ALLENDALE CHARTER TOWNSHIP
PLANNING COMMISSION MEETING

June 20, 2022
7:00 p.m.
Allendale Township Public Meeting Room

1. Call the Meeting to Order

2. Roll Call

3. Received for Information:

4. Approval of the June 6, 2022 Planning Commission Minutes

5. Approval of the Agenda

6. Public Comments for *non-public hearing items*

7. Public Hearings:
    A. Great Lakes Excavating Service (JMM Developers, LLC) – Amendment to Special Use
        - Seeking to process materials

8. Site Plan Review:

9. New Business:

10. Old Business:
    A. Renewable Energy language

11. Public Comments

12. Township Board Reports

13. Commissioner and Staff Comments

14. Adjourn

Next meeting July 18, 2022 at 7:00 p.m.

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ALLENDALE CHARTER TOWNSHIP
PLANNING COMMISSION MEETING

June 6, 2022
7:00 p.m.
Allendale Township Public Meeting Room

1. Call the Meeting to Order
2. Roll Call:
   Present: Longcore, Westerling, Chapla, Zeinstra, Nadda
   Absent: Zuniga, Adams
   Staff and Public Present: Planner Greg Ransford, Kelly Kuiper, Todd Stuive, Merwyn Koster, Richard Barber, Gale Mast
3. Received for Information: None
4. Motion by Chapla to approve the May 16, 2022, Planning Commission Minutes as presented. Seconded by Zeinstra. **Approved 5-0**
5. Motion by Longcore to approve of June 6, 2022, Planning Commission Agenda as presented. Seconded by Zeinstra. **Approved 5-0**
6. Public Comments for *non-public hearing item*:

   Chairperson Longcore opened the public comment section for non-public hearing items.

   Merwyn Koster requested information on the status of the text amendments for solar farms. Mr. Longcore answered that the Planning Commission is working on those amendments.

   Richard Barber inquired about a rumor of a self-storage facility going in on the Centennial Farms property instead of apartments and wanted to state that he would be in favor of that.

   Seeing no more comments, Chairperson Longcore closed the public comment section.
7. Public Hearings: None
8. Site Plan Review: None
9. New Business:
   A. Great Lakes Excavating Service (JMM Developers, LLC) – Amendment to Special Use
      - Seeking to process materials

      Kelly Kuiper, representing the applicant, presented the request to amend the special use permit for processing materials onsite.

      Planner Ransford reviewed his memo and explained to the public what was being reviewed for this application.

      Mr. Chapla had questions regarding trucking equipment and the seasons of the mining and Ms. Kuiper responded that none of that will change due to this request.

      Mr. Longcore inquired if this would change the mining schedule and Ms. Kuiper answered that no they still plan to be able to follow the schedule that was previously approved for this operation and that they will be the ones to provide the yearly reports to the Planning Commission.

      Mr. Westerling asked about dust control. Ms. Kuiper stated that crushed concrete will be used for the drives, but that 46th Ave. is a gravel road, and the applicant has grading equipment and is trying to keep the road graded.

      Mr. Longcore asked Planner Ransford to verify if there have been any noise complaints regarding this project, or any complaints in general.

Consensus was that crushed concrete for the 2 additional drives would be acceptable as the drives are coming off a gravel road.

This project is scheduled for Public Hearing on June 20.

B. Mystic Woods Planned Unit Development Site Plan
   - Seeking final phase

Todd Stuive, representing the applicant, presented the 4th and final phase of Mystic Woods that is being proposed.

Planner Ransford presented his memo and clarified that the reason the project is here being seen by the Planning Commission is that so much time has passed since the original approval and the construction of Phase 3, the Township attorney has recommended that this project be reviewed by the Planning Commission through site plan review only if the plans are identical to the phase plan within the original PUD.

There was discussion of the lights, and it was stated that the lights are the new downward facing LED lights.

Motion by Zeinstra to approve the proposed site plan for Mystic Woods Planned Unit Development Final Phase, contingent upon the review and approval of the Trip Generation Analysis and construction plans by the Township Engineer. Seconded by Westerling. **Approved 5-0**

10. Old Business:
    A. Mini-warehouses and self-storage facilities language

Mr. Longcore attended the Township Board meeting to get direction from the Board regarding this ordinance. The Board would like to have these facilities removed from the ordinances in General Commercial and only allowed in Industrial or C-3 as they feel there is better use for the General Commercial properties along Lake Michigan Dr.

Commissioners directed Planner Ransford to make the necessary changes and to schedule the public hearing for the ordinance amendment.

11. Public Comments

Chairperson Longcore opened the public comment section for non-public hearing items, and seeing no comments, Chairman Longcore closed the public the comment section.

12. Township Board Reports

Mr. Zeinstra reported that the Board discussed HR items, water and sewer, replacing the trunkline coming from Grand Valley, bylaws for the Parks and Recreation Committee and seasonal hiring.

13. Commissioner and Staff Comments: None

14. Chairman Longcore adjourned the meeting at 7:42 p.m.

Next meeting June 20, 2022 at 7:00 p.m.

Minutes respectfully submitted by Kelli McGovern

◊

Fresh Coast Planning

950 Taylor Avenue, Ste 200
Grand Haven, MI 49417
www.freshcoastplanning.com

Gregory L. Ransford, MPA
616-638-1240
greg@freshcoastplanning.com

Julie Lovelace
616-914-0922
julie@freshcoastplanning.com

Sara Moring-Hilt
586-850-8784
sara@freshcoastplanning.com

MEMORANDUM

To: Allendale Charter Township Planning Commission
From: Gregory L. Ransford, MPA
Date: June 15, 2022
Re: Great Lakes Excavating Service (JMM Developers, LLC) Mining Special Use Application – Final Review

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Pursuant to your June 6, 2022 meeting, attached is a final site plan and related application for a special use permit from Great Lakes Excavating Service to amend the existing special use permit held by JMM Developers, LLC at 12084 46th Avenue, parcel number 70-10-18-300-016, and 11910 46th Avenue, parcel number 70-10-19-100-021. As you know, this amendment seeks to excavate aggregate in addition to the authorized excavation of sand, and to process sand, gravel, and stone on site. The property is located within the Agricultural and Rural Zoning District.

As noted within our June 1, 2022 memorandum, in April of last year you authorized an increase in the amount of excavation and the formation of a body of water larger than the original approval in 2019. Following the conclusion of the mining operation, the applicant will accommodate eleven (11) future parcels abutting the body of water.

Given that the final application materials are identical to the preliminary documents submitted at your June 6, 2022 meeting, we do not have any additional observations or findings to provide. Further, given that you did not direct the applicant to revise the plans, we simply note your findings from your preliminary review, which are reflected in the related resolution.

Planning Commission Findings

As you know, at your June 6, 2022 meeting you concluded that the plan was complete, with the following findings:

- Crushed concrete is appropriate for the first fifty (50) feet of the additionally proposed site entrances
- Additional extraction studies are not necessary
- Additional landscaping is not necessary

Removal of Topsoil, Sand, Gravel, or Other Minerals Review Standards

Pursuant to Section 23.08G – Review by Planning Commission; Standards for Approval/Denial of the Allendale Charter Township Zoning Ordinance (ACTZO), the Planning Commission shall review the application and determine if the proposal meets the intent and purpose of Section 23.08, is compliant with the requirements of Section 23.08F4, meets the standards provided therein (Section 23.08G2), and meets the special use standards of the ACTZO. For your convenience, below is a copy of the Purpose, Section 23.08F4, in part, and Section 23.08G2.

Section 23.08B – Purpose

While we would ordinarily provide our comments to assist with your review, and we anticipate that the proposed will not cause any very serious consequences to occur, we felt it was appropriate to first receive public comment prior to commenting on Section 23.08B below.

Section 23.08B - Purpose

The purpose of the mineral mining special land use is to regulate the appropriate excavation and removal of mineral resources, but to authorize such activity only if it can be accomplished without very serious consequences to other land uses in the vicinity and elsewhere in the Township. While the excavation and removal of mineral resources is a legitimate land use, it may involve activities which are incompatible with residential uses or other uses permitted by this Ordinance. The objective of these special land use provisions is to enable the Township to permit such mineral extraction and removal, where such activity can reasonable be permitted, but only upon such terms and conditions as will adequately protect residential and other land uses from very serious consequences and also assure that, once mineral material has been removed, the land shall be reclaimed and restored so as to be available for residential uses or other uses permitted by this Ordinance.

Section 23.08F4 – Operating and Site Reclamation Conditions

As you are aware, each condition provided within Section 23.08F4 is very lengthy and generally provides a required provision rather than a provision of discretion. Given this and rather than providing the entirety of each condition within this memorandum, we have included the subtitle, along with a synopsis of the condition, as well as our comments in italic font for each. If you require the entirety of any condition, please let us know and we will provide it to you.

Section 23.08F4 – Operating and Site Reclamation Conditions

All mineral mining activities which are approved for a special land use shall comply with all of the following conditions:

a. Driveways – Driveway access shall be only at the locations approved for such purpose

   Given that the applicant proposes to maintain the existing driveways, two of which were established without approval but have not resulted in complaints, and that the Planning Commission is satisfied with the proposed driveway locations, it appears this condition has been met.

b. Truck Routes – Routes for trucks shall comply with the Allendale Charter Township Truck Route Ordinance

   The applicant does not propose to change the truck route that was previously approved in compliance with the Allendale Charter Township Truck Route Ordinance. As a result, it appears this condition has been met.

c. Entry Roads – The entry road shall be composed of asphalt, concrete, or similar dustless hard surface material

   Given that the Planning Commission is satisfied with the proposed crushed concrete surface, it appears this condition has been met.

d. Setbacks – Minimum setbacks are required for the excavation area, machinery, and storage or stockpiles

   The Planning Commission concluded that the applicant met all of the required setbacks during the preliminary plan review. The applicant proposes the same setbacks within the final plan. As a result, it appears this condition has been met.

e. Fencing and Signs – Any area subject to excavation shall be fenced and gated as well as signed with no trespassing signage

As was found during your preliminary plan review, the applicant provided satisfactory fencing and signage. As a result, it appears this condition has been met.

f. Entrance Gate – The property shall contain a gate that is properly placed to accommodate mining vehicles on site waiting outside the gate. In addition, the gate entrance shall be appropriately signed.

