)

B. Z-25-23: HANDY TOWNSHIP: CONDITIONAL REZONING. AGRICULTURAL RESIDENTIAL (AR) TO NEIGHBORHOOD SERVICE COMMERCIAL (NSC), IN SECTION 16.

Current Zoning: Agricultural Residential (AR)

Proposed Zoning: Neighborhood Service Commercial (NSC)

Section: 16

Township Master Plan: The Handy Township Future Land Use Map (2018) designates the subject parcel as Industrial. The Township Master Plan states the following regarding the Industrial future land use classification:

The industrial land use category includes both Prime (I-1) and General (I-2) industrial activities. The zoning district is intended to accommodate primarily light industrial activities that pose minimal environmental impacts upon surrounding areas and uses. It is intended to implement the industrial land use category.

The applicant is requesting a conditional rezoning to NSC which is a category intended for local shopping, convenience, and personal/professional services, and are intended to meet the day to day needs of residents. It should be noted that mini-warehouses and self-storage units may be permitted in the industrial or neighborhood service commercial districts subject to any standards outlined in the Township Ordinance, but open-air businesses are only allowed in the NSC District. The conditional rezoning incorporates an open-air business, sales, and commercial storage and forms the basis for the requested zoning change to NSC. While NSC zoning meets the applicant's needs, we believe deviating from the Future Land Use Map invites unnecessary conflicts for the Township. The Township Master plan specifically has an NSC overlay along Grand River Avenue for the purpose of expanding permitted and special uses in this category within the Township.

Township Planning Commission Recommendation: Approval. The proposed conditional rezoning was approved at the June 23, 2023, township public hearing. Minor comments from the public included concerns over potential traffic, wetlands, and noise.

Staff Recommendation: Approval. We are recommending approval of the proposed conditional rezoning from AR (Agricultural Residential) to NSC (Neighborhood Service Commercial). Staff would note that while the proposed rezoning offers a buffer between industrial and residential uses, the conditional rezoning does deviate from the Handy Township Master Plan and Future Land Use Map.

Commission Discussion: Commissioner Call noted that the rezoning deviating from the Township Master Plan and had a question about spot zoning. Bowdoin thought the applicant should work to get it approved under the planned Industrial zoning district. Commissioner Funk concurred with Commissioners Call and Bowdoin.

Public Comment: Melissa Selgado, Handy Township, reiterated the property is zoned agricultural and should remain and is opposed to the rezoning. The applicant, Jennifer Raica, Handy Township, spoke about her application for conditional rezoning and briefed the planning commission on the development.

C. Commission Action:

Commissioner Action: IT WAS MOVED BY COMMISSIONER BURKHOLDER TO RECOMMEND APPROVAL, NO SECOND. MOTION FAILS.

COMMISSISONER IKLE MOVED TO RECOMMEND DISAPPROVAL, SECONDED BY BOWDOIN.

Motion passed: 4-2 (Call, Burkholder – Nay)

8. OLD BUSINESS: None.

9. NEW BUSINESS:

- a. LCPC Visits to Local Planning Commissions: Martha Haglund briefed the planning commission on the Genoa Township Planning Commission meeting.

10. REPORTS: None.

11. CALL TO THE PUBLIC: Mike Brown, Conway Township, spoke again regarding solar developments.

12. ADJOURNMENT:

Commissioner Action: IT WAS MOVED BY COMMISSIONER CALL TO ADJOURN THE MEETING AT 8:12 P.M., SECONDED BY COMMISSIONER IKLE.

Motion passed: 6-0



Livingston County Department of Planning

MEMORANDUM

TO: Livingston County Planning Commissioners and the
Conway Township Board of Trustees

FROM: Robert Stanford, Principal Planner

DATE: June 28, 2023

SUBJECT: Z-24-23 Amendments to Zoning Ordinance Articles -
Various Articles: Solar Energy System Overlay District

Scott Barb
AICP, PEM
Director

Robert A. Stanford
AICP
Principal Planner

Martha Haglund
Principal Planner

The Conway Township Planning Commission proposes to amend various articles in the Township Zoning Ordinance in order to regulate Solar Energy Systems.

The elements of the amendments which are newly proposed are noted in [this manner](#). Current zoning ordinance text not being revised is noted in *this manner*. Staff comments are noted in [this manner](#).

For this review, Staff evaluated and assessed the level of satisfactory and appropriate completeness and comprehensiveness of this proposed set of ordinance amendments based on the utilization and combination of the following sources:

1. Best-practice elements for large-scale/utility-scale solar energy systems as provided in the guidebook developed by Michigan State University Extension and the University of Michigan Graham Sustainability Institute entitled: "Planning & Zoning for Solar Energy Systems: A guide for Michigan Local Governments" (specifically pp. 31-39).
2. Best-practice elements garnered by Staff via County Planning review reports, and subsequent reviews and recommendations provided by the Livingston County Planning Commission, from recent, previously proposed, solar energy system ordinances sent in for these purposes from other local Livingston County communities.

Department Information

Administration Building
304 E. Grand River Avenue
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Howell, MI 48843-2323

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Web Site
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ITEM 1. ADOPTION OF NEW ARTICLE 19, SOLAR ENERGY SYSTEM OVERLAY DISTRICT

The Township proposes to add an entirely new Article 19 entitled "Solar Energy System Overlay District," to the Township Zoning Ordinance. The new Article 19 reads as follows:

Section 19.01 Purpose and Findings

A. **Purpose.** The Solar Energy System Overlay District (the "District") is intended to provide suitable locations for utility-scale solar energy systems that are otherwise authorized under state law and the Township's Code of Ordinances and Zoning Ordinance to meet a reasonable demonstrated need for this land use in the Township. It is the intent of the Township to permit these systems to the extent a demonstrated need exists for the land use by regulating the siting, design, construction, operation, monitoring, modification, and



removal of such systems to protect the public health, safety, and welfare, and to ensure compatibility of land uses in the vicinity of solar energy systems. The Township seeks to preserve its rural character and agricultural heritage. To these ends, the lands included in this District are within reasonable proximity to existing electric power transmission infrastructure.

B. Findings. In establishing this overlay district, the Township of Conway finds as follows:

1. It is necessary and reasonable to permit utility-scale solar energy systems in the Township to the extent that there is a demonstrated need for that land use.
2. Land use for utility-scale solar energy systems beyond a reasonable and legitimate demonstrated need to provide for the Township's energy needs would have needless adverse effects on surrounding businesses and residences, and be detrimental to the health, safety, welfare, and prosperity of the Township and its residents.
3. The Township wishes to preserve its existing topography and rural character, maintain property values, and protect and preserve the quality and pace of rural life of its residents while preserving the environment and protecting wildlife.
4. Solar Energy Systems can adversely impact the health, safety, welfare, and prosperity of that community, including existing property values, especially when in proximity to farms, forests, and residential properties.
5. Solar Energy Systems shall be carefully managed to reduce the adverse long-term effects such land use can have on the productivity of farmland. *See* University of Michigan Graham Sustainability Institute & Michigan State University Extension, "Planning & Zoning for Solar Energy Systems."
6. Several Michigan communities have suffered, or are suffering, from fiscal uncertainty due to litigation and rule changes concerning taxation arising from rural renewable energy production.
7. Conway Township contributes significant storm water runoff into adjacent municipalities because of relative elevations, and therefore the Township values low-impact development to better manage its stormwater runoff.
8. Impervious surfaces such as solar panels channel stormwater runoff, and support posts and trenching are likely to damage drain tiles. Thus, Utility Scale Solar Energy Systems must be carefully sited, designed, and limited in scope.
9. The Township adopts these land use regulations to balance any demonstrated need for utility-scale solar energy systems in the Township with the public, health, and safety impacts identified above.

Section 19.02 Delineation of the Solar Energy System Overlay District

A. The Solar Energy System Overlay District overlays existing zoning districts delineated on the official Conway Township Zoning Map. The boundaries of the Solar Energy System Overlay District are depicted on Map A, incorporated herein by reference, and are generally described as follows:

An area of land consisting of approximately 136 acres, comprised of the following:

1. That portion of Parcel No. 01-12-100-003 located south of the Conway Cohoctah Union Drain as depicted on Map A;
2. That portion of Parcel No. 01-11-200-002 located south and east of the Conway Cohoctah Union Drain; and
3. A northerly portion of Parcel No. 01-11-400-02, as depicted on Map A, the southern boundary of which is located 1,750 feet north of the Section 11/Section 14 line.



STAFF COMMENTS: For the sake of consistency, Item 19.02(A)(1) above should include an “; and” after the sentence and additionally, Item 19.02(A)(2) should include the phrase: “as depicted on Map A”. Also, have the Vangilder’s been notified by the township of this proposed solar overlay district boundary associated with their properties?

MAP A: OVERLAY DISTRICT BOUNDARIES



STAFF COMMENT:

Parcel Information

Parcel 01-11-200-002 = Overall Size: 154.54 Acres
 Owner: Vangilder Properties LLC

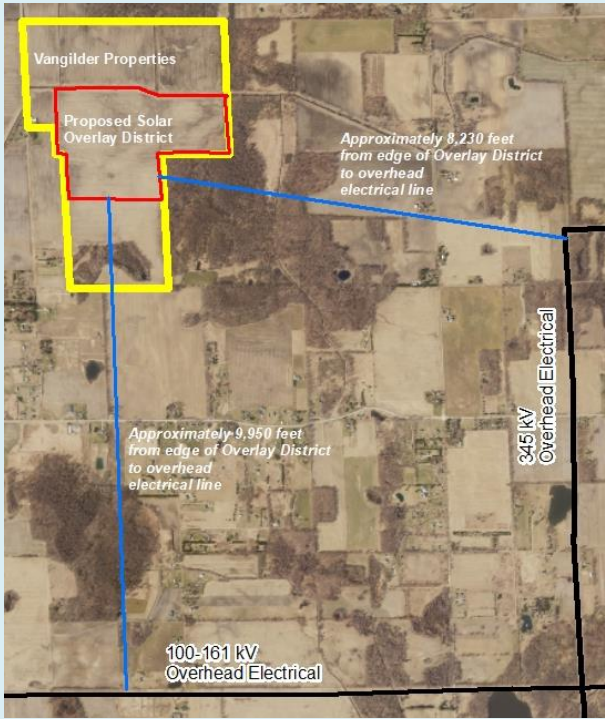
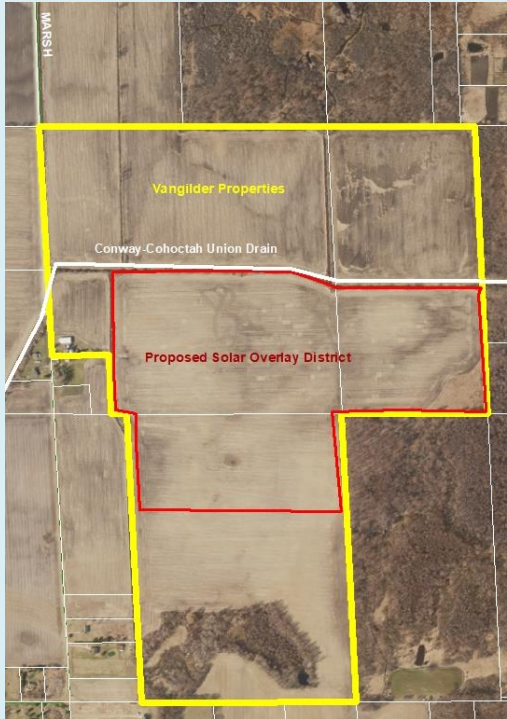
Parcel 01-11-400-002 = Overall Size: 120.62 Acres
 Owner: Vangilder Properties LLC

Parcel 01-12-100-003 = Overall Size 82.05 Acres
 Owner: Vangilder Properties LLC

Total Acreage: 357.21 Acres

Source: Livingston County GIS Department

As shown in the maps below, the proposed solar overlay district is located approximately 9,950 feet (1.88 miles) from the 100-161 kV electric line that bisects the township in an east-west direction, and approximately 8,230 feet (1.55 miles) from the 345kV electric line that bisects the township in a north-south direction. This line would most likely be the anticipated tap in location for the solar site.





Section 19.03. Permitted Uses.

There are no uses permitted by right in the Solar Energy System Overlay District, other than uses permitted by right in the underlying zoning districts.

Section 19.04. Special Land Uses.

The following uses are permitted following approval by the Planning Commission as a Special Land Use in the Solar Energy System Overlay District as regulated by Article 13 (special land uses) and Article 14 (site plan review).

Utility-Scale Solar Energy Systems

STAFF COMMENT: As proposed, the township has identified only a three parcel, 136-acre overlay district for future large/utility scale solar energy system/facility development within the township. As such, does this mean that no other proposed solar energy system facility will be considered unless it is located solely within this district? If so and to clarify, does that also mean that, for example, a township resident with a large-acre parcel, also in close proximity to the existing overhead electrical line, would not legally be allowed to pursue a large/utility scale solar energy facility development on their property as well? Are there plans for any additional areas that could be identified in the future as potential large/utility scale solar energy overlay districts?

ITEM 2. AMENDMENT OF SECTION 6.01 OF THE ZONING ORDINANCE

Section 6.01 of the Zoning Ordinance, entitled “Establishment of Districts,” is amended to read as follows:

Section 6.01 Establishment of Districts

For the purpose of the ordinance, Conway Township is hereby divided into the following zoning districts:

<i>Zoning District</i>		<i>Article</i>
<i>AR</i>	<i>Agricultural Residential District</i>	<i>7</i>
<i>R</i>	<i>Residential District</i>	<i>8</i>
<i>MHP</i>	<i>Manufactured Housing Park District</i>	<i>9</i>
<i>C</i>	<i>Commercial District</i>	<i>10</i>
<i>I</i>	<i>Industrial District</i>	<i>11</i>

For purposes of innovative and flexible development, Conway Township has established the following overlay districts: ~~applicable to the AR Agricultural Residential District and the R Residential District:~~

<i>Overlay District</i>		<i>Article</i>
<i>OS</i>	<i>Open Space Community</i>	<i>12</i>
SES	Solar Energy System	19



ITEM 3. ADDITION OF DEFINITIONS TO ARTICLE 2 OF THE TOWNSHIP ZONING ORDINANCE

The following definitions are added to Article 2 of the Township Zoning Ordinance, consistent with the existing ordering of definitions in that section:

- A. Building Integrated Photovoltaics (BIVPs): A small, private Solar Energy System that is integrated into the structure of a building, such as solar roof tiles and solar shingles.
- B. Ground Mounted Solar Energy System: A Private or Utility-Scale Solar Energy System that is not attached to or mounted to any roof or exterior wall of any principal or accessory building.
- C. Maximum Tilt: The maximum angle of a solar array (i.e., most vertical position) for capturing solar radiation as compared to the horizon line.
- D. Minimum Tilt: The minimal angle of a solar array (i.e., most horizontal position) for capturing solar radiation as compared to the horizon line.
- E. Private Solar Energy System: A Solar Energy System used exclusively for private purposes and not used for any commercial resale of any energy, except for the sale of surplus electrical energy back to the electrical grid.
- F. Roof or Building Mounted Solar Energy System: A Private Solar Energy System attached to or mounted on any roof or exterior wall of any principal or accessory building, but excluding BIVPs.
- G. Solar Energy System: Any part of a system that collects or stores solar radiation or energy for the purpose of transforming it into any other form of usable energy, including the collection and transfer of heat created by solar energy to any other medium by any means.
- H. Utility-Scale Solar Energy System: A Solar Energy System in which the principal design, purpose, or use is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.
- I. Non-Participating Property: A property that is not subject to a Utility Scale Solar Energy System lease or easement agreement at the time an application is submitted for a Special Land Use for the purposes of constructing a Utility Scale Solar Energy System.
- J. Participating Property: A property that participates in a lease or easement agreement, or other contractual agreement, with or that is owned by an entity submitting a Special Land Use Permit application for the purpose of developing a Utility Scale Solar Energy System.
- K. Owner/Operator: A person or entity that owns or operates a Utility Scale Solar Energy System. "Owner/operator," even when used in the singular, may refer to more than one person or entity if there are multiple owners or operators, or the Utility Scale Solar Energy System is owned and operated by different entities. "Owner/operator" includes any successor to the original owner/operator. "Owner/operator" may or may not be the same as the applicant.
-



ITEM 4. Repeal of Existing Section 6.26; Addition of New Section 6.26, entitled “Solar Energy Systems”

The current Section 6.26, entitled “Solar Energy Collectors,” is repealed in its entirety. New Section 6.26, entitled “Solar Energy Systems,” is added to the Township’s Zoning Ordinance and reads as follows:

Section 6.26. Solar Energy Systems.

A. General Provisions. All Solar Energy Systems are subject to the following requirements:

1. All Solar Energy Systems shall conform to the provisions of this Ordinance and all county, state, and federal regulations and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI), Underwriter Laboratory (UL), National Electrical Code (NEC), National Fire Protection Association (NFPA), and the most current Michigan Uniform Building Code adopted by the enforcing agencies.
2. If an applicant, operator, or landowner of a Solar Energy System fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke any approvals after giving the applicant notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township’s actual attorney fees and costs.

STAFF COMMENTS: This is an excellent manner in which to begin this ordinance. This is probably the most important aspect to consider of this entire land use issue, so highlighting this requirement right from the start eliminates any questionable processes or practices by any party related in the matter going forward.

B. Private Solar Energy Systems.

1. Administrative Review. Except as provided in subsection (d) below, all Private Solar Energy Systems require administrative approval as follows:
 - a. Application to Zoning Administrator. An applicant who seeks to install a Private Solar Energy System shall submit an application to the Zoning Administrator on a form approved by the Township Board.
 - b. Application Requirements. The application shall include:
 1. A site plan depicting setbacks, panel size, and the location of property lines, buildings, fences, greenbelts, and road right of ways. The site plan shall be drawn to scale.
 2. Photographs of the property’s existing condition.
 3. Renderings or catalogue cuts of the proposed solar energy equipment.
 4. A certificate of compliance demonstrating that the system has been tested and approved by Underwriters Laboratories (UL) or other approved independent testing agency acceptable to Township.
 5. A copy of the manufacturer’s installation directions.



- c. **Zoning Administrator Authority.** The Zoning Administrator is authorized to approve, approve with conditions, or deny applications for Private Solar Energy Systems. An aggrieved party may appeal the Zoning Administrator's decision to the Zoning Board of Appeals pursuant to Section 5.04(A) of the Zoning Ordinance.
 - d. **Exclusions from Administrative Review.** Administrative review is not required for (i) a single solar panel with a total area of less than eight square feet; and (ii) repair and replacement of existing solar energy equipment if there is no expansion of the size or area of the solar energy equipment.
2. **Private Solar Energy System BIVPs.** Private Solar Energy System BIVPs are permitted as accessory uses in all zoning districts, subject to administrative approval as set forth in this section. A building permit is required for the installation of BIVPs.
 3. **Roof or Building Mounted Private Solar Energy Systems.** Roof or Building Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to administrative approval as set forth in this section and subject to the following requirements:
 - a. **Safety.** A Roof or Building Mounted Private Solar Energy System shall be installed, maintained, and used only in accordance with the manufacturer's instructions, and it shall comply with all applicable construction code and electric code including the most current version of the Michigan Uniform Building Code and National Electrical Code adopted by the enforcing agencies.
 - b. **Building Permit.** A building permit is required for installation of a Roof or Building Mounted Private Solar Energy System.
 - c. **Maximum Height.** No part of the Solar Energy System mounted on a roof is permitted to extend more than five feet beyond the peak of the roof or to exceed the maximum building limitation for the zoning district in which it is located. No part of a Solar Energy System mounted on a roof is to project beyond the eaves of the roof.
 - d. **Location.** If the Solar Energy System is mounted on a building in an area other than the roof, no part of the Solar Energy System is permitted to extend beyond the wall on which it is mounted. A Solar Energy System mounted on a building wall may not face an adjacent public right-of-way.
 - e. **Appearance.** Roof or Building Mounted Private Solar Energy Systems shall be neutral in color and substantially non-reflective of light.
 - f. **Abandonment.** If a Roof or Building Mounted Private Solar Energy System has been abandoned for a period of six months, the property owner shall remove it within three months after the date of abandonment.

STAFF COMMENT: How will the township know if/when the roof or building mounted private solar energy system has been abandoned?

- g. **Nonconforming Buildings.** A Roof or Building Mounted Private Solar Energy System installed on a nonconforming building or structure is not considered an expansion of the nonconformity, but it shall meet all height and placement requirements of the zoning district and this section.



- h. **Inspection.** The Zoning Administrator may inspect a Private Solar Energy System for compliance with this ordinance upon providing reasonable notice to the property owner or occupant.

STAFF COMMENT: How often will township officials inspect private solar energy systems? This isn't clear from the proposed text above.

4. **Ground Mounted Private Solar Energy Systems.** Ground Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to administrative approval as set forth in this section and subject to the following requirements:
- a. **Safety.** A Ground Mounted Private Solar Energy System shall be installed, maintained, and used only in accordance with the manufacturer's instructions, and it shall comply with all applicable construction code and electric code including the most current version of the Michigan Uniform Building Code and National Electrical Code adopted by the enforcing agencies. The Ground Mounted Private Solar Energy System shall be permanently and safely attached to the ground.
 - b. **Building Permit.** A building permit is required for installation of a Ground Mounted Private Solar Energy System.
 - c. **Maximum Height.** A Ground Mounted Private Solar Energy System shall not exceed the maximum building height for adjacent accessory buildings and shall not exceed 16 feet above the ground when oriented at maximum tilt.
 - d. **Location.** A Ground Mounted Private Solar Energy System shall be located in the rear yard or side yard and meet the applicable setback requirements for the zoning district in which it is located.
 - e. **Underground Transmission.** All power transmission or other lines, wires, or conduits from a Ground Mounted Private Solar Energy System to any building or other structure shall be located underground. If batteries are used as part of the Ground Mounted Private Solar Energy System, they shall be placed in a secured container or enclosure.
 - f. **Screening.** Greenbelt screening is required around any Ground Mounted Private Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences. The greenbelt shall consist of shrubbery, trees, or other non-invasive plant species that provide a visual screen. In lieu of a planting greenbelt, a decorative fence that is at least 50% opaque (meeting the requirements of this Ordinance applicable to fences) may be used if approved by the Planning Commission.
 - g. **Lot Area Coverage.** The area of the Ground Mounted Private Solar Energy System shall not exceed 50% of the square footage of the principal building on the property. If the property is two acres or less in size, a Ground Mounted Private Solar Energy System is not considered an accessory building or structure for purposes of Section 6.06.
 - h. **Appearance.** The exterior surfaces of a Ground Mounted Private Solar Energy System shall be generally neutral in color and substantially non-reflective of light.
 - i. **Abandonment.** If a Ground Mounted Private Solar Energy System has been abandoned, the property owner shall notify the Township and remove the system within three months after the date of abandonment.