The applicant has provided the required accommodations pursuant to this condition, which was found satisfactory by the Planning Commission during preliminary plan review. As a result, it appears this condition has been met.

g. Hours of Operation – The hours of operation of any mining site shall be limited to 7:00a.m. to 6:00p.m., Monday through Friday, and 8:00a.m. to 1:00p.m. on Saturday. Operations are prohibited on Sundays and legal holidays.

As presented during the previous plan approval and is proposed to remain, the applicant proposes hours of operation as limited by this provision. As a result, it appears this condition has been met.

h. Noise – Mining sites shall be operated in such a fashion that noise or vibration cannot reasonably be considered disturbing to neighboring uses or users of land

While we do not anticipate the site will operate in an objectionable manner, particularly because the applicant operates the same equipment within a nearby mining site, public comment may reveal concerns in this regard. Pending comments received during the public hearing, it appears this condition has been met.

i. Crushing & Processing of Materials – The processing of material from off-site and from within the site may be occur on the property, with conditions

The applicant proposes to process materials within the site and has met the requirements of the ACTZO in this regard. No crushing is proposed. As a result, it appears this condition has been met.

j. Dust Control – The operator shall maintain all interior access roads by preventing dust from the use of said roads

The applicant has included provisions for dust control within their narrative acknowledging watering of the site shall occur when needed. As a result, it appears this condition has been met.

k. Drainage – Measures shall be taken to avoid surface water exiting the site in an adverse fashion

We unaware of any concerns from the Ottawa County Water Resources Commissioner's office in this regard. As a result, it appears this condition has been met.

l. Topsoil – The replacement of topsoil shall be to a depth of not less than four (4) inches, unless it is demonstrated that less than four (4) inches existed prior to excavation of the site

The applicant indicated during their previous approval that topsoil will be returned at a depth of at least four (4) inches. As a result, it appears this condition has been met.

m. Phasing – If phases exist for a project, reclamation shall occur in one phase prior to operations in another phase

Given that the applicant does not propose any phasing, it appears this condition has been met.

n. Final Slopes – The final slopes shall not exceed one (1) foot of elevation to each four (4) feet of horizontal distance, unless otherwise approved by the Planning Commission. Further, if the mining operation results in a body of water, the final slopes shall not exceed one (1) foot of elevation to each six (6) feet of horizontal distance to a depth of five (5) feet.

The applicant proposes a lake and resulting slopes, which comply with this condition. As a result, it appears this condition has been met.

o. Screening – Earth berms, landscaping or both may be required along the boundaries of the site

As a result of your previous plan requirements, a berm has been added along the north property line. As a result, and pending public comment for additional landscaping, it appears this condition has been met.

p. Lake – The creation of a lake shall only be permitted when a hydrogeological study demonstrates that the waters will not become polluted or stagnant and will not adversely affect groundwater supplies for nearby uses.

The applicant provided a Hydrogeological report during the previous plan approval, which indicated that the lake will not have an adverse effect on area groundwater. Given this, it appears this condition has been met.

Section 23.08G2 – Standards

Section 23.08G2 – Standards

The Township Planning Commission shall not approve any special land use for mineral mining unless the application sufficiently demonstrates that the proposed mineral mining operations and activities will not create very serious consequences or serious environmental impact upon adjacent or nearby lands or other lands in the Township or the area.

Furthermore, before approving a Special Use Permit for mineral mining activities under this Ordinance the Planning Commission shall consider the following factors of the proposed mining operation as applicable:

a. The relationship of extraction and associated activities with existing land uses.
b. The impact on existing land uses in the vicinity of the property.
c. The impact on property values in the vicinity of the property and along the proposed hauling route serving the property, based on credible evidence.
d. The impact on pedestrian and traffic safety in the vicinity of the property and along the proposed hauling route serving the property.
e. The impact on other identifiable health, safety, and welfare interests in the local unit of government.
f. The overall public interest in the extraction of the specific natural resources on the property.

Special Use Standards

As you are aware, you must additionally review the request in accordance with your standards provided for special use approval in Section 20.06 – Standards of the ACTZO. In that regard, below is copy of said Standards as well as our response to each in italic font, in an effort to assist you with your review of the request.

Section 20.06 STANDARDS.

No special land use shall be approved by the Planning Commission unless the Commission finds:

A. That the establishment, maintenance, or operation of the special land use will not be detrimental to or endanger the public health, safety, or general welfare.

We believe the Planning Commission tentatively concluded during its preliminary review that the special land use will not be detrimental. Given that the final plan has not changed since the preliminary plan, we expect that the special land use will not be detrimental to the public health, safety, or general welfare. As a result, this standard appears to be met.

However, pending comment received during the public hearing and after reviewing the final plan, the Planning Commission may disagree with our conclusion.

B. That the special land use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor shall it substantially diminish and impair property values in the neighborhood.

We do not believe the special land use will be injurious to the use and enjoyment of other property in the immediate vicinity, particularly given the addition of the berm along the northern property line and the results of the hydrogeological study. However, pending comment received during the public hearing, the Planning Commission may disagree with our conclusion.

C. That the establishment of the special land use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

We do not believe the special land use will impede the normal and orderly development and improvement of the surrounding property, particularly given that it is located within the Agricultural and Rural Zoning District. As a result, this standard appears to be met.

D. That adequate utilities, access roads, drainage, and necessary facilities have been or are being provided.

Given the previous reviews by the Ottawa County Water Resources Commissioner and the Ottawa County Road Commission, and because no significant changes are proposed to the site that would affect these reviewing agencies, this standard appears to be met.

E. That adequate measures have been or will be taken to provide ingress or egress so designed as to minimize traffic congestion in the public streets.

We believe adequate measures have been taken to ensure the minimization of traffic congestion in public streets, particularly because of the arrangement with the Ottawa County Road Commission to maintain the passable integrity of the streets by the applicant.

In addition, the applicant proposes (and already utilizes) a one-way system within the site, separated with three drive entries/exits. As a result, this standard appears to be met.

F. That the special land use shall, in all other respects, conform to the applicable regulations of the district in which it is located and to any additional conditions or procedures as specified in Article 23.

We believe the proposed special land use conforms to the applicable regulations of the district in which it is located as well as those provided in Article 23 of the ACTZO. As a result, this standard appears to be met.

Site Plan Review Standards

As you are aware, Section 24.06 – Standards for Approval of the ACTZO provides your standards of review when deliberating regarding a site plan application. In that regard, below, in part, is copy of said Standards for Approval. While we would ordinarily provide our response to each in an effort to assist you with your review of the request, we suspect that exercise is unnecessary given that most of the standards do not apply to the project. As you are further aware, each standard is very lengthy and provides guidance and authority to the Planning Commission. Given this, rather than providing the entirety of each standard within this memorandum, we have only included the subtitle. If you require the entirety of any standard, please let us know and we will provide it to you.

Section 24.06 STANDARDS FOR APPROVAL

Prior to approving a site plan, the Planning Commission shall require that the following standards and requirements be satisfied. If these standards and all other requirements of applicable Township ordinances are met, the site plan shall be approved.

A. General Access Requirements
B. Environmental Considerations
C. Sidewalks and Pedestrian Circulation
D. Landscaping and Buffering
E. Lighting
F. Utility Service
G. Outdoor Features
H. Waste Disposal Facilities
I. The location and dimensions of all existing and proposed structures on the subject property
J. Building Appearance
K. Site plans shall conform to all applicable requirements of County, State and Federal statutes and approval may be conditioned on the applicant receiving necessary County, State and Federal permits before final site plan or an occupancy permit is granted
L. Traffic Impact Study

Township Department Reviews

No further comments have been received from township staff since the preliminary plan review. In the instance we receive additional comments, we will transmit them to you.

That said, Supervisor Elenbaas expressed concern with dust control on 46th Avenue and requests that the Planning Commission discuss options with the applicant to mitigate excessive dust on the road.

Resolution

Attached is a proposed resolution of approval for the project. While the resolution can be modified if denial is supported, we drafted the resolution for approval based on your favorable response during the preliminary review.

Planning Commission Considerations

As the Planning Commission deliberates regarding this application, we believe the following warrant your review and consideration. They are listed in no particular order.

- Options for dust control on 46th Avenue
- The content of the proposed resolution
- The standards, conditions, or considerations provided within:
    - Section 23.08B – Purpose
    - Section 23.08F4 – Operating and Site Reclamation Conditions
    - Section 23.08G2 – Standards (mining)
    - Section 20.06 – Standards (special use)
    - Section 24.06 – Standards for Approval (site plan)
- Public comment

The application has been scheduled for a public hearing at your June 20, 2022 meeting. We expect the applicant to be in attendance. If you have any questions, please let us know.

GLR
Planner

Attachments

cc: Adam Elenbaas, Supervisor
Kelly Kuiper, Great Lakes Excavating Service

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

May 11, 2022

Mr. Gregory Ransford, MPA
Fresh Coast Planning
950 Taylor Avenue, Suite 200
Grand Haven, Michigan 49417

RE: JMM Mining Operations – Special Land Use (SLU) Amendment
For Planning Commission Review

Dear Mr. Ransford:

We have received and reviewed the site plan and application for the Amended JMM Mining Special Use Application. This report is intended for use by the Planning Commission in their review and is not intended to be comprehensive for construction purposes. The site plans are dated April 15th, 2022. It is understood that this mining operation was permitted and initiated last year.