STAFF COMMENT: This option related to abandonment of a private energy system appears to be reasonable and appropriate.

- j. Nonconforming Buildings. A Ground Mounted Private Solar Energy System installed on a nonconforming building or structure is not considered an expansion of the nonconformity, but it shall meet all height and placement requirements of the zoning district and this section.
- k. Inspection. The Zoning Administrator may inspect a Private Solar Energy System for compliance with this ordinance upon providing reasonable notice to the property owner or occupant.

STAFF COMMENT: Same as comment regarding item 3(h) above.

C. Utility-Scale Solar Energy Systems. Utility-Scale Solar Energy Systems are permitted by Special Land Use approval in the Solar Energy System Overlay District and require a special land use permit under Article 13 and site plan approval under Article 14. Utility-Scale Solar Energy Systems are also subject to the following requirements:

1. Special Land Use Permit Application Requirements. In addition to the requirements of Article 13, the applicant for a Utility-Scale Solar Energy System shall provide the Township with all of the following:
 - a. Application fee in an amount set by resolution or fee schedule approved by the Township Board.
 - b. A deposit for an escrow account in an amount set by resolution or fee schedule approved by the Township Board. The escrow account is used to cover all costs and expenses associated with the special land use review and/or approval process, which costs can include, but are not limited to, review fees of the Township Attorney, Township Planner, and Township Engineer, as well as any reports or studies which the Township anticipates will be required during the review and/or approval process for the application. At any point during the review process, the Township may require that the applicant place additional monies into escrow with the Township if the existing escrowed funds on account with the Township will be insufficient, in the determination of the Township, to cover any remaining costs or expenses with the review and/or approval process. If additional funds are required by the Township to be placed in escrow and the applicant refuses to do so within 14 days after receiving notice, the Township will cease the zoning review and/or approval process until and unless the applicant makes the required escrow deposit. Any escrow amounts in excess of actual cost will be returned to the applicant. An itemized billing of all expenses will be provided to the applicant upon request.
 - c. A list of all parcel numbers that will be used by the Utility-Scale Solar Energy System; documentation establishing ownership of each parcel; and any and all lease or option agreements, easements, or purchase agreements for the subject parcels, together with any attachments to such agreements or easements.
 - d. An operations agreement setting forth the operations parameters, the name and contact information of the certified operator, the applicant's inspection protocol, emergency procedures, and general safety documentation.
 - e. Federal Employer Identification Number for current owner/operator is required at the time of application.



- f. A written emergency response plan detailing the applicant's plan for responding to emergencies, including fire emergencies, and analyzing whether adequate resources exist to respond to fires and other emergencies. If adequate resources do not exist, the applicant shall identify its plan for providing those resources. The emergency plan shall include identification of potential hazards to adjacent properties, public roadways, and to the community in general that may be created, as well as plans for immediate cleanup, long-term monitoring, and continued mitigation efforts following an emergency.

STAFF COMMENT: Staff would highly recommend that this emergency response plan be submitted to the County Emergency Management Director for their review and approval prior to any final approval by the township.

- g. A written description of the fire suppression system that will be installed, which shall identify the manufacturer of the fire suppression system and generally describe its operations and capacity to extinguish fires.
- h. A written description of specialized training and/or equipment necessary for handling fires and/or other emergencies at the Utility Scale Solar Energy System site. The training plan must include, at a minimum, annual emergency response training for local firefighters and other local emergency personnel at the site of the Utility-Scale Solar Energy System.

STAFF COMMENT: Staff would suggest that this proposed written description of the fire suppression system that will be installed as well as the proposed specialized training and/or equipment necessary for handling fires and/or other emergencies at the Utility Scale Solar Energy System site and the annual emergency response training plan be submitted to the County Sheriff, County Emergency Services Director, the Chief of the Fowlerville Fire Department, and the County Emergency Management Director for review and approval prior to any final approval by the township.

- i. A complete set of photographs, video, and topography map of the entire Participating Property prior to construction.
- j. A copy of any power purchase agreement or other written agreement that the applicant has with an electric utility or any agreement or approval for interconnection between the proposed Utility-Scale Solar Energy System and an electric utility or transmission company.
- k. A written plan conforming to the requirements of this ordinance for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management.
- l. A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Utility-Scale Solar Energy System, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the Utility-Scale Solar Energy System and restore the subject parcels to as near as possible to the condition the subject parcels were in prior to being used as a Utility-Scale Solar Energy System.
- m. Financial security that meets the requirements of this ordinance.



- n. A plan for resolving complaints regarding but not limited to noise, glare, maintenance, and drainage from the public or other property owners concerning the construction and operation of the Utility-Scale Solar Energy System.
- o. Identification of and a plan for managing any hazardous waste.

STAFF COMMENT: Staff would highly recommend that this hazardous waste plan be submitted to the County Emergency Management Director as well as the County Environmental Health Department Director for review and approval prior to any final approval by the township.

- p. A transportation plan for construction and operation phases, including any applicable agreements with the Livingston County Road Commission and Michigan Department of Transportation.

STAFF COMMENT: Staff would suggest that this transportation plan be submitted to the Livingston County Road Commission (LCRC) and Michigan Department of Transportation (MDOT) for review and approval prior to any final approval by the township.

- q. An attestation that the applicant and owner of the subject property will indemnify and hold the Township and its officials, elected or appointed, harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Utility-Scale Solar Energy System.
- r. A copy of the manufacturer's directions, instruction manual, and specification sheets including any unredacted safety manuals and Safety Data Sheets (SDS), for installing, maintaining, and using the Utility-Scale Solar Energy System.

STAFF COMMENT: A copy of this information should be supplied to the County Emergency Management Director as well as the County Environmental Health Department Director for compliance, permanent filing, and reference.

- s. A ground cover vegetation establishment and management plan that complies with this ordinance.
- t. Proof of environmental compliance, including compliance with:
 - i. Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.);
 - ii. Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances;
 - iii. Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.);
 - iv. Part 303, Wetlands (MCL 324.30301 et. seq.);
 - v. Part 365, Endangered Species Protection (MCL324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township.
- u. Any additional information or documentation requested by the Planning Commission, Township Board, or other Township representative.



- v. Insurance. Proof of the owner/operator's public liability insurance shall be provided at the time of application. If the applicant is approved, proof of insurance shall be provided to the Township annually thereafter. The policy shall provide for bodily injury and property damage and shall name Conway Township and each Participating Property owner as an additional insured. The owner/operator shall insure for liability for the utility scale solar system until removed for at least \$25,000,000 per occurrence to protect the owner/operator, Township, and Participating Property owner. Proof of a current policy is required annually and shall be provided each year to the Township prior to the anniversary date of the Special Land Use Permit.
 - w. Compliance with the Michigan Uniform Building Code and National Electric Safety Code: Construction of a Utility Solar Energy Facility shall comply with the most current version of the Michigan Uniform Building Code and National Electrical Code adopted by the enforcing agencies as a condition of any Special Land Use Permit under this section.
 - x. Conceptual plan. A graphical computer generated depiction of how the Utility-Scale Solar Energy System will appear from all directions.
2. Site Plan Application Requirements.
- a. Contents of Site Plan. In addition to the requirements in Article 14, the applicant shall, at its expense, provide a detailed application and site plan drafted to a scale of 1" = 200 feet with the following:

STAFF COMMENT: For sake of clarity and convention, Staff would suggest revising and utilizing the following syntax for the dimensional reference above (instead of mixing symbol and verbal):

"...1" (inch) = 200' (feet)..."

- 1. Location of all proposed structures, panels, equipment, transformers, and substations.
- 2. Location of all existing structures or dwellings on the parcel and location of all existing structures or dwelling on adjacent Non-Participating Property within 1000 feet of the property lines of any Participating Properties.
- 3. Depiction of all setbacks, property lines, fences, signs, greenbelts, screening, drain tiles, easements, flood plains, bodies of water, proposed access routes, and road rights of way.
- 4. Indication of how and where the system will be connected to the power grid.
- 5. Plan for any land clearing and grading required for the installation and operation of the system.
- 6. Plan for ground cover establishment and management.
- 7. Anticipated construction schedule and completion date. As a condition of any special land use or site plan approval, hours of construction shall be limited to Monday through Friday from 7:00 a.m. to 5:00 p.m. with no construction on Saturday, Sunday, or any federally recognized holiday.
- 8. Sound modeling study including sound isolines extending from the sound sources to the property lines.



9. Any additional studies requested by the Planning Commission, including but not limited to the following:
- Visual Impact Assessment: A technical analysis by a third party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscaping and other screening measures), a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project.

STAFF COMMENT: What specific professional qualifications and /or educational experience would the reviewing individual for this requirement be required to possess in order for the applicant to attain compliance? This should be clearly identified. More specifics are needed here.

- Environmental Analysis: An analysis by a third-party qualified professional to identify and assess any potential impacts on the natural environment including, but not limited to, removal of trees, wetlands and other fragile ecosystems, wildlife, endangered and threatened species. If required, the analysis will identify all appropriate measures to minimize, eliminate or mitigate adverse impacts identified and show those measures on the site plan, where applicable.

STAFF COMMENT: What specific professional qualifications and /or educational experience would the reviewing individual for this requirement be required to possess in order for the applicant to attain compliance? This should be clearly identified. More specifics are needed here.

- Stormwater Study: An analysis by a third-party qualified professional studying the proposed layout of the Utility-Scale Solar Energy System and how the spacing, row separation, and slope affects stormwater infiltration, including calculations for a 100-year rain event. Percolation tests or site-specific soil information shall be provided to demonstrate infiltration on-site without the use of engineered solutions.

STAFF COMMENT: What specific professional qualifications and /or educational experience would the reviewing individual for this requirement be required to possess in order for the applicant to attain compliance? This should be clearly identified. More specifics are needed here.

- Glare Study: An analysis by a third-party qualified professional to determine if glare from the Utility-Scale Solar Energy System will be visible from nearby airports, air strips, residences, and roadways. The analysis will consider the changing position of the sun throughout the day and year and its influences on the utility-scale solar energy system.

STAFF COMMENT: What specific professional qualifications and /or educational experience would the reviewing individual for this requirement be required to possess in order for the applicant to attain compliance? This should be clearly identified. More specifics are needed here.



- e. Optional Conceptual Layout Plan. Applicants shall submit an optional conceptual layout plan for review prior to submission of a formal site plan. The conceptual site plan shall be reviewed by the Planning Commission to allow for discussion and feedback.

STAFF COMMENT: What are the required elements that the applicant must show on this plan to attain compliance? More specifics are needed here.

10. Approvals from Other Agencies. Final site plan approval may be granted only after the applicant receives all required federal, state and local approvals, including any applicable approval by the state historic preservation office. Applicant shall provide copies of all review letters, final approved plans, and reports issued by any other governing agencies to the Township.
11. The site plan must show the existing topographical grades in two-foot intervals and conditions of all Participating Property at the time of application.
12. A baseline soil test including Cation Exchange Capacity (CEC) shall be provided to the township prior to any construction.

STAFF COMMENT: This test should be forwarded to the township engineer for review and comment.

13. A written description of how the applicant will address dust control during construction. Such plan shall, at a minimum, consist of water applications at least three times per day unless it has rained in the preceding three hours of the planned application.
 14. Water Usage and Cleaning. The applicant shall detail the methodology planned for cleaning the solar panels, frequency, and listing of any and all detergents, surfactants, chemical solutions used for each cleaning, and sources of water used to facilitate panel restoration and maintenance.
3. Application Items as Substantive Requirements. The information, plans, documents, and other items identified as application requirements in this ordinance, including the site plan and special land use permit, are substantive requirements for obtaining approval for a Utility-Scale Solar Energy System. The Planning Commission is to review the sufficiency of the application materials. If the Planning Commission determines that the substance of any application item is insufficient to protect the public health, safety, and welfare, the Planning Commission shall deny approval on that basis.
 4. System and Location Requirements.
 - a. Utility-Scale Solar Energy Systems are to be located only in the Solar Energy System Overlay District.

STAFF COMMENT: Refer to same comment regarding item 19.02 (A).

- b. Utility-Scale Solar Energy Systems shall be ground mounted.
- c. Utility-Scale Solar Energy Systems (including all solar panels, structures, equipment, and fencing) shall be set back 500 feet from all Non-Participating Property lines (measured from the parcel line of the Non-Participating Property to the nearest fence line of the Utility-Scale Solar Energy System) and 750 feet from all public road rights-of-way measured from the nearest boundary of the public right-of-way. If a single Utility-Scale Solar Energy System is located on more than one lot, or if the adjacent parcel is owned by the same owner as the property on which



the Utility-Scale Solar Energy System is located, then the lot line setbacks of this subsection do not apply to the lot lines shared by those lots.

- d. Utility-Scale Solar Energy Systems shall be set back at least 150 feet from the edge of any wetland, shoreline, or drain. The Planning Commission may increase this setback requirement if the Planning Commission determines that such a setback is necessary to protect the public health, safety, and welfare.
 - e. Riparian buffers and filter strips, and where needed, denitrifying bioreactors, may be required and if required must be installed and maintained to the specifications required by the United States Department of Agriculture's Farm Service Agency (USDA/FSA). The buffers and filter strips are intended to reduce or eliminate sediment and nutrient loading of drainage ditches, streams, rivers, lakes, and other nearby waterways. If required, no structures may be placed within the buffer or filter strip areas. Depending upon the topography, soil, and other factors, buffer or filter strips will generally be between 33 feet and 164 feet wide, on both sides of ditches, streams, and other waterways.
 - f. The height of the Utility-Scale Solar Energy System and any mounts, buildings, accessory structures, and related equipment shall not exceed 16 feet when oriented at maximum tilt. The Planning Commission may allow a height of up to 20 feet if the applicant establishes that the lot is used for grazing by farm animals in a manner that requires increasing the height limit. Lightning rods may exceed 16 feet in height, but they shall be limited to the height necessary to protect the Utility-Scale Solar Energy System from lightning.
 - g. PV Array Components: PV array components shall be approved by the Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electronic Testing Laboratories (ETL), or other similar certification organization acceptable to the Township.
5. Permits. All required county, state, and federal permits shall be obtained before the Utility-Scale Solar Energy System begins operating.
 6. Screening. Greenbelt screening is required around any Utility-Scale Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from all sides and any open views from Non-Participating Property.

STAFF COMMENT: Unless otherwise overlooked by staff and referenced elsewhere in the proposed ordinance, what is the overall dimensional width of the required greenbelt screen?

- a. Screening shall be installed to obscure the Utility Scale Solar Energy System and shall contain two rows of staggered evergreen trees planted not greater than twelve (12) feet apart trunk to trunk, and the two rows shall be no greater than ten (10) feet apart. Any substitution shall be approved in advance by the Planning Commission. No species of any Arborvitae shall be permitted.
- b. Planting shall be at least eight (8) feet tall at time of planting, measured from the top of the root ball to the base of the leader (not including the height of the leader) and reasonably expected to reach a height of ten (10) feet within three (3) growing seasons.
- c. The trees may be trimmed but shall maintain a height of at least eighteen (18) feet.
- d. Evergreen trees shall be Norway Spruce.



STAFF COMMENT: Norway Spruce is fast growing and a good choice of tree species for this type of land use buffering usage.

- e. Good arboricultural techniques shall be followed with respect to vegetation, including but not limited to, proper pruning, proper fertilizing, and proper mulching, so that the vegetation will reach maturity as soon as practical and will have maximum density in foliage. Dead or diseased vegetation shall be removed and shall be replanted in a manner consistent with this Section at the next appropriate planting time. Each dead or diseased vegetation shall be completely replaced at 50% as determined by the Zoning Administrator. Annual review by a Professional Arborist, paid for by the owner/operator, shall be performed to determine any plant/vegetation replacement necessary to remain in compliance with the ordinance.
 - f. Utility-Scale Solar Energy Systems also shall comply with the landscaping standards in Section 6.16 of the Zoning Ordinance.
 - g. Front, side, and rear yard screening is required if the Utility-Scale Solar Energy System is adjacent to a non-participating property.
7. Appearance. The exterior surface of the Utility-Scale Solar Energy System shall be generally neutral in color and substantially non-reflective of light.
8. Lighting. Lighting of the Utility-Scale Solar Energy System is limited to the minimum light necessary for safe operation. Illumination from any lighting shall not extend beyond the perimeter of the participating property. The Utility-Scale Solar Energy System shall not produce any glare that is visible to neighboring lots or to persons traveling on public or private roads. Flashing or intermittent lights are prohibited.
9. Security Fencing.
- a. Security fencing may be required by the Planning Commission to be installed around all electrical equipment related to the Utility-Scale Solar Energy System, including any transformers. Fencing shall be at least seven feet tall and be composed of woven agricultural wire. Barbed and razor wire is prohibited.
 - b. A containment system shall surround any transformers in case of hazardous waste or oil spills.
 - c. Appropriate warning signs shall be posted at safe intervals at the entrance and around the perimeter of the Utility-Scale Solar Energy System.
 - d. Gate posts and corner posts shall have a concrete foundation.
 - e. Gates shall be the same height and constructed of the same material as the fencing. Access, such as Knox box, shall be provided for emergency responders.
 - f. The Township may allow or require a fence design to allow for the passage of wildlife upon a finding that adequate access control and visual screening will be preserved.
 - g. Security fencing is subject to setback requirements. The security fence shall be locked, and a self-locking device shall be used. Lock boxes and keys (may be electronic such as keypad opener, if the passcode is provided to the Township and central dispatch for 911 service) shall be provided at locked entrances for emergency personnel access. Electric fencing is not permitted. A safety plan shall be in place and updated regularly with the local fire department having jurisdiction over the Utility-Scale Solar Energy System.



10. Noise. All sound measurements are to be instantaneous and shall not be averaged. The noise generated by a Utility-Scale Solar Energy System shall not exceed the following limits:
 - a. 40 dBA Lmax, as measured at the property line, between the hours of 7:00 a.m. and 9:00 p.m.
 - b. 35 dBA Lmax, as measured at the property line, between the hours of 9:00 p.m. and 7:00 a.m.
 - c. The owner/operator of the Utility Scale Solar Energy System shall annually provide for a sound analysis or modeling, conducted by an auditory expert chosen by the Township, at the expense of the applicant.
11. Underground Transmission. All power transmission, communication, or other lines, wires, or conduits from a Utility-Scale Solar Energy System to any building or other structure shall be located underground at a depth that complies with current National Electrical Code standards, except for power switchyards or the area within a substation.
12. Drain Tile Inspections. The Utility-Scale Solar Energy System shall be maintained in working condition at all times while in operation. The owner/operator shall identify and inspect all drain tiles at least once every two years by means of a robotic camera, with the first inspection occurring post construction but before the Utility-Scale Solar Energy System is in operation. The owner/operator shall submit proof of the inspection to the Township. The owner/operator shall repair any damage or failure of the drain tile within 60 days after discovery and submit proof of the repair to the Township. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection.

STAFF COMMENT: Good Plan of Operation.

13. Fire Suppression. The Utility-Scale Solar Energy System shall include a fire suppression system that is specifically designed to immediately suppress and extinguish fires in any part of the Solar Energy System, including the panels, electrical equipment, and transformers. The owner/operator shall provide documentation establishing the effectiveness of the fire suppression system and the results of a third-party independent inspection of the fire suppression system.

STAFF COMMENT: This system should also be reviewed and inspected by the local Fire Chief and possibly, if required, the State Fire Marshall, for compliance.

14. Battery Storage. Commercial grid storage batteries or capacitor banks storing or returning supplemental power to the grid are not permitted in the District. Use of Batteries in commercial applications is only permitted as emergency backup for safety lighting and related computer infrastructures.

STAFF COMMENT: The County Emergency Management Director should be notified in the case where a commercial grid storage battery is utilized in a proposed large /utility scale solar facility, so that its location is known and added to the County Emergency Operations Plan (EOP).

15. Inverters shall be set back at least 150 feet inside the boundary of a Solar Energy System Overlay District.
16. Stray Voltage Assessments: No stray voltage originating from a Utility Scale Solar Energy System may be detected on any Participating or Non-Participating property. A preconstruction stray voltage test shall be conducted on all Michigan Department of Agriculture & Rural Development (MDARD) registered livestock facilities located within a one-mile radius of the Participating Properties. The



tests shall be performed by an investigator approved by the Township. A report of the tests shall be provided to the owners of all property included in the study area. The applicant/landowner shall seek written permission from the property owners prior to conducting testing on such owners' property. Applicants/landowners shall not be required to perform testing on property where the owners have refused to grant permission to conduct the testing. The owner of any Participating Property included in the list of project parcels shall not refuse the stray voltage testing if they have a MDARD registered livestock facility on the Participating Property.