This SLU amendment is requesting to intensify the land use on the property. Currently the operation involves excavation, stockpiling, loading, and hauling of the materials. This was approved and extraction began last year. In addition to the above noted activities, the applicant is now seeking approval to mechanically separate grades of mined material. This specific activity will involve a shaker screen, wash plant, pumps, generator and conveyors as per the application materials. This equipment will produce additional noise which will be heard beyond the property lines.

A review of online aerial photographs of the site did not correlate with previously approved plans or proposed plans. Therefore, a site inspection was performed on this date.

The following comments are made for your consideration:

Sheet C-101: GIS Data Plan

1. The applicant shall show existing drainage patterns. Drainage arrows would help illustrate where current sheet flow is directed.
2. The applicant must label any swales, retention/detention ponds that currently collect water
3. The applicant must label any standing water body withing 50' of the property. A review of the aerial image on Google Maps shows several areas of standing water.
4. The applicant should add a legend.

Sheet C-201: Existing Site Conditions & Demo Plan

1. Although this sheet is dated 4-15-2022, it is an outdated aerial photograph which bears no resemblance to current conditions found on site. I recommend that this sheet gets updated to reflect today's conditions to include all three driveways, gates, haul routes, stockpiles, berms, etc. More comments on this follow later in this report.

2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1005
www.fveng.com

Sheet C-205: Site Layout, SESC & Grading Plans

1. The applicant needs to clarify why a looped haul road is necessary when stockpiles are limited to a single 200' x 700' "Processing and Stockpile" area.
2. All haul routes need to be identified which correlate to the existing driveways currently in use.
3. Under "General Notes" the following shall be addressed:
    - Note #6 indicates 4' high fencing (orange plastic) will be installed around the excavation and stockpiling areas. Fencing appeared to be limited to the south property line. Since excavation started last year, I would have expected a secure, continuous fence around the perimeter of the operation as is required by local and federal mining regulations.
    - Note #12 indicates no trespassing signs will be installed every 100 feet along the property lines. Again, since this operation started last year, I would have expected these signs already installed. The site inspection revealed only 3-5 signs were installed.
    - Note #13 indicates the project will be confined to a single phase. As such, please remove the labels indicating current excavation cell and future excavation cell.
4. Bullet point 5 under Mobile Screen Plan Details indicates the screening plant will be situated 350 feet from the road right-of-way. However, in plan view the dimensions indicate this distance will be 410 feet. Please change the note to match the plan.
5. The applicant needs to show all driveways planned for this use.
6. Conveyors are planned for this project. These are considered to be part of the processing machinery and subject to the 250-foot setback from all property lines.
7. The applicant is proposing to use wash water to separate the materials produced. They should illustrate how this will be a "closed-looped" wash operation with zero off-site impacts (i.e. sedimentation, erosion, drainage, etc.).

Sheet C-700: Reclamation Plan

1. No comments.

Summary:

Based on the above, the applicant should:

- Revise the first three sheets as noted. A new existing features plan is strongly recommended.
- Provide clarifications as noted for Sheet C-205.
- The lack of existing safety features (i.e. fencing, signage, etc.) is most troubling. This should be addressed immediately whether the pit is active or not.
- The Township should understand that with the additional equipment be used on site regularly, more noise will be generated. Equipment and stockpiles will be visible from most directions offsite.

We strongly recommend a meeting between the involved Township departments and the Developer to address many of the items noted above. Such a meeting would be mutually beneficial for the Township and the Developer. Should you have any questions or require clarification on the above comments, please contact us at your earliest convenience.

Sincerely,

FLEIS & VANDENBRINK

Shane Peterson, P.E.
Project Engineer

Bruce Pindzia, P.E.
Sr. Project Manager

cc: Chad Doornbos, Superintendent of Public Utilities
Kevin Yeomans, Township Project Coordinator

Allendale Public Utilities

To: Greg Ransford

From: Chad Doornbos

Subject: JMM Mining Amendment

Date: April 20, 2022

Mr. Ransford,

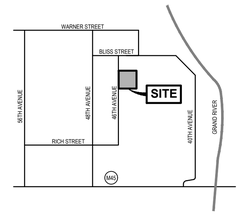
After review of the JMM Mining Amendment, the Utility Department has no comment on the mine itself.

In reviewing the overall project, it was noted that there may be residential lots to the West of the mine. Given the known issues with ground water in Ottawa County, it is highly recommended that the developer install watermain to the project. The watermain is located at 46th and Pingree approximately 500 feet from the edge of the subject property.

Thank you,

Chad E. Doornbos

Superintendent of Public Utilities



LOCATION MAP
NOT TO SCALE

811 Know what's **below.** **CALL** before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NOTE:
EXISTING UTILITIES AND SERVICE LINES IDENTIFIED AS "(PLAN)" WERE OBTAINED FROM AVAILABLE AS-BUILT RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES AND SERVICE LINES PRIOR TO NEW CONNECTIONS.

NEDERVELD
www.nederveld.com
800.222.1868
GRAND RAPIDS
217 Grandville Ave., Suite 302
Grand Rapids, MI 49503
Phone: 616.575.5190
ANN ARBOR
CHICAGO
COLUMBUS
HOLLAND
INDIANAPOLIS
ST. LOUIS

PREPARED FOR:
Miles Ulberg Builders
Miles Ulberg

6564 Warner St
Allendale, MI 49401

REVISIONS:

Title: Township Special Use Submittal		
Drawn: BEM	Checked: RJB	Date: 01.15.2021
Title: Review Comments		
Drawn: BEM	Checked: RJB	Date: 02.02.2021
Title: Review Comments		
Drawn: BEM	Checked: RJB	Date: 03.08.2021
Title: Township Special Use Re-Submittal		
Drawn: BEM	Checked: RJB	Date: 06.28.2021
Title: Township Special Use Re-Submittal		
Drawn: BEM	Checked: RJB	Date: 08.18.2021
Title: Review Comments		
Drawn: BEM	Checked: RJB	Date: 04.15.2022
Title: Review Comments		
Drawn: JW	Checked: JB	Date: 05.27.2022

12084 AND 11910 46TH AVE

GIS Data Plan

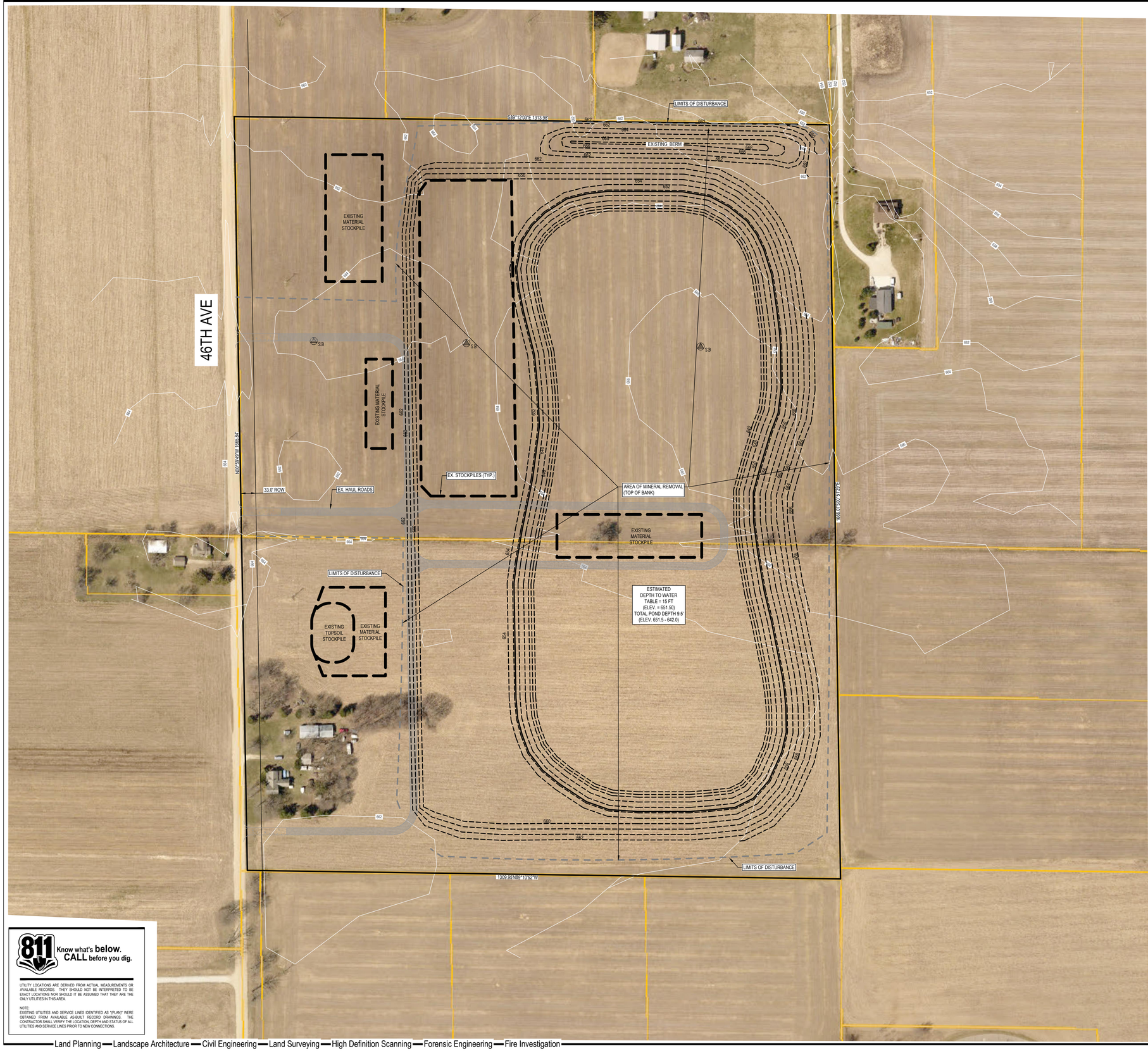
PART OF THE SOUTHWEST 1/4 OF SECTION 18, T7N, R13W, ALLENDALE TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:
STATE OF MICHIGAN
ROGER JACK BARR II
ENGINEER
No. 41990
LICENSED PROFESSIONAL ENGINEER