17. Ground Cover. The lot on which the Utility-Scale Solar Energy System is located shall be covered with vegetation until decommissioning. To meet this requirement, the lot shall include one or more of the following:
 - a. Pollinator Habitat: A site designed to have vegetation that will enhance pollinator populations, including a diversity of flowering plants and wildflowers, and meets a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
 - b. Conservation Cover: A site designed with practices to restore native plants, grasses, and prairie with the aim of protecting specific species or providing specific ecosystem services, such as carbon sequestration or soil health. The site shall be designed in partnership with a conservation organization or approved by the Livingston Conservation District.
 - c. Forage/Grazing: Sites that incorporate rotational livestock grazing and forage production as part of a vegetative maintenance plan.
 - d. Agrivoltaics: Sites that combine raising crops for food, fiber, or fuel, and generating electricity within the project area to maximize land use.
 - e. Ground cover shall be planted within four months of project completion, weather permitting.
 - f. Invasive species and noxious weeds are not permitted and shall be removed in a timely manner.
18. Drainage. Drainage on the site shall be maintained in a manner consistent with, or improved upon, existing natural drainage patterns. Any disturbance to drainage or water management practices shall be managed within the property and on-site in order to not negatively impact surrounding properties as a result of the development. This shall be maintained for the duration of the operation and shall be able to be returned to pre-existing conditions following decommissioning. Any existing drainage tiles that are identified on the property shall be shown on the as-built drawings submitted following construction. Prior to the start of construction, any existing drain tile shall be inspected by robotic camera and the imagery submitted to the Township for baseline documentation on tile condition. Any damage shall be repaired, and a report submitted to the landowner and Township. While the facility is in operation, the owner/operator shall reinspect the drain tiles every three years by robotic camera for any damage and shall repair any damage within 60 days of discovery. The owner/operator shall report the inspection, along with any damage and repair, to the Township within 90 days after each three-year deadline. The Township reserves the right to have the Building Inspector or other agent present at the time of repair. Solar panel support structures and/or foundations shall be constructed to preserve any drainage field tile or system.

STAFF COMMENT: The Livingston County Drain Commissioner Office should be consulted concerning any drainage maintenance issue related to the solar project.

19. Access Routes. Access drives are subject to the approval of the Livingston County Road Commission to the extent of the Road Commission's jurisdiction. All access drives and roads within the site shall be adequately maintained for emergency vehicle use, including winter maintenance.



20. The owner/operator shall submit an As Built Drawing with dimensions relative to property lines of all new structures including inverters and buried cable both inside and outside fenced areas upon completion and before any power is supplied to the grid. The As Built Drawing shall be a scale of 1" = 200 feet.

STAFF COMMENT: For sake of clarity and convention, Staff would suggest revising and utilizing the following syntax for the dimensional reference above (instead of mixing symbol and verbal):

"...1" (inch) = 200' (feet)..."

21. Signs. Signs are permitted but shall comply with Article 17. The lot shall include at least one sign identifying the owner and providing a 24-hour emergency contact telephone number.
22. Emergency Action Plan and Training. Before the Utility Solar Energy System is operational, the owner/operator shall provide the necessary training, equipment, or agreements specified in the application to Township or other emergency personnel.

STAFF COMMENT: Staff would highly recommend that this Emergency Action Plan and Training Plan be submitted to the County Emergency Management Director for review and approval prior to any final approval by the township.

23. Decommissioning and/or Abandonment.
 - a. If a Utility-Scale Solar Energy System is abandoned or otherwise non-operational for a period of six months, the owner/operator shall notify the Township and shall remove the system within six months after the date of abandonment. Removal requires receipt of a demolition permit and full restoration of the site in accordance with the provisions of this Ordinance and to the satisfaction of the Zoning Administrator. The site shall be filled and covered with topsoil and restored to a state compatible with the surrounding vegetation. The requirements of this subsection also apply to a Utility-Scale Solar Energy System that is never fully completed or operational if construction has been halted for a period six months.
 - b. The decommissioning plan shall be written to provide security to the Township for 125% of the cost to remove and dispose of all panels, removal of all wiring, footings, and pilings, (regardless of depth), and restoration of the land to its original condition. The value of decommissioning shall be determined by a third-party financial consultant or engineer selected by the Township and paid for by the developer. The decommissioning security shall be paid in cash to the Township. Once the value of decommissioning is determined, it shall be updated on a periodic basis of not less than every 2 years and additional security shall be required based on the average inflation rate of the preceding 2 years.
 - c. All abandonment and decommissioning work shall be done when soil is dry.
 - d. The ground shall be restored to its original topography within three hundred sixty-five (365) days of abandonment or decommissioning. An extension may be granted if a good faith effort has been demonstrated and any delay is not the result of actions or inaction of the owner/operator.
 - e. If land balancing is required, all topsoil will be saved and spread evenly over balanced area according to the existing topography map provided at the time of application.



- f. An annual report shall be provided to the Zoning Administrator showing continuity of operation and shall notify the Zoning Administrator if the use is to cease, prior to decommissioning, or abandonment.
 - g. Continuing Obligations: Failure to keep any required financial security in full force and effect at all times while a Utility Solar Energy System exists or is in place shall constitute a material and significant violation of the Special Land Use Permit, and this Ordinance, and will subject the Utility Solar Energy System owner/operator (jointly and severally, if more there is more than one owner or operator) to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use Permit.
 - h. The Township shall have the right to seek injunctive relief to effect or complete decommissioning, as well as the right to seek reimbursement from the owner/operator or landowner for decommissioning costs in excess of the amount deposited in escrow and to file a lien against any real property owned by the owner/operator or landowner for the amount of the excess, and to take all steps allowed by law to enforce said lien.
 - i. At the time of decommissioning, the Planning Commission may allow deviations from the above decommissioning requirements following notice and a public hearing in accordance with Section 103 of the Zoning Enabling Act.
24. Complaint Resolution. Utility Solar Energy Systems shall provide a complaint resolution process, as described below:
- a. The site shall have signs posted with contact information to collect complaints related to the Utility Solar Energy System.
 - b. A log shall be kept by the owner/operator of all complaints received and shall be available to Township officials for review at the Township's request.
 - c. The owner/operator shall respond to complainants within ten (10) business days and shall provide notification to the Zoning Administrator.
 - d. Any resolution shall include lawful and reasonable solutions consistent with the Zoning Ordinance, which shall also be provided to the Zoning Administrator.
 - e. The owner/operator or its assigns reserve the right to adjudicate any claims made against it, including residential claims, in a court of competent jurisdiction. An annual report shall be submitted to the Zoning Administrator and the Township Board that details all complaints received, the status of complaint resolution, and actions taken to mitigate complaints.
25. Maintenance and Repair
- a. Each Utility-Scale Solar Energy System shall be kept and maintained in good repair and condition at all times and the site shall be neat, clean, and free of refuse, waste, or unsightly, hazardous, or unsanitary conditions. All solar panels damaged beyond repair or use shall be replaced and removed from the project site within seven (7) days and shall be disposed of off-site in accordance with any state or federal requirements.
 - b. If the Township Board or Zoning Administrator determines that a Utility Scale Solar Energy System fails to meet the requirements of this Ordinance or the Special Land Use Permit, the Zoning Administrator or Township Board shall provide notice to the owner/operator of the non-compliance, and the owner/operator has 14 days to cure the violation. If the violation is a safety hazard as determined by the Zoning Administrator or Township Board, then the owner and/or



operator has 7 days to cure the violation. If the owner and/or operator has not remedied non-compliance issues in the aforementioned time periods, the owner/operator shall immediately shut down the Utility Scale Solar Energy System and shall not operate, start or restart the Utility Scale Solar Energy System until the issues have been resolved. If the owner/operator fails to bring the operation into compliance, the Township may seek relief at law or equity to abate the nuisance and may also issue a municipal civil infraction citation. Each violation for which the owner/operator are deemed responsible shall result in a \$500.00 fine.

STAFF COMMENT: If the violation is a safety hazard as determined by the Zoning Administrator or Township Board, Staff would also suggest that the County Emergency Manager be notified as well.

- c. The owner/operator shall keep a maintenance log on the solar array(s), which shall be available for the Township's review within 48 hours of such request.
 - d. General Maintenance Bond. At the time of the Special Land Use application, the owner/operator shall submit two (2) third-party contractor bids for construction of all fencing, landscaping, and drainage improvements associated with the utility scale solar energy system. A performance bond in the amount of 125% of the higher bid shall be provided to the Township to ensure completion. The Township may use the bond to complete or repair any landscaping, fencing, or drainage infrastructure (including drain tiles).
26. Extraordinary Events. If the Utility-Scale Solar Energy System experiences a failure, fire, leakage of hazardous materials, personal injury, or other extraordinary or catastrophic event, the owner/operator shall notify the Township within 8 hours.
27. Annual Report. The owner/operator shall submit a report on or before January 1 of each year that includes all of the following:
- a. Amount of electric generation;
 - b. Current proof of insurance with the township and Participating Property owner(s) shown as named insured;
 - c. Verification of financial security; and
 - d. A summary of all complaints, complaint resolutions, and extraordinary events. Additionally, a representative of the owner/operator shall appear before the Planning Commission annually to report on the Utility-Scale Solar Energy System and address questions or concerns from the Planning Commission.
28. Inspections. The Township may inspect a Utility-Scale Solar Energy System at any time by providing 24 hours advance notice to the owner/operator.
29. Transferability. A special use permit for a Utility-Scale Solar Energy System is transferable to a new owner. The new owner shall register its name, Federal Employer Identification Number, and business address 30 days prior to the transfer date with the Township and shall comply with this Ordinance and all approvals and conditions issued by the Township. In the event of a sale or transfer of ownership and/or operation of the solar facility, the original security bond or escrow shall be maintained throughout the entirety of the process and shall not be altered.



STAFF COMMENT: If not done so already, the township should develop a form for proper historical record and tracking of the land use permit transfer in these cases. The permit could be something similar to the example below:

Example: Special Land Use Permit Transfer Request

		PLANNING & ZONING	
		SUP TRANSFER REQUEST	
SPECIAL USE PERMIT TRANSFER REQUEST		DATE STAMP	
SPECIAL USE PERMIT #:		PERMIT ADDRESS:	
PREVIOUS PERMIT HOLDER NAME:			
Business Name:			
Address:		City:	State: Zip:
Ph:	Email:	Fax:	
NEW PERMIT HOLDER NAME:			
Business Name:			
Address:		City:	State: Zip:
Ph:	Email:	Fax:	
NEW BUSINESS NAME:			
I acknowledge that I have received a copy of the current restrictions for the operation of this Special Use Permit and agree to operate this special use within the limits specified on this permit.			
_____ Business Owner's Signature		_____ Print Name	_____ Date

30. Major and Minor Site Plan Amendments.

- a. Major site plan amendments include those listed in Section 14.08(C) and any of the following:
 - 1. Changes of the location of arrays, fencing, buildings, or ancillary equipment by 10 feet or more.
 - 2. Any increase in the height of solar panels.
- b. Minor site plan amendments include those listed in section 14.08(D) and any of the following:
 - 1. Changes of the location of arrays, fencing, buildings, or ancillary equipment by less than 10 feet.

31. Remedies. If an owner/operator fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, shall revoke the special land use permit and site plan approval after giving the owner/operator notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

Section 5. Validity and Severability.

If any portion of this Ordinance is found invalid for any reason, such holding will not affect the validity of the remaining portions of this Ordinance.



Section 6. Repealer.

All other ordinances inconsistent with the provisions of this Ordinance are hereby repealed to the extent necessary to give this Ordinance full force and effect.

Section 7. Effective Date.

This Ordinance takes effect seven days after publication as provided by law.

Township Recommendation: Approval. The Conway Township Planning Commission recommended Approval of this set of zoning amendments at its June 12, 2023 meeting. There were public comments both for and against different aspects of the proposed ordinance language noted in the minutes.

Staff Recommendation: Approval with Conditions. The proposed amendments appear to be reasonable and appropriate. There are a few key elements as highlighted in the review that have remaining questions and clarifications which should be addressed before any final approval is given by the township. In addition, Staff would highly recommend that the township carefully consider all Staff comments noted throughout the review before proceeding with any final approval of the proposed amendments by the township as well.



Livingston County Department of Planning

LIVINGSTON COUNTY PLANNING COMMISSION MEETING

Wednesday, August 16, 2023 – 6:30 p.m.

Administration Building, Board of Commissioners Chambers
304 East Grand River, Howell, MI 48843

Please note that this is a hybrid meeting with County Planning Commissioners and staff meeting in-person. Audience participants are welcome to attend in-person or via Zoom by using the meeting link at the bottom of the agenda.

Scott Barb
AICP, PEM
Director

Robert A. Stanford
AICP
Principal Planner

Martha Haglund
Principal Planner

Agenda

1. Call to Order
2. Pledge of Allegiance to the Flag
3. Roll and Introduction of Guests
4. Approval of Agenda – August 16, 2023
5. Approval of Meeting Minutes – July 19, 2023
6. Call to the Public
7. Zoning Reviews
 - A. Z-26-23: Green Oak Township Rezoning, Section 34 – Residential Farming to Rural Estates
 - B. Z-27-23: Cohoctah Township Text Amendment, Article 27 Solar Energy Overlay District; Section 13.27 Solar Energy Systems
 - C. Z-28-23: Genoa Township Text Amendment, Article 11 Solar Energy Systems
8. Old Business
9. New Business: BB lunch and learn event at Genoa Township Hall 8/15/23
10. Reports:
11. Call to the Public
12. Adjournment

Department Information

Administration Building
304 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

•
(517) 546-7555
Fax (517) 552-2347

•
Web Site
<https://milivcounty.gov/planning/>

Via Zoom (on-line meetings):

<https://zoom.us/j/3997000062?pwd=SUdLYVFFcmozWnFxbm0vcHRjWkVIZz09>

Via the Zoom app

Join a meeting, with meeting number: 399 700 0062

Enter the password: LCBOC (ensure there are no spaces before or after the password)

Meeting ID: 399 700 0062



**LIVINGSTON COUNTY PLANNING DEPARTMENT
 REZONING REQUEST - |
 STAFF REPORT**

**CASE NUMBER:
 Z-26-23**


COUNTY CASE NUMBER:	Z-26-23	TOWNSHIP:	Green Oak Charter Township
REPORT DATE:	August 2, 2023	SECTION NUMBER:	34
STAFF ANALYSIS BY:	Martha Haglund	TOTAL ACREAGE:	8.84

APPLICANT / OWNER:	Scott Rose
LOCATION:	11311 Marshall Road
LAND USE:	Residential

CURRENT ZONING:	REQUESTED ZONING:
Residential Farming	Rural Estates
PERMITTED/SPECIAL USES (Not all inclusive):	PERMITTED/SPECIAL USES (Not all inclusive):
<u>Permitted:</u> Single-family dwellings, farm operations, roadside stands, public parks, and recreation areas.	<u>Permitted:</u> Single-family dwellings, farm operations, public parks, and recreation areas.
Special: Private schools, municipal buildings and utility buildings, private non-commercial recreation, golf courses and country clubs, state licensed day care homes, museums Golf driving ranges, stables, kennels, private day camp	Special: Private schools, municipal buildings and utility buildings, private non-commercial recreation, golf courses and country clubs, state licensed day care homes, museums
<u>Minimum Lot Area:</u> 5 Acres	<u>Minimum Lot Area:</u> 2 Acres

TOWNSHIP PLANNING COMMISSION RECOMMENDATION AND PUBLIC COMMENTS:	ESSENTIAL FACILITIES AND ACCESS:
<p>The Green Oak Planning Commission recommended approval at the July 20, 2023 planning commission meeting.</p> <p>Public Comment: Wetland concerns, disagreed with splitting land into smaller lots</p>	Water: Well
	Sewer: Septic
	Access: Marshall Road

EXISTING LAND USE, ZONING AND MASTER PLAN DESIGNATION:

	Land Use:	Zoning:	Master Plan:
Subject Site:	Residential	RF Residential Farming	Low Density Residential
	To the North:	Vacant Land/Industrial	RF Residential Farming
	To the East:	Vacant Land	RF Residential Farming
	To the South:	Open Space/Recreation	RE Rural Estates
	To the West:	Residential	RF, PUD/R2A
			Low Density Residential

ENVIRONMENTAL CONDITIONS:

Soils / Topography:	Boyer-Oshtemo, loamy sands located on the majority of the parcel and Carlisle muck located on the northeast corner of the parcel.
Wetlands:	Wetlands (marsh) located in the north east corner extending to the south. Covering approximately 50 % of the parcel.
Vegetation:	Vegetation has been cleared for the existing residence built in 2015. There are many deciduous trees on the Marshall Rd frontage. To the southeast behind dwelling there are also deciduous trees
County Priority Natural Areas:	High Quality Natural Area, Priority 1 (High Priority) are located on the back half of the parcel. These wetlands are connected to a 216 acre priority 1 overlay in the area.

TOWNSHIP MASTER PLAN DESIGNATION:

The township master plan designates the parcel as Low Density Residential. Very Low and Low Density destinations are very similar that they have larger lots that work to preserve rural character and take environmental sensitive areas into consideration. The major difference being:

Unlike Very Low Density Residential, Low Density Residential areas warrant road improvements in areas of poor road conditions because existing population densities are sufficient.

COUNTY COMPREHENSIVE PLAN:

The 2018 Livingston County Master Plan does not direct future land use patterns, or development within Livingston County. Alternatively, it offers a county-wide land use perspective when reviewing potential rezoning amendments. The Land Use & Growth Management chapter of the plan includes decision-making recommendations regarding potential land use conflicts and promoting good land governance.

COUNTY PLANNING STAFF COMMENTS:

The applicant is proposing to rezone 8.84 acres from Residential Farming to Rural Estates. The applicant's application describes the main driver for the rezoning request is to split the parcel into smaller lots with at least 2 acres. The minutes from the meeting also indicate the applicant owns the adjacent 48-acre parcel to the south that is currently zone Rural Estates (RE). These splits would be subject to Land Division Act, Act 288 of 1967 and Green Oak Township's Land Division Ordinance. If the applicant splits their property in the future, they should utilize best practices to minimize the disturbance to the existing wetlands that are featured as Priority 1 Natural Features.

Article 38-539 from the township ordinance, establishes the criteria that are to be considered for a rezoning request.

1. **Whether the rezoning is consistent with the policies and uses proposed for that area in the Township's Master Land Use Plan.** The Township Future Landuse Map designates the subject property to be low density, minimum 2 acre lots. The rezoning would be consistent with the Township's Master Plan.
2. **Whether all of the uses allowed under the proposed rezoning would be compatible with other zones and uses in the surrounding area.** The proposed rezoning is compatible with the surrounding area. The rezoning use would continue to be residential. Permitted uses within the Residential Farming and Rural Estates are very similar. The major difference being the lot sizes 5 and 2 acres respectively. Also, there are more farming permitted uses on the existing zone. Parcels directly south are zoned Rural Estates.
3. **Whether any public services and facilities would be significantly adversely impacted by a development or use allowed under the requested rezoning.** The site is not serviced by public water or sewer. The existing dwelling is serviced by private well and septic. Public facilities would not be adversely impacted by a development allowed under the requested rezoning.
4. **Whether the uses allowed under the proposed rezoning would be equally or better suited to the area than uses allowed under the current zoning of the land.** The parcel's proximity to planned medium density residential to the west and existing Rural Estates zoning to the south make the parcel better suited to be zoned Rural Residential (2 acres) than Farming Residential (5 acres).
5. **Whether the condition and/or value of property in the Township or in adjacent communities would be significantly adversely impacted by a development or use allowed under the requested rezoning.** The property values would not be adversely impacted as the rezoning is commentary to the surrounding existing zoning.
6. **Whether or not the requested zoning change is justified by a change in conditions since the original ordinance was adopted or by an error in the original ordinance.** Development has increased along Marshall Road since the ordinance was adopted lending the parcel to be better suited as Rural Residential than Farming Residential.
7. **Whether precedents might result from approval or denial of the petition, and the possible effects of such precedents.** The rezoning is consistent with the Township's Master Plan. Negative precedents would not result from the rezoning.

COUNTY PLANNING STAFF RECOMMENDATION:

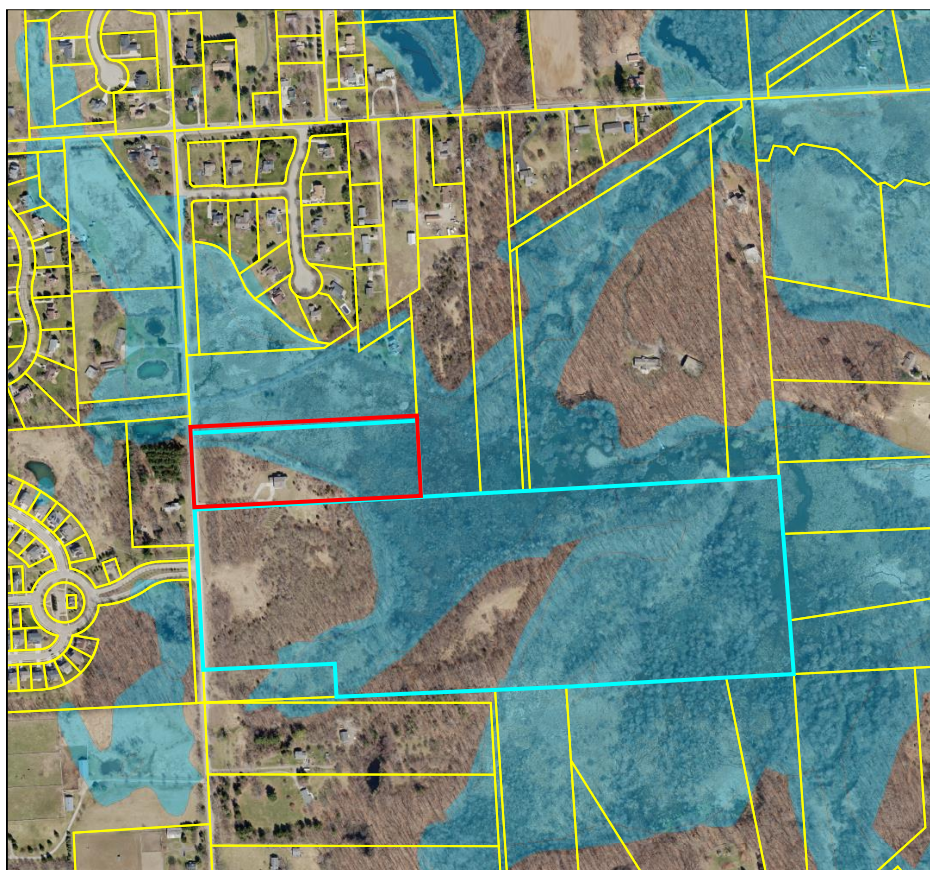
Approval: The rezoning has been thoroughly reviewed. The rezoning would be complementary to the surrounding uses and consistent with Green Oak Charter Township Master Plan.

EXISTING LAND USE MAP:

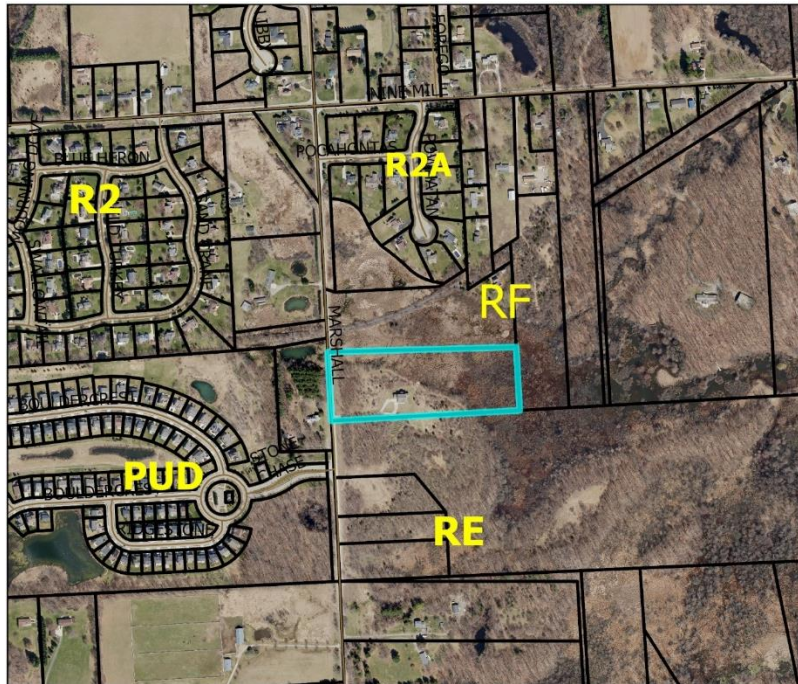
Residential



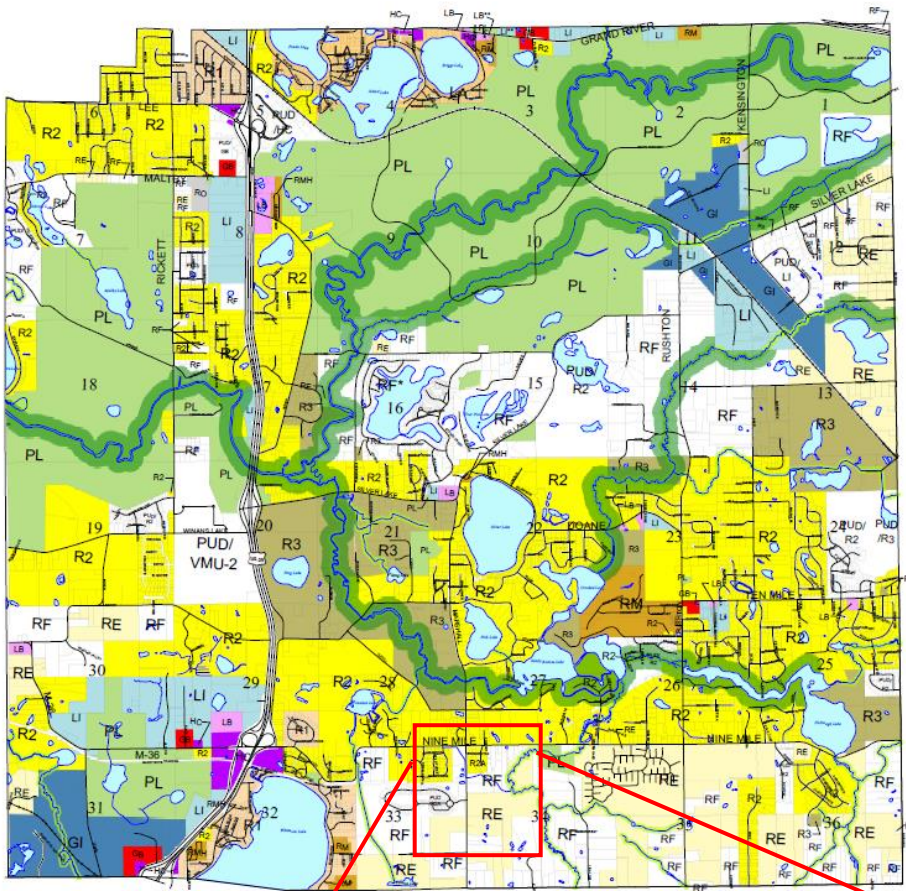
Wetland Map



SURROUNDING ZONING MAP:



TOWNSHIP ZONING MAP:

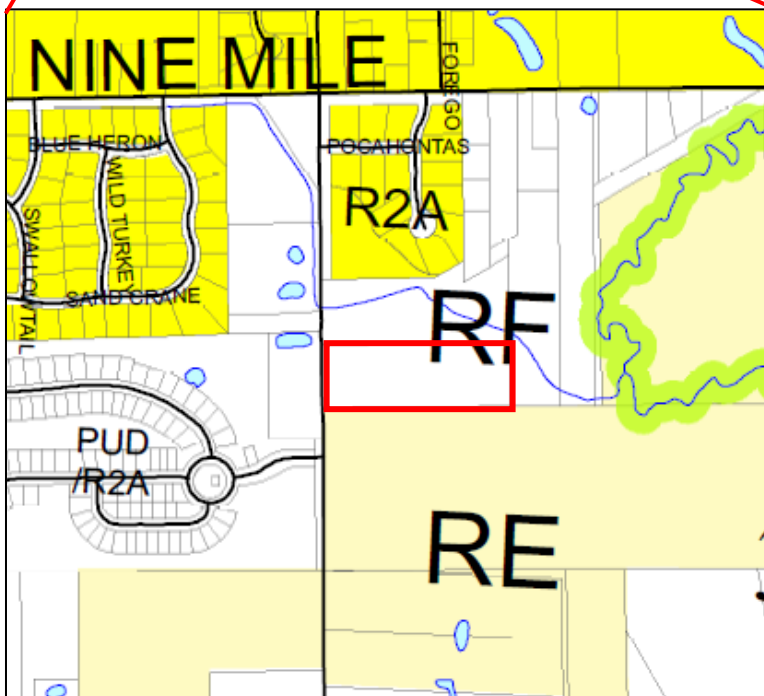


- LEGEND**
- Natural River Overlay
 - Tributary Overlay
 - PL - Public Land
 - RF - Residential Farming
 - RE - Rural Estates
 - R3 - Single Family
 - R2 - Single Family
 - R2A - Single Family
 - R1 - Single Family
 - LA - Lake Area Residential
 - RM - Multiple Family
 - RMH - Mobile Home Park
 - LB - Local Business
 - GB - General Business
 - HC - Highway Commercial
 - RO - Research Office
 - LI - Limited Industrial
 - GI - General Industrial
 - PUD - Planned Unit Development
 - VMU-1 - Village Mixed Use 1
 - VMU-2 - Village Mixed Use 2
- * Court Judgement
** Conditional Zoning

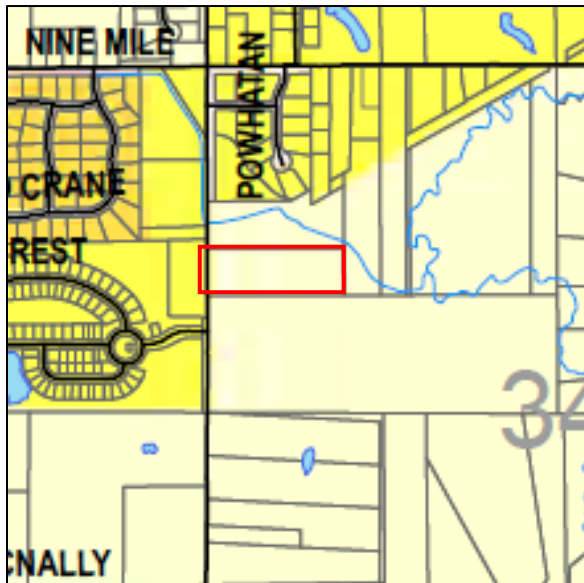
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 Map Date: 8/2/2023
 Prepared by: Martha Haglund
 Review Date: 8/2/2023

ZONING DISTRICTS MAP

Green Oak Charter Township
Livingston County, Michigan



FUTURE LAND USE MAP:



- Very Low Density Residential
- Low Density Residential
- Medium Density Residential
- Suburban Density Residential
- High Density Residential
- Multiple Family



Livingston County Department of Planning

MEMORANDUM

TO: Livingston County Planning Commission and the Cohoctah Township Board of Trustees

FROM: Martha Haglund, Principal Planner

DATE: August 8, 2023

SUBJECT: Z-27-23. Amendments to the Zoning Ordinance 27.01; Solar Energy Systems 13.27

Scott Barb
AICP, PEM
Director

Robert A. Stanford
AICP
Principal Planner

Martha Haglund
Principal
Planner

- New Article 27: Intent and Overlay District
- Amend Section 3.01 Zoning Districts
- Addition of Definitions to Article 2
- Addition of New Section 13.27: Solar Energy Systems

Background

Cohoctah Township has worked since December of 2021 developing and updating their Solar Ordinance. A moratorium was adopted (December 22, 2021-December 31, 2022) on Utility Solar to allow their planning commission time to develop their first draft. The planning commission held several public hearings and discussion workshops to develop their first draft which was submitted to Livingston County for review.

Staff reviewed that draft Solar Ordinance October 24, 2022 and generated Livingston County Case Z-37-22, recommending **Approval** for the township's solar ordinance. However, at the November 16, 2022 Livingston County Planning Commission meeting, there was significant public input to not approve the current draft. Taking public input into consideration, the Livingston County Planning Commission (LCPC) recommended to: **Take no Action, Encourage Further Review.**

The moratorium on utility solar was set to expire while the township planning commission went back to revise their solar ordinance. Cohoctah Township Planning Commission recommended to the Cohoctah Township Board to place another moratorium. Livingston County reviewed moratorium ordinance language, Livingston County Case Z-06-23, which recommended: **Approval with Conditions.** The report cited court cases in which lengthy (longer than 6 month) moratoriums can pose legal risk. At the January 18, 2023 LCPC meeting, the Commission recommended: **Take No Action, Encourage Further Review** with regard to adopting another moratorium on utility solar.

At the February 9, 2023 Cohoctah Township Board meeting, they retained new legal counsel. At the same February meeting, the Cohoctah Township Board **Approved** the moratorium on utility solar. The moratorium ordinance was set for

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a length of 12 months and will expire February 9, 2024.

During the current moratorium, the Cohoctah Planning Commission has held several public hearings and workshops to involve the public and take their comments into consideration.

The Cohoctah Township Planning Commission is now proposing to add a solar overlay to their established zoning districts and amend several sections of the Township Ordinance that will add new definitions and modify standards for both private and industrial scale solar facilities.

Staff has reviewed the proposed amendments for accuracy and compatibility with the existing ordinance language and offers the following summary for your review. **Staff comments** are noted throughout the document. Additions and changes to the Ordinance are written in red.

ITEM 1: Add New Article 27, entitled “Solar Energy System Overlay District,” is added to the Zoning Ordinance and reads as follows:

Section 27.01 Purpose and Findings

A. **Purpose.** The Solar Energy System Overlay District (the “District”) is intended to provide suitable location for utility-scale solar energy systems that are otherwise authorized under state law and the Township’s Code of Ordinances and Zoning Ordinance to meet a reasonable demonstrated need for renewable energy land uses in the Township. It is the intent of the Township to permit these systems to the extent a demonstrated need exists for the land use by regulating the siting, design, construction, operation, monitoring, modification, and removal of such systems to protect the public health, safety, and welfare, and to ensure compatibility of land uses in the vicinity of solar energy systems. The Township seeks to preserve its rural character and agricultural heritage. To these ends, the land included in this District are within reasonable proximity to existing electric power transmission infrastructure.

B. **Findings.** In establishing this overlay district, the Township of Cohoctah finds as follows:

1. It is necessary and reasonable to permit utility-scale solar energy systems in the Township to the extent that there is a demonstrated need for that land use.
2. Land use for utility-scale solar energy systems beyond a reasonable and legitimate demonstrated need to provide for the Township’s energy needs would have needless adverse effects on surrounding businesses, residences, and agricultural properties, and will be detrimental to the health, safety, welfare, and prosperity of the Township and its residents.
3. The Township wishes to preserve its existing topography and rural character, maintain property values, and protect and preserve the quality and pace of rural life of its residents, while also preserving the environment and protecting wildlife.
4. Utility-scale solar energy systems can adversely impact the health, safety, welfare, and prosperity of the community, including existing property values, especially when in proximity to residential uses, farms, and forests.



5. Utility-scale solar energy systems must be carefully managed to reduce the adverse long-term effects such land use can have on the productivity of farmland. *See* University of Michigan Graham Sustainability Institute & Michigan State University Extension, “Planning & Zoning for Solar Energy Systems.”
6. Several Michigan communities have suffered, or are suffering, from fiscal uncertainty due to litigation and rule changes concerning taxation arising from rural renewable energy production and land uses.
7. The Township adopts these land use regulations to balance any demonstrated need for utility-scale solar energy systems in the Township with protection of the public, health, and safety welfare.
8. A utility-scale solar energy system is drastically different than traditional agricultural activities and necessitates more stringent zoning requirements to protect the health, safety, and welfare of township residents.
9. The Township has reviewed its other zoning districts, including the Light Industrial Zoning District, which is small and located near residential homes and found that it is inappropriate for utility-scale solar energy systems. Creating a new utility-scale solar energy system overlay district is a better fit in the Agriculture/Residential Zoning District to both facilitate the land use, but to minimize the impact on the health, safety, and welfare of township residents.

Staff Comments: Overall, these findings summarize and support the proposed zoning amendments and overlay map. A summary of the intent and findings should be incorporated into the next Cohoctah Township’s Master Plan if not already done.

Section 27.02 Delineation of the Solar Energy System Overlay District

- A. The Solar Energy System Overlay District overlays existing zoning districts delineated on the official Cohoctah Township Zoning Map, which Township Zoning Map is hereby amended to add the Solar Energy Overlay District described in this section and Depicted on Map A. The boundaries of the Solar Energy System Overlay District are depicted on Map A, incorporated herein by reference, and are generally described as follows:

Tax Payer Identification 4702-08-400-005

SEC 8 T4N R4E BEG S 230 FT FROM E 1/4 COR, TH W 1320 FT, TH N 210 FT, TH W ALG EW 1/4 LINE 2970 FT, TH S 1320 FT, TH W 990 FT, TH S 350 FT, TH E 990 FT, TH S 310 FT, TH E 2970 FT, TH N 1400 FT, TH E 1320 FT, TH N 350 FT TO POB. COMB FROM 08-300-002 & 08-400-004 IN 1983 & SHOULD HAVE INC 08-200-004 WHICH IS NOW KNOWN AS 08-200-009 - THE E 550 FT OF THE W1/2 OF THE NE1/4 SEC 8, ALSO INCLUDING THE WEST 990FT OF THE S 135FT OF THE NW 1/4 OF THE SW1/4 191.29 AC



EXCEPT FOR THE WESTERLY 1000 FEET AND SOUTHERLY 650 FEET OF THE ABOVE-DESCRIBED PARCEL, WHICH IS APPROXIMATELY 134 ACRES AS DEPICTED ON MAP A. Section 27.03. Permitted Uses.

There are no uses permitted by right in the Solar Energy System Overlay District, other than uses permitted by right in the underlying zoning districts.

Section 27.04. Special Land Uses.

The following uses are permitted following approval by the Planning Commission as a Special Land Use in the Solar Energy System Overlay District as regulated by Article 13 (special land uses) and Article 20 (site plan review).

Utility-Scale Solar Energy Systems

Staff Comments on Solar Overlay Map at the end of report

ITEM 2: Section 3.01 of the Zoning Ordinance, entitled “Establishment of Zoning Districts,” is amended to read as follows:

The Township is hereby divided into the following zoning districts as shown on the Official Zoning Map on file in the office of the Township Clerk, which together with all explanatory matter shown thereon, is hereby adopted by reference, and declared to be a part of this Ordinance:

Article IV	RD	Resource Development District
Article V	WRD	Waterways Resource Development District
Article VI	AR	Agricultural Residential District
Article VII	RR	Rural Residential District
Article VIII	SR	Suburban Residential District
Article IX	S	Settlement District
Article X	NSC	Neighborhood Service Commercial District
Article XI	LI	Light Industrial District
Article XII	MHR	Mobile Home Residential District
Article XXVI	LRR	Limited Recreation Residential
Article XXVII	SEOD	Solar Energy System Overlay District



ITEM 3: The following definitions are added to Article 2 of the Township Zoning Ordinance, consistent with the existing ordering of definitions in that section:

- A. Building Integrated Photovoltaics (BIPVs): A small, private Solar Energy System that is integrated into the structure of a building, such as solar roof tiles and solar shingles.
- B. Ground Mounted Solar Energy System: A Private or Utility-Scale Solar Energy System that is not attached to or mounted to any roof or exterior wall of any principal or accessory building.
- C. Maximum Tilt: The maximum angle of a solar array (i.e., most vertical position) for capturing solar radiation as compared to the natural or unaltered ground or topography upon which the solar array is installed.
- D. Minimum Tilt: The minimal angle of a solar array (i.e., most horizontal position) for capturing solar radiation as compared to the natural or unaltered ground or topography upon which the solar array is installed.
- E. Private Solar Energy System: A Solar Energy System used exclusively for private purposes and not used for any commercial resale of any energy, except for the sale of surplus electrical energy back to the electrical grid.
- F. Roof or Building Mounted Solar Energy System: A Private Solar Energy System attached to or mounted on any roof or exterior wall of any principal or accessory building but excluding BIPVs.
- G. Solar Energy System: Any part of a system that collects or stores solar radiation or energy for the purpose of transforming it into any other form of usable energy, including the collection and transfer of heat created by solar energy to any other medium by any means.
- H. Utility-Scale Solar Energy System: A Solar Energy System in which the principal design, purpose, or use is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.

Staff Comments: There are more definitions listed under 13.27 C(1) Utility Solar: Abandonment, Private Solar Energy System, Decommission, Non-Participating Property, Participating Property. Township may consider consolidating all definitions under Article 2.

ITEM 4: New Section 13.27, entitled “Solar Energy Systems,” is added to the Township’s Zoning Ordinance and reads as follows:

Section 13.27. Solar Energy Systems.

A. General Provisions. All Solar Energy Systems are subject to the following requirements:

1. All Solar Energy Systems must conform to the provisions of this Ordinance and all county, state,



and federal regulations, and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI).

2. If an applicant, owner, or operator of a Solar Energy System fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke any approvals after giving the applicant notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

B. Private Solar Energy Systems.

1. Administrative Review. Except as provided in subsection (d) below, all Private Solar Energy Systems require administrative approval as follows:
 - a. *Application to Zoning Administrator.* An applicant who seeks to install a Private Solar Energy System must submit an application to the Zoning Administrator on a form approved by the Township Board.
 - b. *Application Requirements.* The application must include:
 1. A site plan depicting setback, panel size, and the location of property lines, buildings, fences, greenbelts, and road right of ways. The site plan must be drawn to scale.
 2. Photographs of the property's existing condition.
 3. Renderings or catalogue cuts of the proposed solar energy equipment.
 4. A certificate of compliance demonstrating that the system has been tested and approved by Underwriters Laboratories (UL) or other approved independent testing agency acceptable to Township.
 5. A copy of the manufacturer's installation directions.
 - c. *Zoning Administrator Authority.* The Zoning Administrator is authorized to approve, approve with conditions, or deny applications for Private Solar Energy Systems. An aggrieved party may appeal the Zoning Administrator's decision to the Zoning Board of Appeals pursuant to Article XXII of the Zoning Ordinance.
 - d. *Exclusions from Administrative Review.* Administrative review is not required for (i) a single solar panel with a total area of less than eight square feet; and (ii) repair and replacement of existing solar energy equipment if there is no expansion of the size or area of the solar energy equipment.
2. Private Solar Energy System BIPVs. Private Solar Energy System BIPVs are



permitted as accessory uses in all zoning districts, subject to administrative approval as set forth in this section. A building permit is required for the installation of BIPVs.

3. Roof or Building Mounted Private Solar Energy Systems. Roof or Building Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to administrative approval as set forth in this section and subject to the following requirements:

- a. *Safety.* A Roof or Building Mounted Private Solar Energy System must be installed, maintained, and used only in accordance with the manufacturer's directions, and it must comply with all applicable codes, including the construction code and electric code.
- b. *Building Permit.* A building permit is required for installation of a Roof or Building Mounted Private Solar Energy System.
- c. *Maximum Height.* No part of the Solar Energy System mounted on a roof is permitted to extend more than five feet beyond the peak of the roof or to exceed the maximum building limitation for the zoning district in which it is located. No part of a Solar Energy System mounted on a roof is to project beyond the eaves of the room.
- d. *Location.* If the Solar Energy System is mounted on a building in an area other than the roof, no part of the Solar Energy System is permitted to extend beyond the wall on which it is mounted. A Solar Energy System mounted on a building wall may not face an adjacent public right-of-way.
- e. *Appearance.* Roof or Building Mounted Private Solar Energy Systems must be neutral in color and substantially non-reflective of light.
- f. *Abandonment.* If a Roof or Building Mounted Private Solar Energy System has been abandoned, the property owner must remove it within three months after the date of abandonment.
- g. *Nonconforming Buildings.* A Roof or Building Mounted Private Solar Energy System installed on a nonconforming building or structure is not considered an expansion of the conformity, but it must meet all height and placement requirements of the zoning district and this section.
- h. *Inspection.* The Zoning Administrator may inspect a Private Solar Energy System for compliance with this ordinance upon providing reasonable notice to the property owner or occupant.