PROJECT NO:
19200719

SHEET NO:
C-101

JW 5/1/2022 10:40
19200719-CP1.dwg



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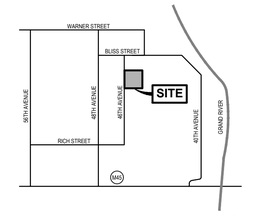

LOCATION MAP
NOT TO SCALE

0' 50' 100' 200'
SCALE: 1" = 100'

PARTIAL DESCRIPTION

PART OF SW FRL 1/4 COM SW SEC COR, TH N 0D 49M 07S W 1345.38 FT, S 89D 12M 03S E 1337.61 FT & S 0D 59M 49S E 419.03 FT TO PT OF BEG, TH S 89D 12M 03S E 1313.98 FT, S 0D 51M 29E 927.23 FT, N 89D 10M 52S W 1311.74 FT, TH N 0D 59M 49S W 926.94 FT TO BEG. SEC 18 T7N R13W 27.93 AC

DEMOLITION LEGEND

EXISTING GRADE CONTOUR

AREA OF DISTURBANCE

REMOVAL / DEMOLITION NOTES

1) THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AT LEAST THREE WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION OPERATIONS. THERE ARE EXISTING UNDERGROUND UTILITIES WHICH CROSS THE PROPOSED REPLACEMENT WORK AREAS. ALTHOUGH THEIR EXACT LOCATION CANNOT BE DETERMINED, IT IS KNOWN THESE UTILITIES ARE LOCATED WHERE DIGGING IS REQUIRED. THE CONTRACTOR SHALL CONDUCT THE REQUIRED EXCAVATION IN THESE AREAS WITH EXTREME CAUTION.
2) ALL EXISTING UTILITY INFORMATION SHOWN IS TAKEN FROM EXISTING RECORDS, AND FIELD VERIFIED WHERE ACCESSIBLE ONLY. INFORMATION OBTAINED FROM EXISTING RECORDS MAY NOT BE COMPLETE OR ACCURATE. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY FOR ACCURACY, LOCATION AND CONDITION.
3) BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE TOWNSHIP AND BY THE OWNER, REPRESENTATIVES OF THE TOWNSHIP, THE OWNER AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING UTILITIES AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS AND EXISTING VIDEO TAPES. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE CONTRACTOR.
4) THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION WORK.
5) ALL EXISTING UTILITIES, SEWERS AND WATER LINES ARE TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED ON THE PLANS. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL APPLICABLE UTILITY COMPANIES, MUNICIPALITIES AND AGENCIES BEFORE COMMENCING ANY WORK.
6) THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES REGARDING REMOVAL OF EXISTING POLES, OVERHEAD WIRES, UNDERGROUND UTILITIES, GUY WIRES, GAS LINES, ETC. ALL ADJUSTMENT OR RECONSTRUCTION WORK, EXCEPT FOR THOSE STRUCTURES OTHERWISE NOTED ON THE PLANS, SHALL BE PERFORMED BY THE CONTRACTOR. EXISTING APPURTENANCES SUCH AS UTILITY POLES AND VALVES BOX SHALL NOT BE DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION.
7) THE CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICE TO ALL ADJOINING PROPERTIES.

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INDIANAPOLIS
ST. LOUIS

PREPARED FOR:
Miles Ulberg Builders
Miles Ulberg

6564 Warner St
Allendale, MI 49401

REVISIONS:

Title: Township Special Use Submittal		
Drawn: BEM	Checked: RJB	Date: 01.15.2021
Title: Review Comments		
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Title: Review Comments		
Drawn: BEM	Checked: RJB	Date: 04.15.2022
Title: Review Comments		
Drawn: JW	Checked: JB	Date: 05.27.2022

12084 AND 11910 46TH AVE

Existing Site Conditions & Demo Plan

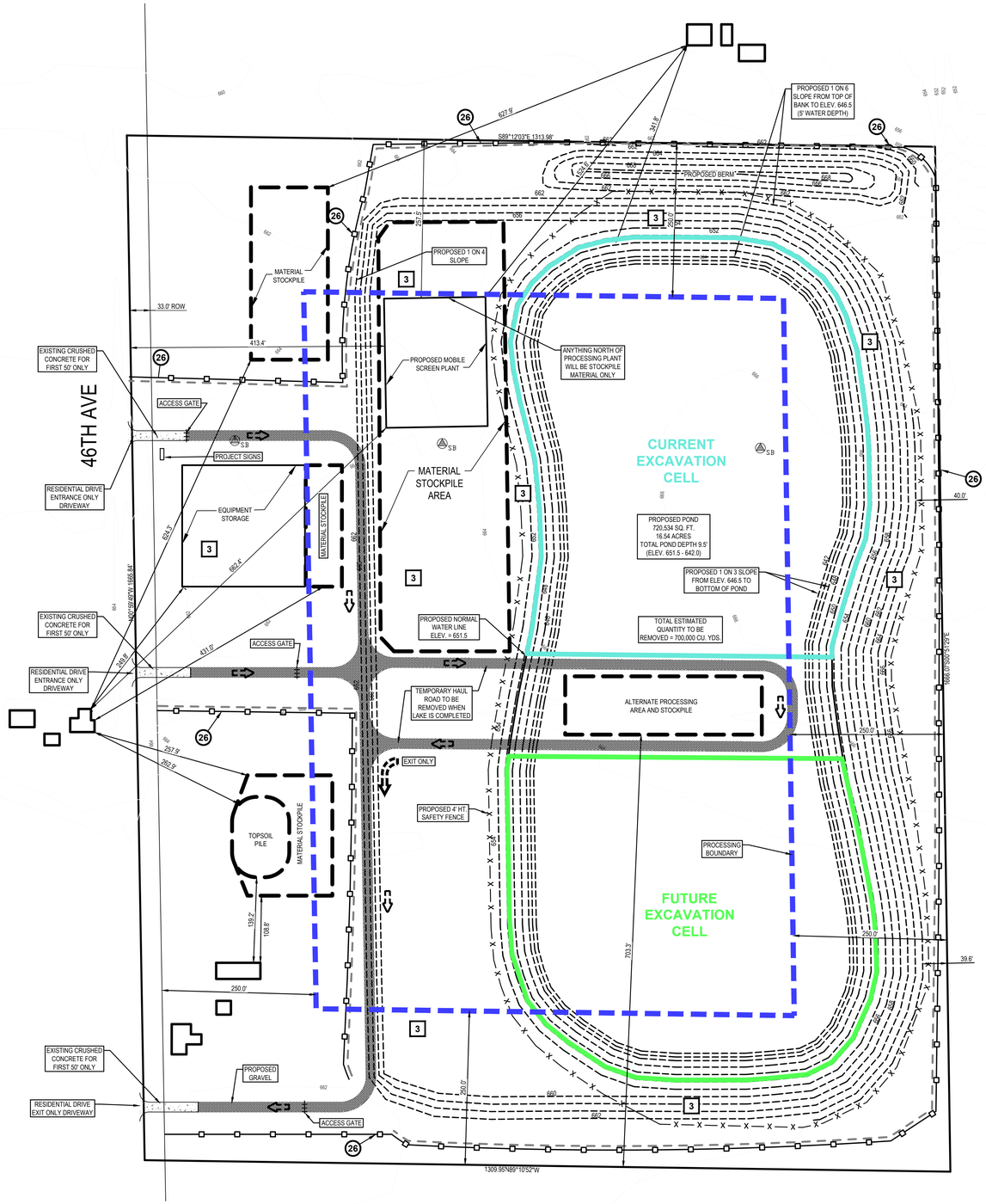
PART OF THE SOUTHWEST 1/4 OF SECTION 18, T7N, R13W, ALLENDALE TOWNSHIP, OTTAWA COUNTY, MICHIGAN

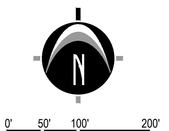
STAMP:
STATE OF MICHIGAN
ROGER JACK BARR II
ENGINEER
No. 41990
LICENSED PROFESSIONAL ENGINEER

PROJECT NO:
19200719

SHEET NO:
C-201

JW 6/1/2022 07:40
19200719-CP1.dwg





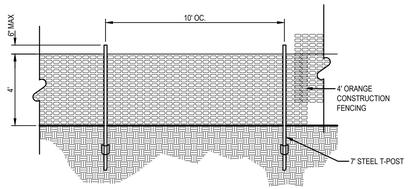
LOCATION MAP
NOT TO SCALE

LEGEND

- EX. GRADE CONTOUR
- PROP. GRADE CONTOUR
- PROP. LIMITS OF GRADING
- PROP. 4' SAFETY FENCE
- SILT FENCE
- STOCKPILE AREA LIMIT
- PROCESSING BOUNDARY