4. Ground Mounted Private Solar Energy Systems. Ground Mounted Private Solar Energy Systems are permitted in all zoning districts except the Settlement District as an accessory use, subject to administrative approval as set forth in this section and subject to the



following requirements:

- a. *Safety.* A Ground Mounted Private Solar Energy System must be installed, maintained, and used only in accordance with the manufacturer's directions, and it must comply with all applicable codes, including the construction code and electric code. The Ground Mounted Private Solar Energy System must be permanently and safely attached to the ground.
- b. *Building Permit.* A building permit is required for installation of a Ground Mounted Private Solar Energy System.
- c. *Maximum Height.* A Ground Mounted Private Solar Energy System must not exceed the maximum building height for adjacent accessory buildings and must not exceed 10 feet above the ground when oriented at maximum tilt.
- d. *Location.* A Ground Mounted Private Solar Energy System must be located in the rear yard or side yard and meet the applicable setback requirements for the zoning district.
- e. *Underground Transmission.* All power transmission or other lines, wires, or conduits from a Ground Mounted Private Solar Energy System to any building or other structure must be located underground. If batteries are used as part of the Ground Mounted Private Solar Energy System, they must be placed in a secured container or enclosure.
- f. *Screening.* Greenbelt screening is required around any Ground Mounted Private Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences. The greenbelt must consist of shrubbery, trees, and other non-invasive plant species that provide a visual screen. In lieu of a planting greenbelt, a decorative fence that is at least 50% opaque (meeting the requirements of Section 16.29 of this Ordinance applicable to fences) may be used if approved by the Planning Commission.
- g. *Lot Area Coverage.* The area of the Ground Mounted Private Solar Energy System must not exceed 50% of the square footage of the principal building on the property.
- h. *Appearance.* The exterior surfaces of a Ground Mounted Private Solar Energy System must be generally neutral in color and substantially non-reflective of light.
- i. *Abandonment.* If a Ground Mounted Private Solar Energy System has been abandoned, the property owner must notify the Township and remove the system within three months after the date of abandonment.



- j. *Nonconforming Buildings.* A Ground Mounted Private Solar Energy System installed on a nonconforming building or structure is not considered an expansion of the nonconformity, but it must meet all height and placement requirements of the zoning district and this section.
- k. *Inspection.* The Zoning Administrator may inspect a Private Solar Energy System for compliance with this ordinance upon providing reasonable notice to the property owner or occupant.

Staff Comments: Private Solar Energy Systems:

Exclusions from Administrative Review: These clear guidelines will help homeowners know exactly when to seek review from Zoning Administrator and not overwhelm administration with very small projects (less than 8 sq ft). However, we recommend adding a sentence: 'The project is still subject to required building permits.'

The Township should establish and approve, a form for 'Application for Private Solar Energy Systems' alongside the enactment of this proposed ordinance.

Roof or Building Mounted:

Nonconforming Buildings: Typo 'expansion of the ~~conformity~~, non-conformity'

Ground Mounted:

- **(g) Lot Area Coverage:** The township may consider placing a maximum limit in square feet. Example: up to 2,500 sq. ft.
- **(f) Screening:** Private Ground Mounted systems are often comparable to accessory buildings like pole barns. The required screening seems excessive to require of a private landowner. We recommend that any screening for Ground Mounted Private Solar Energy Systems be comparable to what is required of accessory buildings in the applicable zoning districts.
- **(j) Non-Conforming Buildings:** This is an unnecessary provision for Ground Mounted Solar Energy System. -It would be built on the ground not on a building.

The Private Solar Energy Systems strengthens Cohoctah Township ordinance standards. With solar energy systems becoming more affordable the Cohoctah Township can expect to see an increase in private applications. The draft ordinance clearly outlines requirements, and the steps residents need to take to install Private Solar Energy Systems without encroaching on personal property rights.

ITEM 4: New Section 13.27, entitled "Solar Energy Systems," continued....

C. Utility-Scale Solar Energy Systems. Utility-Scale Solar Energy Systems are permitted by Special Land Use approval in the Solar Energy System Overlay District and require a



special land use permit under Article 13 and site plan approval under Article 20. Utility-Scale Solar Energy Systems are also subject to the following requirements:

1. *Definitions.* For purposes of this Section 13.27, the following terms and words are defined as follows. Should there be any conflict between the definitions of this Section and any other part of this Ordinance, the terms of this Section shall govern.

- a. *Abandonment.* Any solar energy system or facility that is no longer producing power, including damaged panels and non-functioning panels.
- b. *Conceptual Plan.* A map and summary of the proposed development or land use, indicating the lands to be included, a brief description of the proposed project, a timeline for the proposed project, where and how project will connect to the power grid, and any other information Applicant deems necessary to provide the Township with a general overview of the proposed project.
- c. *Decommission.* To remove or retire a solar energy system or facility from active service.
- d. *Height.* The height of a solar energy system and components, measured vertically from the natural grade to its highest point at maximum tilt.
- e. *Non-Participating Property.* A property that is not subject to a Utility Scale Solar Energy System lease or easement agreement at the time an application is submitted for a Special Land Use for the purposes of constructing a Utility Scale Solar Energy System.
- f. *Participating Property.* A property that participates in a lease or easement agreement, or other contractual agreement, with an entity submitting a Special Land Use Permit application for the purpose of developing a Utility Scale Solar Energy System.

2. *Special Land Use Permit Application Requirements.* In addition to the requirements of Article 13, the applicant for a Utility-Scale Solar Energy System must provide the Township with all of the following:

- a. The name of the applicant, any parent company, subsidiary of the parent company, along with any “doing business as” of the parent company.
- b. Application fee in an amount set by resolution or fee schedule approved by the Township Board.
- c. A list of all parcel numbers that will be used by the Utility-Scale Solar Energy System including applicable attachments, establishing ownership of each parcel, with all lease agreements, easements, or purchase agreements for



the subject parcels. All agreements related to the use of the subject parcels must be recorded with the Livingston County Register of Deeds.

- d. An operations agreement setting forth the operations parameters, the name and contact information of the certified operator, the applicant's inspection protocol, emergency procedures, and general safety documentation.
- e. A written emergency response plan detailing the applicant's plan for responding to emergencies, including fire emergencies, and analyzing whether adequate resources exist to respond to fires and other emergencies. If adequate resources do not exist, the applicant must identify its plan for providing those resources.
- f. A written description of the fire suppression system that will be installed, which must identify the manufacturer of the fire suppression system and generally describe its operations and capacity to extinguish fires.
- g. Current ground and aerial photographs of the participating property, in both a physical and electronic copy of the photographs.
- h. A copy of the applicant's power purchase agreement or other written agreement, with any exhibits or attachments thereto, with an electric utility showing approval of an interconnection with the proposed Utility-Scale Solar Energy System.
- i. A written plan for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management.
- j. A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Utility-Scale Solar Energy System, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the Utility-Scale Solar Energy System and restore the subject parcels.
- k. Financial security that meets the requirements of this ordinance.
- l. A plan for resolving complaints from the public or other property owners concerning the construction and operation of the Utility-Scale Solar Energy System.
- m. A plan for managing any hazardous waste.
- n. A transportation plan for construction and operation phases, including any applicable agreements with the Livingston County Road Commission and Michigan Department of Transportation.



- o. An attestation that the applicant will indemnify and hold the Township, and its elected and appointed officials, harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Solar Energy System. The Township shall be named as an additional insured for such indemnity under C.23.
- p. A copy of the manufacturer's directions or instruction manual for installing, maintaining, and using the Utility-Scale Solar Energy System.
- q. A ground cover vegetation establishment and management plan that complies with this ordinance.
- r. Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection (MCL324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township.
- s. A groundwater analysis of all parcels in the participating property.
- t. Any additional information or documentation requested by the Planning Commission, Township Board, or other Township representative.

3. *Site Plan Application Requirements.*

- a. *Contents of Site Plan.* In addition to the requirements in Article 20, the applicant must provide a boundary survey by surveyor licensed in the State of Michigan of the project and a detailed site plan draft to a scale of 1" = 200 feet with the following:
 - 1. Location of all existing and proposed dwellings, structures, panels, equipment, electrical tie lines, transmission lines, transformers, inverters, substations, security fencing, and all other components of the Utility-Scale Solar Energy System within the participating property and all dwellings and/or structures within 1000 feet of the property lines of the participating property.
 - 2. Depiction (to scale) of all setbacks, property lines, fences, signs, greenbelts, screening, drain tiles, easements, flood plains, bodies of water, proposed access drives, and road rights of way.
 - 3. Indication of how and where the system will be connected to the power grid.



4. Plan for any land clearing and grading required for the installation and operation of the system.
5. Plan for ground cover establishment and management.
6. Plan for providing a wildlife corridor that provides access for wildlife to navigate through the development.
7. Description of measures to be taken to support the flow of rainwater and/or stormwater management.
8. Security plan detailing measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance, or repair of the Utility-Scale Solar Energy System.
9. A maintenance plan, including landscaping upkeep, regular checks, and maintenance for the equipment, and decommissioning and removal. The description shall include maintenance schedules, types of maintenance to be performed, and decommissioning and removal procedures and schedules if the Utility-Scale Solar Energy System is decommissioned. The maintenance plan must include a plan for maintaining all setback areas in the project.
10. Anticipated construction schedule including timeline to completion and scope of work.
11. Sound modeling study including sound isolines extending from the sound sources to the property lines.
12. Any additional studies requested by the Planning Commission, including but not limited to the following:
 - a. Visual Impact Assessment: A technical analysis by a third- party qualified professional acceptable to the Township of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscaping and other screening measures), a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project.
 - b. Environmental Analysis:
 - i. The applicant shall have a third-party qualified professional, acceptable to the Township, conduct an



analysis to identify and assess any potential impacts on the natural environment including, but not limited to, wetlands and other fragile ecosystems, historical and cultural sites, and antiquities. The applicant shall take appropriate measures to minimize, eliminate, or mitigate adverse impacts identified in the analysis.

- ii. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts. The applicant shall comply with applicable parts of the Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, MCL 324.101 et seq.) including but not limited to Part 31 Water Resources Protection (MCL 324.3101 et seq.), Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 et seq.), Part 301 Inland Lakes and Streams (MCL 324.30101 et seq.), Part 303 Wetlands (MCL 324.30301 et seq.), Part 323 Shoreland Protection and Management (MCL 324.32301 et seq.), Part 325 Great Lakes Submerged Lands (MCL 324.32501 et seq.), and Part 353 Sand Dunes Protection and Management (MCL 324.35301 et seq.).
- c. Stormwater Study: An analysis by a third-party qualified professional acceptable to the Township studying the proposed layout of the Utility-Scale Solar Energy System and how the spacing, row separation, and slope affects stormwater infiltration, including calculations for a 100-year rain event. Percolation tests or site-specific soil information must be provided to demonstrate infiltration on-site without the use of engineered solutions.
- d. Glare Study: An analysis by a third-party qualified professional acceptable to the Township to determine if glare from the Utility-Scale Solar Energy System will be visible from nearby residents and roadways. If required, the analysis will consider the changing position of the sun throughout the day and year and its influences on the utility-scale solar energy system.
- e. Wildlife Impact: A wildlife impact study, including an analysis of the impact on the properties within one mile of the project.
- f. Utility-scale solar energy systems are not permitted on property enrolled in the Farmland and Open Space Preservation Act, being in PA 116, of 1974, now codified in Part 361 of the Natural Resources and Environmental Protection Act, PA 451 of



1974, as amended.

- b. *Conceptual Layout Plan.* Applicants may submit an optional conceptual layout plan for review prior to submission of a formal site plan. The conceptual site plan may be reviewed by the Planning Commission to allow for discussion and feedback.
- c. *Approvals from Other Agencies.* Final site plan approval may be granted only after the applicant receives (1) all required federal and state approvals, and (2) approval by the local fire chief, county drain commissioner, county road commission, local airport zoning authority (if applicable), county building department, and any other federal, state or local agency having jurisdiction or authority to grant permits related to the Utility-Scale Solar Energy System.

4. *Application Items as Substantive Requirements.* The information, plans, documents, and other items identified as application requirements in this ordinance, including the site plan and special land use permit, are substantive requirements for obtaining approval for a Utility-Scale Solar Energy System. The Planning Commission will review the sufficiency of the application materials. If the Planning Commission determines that the substance of any application item is insufficient to protect the public health, safety, and welfare, the Planning Commission may deny approval on that basis.

5. *System and Location Requirements.*

- a. Utility-Scale Solar Energy Systems are only permitted within the Solar Energy System Overlay District.
- b. Utility-Scale Solar Energy Systems must be ground mounted.
- c. Utility-Scale Solar Energy Systems (including all solar panels, structures, and equipment) must be set back at least 250 feet from the property line of any Non-Participating Property at the time of application. In addition, if a non-participating dwelling is within 500 feet of said setback, the setback must be increased to maintain 500 feet from said dwelling. If a single Utility-Scale Solar Energy System is located on more than one lot, or if the adjacent parcel is owned by the same owner as the property on which the Utility-Scale Solar Energy System is located, then the lot-line setbacks of this subsection do not apply to the lot lines shared by those lots. All property in the setback areas, if not farmed, shall be maintained as defined in a maintenance setback plan acceptable to the Township.
- d. Utility-Scale Solar Energy Systems must be set back at least 100 feet from the edge of any wetland, shoreline, or drain easement. The Planning Commission may increase this setback requirement up to 200 feet if the Planning Commission determines that such a setback is necessary to protect the public health, safety, and welfare.



- e. The height of the Utility-Scale Solar Energy System and any mounts, buildings, accessory structures, and related equipment must not exceed 10 feet when oriented at maximum tilt. The Planning Commission may allow a height of up to 16 feet if the applicant establishes that the lot is used for grazing by farm animals in a manner that requires increasing the height limit. Lightning rods shall not exceed 20 feet in height and shall not be any greater than necessary to protect the Utility-Scale Solar Energy System from lightning.
 - f. The ground mounting of panels must be by screw or a similar system that does not require a footing, concrete, or other permanent mounting, to minimize soil compaction. No pounding of panels posts is permitted.
6. *Permits.* All required county, state, and federal permits must be obtained before final site plan approval and before the Utility-Scale Solar Energy System begins operating.
7. *Screening.* Greenbelt screening is required around any Utility-Scale Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences, as described below:
- a. The screening shall be installed to obscure the Utility Scale Solar Facility and shall contain two rows of staggered evergreen trees planted not more than twelve (12) feet apart trunk to trunk, and the two rows shall be no greater than ten (10) ft apart. The Township may consider an alternative landscape buffer as a part of the special land use approval, provided the alternative provides adequate screening.
 - b. Plantings shall be least eight (8) feet tall at time of planting and shall reach a height of ten (10) feet within three (3) growing seasons.
 - c. The trees may be trimmed but must maintain a height of at least eighteen (18) feet.
 - d. Evergreen trees shall be Norway Spruce or such alternative approved by the Township.
 - e. Good husbandry techniques shall be followed with respect to vegetation, including but not limited to, proper pruning, proper fertilizing, and proper mulching, so that the vegetation will reach maturity as soon as practical and will have maximum density in foliage. Dead or diseased vegetation shall be removed and must be replanted in a manner consistent with this Section at the next appropriate planting time.
 - f. Front, side, and rear yard screening is required if the Utility Scale Solar Energy System is adjacent to a non-participating property.



8. *Appearance.* The exterior surface of the Utility-Scale Solar Energy System must be generally neutral in color and substantially non-reflective of light.

9. *Agricultural Preservation and Habitat Impact.* Land clearing and clear cutting trees and other vegetation shall be limited to what is minimally necessary for installation and operation of the system and to ensure all-season access to solar resources given the topography of the land. Topsoil distributed during preparation shall be retained on site. In addition, access drives shall be designed to minimize extent of soil disturbance, water run-off, and soil compaction.

10. *Lighting.* Lighting of the Utility-Scale Solar Energy System must be down facing and is limited to the minimum light necessary for safe operation. Lighting shall not be more than 4 feet taller than the maximum height of any panel and in no case shall lighting be taller than 20 feet. Illumination from any lighting must not extend beyond the perimeter of the lot(s) used for the Utility-Scale Solar Energy System. The Utility-Scale Solar Energy System must not produce any glare that is visible to neighboring lots or to persons traveling on public or private roads. Flashing, intermittent, and motion lights are prohibited.

11. *Signage.* Signage is not permitted except as required in this subsection and for purposes of posting information that may be necessary for electrical operations and the safety and welfare of the public. An information sign shall be posted and maintained at the entrance(s) listing the name, address, and phone number of the operator.

12. *Security Fencing.* Security fencing may be required around all electrical equipment related to the Utility-Scale Solar Energy System, including any transformers and transfer stations in the discretion of the Planning Commission and to provide for the movement of wildlife. Appropriate warning signs must be posted at safe intervals at the entrance and around the perimeter of the Utility-Scale Solar Energy System. Required fencing must be at least seven feet tall and be composed of wood post and woven farm wire fencing. The Township may allow or require a fence design to allow for the passage of wildlife upon a finding that adequate access control and visual screening will be preserved.

13. *Noise.* The noise generated by a Utility-Scale Solar Energy System (which shall not be averaged over time, but instead shall be instantaneous) must not exceed the following limits:

- a. 40 dBA L_{max}, as measured at the property line, between the hours of 7:00 a.m. and 9:00 p.m.
- b. 35 dBA L_{max}, as measured at the property line, between the hours of 9:00 p.m. and 7:00 a.m.
- c. In addition to the above limitations, an evergreen tree berm, with trees spaced not more than 12 feet apart, may be required to reduce noise levels surrounding all inverters and substations. The berm must be no more than 10 feet from all inverters, must be at least as tall as all inverters but not more than three feet taller than the height of all inverters.



14. *Underground Transmission.* All power transmission or other lines, wires, or conduits from a Utility-Scale Solar Energy System to any building or other structure must be located underground at a depth that complies with current National Electrical Code standards, except for power switchyards or the area within a substation.

15. *Drain Tile Inspections.* The applicant or operator must inspect all drain tile at least once every three years by means of robotic camera, with the first inspection occurring before construction of any part of the Utility-Scale Solar Energy System occurs. The applicant or operator must submit proof of the inspection to the Township and Livingston County Drain Commission. Any damaged or inoperable tile shall be repaired prior to construction. After the Utility-Scale Solar Energy System is operational, the owner or operator must repair any damage or failure of the drain tile within 30 days after discovery and submit proof of the repair to the Township. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection. Documentation of repairs shall be submitted to the property owner, the township, and the Livingston County Drain Commission and must indicate the location, nature, and satisfactory completion of the repairs.

16. *Groundwater Analysis.* The operator of the Utility-Scale Solar Energy System must provide a groundwater analysis for all parcels within the participating properties annually during the life of the project and for five years after abandonment or decommissioning.

17. *Access Routes.* Access drives are subject to the approval of the Livingston County Road Commission and the Township Planning Commission. Access drives must be adequately maintained for emergency vehicle use, even in winter.

18. *Construction.* Construction or maintenance of the Utility-Scale Solar Energy System may only occur between 7:00 a.m. and 6:00 p.m. Monday through Friday, excluding federal holidays. Any material damages to a public road located within the Township resulting from the construction, maintenance, or operation of a Utility Scale Solar Energy System shall be repaired at the Applicant's expense.

19. *Fire Suppression.* The Utility-Scale Solar Energy System must include a fire suppression system that is specifically designed to immediately suppress and extinguish fires in any part of the Solar Energy System, including the panels, electrical equipment, transformers, and transfer stations. The applicant or operator must provide documentation establishing the effectiveness of the fire suppression system and the results of a third-party independent inspection acceptable to the Township of the fire suppression system.

20. *Ground Cover.* The lot on which the Utility-Scale Solar Energy System is located must be covered with vegetation until decommissioning. To meet this requirement, the lot must include one or more of the following:

- a. *Pollinator Habitat:* A site designed to have vegetation that will enhance pollinator populations, including a diversity of flowering plants and wildflowers, and meets a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.



- b. Conservation Cover: A site designed with practices to restore native plants, grasses, and prairie with the aim of protecting specific species or providing specific ecosystem services, such as carbon sequestration or soil health. The site must be designed in partnership with a conservation organization or approved by the Livingston Conservation District.
- c. Forage/Grazing: Sites that incorporate rotational livestock grazing and forage production as part of a vegetative maintenance plan.
- d. Agrivoltaics: Sites that combine raising crops for food, fiber, or fuel, and generating electricity within the project area to maximize land use.

21. *Wildlife Corridor.* Utility Scale Solar Energy Systems shall have access corridors for wildlife to navigate through the development.

22. *Signs.* Signs are permitted but must comply with Article 19. The lot must include at least one sign identifying the owner and providing a 24-hour emergency contact telephone number.

23. *Insurance.* The applicant or operator will maintain property/casualty insurance and general commercial liability insurance in an amount of at least \$10 million per occurrence. All insurance policies shall name the Township as an additional insured and shall include the indemnity provisions of C.2.o.

24. *Decommissioning.* If a Utility-Scale Solar Energy System is abandoned or otherwise nonoperational for a period of 90 days, the property owner or the operator must notify the Township and must remove the system within six months after the date of abandonment. The site must be filled and covered with topsoil and restored to a state compatible with the surrounding vegetation. Removal requires receipt of a demolition permit from the Building Official and full restoration of the site to the satisfaction of the Zoning Administrator. The requirements of this subsection also apply to a Utility-Scale Solar Energy System that is never fully completed or operational if construction has been halted for a period of one year. Should the Applicant fail to meet its obligations to decommission the site, the Township may utilize the security being held for this purpose to enter the site and decommission in accordance with the last approved plan.