GENERAL NOTES

1. SUMMARY OF PROPOSED LAND USE:
   a) 12084 46th Avenue
   Allendale, MI 49401
   70-10-18-300-016
   b) ZONING AG
   c) TOTAL ACREAGE (EXCL. R.O.W.) 48.89 (2,129,630.4 S.F.)
   d) PROPOSED POND ACREAGE 16.54 AC.
   e) TOTAL EXCAVATED MATERIAL 700,000 CU. YDS.
   f) SETBACKS
   CUT/EXCAVATION SETBACK 25' FROM ALL PROPERTY LINES
   100' FROM PRINCIPLE BUILDING ON ADJOINING PROPERTY
   PROCESSING MACHINERY SETBACK 250' FROM ALL PROPERTY LINES
   STORAGE/STOCKPILE SETBACK 250' FROM A PRINCIPLE BUILDING
2. HOURS OF OPERATION:
   MON-FRI: 7AM TO 6PM
   SATURDAY: 8AM TO 1PM
3. ALL TRUCKS SHALL BE ROUTED SOUTH ON 46TH AVENUE TO RICH STREET TO 48TH AVENUE PER THE ALLENDALE TOWNSHIP TRUCK ROUTE ORDINANCE.
4. THE CONDUCT AND OPERATIONS OF THE MINERAL REMOVAL WILL NOT RESULT IN WIND-BLOWN SAND, DUST OR SOIL THAT WOULD MIGRATE OFF-SITE. SITE WILL BE SPRAYED AS NEEDED.
5. FOUR FOOT HIGH FENCING WILL BE ERECTED AROUND CURRENTLY MINED AND STOCKPILING AREAS OF THE MINERAL REMOVAL OPERATION.
6. THE CONDUCT AND OPERATIONS OF THE MINERAL REMOVAL WILL BE OPERATED IN SUCH A FASHION THAT THE NOISES OF OPERATION CANNOT REASONABLY BE CONSIDERED DISTURBING FOR NEIGHBORS. OBJECTIONABLE NOISES SHALL BE MUFFLED EXCEPT FOR WARNING DEVICES EMITTING SOUND FOR WARNING PURPOSES AS REQUIRED BY LAW.
7. MINING MATERIAL AND STRIPPED TOPSOIL TO BE STOCKPILED WITHIN THE PROPOSED POND AREA AND IN INDICATED STOCKPILE AREAS, WITH STRIPPING AND MINING BEING CONDUCTED FROM EAST TO WEST. BOTH MATERIALS WILL BE SOLD AND MOVED FROM THE SITE BY THE YARD AS MARKET DEMANDS. STOCKPILES TO NOT EXCEED 20 FEET IN HEIGHT (AS MEASURED FROM ORIGINAL GRADE).
8. ANY CHANGE OF THE NATURAL CONTOUR OF THE LAND, BOTH DURING MINERAL REMOVAL OPERATIONS AND AT THE TIME OF ABANDONMENT BY COMPLETION, SHALL BE MAINTAINED AS SAFE TO ALL TRESPASSERS AND ANY OTHER PERSONS HAVING REASON TO BE WITHIN THE AREA OF ACTIVITY.
9. AS THE NATURAL RESOURCES ARE BEING REMOVED, THE PROPERTY SHALL BE RESTORED BY THE REPLACEMENT OF TOPSOIL WHERE FEASIBLE; AND ALL EXCAVATION SHALL BE SLOPED TO A GRADIENT WITH NOT MORE THAN A 3-FOOT HORIZONTAL/1 FOOT VERTICAL SLOPE AND THE CONTOUR BE CAUSED TO BLEND AS NEARLY AS POSSIBLE WITH THE NATURAL SURROUNDINGS. THE MINERAL REMOVAL AREA SHALL BE PLANTED WITH A SUITABLE GROUND COVER SUFFICIENT TO CONTROL EROSION. TOPSOIL SHALL BE REPLACED ON THE SITE TO A DEPTH OF NOT LESS THAN FOUR INCHES UNLESS IT IS DEMONSTRATED THAT THERE WAS LESS THAN FOUR INCHES OF TOPSOIL ON THE SITE PRIOR TO ANY EXCAVATION IN WHICH CASE TOPSOIL SHALL BE REPLACED TO THE EXTENT THAT IT EXISTED ON THE SITE PRIOR TO ANY EXCAVATION.
10. THE PROPOSED EARTH CHANGE SHALL COMPLY WITH ALL FEDERAL, STATE AND COUNTY OF OTTAWA REGULATIONS, ORDER AND PERMIT APPROVAL REQUIREMENTS.
11. NO TRESPASSING SIGNS TO BE PLACED EVERY 100 FEET ALONG PROPERTY LINES.
12. THE APPLICANT WILL COORDINATE WITH THE OTTAWA COUNTY ROAD COMMISSION REGARDING MAINTENANCE OF 46TH AVENUE.
13. ALL MINERAL MATERIAL TO BE MINED WILL BE SAND. R. JACK BARR, PE #41990 STATE OF MICHIGAN HEREBY CERTIFIES THE MATERIAL TYPE AND VOLUME CALCULATIONS.
14. BACKHOE EXCAVATION WAS CONDUCTED ON THE SITE IN JUNE 2019 TO CONFIRM THE MINERAL MATERIAL TYPE AND DEPTH.
15. NO SIDEWALK ALONG 46TH AVENUE IS PROPOSED. THE APPLICANT REQUESTS DEFERRAL OF SAID SIDEWALK.
16. NO PRIVACY SCREENING OR FENCING IS PROPOSED.



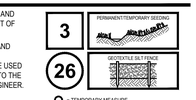
4' SAFETY FENCE DETAIL
N.T.S.

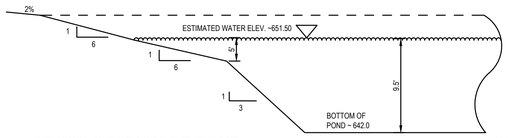
MOBILE SCREEN PLAN DETAILS

- SCREEN PLANT WILL SEPARATE STONE FROM THE SAND
- A LOADER WILL BE USED TO PLACE MATERIAL INTO A HOPPER FROM A STOCKPILE
- SAND WILL FALL THROUGH THE SCREEN AND STONE WILL BE SEPARATED
- THE SCREEN PLANT WILL OPERATE AT 85 DECIBELS MEASURED AT 50-FEET
- THE SCREEN PLANT WILL BE PLACED AT LEAST 350-FEET EAST OF THE 46TH AVENUE RIGHT-OF-WAY AND 700-FEET FROM THE CLOSEST RESIDENCE
- THE SCREENING OF MATERIAL WILL SHORTEN THE OVERALL MINING DURATION BY 12-18 MONTHS BY ALLOWING A VARIETY OF MATERIALS TO BE SOLD

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1) CONTRACTOR SHALL POSSESS THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT PRIOR TO START OF ANY EARTH WORK.
2) CONTRACTOR SHALL MODIFY THIS SOIL EROSION AND SEDIMENTATION CONTROL PLAN TO SHOW THE ADDITIONAL CONTROL MEASURES INTENDED TO BE USED DURING CONSTRUCTION. SUBMIT MODIFICATIONS TO THE CONTROLLING AGENCY, THE OWNER, AND THE ENGINEER.
3) REFER TO THE M.D.O.T. "SOIL EROSION AND SEDIMENTATION CONTROL MANUAL" (APRIL 2006) FOR ADDITIONAL INFORMATION
4) THE CONTRACTOR SHALL BE RESPONSIBLE TO INSPECT, TAKE CORRECTIVE ACTION AND MAINTAIN ALL TEMPORARY SESC MEASURES DAILY AND AFTER EACH RAIN EVENT UNIT FINAL COMPLETION AND ACCEPTANCE OF THE PROJECT.





CROSS SECTION OF POND
N.T.S.

SOIL EROSION CONTROL SCHEDULE 2020

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PLACE SILT FENCE												
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE SITE (PROJECT TO BEGIN ON NORTH END)												
FINISH GRADE SITE												
RESPREAD TOPSOIL/COMPACTION												
SEED DISTURBED AREAS												
SITE RESTORATION/CLEAN UP												

*ANTICIPATED COMPLETION 2024

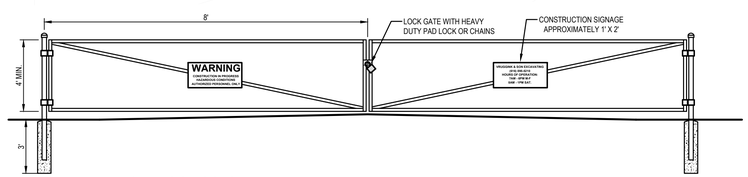
SOIL EROSION CONTROL SCHEDULE 2024

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ROUGH GRADE SITE (PROJECT TO BEGIN ON NORTH END)												
FINISH GRADE SITE												
RESPREAD TOPSOIL/COMPACTION												
SEED DISTURBED AREAS												
SITE RESTORATION/CLEAN UP												

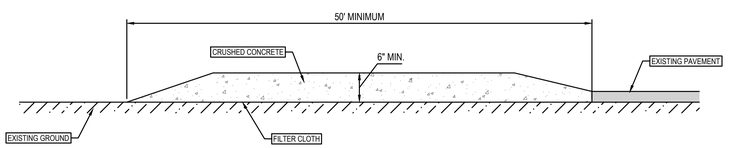
811 Know what's below. CALL before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NOTE:
EXISTING UTILITIES AND SERVICE LINES IDENTIFIED AS "PLAN" WERE OBTAINED FROM AVAILABLE AS-BUILT RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES AND SERVICE LINES PRIOR TO NEW CONNECTIONS.



MAIN ENTRANCE ACCESS GATE DETAIL
N.T.S.



ACCESS ROAD CROSS SECTION
N.T.S.

Land Planning — Landscape Architecture — Civil Engineering — Land Surveying — High Definition Scanning — Forensic Engineering — Fire Investigation

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PREPARED FOR:
Miles Ulberg Builders
Miles Ulberg

6564 Warner St
Allendale, MI 49401

REVISIONS:

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Drawn: BEM	Checked: RJB	Date: 01.15.2021
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12084 AND 11910 46TH AVE

Site Layout, S.E.S.C. & Grading Plans

PART OF THE SOUTHWEST 1/4 OF SECTION 18, T7N, R13W, ALLENDALE TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:

STATE OF MICHIGAN
ROGER JACK BARR II
ENGINEER
No. 41990
LICENSED PROFESSIONAL ENGINEER

PROJECT NO:
19200719

SHEET NO:
C-205

19200719-CPI.dwg JW 6/1/2022 07:40

LOCATION MAP
NOT TO SCALE

0' 50' 100' 200'
SCALE: 1" = 100'

811 Know what's **below.** **CALL** before you dig.

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PREPARED FOR:
Miles Ulberg Builders
Miles Ulberg

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12084 AND 11910 46TH AVE

Reclamation Plan

PART OF THE SOUTHWEST 1/4 OF SECTION 18, T7N, R13W,
ALLENDALE TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:
STATE OF MICHIGAN
ROGER JACK BARR II
ENGINEER
No. 41990
LICENSED PROFESSIONAL ENGINEER

PROJECT NO:
19200719

SHEET NO:
C-700

19200719-CPI.dwg JW 6/1/2022 07:40

May 27, 2022

Mr. Gregory Ransford
Planning Consultant
Allendale Charter Township
6676 Lake Michigan Drive
PO Box 539
Allendale, MI 49401

RE: Special Land Use Amendment – ***Response to Review Memos***
11910 & 12084 46th Avenue, Allendale Township, Ottawa County, Michigan

Dear Mr. Ransford:

Included with this cover letter, please find six (6) copies of revised submittal materials for an amendment to the existing special land use permit that is on record for mining at 11910 and 12084 46th Avenue. The revised materials have been prepared to address the review memos supplied by yourself, the Township Engineer, and the Utilities Department. As previously indicated, the amendment seeks to add processing to the site and notes a change in contractors from Vruggink & Sons Excavating to Great Lakes Excavating. An electronic copy of the submittal package has also been submitted. Each package includes:

1. Special Land Use Application **no change from original submittal*
2. Legal Description **no change from original submittal*
3. Revised Project Description **no change from original submittal*
4. Revised Site Plan Set (to scale, 24x36) **Only item that contains revisions per review comments*

Additionally, the following comments have been prepared in response to the review memos.

<u>Public Utilities</u>

1. Great Lakes Excavating Service wants to clarify that it is the contractor for the mining only (and the application is only to add processing to the existing mining special land use), therefore, JMM Developers LLC remains the owner and developer of the property. Any requirements of the future residential parcels, such as public water connection, will remain their responsibility.

Planning Review

1. I have not been able to track down decibel charts similar to the one provided previously on the Warner Street site for the makes and models of the equipment. The decibel levels at approximately one (1) meter was provided in the revised narrative.
2. All of the driveways are existing and have been added accurately on the plan. These driveways were installed by JMM/the developer.
3. The allowable envelope for processing has been added to the site plan set.
4. The dimensions from the top soil pile to the home to the south (on site) and the home to the west have been added.

Engineering Review

1. We have discovered that additional high ground is needed for stockpiling the wet sand. The looped road allows trucks to maneuver through the site smoothly with the alternate processing and stockpile areas. In addition, per the general notes, stockpiling also occurs within the pond area.
2. All existing driveways and haul routes as established by JMM (original developer/contractor) have been noted on the plan set.
3. Since Great Lakes Excavating is coming into this project after the approval for the mining special use was already granted to JMM, we are also working to understand what items need to be updated or complied with. Great Lakes Excavating will work to make sure the required fencing and no trespassing signs are installed.
4. A land bridge is being utilized, therefore, the project note limiting the project to a single cell has been removed.
5. All processing equipment will adhere to the setback requirements and the allowable processing "envelope" has been added to the plan. Great Lakes Excavating is eliminating any need for a wash operation and will only be dry screening at the site.

These items are being submitted for consideration at the regular Planning Commission meeting on June 20, 2022. Should you have any questions or need additional information, please do not hesitate to contact me at (616) 485-5321 or kmkuiper@outlook.com.

Thank you,

Kelly Kuiper

Kelly Kuiper
Great Lakes Excavating

Planning Commission

Site Plan Review Application

Submission Date: April 15, 2022

Application for Site Plan Review in conjunction with which of the following:

- ☐ Site Plan Review Only
- ☐ PUD Rezoning
- ☒ Special Use Application AMENDMENT
- ☐ Other:_____

Property Owner:	JMM Developers LLC		
Mailing Address:	7300 Fillmore Street, Allendale, MI 49401		
Phone Number:	(616) 218-2230	Cell Phone:	
Email Address:	matthd43@hotmail.com	Fax:	
Owner's Signature:	Matt DeYoung dotloop verified 04/14/22 5:08 PM EDT 7ICM-1BHK-GVW1-8C4Q		

Applicant Name: (if not owner)	Great Lakes Excavating Service		
Mailing Address:	3471 146th Avenue, Zeeland, MI 49464		
Phone Number:	(616) 240-0962	Cell Phone:	
Email Address:	glesinc2@gmail.com	Fax:	
Applicant's Signature:	Curt Moran dotloop verified 04/14/22 3:19 PM EDT VSCP-JKXA-HY4S-VMHS		

Who is the responsible party for future invoices? Check one: ☐ Property Owner ☒ Applicant

Architect, Engineer, Attorney or other professionals associated with the project (attach additional sheets if necessary):

Contact:	Jack Barr, P.E. - Nederveld, Inc.		
Mailing Address:	217 Grandville Ave SW, Suite 302, Grand Rapids, MI 49503		
Phone Number:	(616) 575-5190	Cell Phone:	
Email Address:	jbarr@nederveld.com	Fax:	

6676 Lake Michigan Drive | P.O. Box 539 | Allendale MI 49401
Phone: 616-895-6295 Fax: 616-895-6670 or 616-895-6330
www.allendale-twp.org

Address of Property:	11910 & 12084 46th Avenue				
Permanent Parcel Number:	70 - 10 - 19 - 100 - 021 (11910) and 70-10-18-300-016 (12084)				
Legal Description of Property (or attach to the application):					
Included					
Lot Area:	50.15 ac	Lot Depth:	1,314 ft (west/east)	Lot Width:	1,666 ft (north/south)
Current Zoning of Parcel:	AG	Current Use of Parcel:	Single family dwelling & Vacant		
Proposed Use of Parcel:	Sand and aggregrate mining to create aesthetic lake with 11 future land divisions				
Name of Proposed Development (if applicable):					
Name of Proposed Buildings to be constructed:					
Square feet of gross:		Square feet of usable floor area:			
Number of Permanent Employees (if applicable):					

- Please include 6 sets of the proposed Site Plan and 1 electronic copy for staff review along with your application and escrow fee. (When ready for submission to the Planning Commission, smaller than typical plans are allowed when they can be easily interpreted and are to scale.)
- Please see Resolution 2011-2 for our full escrow fee policy. If you would like a copy of this policy it is available online or by request at the Township office.
- If your escrow is not kept up to date, according to our policy, the Township reserves the right to withhold approval of your project, issue a stop work order, or withhold final occupancy until the escrow balance is made current.

For Office Use Only

Date Received:			
Amount Paid:		Check No:	
Notes:			

ALLENDALE CHARTER TOWNSHIP
6676 Lake Michigan Drive | P.O. Box 539 | Allendale MI 49401
Phone: 616-895-6295 Fax: 616-895-6670 or 616-895-6330
www.allendale-twp.org

April 14, 2022

Mr. Gregory Ransford

Planning Consultant

Allendale Charter Township

6676 Lake Michigan Drive

PO Box 539

Allendale, MI 49401

RE: Special Land Use Amendment

11910 & 12084 46th Avenue, Allendale Township, Ottawa County, Michigan

Dear Mr. Ransford:

JMM Developers LLC has decided to no longer utilize Vruggink & Sons Excavating as the contractor the mining special land use at the above-mentioned address. Great Lakes Excavating Service is now proposed to be the contractor. As the new contractor, they are seeking to add the ability to process materials at the site, therefore, they are assuming the responsibility of seeking the amendment to the existing special land use, however, there is no formal change in ownership at this site and this is the only reason they are listed as the "applicant" for this amendment.

Thank you,

Matt DeYoung dotloop verified 04/14/22 5:08 PM EDT U7DX-GMYY-XFEP-5LUS

Matt DeYoung

JMM Developers LLC

LEGAL DESCRIPTION
11910 & 12084 46th Avenue Pond

11910 46th Avenue (70-10-19-100-021)

PART OF E 1/2 OF NW 1/4 COM N 1/4 COR, TH S 88D 54M 35S W 1311.72 FT, S 0D 05M 07S E 730 FT, N 88D 54M 35S E 1313.3 FT, TH N 0D 05M 07S W 730.04 FT TO BEG. SEC 19 T7N R13W

12084 46th Avenue (70-10-18-300-016)

PART OF SW FRL 1/4 COM SW SEC COR, TH N 0D 49M 07S W 1345.38 FT, S 89D 12M 03S E 1337.61 FT & S 0D 59M 49S E 419.03 FT TO PT OF BEG, TH S 89D 12M 03S E 1313.98 FT, S 0D 51M 29E 927.23 FT, N 89D 10M 52S W 1311.74 FT, TH N 0D 59M 49S W 926.94 FT TO BEG. SEC 18 T7N R13W 27.93 AC.