- a. The decommissioning plan shall be written to provide financial security to the Township for 125% of the cost to remove and dispose of all panels, wiring, and restoration of the land to its original conditions. The value of decommissioning shall be determined by a third-party financial consultant or engineer selected by the Township and paid for by the developer. The decommissioning financial security shall be paid in cash to the Township. Once value of decommissioning is determined, it shall be updated on a periodic basis of not less than every 2 years and additional financial security may be required on the basis of the average inflation rate of the preceding 2 years.



- b. Continuing Obligations: Failure to keep any required financial security in full force and effect at all times while a Utility Scale Solar Energy System exists or is in place shall constitute a material and significant violation of the Special Land Use Permit and this Ordinance, and will subject the Utility Scale Solar Energy System Applicant, owner and operator to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use Permit.

25. *Complaint Resolution Protocol.* Applicant shall provide a Complaint Resolution protocol at time of submission of final site plan. The operator of the project or its assigns shall initially respond within 10 business days to complaints from neighboring property owners arising from and related to the operation of the Utility Scale Solar Energy System. Any resolution shall include lawful and reasonable solutions consistent with the Zoning Ordinance, which shall also be provided to the Township Zoning Administrator.

26. *Extraordinary Events.* If the Utility-Scale Solar Energy System experiences a failure, fire, leakage of hazardous materials, personal injury, or other extraordinary or catastrophic event, the applicant or operator must notify the Township within 24 hours. Any damaged or inoperable panels must be repaired within 30 days after discovery and the applicant or operator must submit proof of the repair to the Township. Add language to show cause for additional time.

27. *Annual Report.* The applicant or operator must submit a report on or before November 1 of each year that includes all of the following:

- a. Amount of electric generation;
- b. Current proof of insurance;
- c. Verification of financial security; and
- d. A summary of all complaints, complaint resolutions, and extraordinary events.
- e. Number of panels removed, replaced, repaired, or other improvements.

Additionally, a representative of the applicant or operator must appear before the Township Board at least once every three years to report on the Utility-Scale Solar Energy System and address questions or concerns from the Planning Commission.

28. *Inspections.* The Township may inspect a Utility-Scale Solar Energy System at any time by providing 24 hours advance notice to the applicant or operator.

29. *Transferability.* A special use permit for a Utility-Scale Solar Energy System is transferable to a new owner or operator. The new owner or operator must register its name and



business address with the Township and must comply with this Ordinance and all approvals and conditions issued by the Township.

30. *Lease.* If the participating property is proposed to be leased, instead of owned, by the owner or applicant of the Utility-Scale Solar Energy Project, all property within the project boundary must be included in a recorded easement(s), lease(s), or consent agreement(s) specifying the applicable uses for the duration of the project. All necessary leases, easements, or other agreements between the utility scale solar energy owners or applicant and the property owners must be in place prior to commencing construction.

31. *Site Plan Amendments.*

- a. Site plan amendments may be permitted pursuant to Article XX of the zoning ordinance, except the following shall not be considered a minor amendment by the Planning Commission:
 1. Changes of the location of arrays, fencing, buildings, or ancillary equipment by 10 feet or more.
 2. Any increase in the height of solar panels.
- b. The Planning Commission may consider the following to be minor amendments:
 1. Changes of the location of arrays, fencing, buildings, or ancillary equipment by less than 10 feet.

32. *Remedies.* If an applicant or operator fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke the special land use permit and site plan approval after giving the applicant or operator notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

33. *No Battery Storage.* No on-site power storage, battery storage, PV Array, or device storage is permitted.

34. The applicant must certify and guarantee that the utility-scale solar energy system will comply with 47 CFR Part 15, subpart B and not produce any radio frequency interference or electrical magnetic interference at the property line of all non-participating property owners within 1,000 feet of the project.

Validity and Severability.

If any portion of this Ordinance is found invalid for any reason, such holding will not affect the validity of the remaining portions of this Ordinance.

Repealer.



Section 13.17 of the Township Zoning Ordinance pertaining to “solar buildings” is repealed. All other ordinances inconsistent with the provisions of this Ordinance are repealed to the extent necessary to give this Ordinance full force and effect.

Effective Date.

This Ordinance takes effect seven days after publication as provided by law.

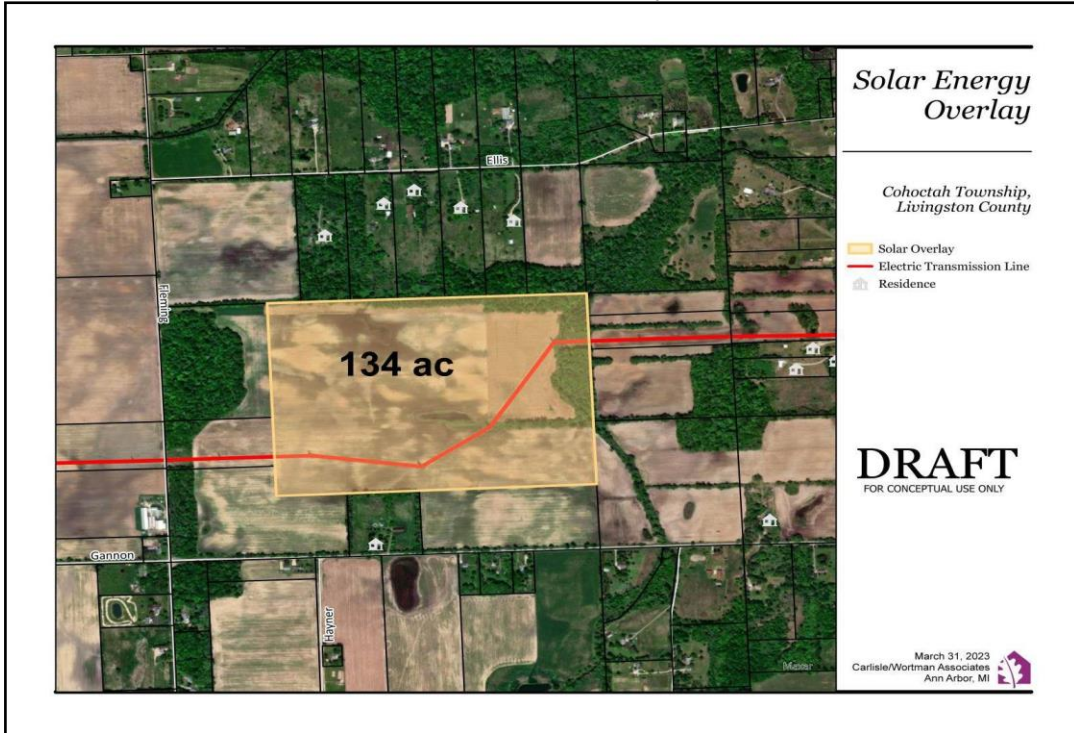
Staff Comments Utility Solar Energy Systems:

13.27 (5)c: Utility-Scale Solar Energy Systems (including all solar panels, structures, and equipment) must be set back at least 250 feet from the property line of any Non-Participating Property at the time of application. *In addition, if a non-participating dwelling is within 500 feet of said setback, the setback must be increased to maintain 500 feet from said dwelling. If a single Utility-Scale Solar Energy System is located on more than one lot, or if the adjacent parcel is owned by the same owner as the property on which the Utility-Scale Solar Energy System is located, then the lot-line setbacks of this subsection do not apply to the lot lines shared by those lots. All property in the setback areas, if not farmed, shall be maintained as defined in a maintenance setback plan acceptable to the Township.*

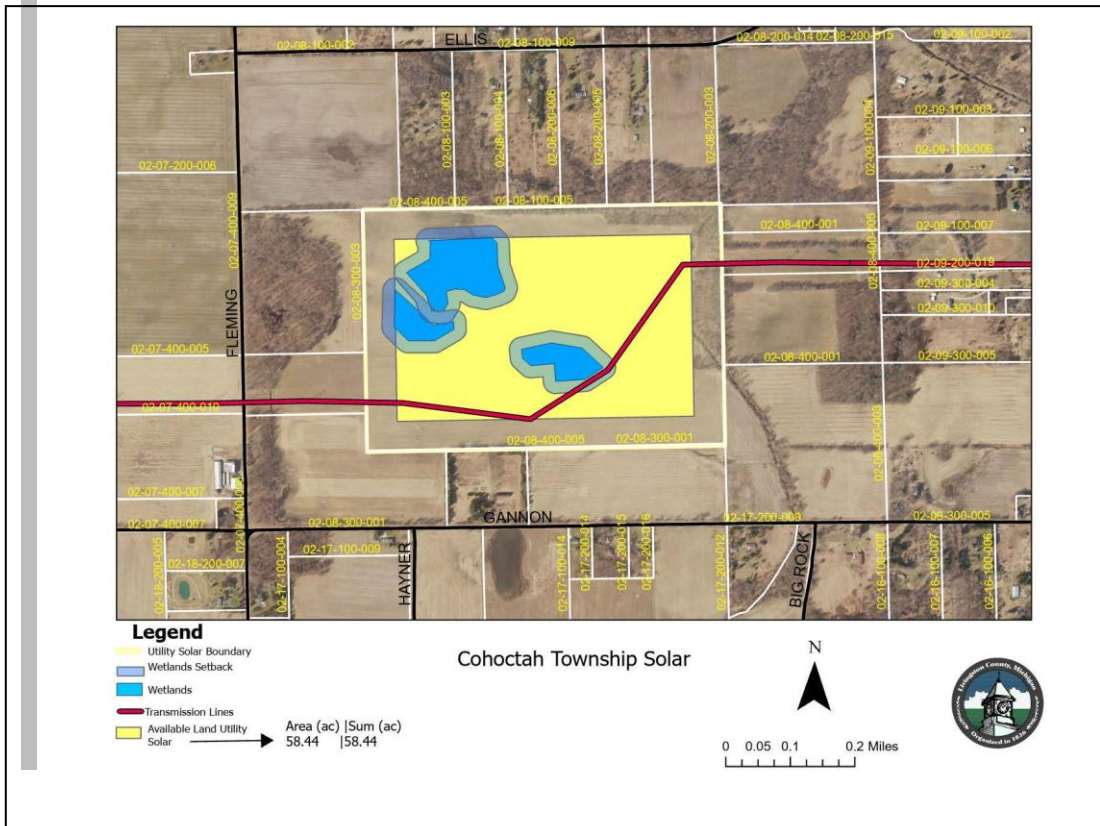
- *The above was an addition made at the July 6, 2023, Planning Commission Meeting. Property lines are used for setback placement because they are not easily moved and modified. Whereas setting ‘dwellings’ as a point for setbacks can pose some future issues and challenges because they can be constructed and moved more easily. We would recommend deleting the 500 ft setback requirements set at dwellings for the potential future issues it may cause.*
- *13.27 (3) a.1 Application Fee: should be set prior or alongside the enactment of this proposed ordinance.*
- *Other than the above suggestions, the proposed ordinance is concise and thoroughly reviewed by the township attorney. While solar ‘farming’ is considered a use by the Michigan Department of Agriculture and Rural Development (MDARD) and the Farmland and Open Space Preservation Act (MCL 324.36101 et seq.), Cohoctah Township is choosing to prohibit any commercial solar energy facilities on PA 116 lands which is allowed within local zoning controls that are in place with the Township Ordinance. We believe that the amendments that are proposed at this time will proactively protect the community while allowing this renewable energy source Cohoctah Township.*



Review of the Solar Overlay District



Cohoctah Solar Overlay District with Setbacks





Staff Comments Overlay District

As noted in the above graphics, with the 250-foot setback from non-participating properties and 100-foot setbacks from wetlands applied to the 134 Overlay; there are 54 remaining acres. This does not consider the 500-foot setback for dwellings, that would further decrease the available acreage. The township needs to decide if that amount of area aligns with the Townships' demonstrated need per 27.01 (7)

The Solar Overlay and buildable acreage is limited. Further, it is a possibility that a landowner could choose: to develop something else or sell the land to a residential developer, the overlay area may become unavailable in the future.

The current owner of the 4702-08-400-005 is Consumers Energy. We would inquire if the landowner has been notified about the placement of the solar overlay.

It would be in the best interests for the Cohoctah Planning Commission to begin looking at other properties that could be added to the overlay should the current overlay become unavailable. If not done prior to the enactment of this proposed ordinance than during the next Master Plan review. We recommend these suggestions so the township does not find themselves excluding a land use should the overlay become developed or sold. Excluding a land use is prohibited under Zoning Act Enabling Act (MLC 125.3207).

If additional parcels are needed to avoid exclusionary zoning the township should be confident in the standards laid out in the proposed ordinance.

TOWNSHIP PLANNING COMMISSION RECOMMENDATION: APPROVAL, Cohoctah Township Planning Commission recommended approval of the proposed amendments at their July 6, 2023, public hearing. There were no comments for or against the proposed amendments prior to recommend approval. 'Public comment was received' after recommended approval, with no indication what the public comments were.

RECOMMENDATION: APPROVAL. The solar amendments to the Cohoctah Zoning Ordinance are well written and serve to strengthen the ordinance standards for private and commercial solar energy systems.



Livingston County Department of Planning

MEMORANDUM

TO: Livingston County Planning Commission and Genoa Charter Township Board

FROM: Martha Haglund, Principal Planner

DATE: 8/06/2023

SUBJECT: Z-28-23. Amendments to the Zoning Ordinance:

- Replace Sections as follows:
 - 11.06.01: Solar Energy Systems
 - 11.06.02: Private Solar Energy Systems
 - 11.06.03: Ground Mounted Private Solar Energy System
 - 11.05.04: Roof or Building Mounted Private Solar Energy System
- Add New Section 11.06.05: Utility solar Energy System or Facility

Scott Barb
AICP, PEM
Director

Robert A. Stanford
AICP
Principal Planner

Martha Haglund
Principal Planner

The Genoa Charter Township Planning Commission is proposing to replace several sections of the Township Zoning Ordinance that will add a new section. The additions outline standards for both private and utility scale solar facilities. Genoa Township approved a moratorium on utility solar energy systems on March 20, 2023 and will expire September 20, 2023. Genoa Township has held several work sessions and garnered public input on the proposed ordinance changes.

The Staff has reviewed the proposed amendments for accuracy and compatibility with the existing ordinance language and offers the following summary for your review. Staff comments are written in *italic and underlined* with additions and proposed changes to the ordinance written in red.

ITEM 1: Replace 11.06.01 in its entirety, entitled “Solar Energy Systems,” in its Zoning Ordinance and reads as follows:

11.6.1 General:

(a) **Intent:** The intent of these regulations is to provide suitable locations for Solar Energy Systems to meet a reasonable demonstrated need for renewable energy land uses while providing regulations that limit the impact of these facilities as follows:

- (1) Protect public health, safety, welfare and quality of life by minimizing the potential adverse impacts of a solar energy system.
- (2) To ensure the compatibility of land uses in the vicinity of the solar

Department Information

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energy system.

- (3) Protect the aesthetic quality of the natural, rural open spaces of the Township and to mitigate adverse impacts to agricultural lands, natural and environmentally-sensitive areas, and developed residential areas; and to preserve scenic views and cultural heritage.
- (4) Protect neighboring property owners from glare, noise and safety impacts.
- (5) Protect native vegetation, wildlife and pollinator habitat.
- (6) To establish standards and procedures by which the siting, design, construction, operation, monitoring, modification, and removal of such systems shall be governed.
- (7) Land considered for utility solar energy systems shall be within reasonable proximity to an electrical substation and electrical transmission lines to limit potential impact on other areas and uses within the Township.

(b) Definitions:

- (1) **Abandonment:** Any solar energy system or facility that is no longer producing power.
- (2) **Building Integrated Photovoltaics (BIPVs):** A private solar energy system that is integrated into the structure of a building (rather than a separate mechanical device), replacing or substituting for an architectural or structural component of the building. Building integrated systems include but are not limited to photovoltaic or hot water solar energy systems that are contained within roofing materials such as solar roof tiles or solar shingles, windows, skylights and awnings.
- (3) **Decommission:** To remove or retire a solar energy system or facility from active service.
- (4) **Ground-Mounted Solar Energy System:** A private or utility solar energy system that is not attached to or mounted on any roof or exterior wall of any principal or accessory building.
- (5) **Height:** The height of a solar energy system, measured vertically from the adjacent grade to its highest point at maximum tilt.
- (6) **Inhabited Structure:** Any existing structure usable for living or non-agricultural commercial purposes, including, but not limited to: working, sleeping, eating, cooking, recreation, office, office storage, or any combination thereof. An area used only for storage incidental to a residential use, including agricultural barns, is not included in this definition. If it is not clear by this definition, the Zoning Administrator shall make a determination of any structure regarding whether or not it is inhabited.
- (7) **Maximum Tilt:** The maximum angle of a solar array (i.e., most vertical position) for capturing solar radiation as compared to the natural or unaltered ground or topography upon which the solar array is installed.
- (8) **Minimum Tilt:** The minimal angle of a solar array (i.e., most horizontal position) for capturing solar radiation as compared to the natural or unaltered ground or topography upon which the solar array is installed.

- (9) **Non-Participating Property:** A property that is not subject to a Utility Solar Energy Facility lease or easement agreement at the time an application is submitted for a Special Land Use for the purposes of constructing a Utility Solar Energy Facility.
- (10) **Participating Property:** A property that participates in a lease or easement agreement, or other contractual agreement, with or that is owned by an entity submitting a Special Land Use Permit application for the purpose of developing a Utility Solar Energy Facility.
- (11) **Photovoltaic Array (PV Array):** A device designed to collect and transform solar energy into electricity.
- (12) **Private Solar Energy System:** A Solar Energy System used exclusively for private purposes with the purpose primarily of generating electricity for the principle use on the site and not used for commercial resale of energy, except for the sale of surplus electrical energy back to the electrical grid.
- (13) **Repowering:** Replacing or upgrading Solar Energy System to increase power rating of panels or Solar Energy System accessory structures within the approved project footprint. This does not apply to regular maintenance.
- (14) **Roof or Building-Mounted Solar Energy System:** A private solar energy system that is attached to or mounted on any roof or exterior wall of any principal or accessory building but excluding BIPVs.
- (15) **Solar Energy System:** Any part of a system or device designed to collect or store solar radiation or energy for the purpose of transforming it into any other form of usable energy or electricity, including the collection and transfer of heat created by solar energy to any other medium by any mean which may include but is not limited to, PV arrays, racks, inverters, transformers, wiring, batteries, and electrical system components.
- (16) **Solar Carport:** A solar energy system of any size that is installed on a structure that is accessory to a parking area, and which may include electric vehicle supply equipment or energy storage facilities. Solar panels affixed on the roof of an existing carport structure are considered a Roof-Mounted SES.
- (17) **Solar Farm:** See Utility Solar Energy Facility.
- (18) **Utility Solar Energy System or Facility:** A Solar Energy System where the principal design, purpose, or use of such system is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.

- (a) **General Provisions:** Solar Energy Systems shall comply with the standards below:
- (1) All Solar Energy Systems shall be permanently and safely attached to the building or structure or to the ground and must conform to the provisions of this Ordinance and all County, State, and Federal regulations, and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI).
 - (2) Solar Energy Systems shall be installed, maintained and used only in accordance with the manufacturer's directions. Upon request, a copy shall be submitted to the Township or building official prior to installation. The Township may inspect the completed installation to verify compliance.
 - (3) If an applicant or operator of a Solar Energy System fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke any approvals after giving the applicant notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

Staff Comments

The Intent, Definitions, and General Provisions are are very thorough. The only suggestion being the absent use of the word 'Solar Carport' throughout the proposed changes, although there is a definition. The township may consider being more specific in the definition as to if a new solar carport installation would be categorized as a Ground Mounted SES or a Roof-Mounted SES. Then an applicant could infer the required standards from there.

ITEM 2: Replace 11.06.02 in its entirety, now entitled "Private Solar Energy System," in its Zoning Ordinance and reads as follows:

11.6.2 Private Solar Energy System:

- (a) Private Solar Energy Systems shall be permitted as an accessory use in all zoning districts, subject to the following:
- (1) A land use permit from the Township is required for the installation of any private solar energy system. The applicant is responsible for contacting the building department to determine if a Private Solar Energy System requires a building permit. The application must include:
 - a. A site plan depicting setback, panel size and location, wiring location, lot coverage, location of property lines, buildings, structures, fences, greenbelts, and road right of ways. The site plan must be drawn to scale.
 - b. Photographs of the property's existing condition.

- c. Renderings or catalogue cuts of the proposed solar energy equipment.
 - d. A certificate of compliance demonstrating that the system has been tested and approved by Underwriters Laboratories (UL) or other approved independent testing agency acceptable to Township.
 - e. A copy of the manufacturer's installation directions.
- (2) The exterior surfaces of solar energy systems shall be generally neutral in color and substantially non-reflective of light. A unit may not be installed or located so that sunlight or glare is reflected into neighboring uses or onto adjacent streets.
 - (3) Solar energy systems shall be located in the least visibly obtrusive location where panels would remain functional.
 - (4) Batteries associated with Private Solar Energy Systems must be located within a secured container or enclosure.
 - (5) Solar energy systems that are damaged or are no longer in use for a period of one (1) year shall be replaced or removed by the property owner within six (6) months of the date of damage or abandonment.
 - (6) Signage shall be provided in a visible location with disconnection procedures for emergency first responders.
 - (7) All power transmission lines, wires, or conduits from a ground-mounted Private Solar Energy System to any building or other structure shall be located underground.