PROJECT DESCRIPTION
11910 & 12084 46th Avenue
Updated April 14, 2022

Request.

The special land use request for 11910 & 12084 46th Avenue proposes an aesthetic pond totaling 18.45 acres in size with a total proposed excavation of approximately 774,196 cubic yards of sand and aggregate. The sand and aggregate produced by this pond will aid in the booming West Michigan construction industry, specifically in the immediate Ottawa County area for road and home construction. This sand is used extensively for sub-base, pipe trench backfill, and as structured material for new building construction.

Name of all of the owners(s) of the land from which removal is to be made or upon which mining operations will take place.

JMM Developers LLC
Joshua Vruggink
7300 Fillmore Street
Allendale, MI 49401

Name and address of the applicant.

JMM Developers LLC
Joshua Vruggink
7300 Fillmore Street
Allendale, MI 49401

**Great Lakes Excavating is assuming responsibility of amending the existing special land use to pursue the ability to process, however, they will be operating as the contractor only*.

Name and address of the person, firm or corporation who will be conducting the actual removal and/or processing operation.

Original contractor:
Vruggink and Son Excavating
7300 Fillmore Street
Allendale, MI 49401

New contractor to finish project:
Great Lakes Excavating Service
3471 146th Avenue
Zeeland, MI 49464

Location, size, and legal description of the area from which the removal is to be made.

The excavation is to take place at 11910 & 12084 46th Avenue in Allendale Township, two parcels containing approximately 48.89 acres. The legal descriptions are as follows:

> 11910 46th Avenue (70-10-19-100-021)
> PART OF E 1/2 OF NW 1/4 COM N 1/4 COR, TH S 88D 54M 35S W 1311.72 FT, S 0D 05M 07S E 730 FT, N 88D 54M 35S E 1313.3 FT, TH N 0D 05M 07S W 730.04 FT TO BEG. SEC 19 T7N R13W

12084 46th Avenue (70-10-18-300-016)
PART OF SW FRL 1/4 COM SW SEC COR, TH N 0D 49M 07S W 1345.38 FT, S 89D 12M 03S E 1337.61 FT & S 0D 59M 49S E 419.03 FT TO PT OF BEG, TH S 89D 12M 03S E 1313.98 FT, S 0D 51M 29E 927.23 FT, N 89D 10M 52S W 1311.74 FT, TH N 0D 59M 49S W 926.94 FT TO BEG. SEC 18 T7N R13W 27.93 AC.

A description of the type of mineral to be removed and an estimate of the total quantity and an annual quantity to be removed. This estimate shall be verified by a registered civil engineer or land surveyor.

The proposed pond will total 18.45 acres in size and will result in a total cut of approximately 774,196 cubic yards of sand and aggregate. The proposed annual quantity to be removed is approximately 100,000 cubic yards. This estimate has been verified by a registered civil engineer.

If over 100,000 cubic yards of material is to be removed, provide evidence to reasonably demonstrate that the amount of material proposed to be removed actually exists on site.

Soil borings and backhoe excavations have been performed on site and verified by a professional engineer.

A description of the trucks to be used to transport the minerals described in cubic yard capacity and single or double bottom.

Conventional 15 cubic yard dump trucks and 50 cubic yard lead and train trucks will be utilized.

Estimated number of truck trips per day. (A truck going in and coming out is two truck trips).

The excavated sand and aggregate leaving the site will be based on market demand, therefore, the number and loaded weight of the trucks to be utilized may vary greatly. On average, approximately fifteen (15) trucks or ten (10) lead and train trucks per day will haul sand from the site.

The roads which will primarily be used to transport the minerals (haul route).

Trucks leaving the site will head south on 46th Avenue to Rich Street to 48th Avenue, which is a designated truck route per the Allendale Township Truck Route Ordinance.

The proposed hours and days of operation.

The hours and days of operation shall be limited to 7:00 a.m. to 6:00 p.m., Monday through Friday, and 8:00 a.m. to 1:00 p.m. on Saturday per the special use standards in Section 23.08.F.4.g.

A description of the types of equipment to be used in the mining operation (Revised).

The proposed pond will be constructed with standard excavating equipment such as excavators, clam shells or cranes and draglines, and no dewatering of the site is proposed.

This amendment to the original special use approval is being sought to add processing of the mined sand and aggregate. Some of the heavier sand, the gravel and the stone is proposed to be run through the processing machinery in order to classify the materials into multiple particle sizes. By sorting and classifying the material, it becomes more usable for its intended purpose in construction projects. Without this process, some of the material mined from the site is not marketable for end users. The proposed additional equipment for processing includes:

1. 2021 5x16-3DR Incline Screen. (serial number: V700560-1001) Sound Decibel Level - 90-95dB @ 1 meter, approximately 16 ft x 5 ft
2. 2021 Finespro100 Sand Wash Plant. (serial number: N100700-1011) Sound Decibel Level -90-95dB @ 1 meter, approximately 5 ft x 6 ft
3. 022 Schurco Slurry Fresh Water Pump. (serial number: 1001) Sound Decibel Level - 85dB @ 1 meter, approximately 1 ft x 2 ft

4. 2021 350kw Gillette Generator. (serial number: SD-19-300) Sound Decibel Level - 80dB @ 1 meter, approximately 16.5 ft x 6 ft
5. 2021 Cross tech 60x30 Stacking conveyors. (serial numbers: 6030-0216 / 6030-0217) Sound Decibel Level – Unknown, up to two (2) on site, approximately 30 ft x 60 ft

Please note that all of the equipment is mobile and able to be moved within the indicated processing area on the revised site plan. This is for ease of stockpiling and loading trucks. All of the equipment will maintain required setbacks from property lines and all equipment is able to meet the maximum decibel requirements at property lines. Last, no crushing is proposed as part of the revised application for material processing.

A description of the methods to be used for dust control.

Windblown dust and sand will be minimized by watering the site as need during dry/windy conditions. In addition, the first 50 feet of the haul road will be constructed with crushed concrete so as to minimize tracking onto 46th Avenue (however, 46th Avenue is a gravel road).

State if materials such as asphalt and concrete will be brought into the site for crushing and mixing with on-site mining minerals.

Materials such as asphalt and concrete will not be brought into the site for mixing with on-site mining minerals. Also, as previously stated, no crushing is proposed as part of the processing request.

The estimated number of years to complete operations and number of phases.

The proposed pond totals approximately 774,196 cubic yards of sand and approximately 100,000 cubic yards is proposed to be removed annually. Therefore, the estimated number of years to complete the pond is eight (8) years. Based on the date of the original special land use, the project is still anticipated to be completed in this time frame.

A description of the proposed use of the land follow completion of mining activities.

The pond will serve as an aesthetic addition to for 11910 & 12084 46th Avenue and the eleven (11) proposed future land divisions.

Proof of liability insurance with at least one million dollars of coverage.
Proof of liability insurance for Great Lakes Excavating with at least one million dollars of coverage will be provided to the Township as part of this application process.

CHARTER TOWNSHIP OF ALLENDALE
COUNTY OF OTTAWA
STATE OF MICHIGAN

RESOLUTION #_____

At a regular meeting of the Planning Commission of the Charter Township of Allendale, Ottawa County, Michigan, held on the 20th day of June, 2022 at 7:00 p.m. local time.

PRESENT: _____

ABSENT: _____

It was moved by member _____ and supported by member _____ that the following Resolution be adopted.

WHEREAS**,** Great Lakes Excavating Service (the "Applicant"), whose address is 3471 146th Avenue, Zeeland, Michigan, 49464, applied to Allendale Charter Township (the "Township") for a special use approval pursuant to Article 20 and Section 23.08 of the Allendale Charter Township Zoning Ordinance (the "Zoning Ordinance"), to amend an existing permit that authorizes the excavation of approximately 774,196 cubic yards of sand, resulting in a lake with a surface area of 16.54 acres within parcel numbers 70-10-19-100-021 and 70-10-18-300-016, owned by JMM Developers, LLC, whose address is 7300 Fillmore Street, Allendale, Michigan, 49401. The amendment is as shown in the site plan submission titled 12084 and 11910 46th Avenue, prepared by Nederveld, Incorporated, dated 05.27.2022 (the "Development"), which includes;

1. An undated two (2) page Special Land Use Permit Application;
2. A letter of authorization from Matt DeYoung of JMM Developers, LLC, titled Special Land Use Amendment 11910 & 12084 46th Avenue, Allendale Township, Ottawa

County, dated April 14, 2022;

3. A legal description sheet for 11910 46th Avenue and 12084 46th Avenue;
4. A previously submitted Location Map 11910 & 12084 46th Avenue, Project No. 19200719;
5. A three (3) page Project Description;
6. A previously submitte3d Certificate of Insurance, dated 01/29/2021;
7. A previously submitted Letter of Credit Estimate from Nederveld dated 09/25/19, updated 10/16/19, updated 01/29/21;
8. A previously submitted Minimal Impact Waiver Request letter dated January 29, 2021 to Mr. Joe Bush;
9. A previously submitted five (5) page Ottawa County Environmental Health Vacant Land Evaluation Report dated 06/06/2019;
10. A May 27, 2022 letter titled Special Land Use Amendment – Response to Review Memos 11910 & 12084 46th Avenue, Allendale Township, Ottawa County, Michigan from Kelly Kuiper (2 pages);
11. 12084 46th Avenue and 11910 46th Avenue GIS Data Plan, Project No. 19200719, Sheet No. C-101, dated 05.27.2022;
12. 12084 46th Avenue and 11910 46th Avenue Existing Site Conditions & Demo Plan, Project No. 19200719, Sheet No. C-201, dated 05.27.2022;
13. 12084 46th Avenue and 11910 46th Avenue Site Layout, S.E.S.C. & Grading Plans, Project No. 19200719, Sheet No. C-205, dated 05.27.2022;
14. 12084 46th Avenue and 11910 46th Avenue Reclamation Plan, Project No. 19200719,

Sheet No. C-700, dated 05.27.2022; and

WHEREAS**,** before taking any action to approve or deny a request for approval of the Development, it is necessary that the Planning Commission hold a public hearing on the proposed special land use and give notice as required by Michigan Act 110 of 2006, as amended; and

WHEREAS**,** proper notice of the public hearing on the special land use and related site plan having been given as is required by Michigan Act 110 of 2006, as amended, as is evidenced by the Affidavits of Publication and Mailing on file in the office of the Township Clerk and the public hearing having been held on June 20, 2022; and

WHEREAS, the Township Planning Commission found that the Development complies with the purpose of Section 23.08 of the Zoning Ordinance, the conditions of Section 23.08F4 of the Zoning Ordinance, the standards of Section 23.08G2 of the Zoning Ordinance, the standards of Section 20.06 of the Zoning Ordinance, and the standards of Section 24.06 of the Zoning Ordinance and;

WHEREAS**,** pursuant to Article 20 and Section 23.08 of the Zoning Ordinance, the Township Planning Commission desires to approve the Development.