ITEM 3: Replace 11.06.03 in its entirety, now entitled "Ground Mounted Private Solar Energy System," in its Zoning Ordinance and reads as follows:

11.6.3 Ground Mounted Private Solar Energy System. Ground Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to the following:

- (a) Ground Mounted Private Solar Energy Systems are subject to special land use review except small residential accessory systems which occupy less than 500 square feet in area are subject to administrative review of a land use permit.
- (b) Location. Ground Mounted Private Solar Energy System shall only be located in the non-required rear or side yard for principal buildings in the zoning district in which it is located. The unit may be located in the front yard only if permitted by the Planning Commission provided that the unit is no less than two-hundred (200) feet from the front lot line.
- (c) Size. The total combined area of all Ground Mounted Private Solar Energy System must not exceed one (1) percent of the size of the lot with a maximum of 2,500 square feet.

- (d) Lot Coverage. The total area of ground-mounted solar energy collectors shall be included in the calculation of maximum permitted lot coverage for impervious surface.
- (e) Height. 16 feet maximum, measured from the natural grade below the unit to the highest point when oriented to maximum tilt.
- (f) All power transmission lines, wires, or conduits from a ground-mounted Private Solar Energy System to any building or other structure shall be located underground.
- (g) Screening. Greenbelt screening is required around any Ground Mounted Private Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from adjacent residences. The greenbelt shall consist of shrubs, trees, and other non-invasive plant species that provide a visual screen. In lieu of a planting greenbelt, a decorative fence may be used if approved by the Planning Commission.

ITEM 4: Replace 11.06.04 in its entirety, now entitled “Building Integrated Photovoltaics (Roof or Building Mounted Private Solar Energy Systems),” in its Zoning Ordinance and reads as follows:

11.6.4 Building Integrated Photovoltaics (Roof or Building Mounted Private Solar Energy Systems). Private solar energy system BIVPs shall be permitted in all zoning districts and shall be subject to the zoning regulations applicable to the structure or building to which they are integrated. BIVP’s must comply with the general provisions of 11.06.01(c).

11.06.04 Roof or Building Mounted Private Solar Energy Systems:

- (a) Weight and Installation: A roof or building mounted unit shall be only of such weight as can safely be supported by the structure. Proof thereof, in the form of certification by a professional engineer or other qualified person, shall be submitted to the Township prior to installation.
- (b) Application: Applications for building and roof mounted solar energy systems must include horizontal and vertical elevation drawings that show the location and height of the system on the building and the dimensions of the system.
- (c) Location: Wall-mounted units shall not be located on the front yard elevation wall of a building.
- (d) Height:
 - (1) Wall-mounted units shall not exceed the height of the building wall to which they are attached.
 - (2) A roof-mounted system shall not project more than three (3) feet above the highest point of the roof and shall not exceed the maximum building height for the zoning district in which it is located.
- (e) Extension: A solar energy collector that is mounted on a building in an area other

than the roof shall not extend vertically beyond the wall on which it is mounted and shall not extend more than twelve (12) inches beyond the wall on which it is mounted and may not extend into a required yard.

Staff Comments: Private Solar Energy Systems

Add Title to 11.06.02 (a) (1)-Administrative Review

May consider adding a sentence to 11.06.02 (a) (5), granting the Zoning Administrator the authority to inspect, any suspected abandoned or damaged SES.

- There needs to be a protocol established for this or subject to existing blight or nuisance ordinances. Protocol would include such things as a timeline for notices, fees, or expense for removal.

11.06.03 (a) Ground Mounted Private Solar Energy Systems are subject to special land use review except small residential accessory systems which occupy less than 500 square feet in area are subject to administrative review (see 11.06.02 (a) (1)) of a land use permit.

The Ground Mounted SES (500 sq ft or greater) should be added to the schedule of permitted and special land uses to corresponding zoning districts. Example of residential below:

	AG	CE	RR	LDR	SR	UR	LRR	MDR	HDR	Req.
Residential Dwellings										
Single family detached dwellings	P	P	P	P	P	P	P	P	P	11.03
Two family duplex dwellings	--	--	--	--	--	P	--	P	P	11.03
Townhouses, row houses, and similar attached dwellings with individual entrances and garages	--	--	--	--	--	--	--	P	P	
Multiple-family dwellings, including apartments with up to 24 units in a building, terrace residences and other types of multiple family uses	--	--	--	--	--	--	--	--	P	
Housing for the elderly, including interim care units, extended care units, congregate care and nursing care	--	--	--	--	--	--	--	P	P	
A second single family home or dwelling unit on a site of at least forty (40) acres for use by members of the immediate family or employees of the farm operation	S	--	--	--	--	--	--	--	--	
Accessory Uses										
Accessory home occupations	P	P	P	P	P	P	P	P	P	3.03.02(a)
Accessory uses, buildings and structures customarily incidental to any permitted use	P	P	P	P	P	P	P	P	P	11.04
Bed and breakfast inns	S	S	S	S	S	S	--	--	--	3.03.02(b)
Keeping of pets	P	P	P	P	P	P	P	P	P	3.03.02(g)

Ground Mounted SES 500 sq ft or greater	S	S	S	S	S	S	S	S	S	S
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Staff Comments Private SES continued...

11.06.03 (b) Location. Ground Mounted Private Solar Energy System shall only be located in the non-required rear or side yard for principal buildings in the zoning district in which it is located. The unit may be located in the front yard only if permitted by the Planning Commission and maintain 200 ft (or greater) setback from the front lot line. ~~provided that the unit is no less than two hundred (200) feet from the front lot line.~~

Unsure what non-required means.

11.06.03 (g) Screening: Private Ground Mounted systems are often comparable to accessory buildings like pole barns. The required screening seems excessive to require of a private landowner. We recommend that any screening for Ground Mounted Private Solar Energy Systems be comparable to what is required of accessory buildings in the applicable zoning districts. Further, 11.06.02 (a) (3) requires applicants to install SES in the 'least visibly obtrusive location'.

There are two 11.06.04 sections. See ordinance for suggested edits.

ITEM 5: Add new section 11.06.05 entitled” Utility Solar Energy System or Facility” to their zoning ordinance and read as follows:

11.06.05 Utility Solar Energy System or Facility

- (a) Intent and Purpose. The intent and purpose of this Section is to establish standards for the siting, installation, operation, repair, decommissioning, and removal of Utility Solar Energy Systems or Facilities; establish the process for the reviewing and permitting of such facilities; protect the health, welfare, safety, and quality of life of the general public; and ensure compatibility with land uses in the vicinity of the areas affected by such facilities.
- (b) Locational Requirements. Utility Solar Energy Systems or Facilities are permitted by special land use in the Industrial (IND) and Planned Industrial (PID) Districts. Utility solar energy systems and facilities are not permitted on property enrolled in the Farmland and Open Space Preservation Act, being in PA 116, of 1974, now codified in Part 361 of the Natural Resources and Environmental Protection Act, PA 451 of 1974, as amended.
- (c) Application Requirements. An applicant proposing a Utility Solar Energy System or Facility must comply with the Special Land Use requirements of Article 19 and the Site Plan review requirements of Article 18. The information, plans, documents, and other items identified as application requirements in this ordinance, including the site plan and special land use permit, are substantive requirements for obtaining approval for a Utility Solar Energy System or Facility. The Planning Commission will review the sufficiency of the application materials. If the Planning Commission determines that the substance of any application item is insufficient to protect the public health, safety, and welfare, the Planning Commission may deny approval on that basis. In addition, the applicant for a Utility Solar Energy System or Facility shall provide the Township with all of the following:
 - (1) Applicant Identification. The name of the applicant, any parent company or subsidiary of the parent company, along with any “doing business as” of the parent company along with address in full. A statement that the applicant is the owner involved or is acting on the owner's behalf. The address of the property involved in the application (substitution may include a legal description and parcel identifications number(s)), and any additional contact information. Each application for a Utility Solar Energy Facility shall also be dated to indicate the date the application is submitted to the Township.
 - (2) A complete of the agreement including all exhibits and attachments between the applicant and the utility company that will be purchasing electricity from the proposed Utility Solar Energy System or Facility.
 - (3) An affidavit or evidence of an agreement between the lot owner or operator confirming the owner or operator has the permission of the property owner to apply for the necessary permits for construction and operation of Utility Solar Energy System or Facility.

- (4) Parcel Numbers. A list of all parcel numbers that will be used by the Utility Solar Energy System or Facility including applicable attachments, establishing ownership of each parcel, with all lease agreements, easements, or purchase agreements for the subject parcels.
- (5) Project Description. A general description of the proposed project including a legal description of the property or properties on which the project would be located and an anticipated construction schedule.
- (6) Insurance. Proof of the general liability insurance to cover the Utility Solar Energy Facility, the Township, and the Landowner.
- (7) Certifications. Certification that applicant will comply with all applicable state and federal laws and regulations.
- (8) Compliance with the County Building Code and the National Electric Safety Code. Construction of a Utility Solar Energy System or Facility shall comply with the National Electric Safety Code and the County Building Code (as shown by approval by the County) as a condition of any Special Land Use Permit under this section. In the event of a conflict between the County Building Code and National Electric Safety Code (NESC), the NESC shall prevail.
- (9) Operations and Maintenance Agreement. This agreement shall include landscaping upkeep, regular checks, and maintenance with a detailed description of operations and parameters including anticipated regular and unscheduled maintenance and the hours maintenance will take place, the name and contact information of the certified operator, the applicant's equipment maintenance and repair plan, the applicant's inspection protocol, and general safety documentation as well as consequences and penalties for noncompliance. This agreement shall attach copies of manufacturer's directions and/or instruction manuals for installing, maintaining and using the Utility Solar Energy System or Facility.
- (10) Hazardous Waste Plan. A plan for managing hazardous waste shall be provided. This plan shall include Manufacturers' Safety Data Sheets (MSDS) and documentation of the type, quantity and storage procedures of all materials used in the operation of all equipment.
- (11) Environmental Impact: Copy of the Environmental Impact Assessment meeting the requirements of 11.06.05(c)(36)(f) section and those of Section 18.07.
- (12) Sound modeling study including sound isolines extending from the sound sources to the property lines and indicating compliance with the requirements of 11.06.05(c)(36)(h).
- (13) Wildlife Impact: A wildlife impact study, including an analysis of the impact on the properties within one mile of the project and meeting the requirements of 11.06.05(c)(36)(e).

- (14) A ground cover vegetation establishment and management plan shall be provided and shall meet the requirements of 11.06.05(c)(36)(i).
- (15) A groundwater analysis of all parcels in the participating property shall be provided.
- (16) Glare Study: An analysis by a third-party qualified professional acceptable to the Township to determine if glare from the Utility-Scale Solar Energy System will be visible from nearby residents and roadways. If required, the analysis will consider the changing position of the sun throughout the day and year and its influences on the utility-scale solar energy system.
- (17) Stormwater Study: An analysis by a third-party qualified professional acceptable to the Township studying the proposed layout of the Utility-Scale Solar Energy System and how the spacing, row separation, and slope affects stormwater infiltration, including calculations for a 100-year rain event. Percolation tests or site-specific soil information must be provided to demonstrate infiltration on-site without the use of engineered solutions.
- (18) Visual Impact Assessment Analysis. A technical analysis by a third party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscape and other screening measures) a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project and documented on the site plan.
- (19) Decommissioning and Land Reclamation Plan: This plan shall describe the actions to be taken following the abandonment or discontinuation of the Utility Solar Energy System or Facility, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the system or facility and restore the subject parcels to a native state. This plan shall include the format of a financial security to be applied to the decommissioning process. This plan shall also comply with the requirements of Section 11.06.05(c)(37).
- (20) Complaint Resolution Protocol: A plan for resolving complaints from the public or others concerning the construction and operation of the Utility Solar Energy System or Facility. This plan shall comply with the requirements as provided in Section 11.06.05(c)(38).
- (21) Emergency Action Plan: Copy of a plan for the actions to be taken in event of an emergency. The emergency action plan must include a fire suppression plan, including the technology to be used and the training and equipment to be provided to Township or other firefighters before the facility becomes operational. The emergency action plan must include plans for immediate cleanup and long-term aftermath efforts following an emergency.
- (22) Proof of approval by Livingston County, Road Commission, and Drain

Commission.

- (23) The applicant must also obtain a permit from the Livingston County Road Commission or Michigan Department of Transportation (MDOT) for permission to connect access roads to existing County or State roads and from the Livingston County Drain Commission for any culverts or other drainage facilities.
- (24) Proof that the Applicant and/or its contractor has informed the Livingston County Road Commission (LCRC) and the Township of all the roads they propose to use as haul routes to each construction (including repair and decommissioning) site. This shall be done prior to beginning any construction (or decommissioning) at any site. A third-party road inspector will be retained, with mutual approval of the Township, the Applicant, and the LCRC or the Michigan Department of Transportation (MDOT) if a state highway is involved. The road inspector will determine any precautions to be taken (including videotaping and physical inspections) during the process to determine any damage that may be caused by Applicant's contractor(s), and then determine the appropriate road standards and measures to be taken to repair the damage. The cost of the third-party road inspector and/or any other required third-party assistance, and of all repairs necessitated to restore the roads [and related property which may be damaged by the contractor(s)], shall be the responsibility of the Applicant and/or their contractor, and shall in no case be the responsibility of the Township.
- (25) Anticipated construction schedule including timeline to completion and scope of work.
- (26) A complete description of the proposed technology to include type of solar panel and system, maximum height, fixed mounted versus tracking, number of panels and angles of orientation.
- (27) Current ground and aerial photographs and video of the entire development area prior to construction.
- (28) Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection (MCL324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township.
- (29) An attestation that the applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Solar Energy System. The Township shall be named as an additional insured for such indemnity under **3.(vi).** (36 (n))?

- (30) Airport Review: Any Solar Energy System must be reviewed using the current Solar Glare Hazard Analysis Tool (SGHAT) available through Sandia National Laboratories or a commercially available equivalent. The SGHAT will be used to ensure that airports and those that use them will not be affected by unwanted visual or ocular impacts. The process is designed to save costs and increase public safety.
- a. The Study shall determine if there are any potential adverse effects on any registered airfield within ten miles of the project. Effects noted, but not exclusively, should include any possible decreased safety and utility.
 - b. In addition, all proposed solar facilities must obtain a Determination of No Hazard (DNH) from the Federal Aviation Administration (FAA). A DNH does not eliminate the need for the SGHAT study nor does it in any way eliminate the standard for glare on roadways or non-participating parcels.
 - c. The DNH must be obtained prior to breaking ground on any portion of the Solar Energy System.
 - d. No Solar Energy System that impacts safety or utility of any registered airfield shall be permitted.
- (31) Any other relevant studies, reports, certificates, or approvals as may be reasonably required by the Planning Commission.
- (32) Site Plan Requirements shall be submitted meeting the requirements of Section 18.04 and in addition, shall also include the following:
- a. The approximate height, and dimensions of all existing structures, existing parcel drainage tile layouts, water bodies, waterways, floodplains, landscaping, and fencing, on the parcels planned for Solar Energy installation including other parcels within one thousand (1000) feet of the project's boundaries.
 - b. Documentation of existing vegetation, floodplains and regulated and/or endangered species.
 - c. Indication of how and where the system will be connected to the power grid.
 - d. Photometric plan meeting the requirements of Section 12.03.07.
 - e. Plan(s) showing the location of proposed Utility Solar Energy System or Facility including panels, equipment, transformers, inverters, fencing, underground and overhead wiring (including the depth of underground wiring), new drainage facilities (if any), access drives (including width), substations and accessory structures, along with a note indicating where any trees measuring over 2.5 feet in diameter within six inches of grade are to be removed.

- f. Plan for ground cover establishment and management.
- g. Plan for providing wildlife corridor that provides access for wildlife to navigate through the project.
- h. Security plan detailing measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance, or repair of the Utility Solar Energy System or Facility.
- i. Application Fee. Review fees shall be submitted for a Special Use application and Site Plan Review application. If requested by the Planning Commission, the applicant shall provide an escrow fee to the Township in the amount specified by the Zoning Administrator to cover the costs associated with but not limited to independent review by experts.

(33) Site Requirements.

- a. The site shall be at least twenty (20) acres.
- b. The site may consist of a single participating property or multiple participating properties.
- c. The site and all fenced compounds shall have access described below.
 - i. There shall be direct access from a public road or an access easement with a maximum length of one thousand (1,000) feet and a width of at least thirty- three (33) feet.
 - ii. Access drives shall be paved with a permanent, durable and dustless surface and shall be graded and drained to dispose stormwater without negatively impacting adjacent property. The Township Board, following a recommendation of the Planning Commission and the Township Engineer, may approve a gravel surface for low intensity use drives, upon a finding that neighboring properties and the environment will not be negatively impacted and that the surface is sufficient to support fire apparatus and provide access at all times of the year.
- d. Utility Solar Energy Systems (including all solar panels, components, equipment and related accessory structures) must be set back at least one hundred (100) feet from the property line of any Non-Participating Property at the time of application. If a single Utility Solar Energy System is located on more than one lot, or if the adjacent parcel is owned by the same owner as the property on which the Utility Solar Energy System is located, then the Planning Commission may eliminate the lot-line setbacks of this subsection for the lot lines shared by those lots. All property in the setback areas, shall be maintained as defined in a maintenance setback plan acceptable to the Township.
- e. Utility Solar Energy Systems must be set back at least one hundred (100) feet from the edge of any road or rail right-of-way, wetland, shoreline, river, wellhead

protection area or drain easement. The Planning Commission may increase this setback requirement up to 200 feet if the Planning Commission determines that such a setback is necessary to protect the public health, safety, and welfare.

- f. Utility Solar Energy Systems must be set back at least five hundred (500) feet from non-participating residential dwellings, churches or religious institutions, schools, family or group child day-care homes, bed and breakfast establishments, residential facilities, and any other residence or inhabited structure.
- g. The height of the Utility Solar Energy System and any mounts, buildings, accessory structures, and related equipment must not exceed sixteen (16) feet when oriented at maximum tilt. Lightning rods shall not exceed 20 feet in height and shall not be any greater than necessary to protect the Utility Solar Energy System from lightning.
- h. The ground mounting of panels must be by screw or a similar system that does not require a footing, concrete, or other permanent mounting, to minimize soil compaction. No pounding of panel posts is permitted.
- i. Permits. All required county, state, and federal permits must be obtained before commencement of construction of the Utility Solar Energy System.

(34) Buffer and Screening Requirements. Greenbelt screening is required around any Utility Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible. There shall be a landscape buffer at least fifty (50) feet wide along the exterior of the fenced compound with plantings required as described below.

- a. Where adjacent to a residential use or zoning district, the buffer shall include an eight foot tall landscaped berm upon which the required landscaping will be placed.
- b. An evergreen buffer shall contain two rows of staggered evergreen trees planted not less than twelve (12) feet apart trunk to trunk, and the two rows shall be ten (10) ft apart. The buffer shall also include native shrubs planted with spacing of not more than six (6) feet apart on center. The Township may consider an alternative landscape buffer as a part of the special land use approval provided the alternative provides adequate screening.
- c. Evergreen plantings shall be least eight (8) feet tall at time of planting, measured from the top of the root ball to the base of the leader (not including the height of the leader) and must be a species that can reasonably be expected to reach a height of ten (10) feet within three (3) growing seasons.
- d. Native shrub plantings shall be a least two (2) feet tall at the time of planting measured from the top of the root ball to the top of the shrub.
- e. The trees may be trimmed but must maintain a height of at least eighteen (18) feet.
- f. The overall landscape plan shall not contain more than 33% of any one plant species. The use of trees native to the area, and mixture of trees from the same species association, is encouraged.

- g. Good arboricultural techniques shall be followed with respect to vegetation, including but not limited to, proper pruning, proper fertilizing, and proper mulching, so that the vegetation will reach maturity as soon as practical and will have maximum density in foliage. Dead or diseased vegetation shall be removed and must be replanted in a manner consistent with this Section at the next appropriate planting time.

(35) Appearance. The exterior surface of the Utility Solar Energy System must be generally neutral in color and substantially non-reflective of light.

(36) Performance Standards:

- a. Utility Solar Energy Systems or Facilities shall be designed, constructed, operated, and maintained in compliance with all applicable provisions of local, state, and federal laws and regulations.
- b. PV Array Components: PV array components shall be approved by the Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electronic Testing Laboratories (ETL), or other similar certification organization if the similar certification organization is acceptable to the Township.
- c. Fencing: If regulations require fencing, the Utility Solar Energy System or Facility compounds may be completely surrounded by a fence designed to prevent unauthorized access.
 - i. The fence shall be at least seven (7) feet tall without barbed wire and posts shall extend at least thirty-six (36) inches into the ground.
 - ii. Gate posts and corner posts shall have a concrete foundation.
 - iii. The fence shall be a woven agricultural-style fence or other design as approved by the Planning Commission.
 - iv. Gates shall be provided at all access points, unless otherwise permitted or approved. Gates for vehicular access shall be approved by the Fire Authority.
 - v. Gates shall be the same height and constructed of the same material as the fencing. Access, such as knock box, shall be provided for emergency responders.
 - vi. The Township may require or allow a fence design to allow for the passage of wildlife upon a finding that adequate access control and visual screening will be preserved.
 - vii. Alternate fencing may be approved by the Township upon a finding that the alternative provides adequate access control and visual screening.
- d. Safety:

- i. All collection system wiring shall comply with all applicable safety and stray voltage standards.
- ii. All electrical connection systems and lines from the Utility Solar Energy System or Facility to the electrical grid connection shall be located and maintained a minimum of six (6) feet underground within and adjacent to the site.
- iii. All access gates and doors to Utility Solar Energy System or Facility compounds and electrical equipment shall be lockable and kept secured at all times when service personnel are not present.
- iv. The applicant shall be responsible for maintenance of the access roads.
- v. The manufacturers or installer's identification and appropriate warning signs shall be posted on or near solar panels in a clearly visible manner.
- vi. Fire suppression plans and Safety Data Sheets shall be kept on-site and be accessible for emergency responders.
- vii. The applicant will provide an unredacted copy of the manufacturer's safety manual for each component of the Utility Solar Energy System without distribution restraints to be kept at the Township Hall or other locations deemed necessary by Planning Commission or local first responders. The Manual should include standard details for an industrial site such as materials, chemicals, fire, access, safe distances during system or facility failure, processes in emergencies, etc.
- viii. The Township shall have the right upon issuing any Solar Energy System or Facility special use permit to inspect the premises on which each system is located at any reasonable time. The Township may hire a consultant to assist with any such inspections at a reasonable cost to be charged to the operator of the Solar Energy System or Facility.
- ix. Advertising or non-project related graphics shall be prohibited. This exclusion does not apply to signs required by this Ordinance.
- x. Signs shall be posted at entrances to Utility Solar Energy System or Facility compounds containing emergency contact information, operator contact information, and complaint resolution information. The Township may require additional signs with this information on the fence surrounding the compound.
- xi. The Utility Solar Energy System or Facility owner, operator, and property owner shall be responsible, jointly and severally, for mitigating erosion, flooding, and all other environmental impacts resulting from the Utility Solar Energy System or Facility.
- xii. The Utility Solar Energy System or Facility owner, operator, and property owner shall be responsible, jointly and severally, for making

repairs to any public roads, drains, and infrastructure damaged by the construction of, use of, or damage to, a Utility Solar Energy System or Facility. Any solar panel damaged beyond repair or use must be removed from the project site within five days and must be disposed of off-site in accordance with any state or federal requirements.

- xiii. Utility Solar Energy Systems or Facilities shall not have any on-site battery storage systems for the sale of stored energy.
- xiv. Plants or grasses not part of the buffer area shall be maintained not to exceed a height of twelve (12) inches. The Township may approve a taller height upon a finding that it will not result in a nuisance.

e. **Wildlife Impact:**

- i. The applicant shall have a third-party qualified professional, acceptable to the Township, conduct an analysis to identify and assess any potential impacts on wildlife and endangered species. The applicant shall take appropriate measures to minimize, eliminate, or mitigate adverse impacts identified in the analysis. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts.
- ii. Sites requiring special scrutiny include wildlife refuges, other areas where birds are highly concentrated, bat hibernacula, wooded ridge tops that attract wildlife, sites that are frequented by federally or state listed endangered species of birds and bats, significant bird migration pathways, and areas that have landscape features known to attract large numbers of raptors.
- iii. At a minimum, the analysis shall include a thorough review of existing information regarding species and potential habitats in the vicinity of the project area. Where appropriate, surveys for bats, raptors, or general avian use should be conducted. The analysis shall include the potential effects on species listed under the federal Endangered Species Act and Michigan's Endangered Species Protection Law. The applicant shall follow all pre-construction and post-construction recommendations of the United States Fish and Wildlife Service.
- iv. The analysis shall indicate whether a post-construction wildlife mortality study will be conducted and, if not, the reasons why such a study does not need to be conducted. Power lines should be placed underground, when feasible, to prevent avian collisions and electrocutions. All above-ground lines, transformers, or conductors should follow any Avian Power Line Interaction Committee (APLIC, <http://www.aplic.org/>) guidelines to prevent avian mortality.

f. **Environmental Impact:**

- i. The applicant shall have a third-party qualified professional, acceptable to the Township, conduct an analysis to identify and assess any potential impacts on the natural environment including, but not limited to, wetlands and other fragile ecosystems, historical and cultural sites, and antiquities. The applicant shall take appropriate measures to minimize, eliminate, or mitigate adverse impacts

identified in the analysis.

- ii. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts. The applicant shall comply with applicable parts of the Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, MCL 324.101 et seq.) including but not limited to Part 31 Water Resources Protection (MCL 324.3101 et seq.), Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 et seq.), Part 301 Inland Lakes and Streams (MCL 324.30101 et seq.), Part 303 Wetlands (MCL 324.30301 et seq.), Part 323 Shoreland Protection and Management (MCL 324.32301 et seq.), Part 325 Great Lakes Submerged Lands (MCL 324.32501 et seq.), and Part 353 Sand Dunes Protection and Management (MCL 324.35301 et seq.).
- g. Spacing. Utility Solar Energy Systems or Facilities shall be at least two thousand five hundred (2,500) feet from any adjacent, existing Utility Solar Energy System or Facility.
- h. Noise. The noise generated by a utility-scale solar energy system must not exceed the following limits:
 - i. Forty (40) Dba Lmax, as measured at the lot line of the project property.
 - ii. Thirty-Five (35) Dba Lmax, as measured at the lot line of the project property, between the hours of 9:00 p.m. and 7:00 a.m.
 - iii. In addition to the above limitations, a sound barrier of a solid decorative masonry wall or evergreen tree berm, with trees spaced not less than 10 feet apart, must be constructed to reduce noise levels surrounding all inverters. The berm must be no more than ten (10) feet from all inverters, must be at least as tall as all inverters but not more than three (3) feet taller than the height of all inverters.
 - iv. The noise level by a Utility Solar Energy Facility must be inspected every three (3) years, at the operator's expense, by an auditory expert to ensure compliance with these noise requirements.
- i. Groundcover. Utility Solar Energy Facilities shall include the installation of at least one (1) of the following types of dual use perennial ground cover vegetation to promote ecological benefits. The perennial ground cover vegetation shall be maintained for the duration of operation until the site is decommissioned.~~provide~~
 - i. Pollinator habitat with a score of at least seventy-six (76) on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites (www.pollinators.msu.edu);
 - ii. Conservation cover focused on restoring native plants, grasses, or prairie with the aim of protecting specific species, such as bird habitat, or providing specific ecosystem services, such as carbon sequestration or improving soil health;
 - iii. Incorporation of rotational livestock grazing and forage production as part of an overall vegetative maintenance plan; or

- iv. Raising crops for food, fiber, or fuel and generating electricity within the site to maximize land use.
 - v. The Township may approve or require alternative ground cover upon finding it is not feasible to provide groundcover as defined above.
 - vi. All groundcover must be native plants with substantial root system to support soil. Turf grass is not permitted as ground cover.
 - vii. Invasive species and noxious weeds are not permitted and must be removed in a timely manner.
- j) Lighting. Lighting shall be limited to inverter or substation locations only and shall comply with 14.04(E) Lighting.
- k) Emergency Action Plan; Emergency Training. Before the Utility Solar Energy System or Facility is operational, it must provide the necessary training, equipment, or agreements specified in the application to Township or other emergency personnel.
- l) General Liability Insurance; Bonding Requirements; Escrow Requirements.
- i. Utility Solar Energy Systems or Facilities shall have and maintain general liability insurance of at least ten million (\$10,000,000.00) dollars. The Township may require a higher amount for larger projects and may allow for a lesser amount for smaller projects upon a finding that the alternate amount is more consistent with the likely risk.
 - ii. In addition, In order to assure the funds will be available to perform all road repairs required under this ordinance, the Applicant will be required to post financial security acceptable to the Township, in the form of: a) a surety bond from a surety listed as acceptable on the Federal Surety Bond circular 570 of the U.S. Department of Treasury; or b) an acceptable letter of credit; or c) an escrow account established in a financial institution licensed in the State of Michigan. The amount of the security shall be a minimum of one million two hundred fifty thousand dollars (\$1,250,000), but this amount may be increased if the third-party consultant determines the amount needed for road repairs is greater than this amount. The bond (or other security) shall only be released (in whole or part) when the Township Board, in consultation with LCRC and the third-party inspector, determines that all required road work has been completed and approved by LCRC and/or MDOT.
 - iii. General Maintenance Bond. The Township shall require a General Maintenance Bond to guarantee all aspects of this Ordinance are met at all times during the construction and operation of the Utility Solar Energy System. At the time of the Special Use application, the Applicant shall submit two third-party contractor bids for construction of all fencing, landscaping, and drainage improvements associated with the Utility Solar Energy System, and the bond shall be the higher of the two bids. The Township may use the bond to repair any landscaping, fencing, drainage infrastructure (including drainage

tiles), and/or to correct any ongoing violation of this Ordinance, in the event that the facility fails to adequately maintain the required site improvements, or fails to make operational changes to correct an operational violation.

- iv. The Applicant shall be required, as a condition of the operation, to fund an escrow account for investigation of complaints for, but not limited to glare, stray voltage, noise, and signal interference in the amount of \$15,000.00 to be used at the discretion of the Township Board to pay for third party investigative services, the provider of which shall be chosen by the Township. Such funds shall be deposited with the Township Treasurer, or with a third-party fiduciary, at the discretion of the Township. When the escrow account balance is below \$5,000.00 the Township shall notify the Applicant and the Applicant shall replenish the account to the amount of \$15,000.00 within 45 days.
 - m. Repowering or Modifications. Any modifications of an approved site plan that are made after the initial date of approval, including an expansion of project, shall be resubmitted to the Township Planning Commission for review at an additional fee based upon current fee schedule. Any changes of the approved site plan, subject to this Ordinance as it exists at time of application, will require a new site plan application and review, including reconfiguration of arrays, updating current technology, and Solar Energy Facility infrastructure.
 - n. The Applicant must submit an attestation that the Applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, use, maintenance, repair, or removal of the Utility Solar Energy System. *Including indemnity provisions of (29).*
 - o. Prior to the start of construction, any existing drain tile must be inspected by robotic camera and the imagery submitted to the township for baseline documentation on tile condition. Any damage shall be repaired, and a report submitted to the landowner and Township. While the facility is in operation, the owner or operator must reinspect the drain tiles every three years by robotic camera for any damage and must repair any damage within 60 days of discovery. The owner or operator must report the inspection, along with any damage and repair, to the Township within 90 days after each three- year deadline. The Township reserves the right to have the Building Inspector or other agent present at the time of repair. Solar panel support structures and/or foundations shall be constructed to preserve any drainage field tile or system.
 - p. Transfer or Sale: In the event of a transfer or sale of the Facility, the new owner or operator must notify the Township in within 30 days, and the Zoning Administrator shall administratively amend the permit to name the new owner or operator. Upon transfer or sale, the cash bond shall be transferred to the new owner or operator and shall be maintained at all times, the estimated costs of decommissioning shall be resubmitted, and the security bond adjusted to account for the new estimate.
- (37) Abandonment and Decommissioning: Following the operational life of the project, the Applicant shall perform decommissioning and removal of the Utility Solar Energy System or Facility and all its components and restore the site to its original conditions.

- a. The decommissioning plan shall be written to provide security to the Township for one hundred twenty-five percent (125%) of the cost to remove and dispose of all panels, wiring, and restoration of the land to its original conditions. The value of decommissioning shall be determined by a third-party financial consultant or engineer selected by the Township and paid for by the developer. The decommissioning security shall be paid in cash to the Township. Once value of decommissioning is determined, it shall be updated on a periodic basis of not less than every three (3) years and additional security may be required on the basis of the average inflation rate of the preceding three (3) years.
- b. All abandonment and decommissioning work must be done when soil is dry or frozen to prevent compaction.
- c. Solar energy systems that are not operated for a continuous period of twelve (12) months shall be considered abandoned and shall be subject to removal proceedings.
- d. Solar energy systems that are damaged shall be replaced or removed within seven (7) days.
- e. The ground must be restored to its original topography within three hundred sixty-five (365) days of abandonment or decommissioning. An extension may be granted if a good faith effort has been demonstrated and any delay is not the result of actions or inaction of the operator. An alternative topography can be approved by the Township as part of the original site plan review or later as part of decommissioning.
- f. If land balancing is required, all top soil will be saved and spread evenly over balanced area.
- g. An annual report shall be provided to the Zoning Administrator showing continuity of operation and shall notify the Zoning Administrator if use is to cease, prior to decommissioning, or abandonment.
- h. Continuing Obligations: Failure to keep any required financial security in full force and effect at all times while a Utility Solar Energy System or Facility exists or is in place shall constitute a material and significant violation of the Special Land Use, Special Use Permit, and this Ordinance, and will subject the Utility Solar Energy System or Facility Applicant, owner, and operator, jointly and severally, to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use Permit.
- i. The Applicant shall be responsible for the payment of all attorney fees and other costs incurred by the Township in the event that the structure is not voluntarily removed and the Township has to enforce removal.

(38) Complaint Resolution. Utility Solar Energy Systems or Facilities shall provide a complaint resolution process, as described below.

- a. The site shall have signs posted with contact information to collect complaints related to the Utility Solar Energy System or Facility.
- b. A log shall be kept by the owner or operator of all complaints received and shall be available to Township officials for review, per Township request.
- c. The operator or its agent shall respond to complainants within ten (10) business days and shall provide notification to the Zoning Administrator.
- d. Any resolution shall include lawful and reasonable solutions consistent with the Zoning Ordinance, which shall also be provided to the Zoning Administrator.
- e. The operator or its assigns reserve the right to adjudicate any claims, including residential claims, in a court of competent jurisdiction. An annual report shall be submitted to the Zoning Administrator and the Township Board that details all complaints received, the status of complaint resolution, and actions taken to mitigate complains.

Staff Comments: Utility Solar

11.06.05 (b) Utility Solar energy systems are not permitted in lands under Farmland Preservation Act 116..... *It does not seem this provision is necessary as the permitted, special land use is located in Industrial/Planned Industrial (IN/PID). Where there are no Farmland Preservation 116 parcels.*

11.06.05 (i.) Application Fee: set application fee prior to the enactment of this ordinance.

11.06.05 (c)(29) See section for typo correction.

11.06.05 (33)(f) 500-foot set back from dwellings etc. keep setbacks to property lines because residences can be changed overtime more easily than property lines. Additionally, this is excessive for being in the industrial zone. Setbacks should be similar to other uses in the Industrial Zone.

11.06.05 (34) The Buffer Screening requirements seem excessive especially by the highways. We recommend adjusting these requirements to be similar to other uses in the Industrial District. OR add a line: If approved by the Planning Commission, Buffer and Screening requirements may be modified or waived.

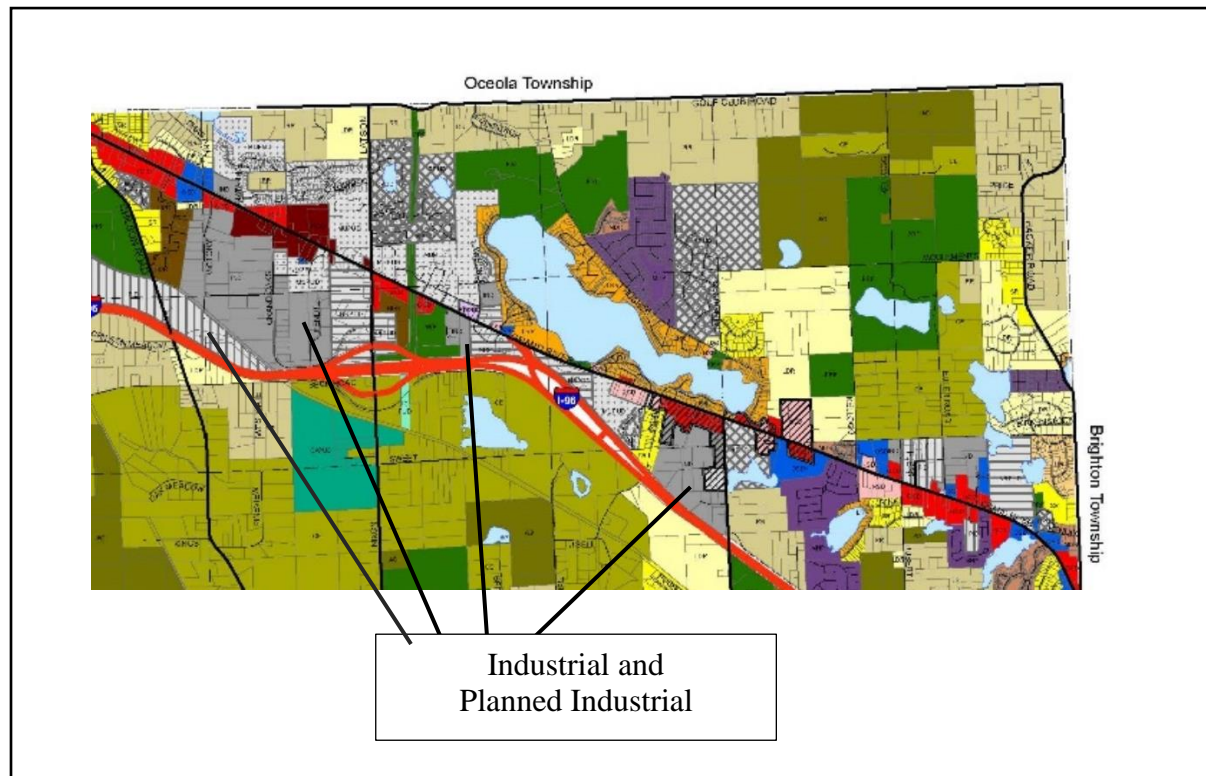
Staff Comments Utility Solar Permitted Use: Industrial and Planned Industrial Zone

There are 4 parcels within the Industrial and Planned Industrial districts that are 20 acres or more. Two of those parcels are developed. That leaves 2 parcels located in sections 6 and 7 of the township, with access from Chilson Rd. Once the 100-foot setback from property lines and 100-foot setbacks for wetlands were applied it leaves approximately 30-40 acres of buildable area for utility solar in the township. This does not consider the proposed setbacks of 500-feet from dwellings. If that fits the townships demonstrated need per 11.06.01 (a), than that may be sufficient area and not considered exclusionary zoning.

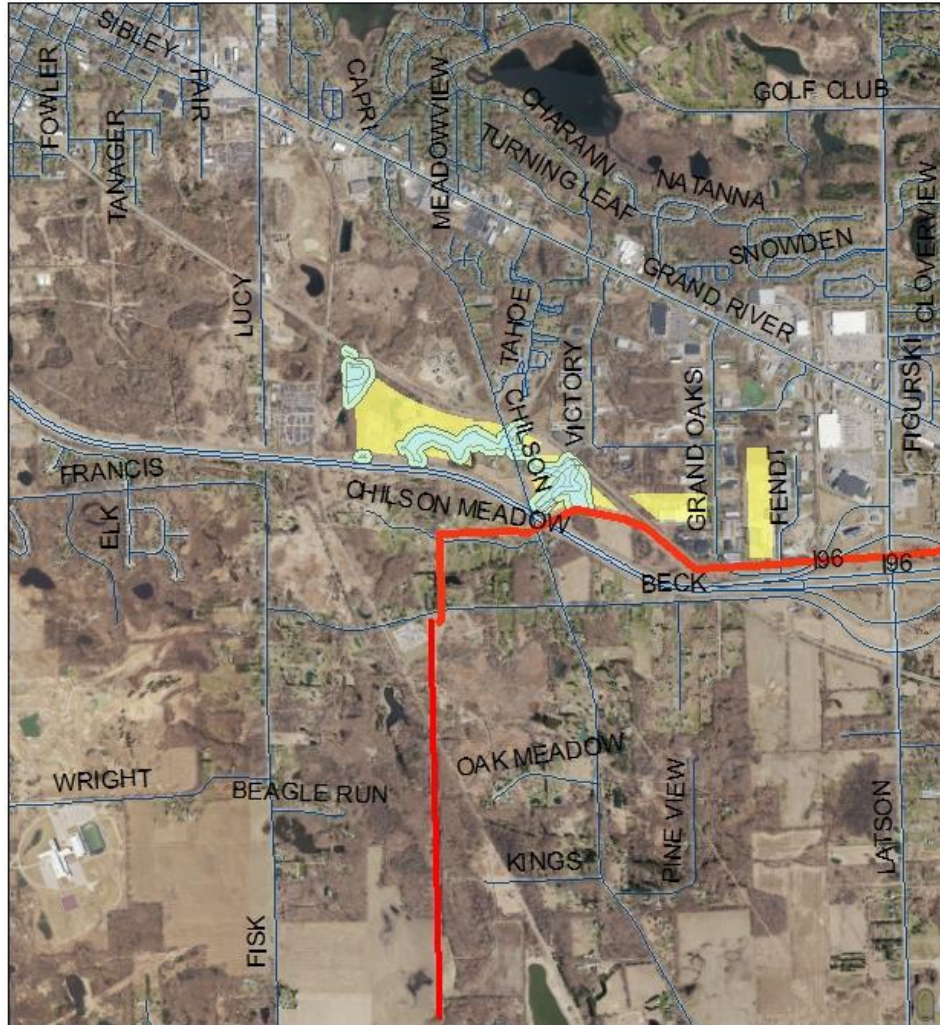
The area is limited and likely to be developed because it is zoned Industrial or Planned Industrial. This may present conflicts in the future if these areas are no longer available for Utility Solar; as it could be considered exclusionary zoning. In anticipating, the industrial parcels being developed for another use other than utility solar, the township may begin contemplating future parcels fitting for the land use. Most likely this would be done during Genoa Township's next Master Plan review.

The areas are within .5 mile of the transmission lines. The areas are unlikely to cause conflict with Residential Zones.

Zoning Map Genoa Township Industrial



Proposed Area for Utility Solar Genoa Township



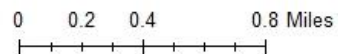
Genoa Township Solar

Permitted Use: Industrial AND Planned Industrial with 20 or more acres

Legend

- Transmission Lines
- Roads
- Wetlands in Solar
- 100ft Setback from Wetlands
- 100ft setback
- Genoa Solar

Area measurement
 Segment: 439.041386 Feet
 Perimeter: 7,723.660454 Feet
 Area: 30.24469 Acres



Staff Recommendation:

TOWNSHIP PLANNING COMMISSION RECOMMENDATION: APPROVAL, Genoa Charter Township Planning Commission recommended approval of the proposed amendments at their July 10, 2023, public hearing. The public spoke about the required vegetation cover and another member of the public was happy solar was not on agricultural lands.

RECOMMENDATION: APPROVAL. The solar amendments to the Genoa Charter Township Zoning Ordinance are well written and serve to strengthen the ordinance standards for private and commercial solar energy systems.