NOW, THEREFORE, BE IT RESOLVED THAT THE DEVELOPMENT IS APPROVED WITH THE FOLLOWING CONDITIONS:

1. The pedestrian pathway parallel to 46th Avenue is to be constructed at the time 46th Avenue is paved abutting the Development.
2. Excavation shall commence from east to west and shall be limited to aggregate and sand.
3. Processing shall comply with the Development.

4. Crushing is prohibited.
5. All trucks shall be routed south on 46th Avenue to Rich Street, to 48th Avenue
6. All topsoil returned to the site shall be replaced at a depth of not less than four (4) inches.
7. The special land use shall be completed within five (5) years from April 19, 2021.
8. No activity shall be conducted outside of the hours of 7:00am and 6:00pm Monday through Friday, outside of the hours of 8:00am to 1:00pm on Saturday, and never on Sundays.
9. Stockpiles shall not exceed twenty (20) feet in height from original grade.
10. A berm shall be maintained on site along the north property line as identified within the proposed Development.
11. A cash deposit or irrevocable letter of credit in an amount of $109,938.00 or as otherwise determined by the Township Engineer, naming the Township as the beneficiary thereof, shall be posted pursuant to and in accordance with Section 23.08G5 of the Zoning Ordinance.
12. The special land use permit shall be subject to annual review by the Planning Commission on or about the anniversary date of approval of the permit. The applicant shall provide a written description of the progress of the special land use pursuant to Section 23.08G6 of the Zoning Ordinance.
13. The special land use shall be subject to periodic inspections by the Township Engineer to determine if the approved activity is proceeding in accordance with the conditions of the approved site plan and the site plan itself.
14. Upon expiration of the special land use permit, the Applicant shall provide to

the Township a certification from a registered civil engineer, landscape architect, or registered land surveyor that the site has been restored in conformance with the approved reclamation plan and may consult with the Township Engineer. Any costs incurred by the Township for such engineering services shall be paid for by the Applicant.

15. Review and approval from the Ottawa County Road Commission. If significant changes are required to the site, as determined by the Township Zoning Administrator, as a result of approval by the Ottawa County Road Commission, the Applicant shall return to the Planning Commission for revised approval.
16. Review and approval from the Ottawa County Water Resources Commissioner's office. If significant changes are required to the site, as determined by the Township Zoning Administrator, as a result of approval by the Ottawa County Water Resources Commissioner's office, the Applicant shall return to the Planning Commission for revised approval.
17. Review and approval from the Ottawa County Soil Erosion and Sedimentation Control Agency.
18. Compliance with the conditions of approval provided by the Fleis and VandenBrink review letter dated May 11, 2022, and any subsequent letter.
19. Review and approval from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) is required prior to mining below the water table and for any water surface area greater than five (5) acres. If significant changes are required to the site, as determined by the Township Zoning Administrator, as a result of approval by the EGLE, the Applicant shall return to the Planning

Commission for revised approval.

20. The Applicant shall be subject to any bond or other surety required by the Ottawa County Road Commission for the purpose of repair of any damage and or application of appropriate dust control to 46th Avenue resulting from Applicant's operation, as determined by the Ottawa County Road Commission or the Township.

    a. As authorized by the Ottawa County Road Commission, the Applicant shall regularly remove all site materials from the public right-of-way to ensure that a clean and passable road surface is maintained in the same condition as existed prior to the collection and removal of site materials.

    b. Further, the Applicant shall remove all site materials from the public right-of-way, consistent with subsection 18a, upon proper notice from the Township.

21. The end use shall consist of eleven (11) divisions that comply with the dimensional provisions of the Agricultural and Rural Zoning District.

22. These conditions shall be binding on the Applicant and all successor owners or parties in interest in the Development, or any portion of the Development.

23. Any violation of these conditions shall constitute a violation of the Zoning Ordinance and, in addition to the remedies provided therein, shall be cause for the Township Board to suspend or revoke any zoning or building permit applicable to the Development.

24. Resolution #041921-1 is hereby rescinded.

YEAS: _____

NAYS: _____

RESOLUTION DECLARED _____.

_____
Tom Zuniga, Secretary
Allendale Charter Township
Planning Commission

Fresh Coast Planning

950 Taylor Avenue, Ste 200
Grand Haven, MI 49417
www.freshcoastplanning.com

Gregory L. Ransford, MPA
616-638-1240
greg@freshcoastplanning.com

Julie Lovelace
616-914-0922
julie@freshcoastplanning.com

Sara Moring-Hilt
586-850-8784
sara@freshcoastplanning.com

MEMORANDUM

To: Allendale Charter Township Planning Commission
From: Gregory L. Ransford, MPA
Date: June 15, 2022
Re: Section 23.20 – Renewable Energies – Revised Draft

Pursuant to your direction at your May 16, 2022 meeting, we have revised the draft Section 23.20 – Renewable Energies to be incorporated into the Allendale Charter Township Zoning Ordinance. As you will recall, your direction included the following:

1. Correct the height provisions within subsection D1(i) and (ii)
    - While we corrected subsequent provisions within subsection D (1(iii)bii and 3a), after rereviewing the language within subsection D1(i) and (ii), we believe the language as it reads achieves your previous direction to establish a maximum height for structure mounted and small tower mounted wind energy turbines to the district maximum. Given this, we have left these two provisions unchanged. Any structure mounted or small tower mounted wind energy turbine greater than said maximum requires a special use.
2. Add decommissioning financial sureties for wind and solar

While this was the extent of your direction, as you know we recently attended a webinar regarding renewable energies in an effort to ensure the draft language is as up to date as possible. As a result of that webinar, we additionally included the following changes for your review:

1. Revised noise language for wind energy turbines and added the same for solar energy systems to not exceed 45dB(A) as defined by the American National Standards Institute. This decibel level is widely accepted for solar installations. Given that it is important to regulate certain land uses in a similar way, it is appropriate to apply the same to wind energy turbines.
2. Struck the definition of Ambient Sound Level as a result of number one (1) above, and because "Ambient Sound Level" was not used elsewhere within the language.
3. Stabilization language for the ground supporting solar energy systems.
4. Special Use Solar – Struck "accessory structures," as it did not seem appropriate to limit the structures to accessory. We have highlighted this change in yellow to make it easier to find given the Track Changes graphics throughout the document.

Planning Commission Considerations

Wind Energy

During the webinar, the presenter indicated that wind energy turbines are typically 500 to 600 feet in height for commercial energy production. The presented suggested that any ordinance that does not provide for this height has created a de facto prohibition and perhaps exclusionary zoning. While Township Legal Counsel previously indicated that the Township could eliminate large wind energy turbines and are not exclusionary, we have nonetheless informed him of this opinion and asked for his own. Once we receive his opinion, we will transmit it to you.

Structure Mounted Wind and Solar

While drafting revisions to the decommissioning sections of the language, we thought it was important to ask the Planning Commission whether you desire to require a financial surety for structure mounted wind energy turbines and solar panels. Currently, the language as drafted would require such a surety.

As always, we used the Track Changes feature of Microsoft Word to show the proposed revisions since the previous version of the text. We also maintained the previous revisions you reviewed at your May 16, 2022 meeting. Attached is this changes document as well as a clean copy of the language.

The language has been scheduled for your review at your June 20, 2022 meeting. If you have any questions, please let us know.

GLR
Planner

Attachments

cc: Adam Elenbaas, Supervisor

SECTION 23.20 RENEWABLE ENERGIES.

A. Purpose

Renewable energies are a resource that can prevent fossil fuel emissions and reduce energy load. The purpose and intent of renewable energies is to promote the compatible use of solar, biofuel, anaerobic digesters, and wind to assist in decreasing the dependence of the Township on non-renewable energy systems through the accommodation of proper renewable energy systems and equipment within the township. The purpose of this Section is to establish guidelines for siting solar, biofuel, anaerobic digesters, wind energy uses, and other ~~alternative~~ renewable energies that meet this purpose. The goals are as follows.

1. Promote the safe, effective, and efficient use of solar, biofuel, anaerobic digesters, wind energy uses, and other alternative energies in order to reduce the consumption of fossil fuels in producing electricity.

2. Preserve and protect public health, safety, welfare, and quality of life by minimizing the potential adverse impacts of solar, biofuel, anaerobic digesters, wind energy uses, and other alternative energies.

3. Establish standards and procedures by which the siting, design, engineering, installation, operation, and maintenance of solar, biofuel, anaerobic digesters, wind energy uses, and other alternative energies shall be governed.

B. Definitions

As used in this Chapter, the following terms shall have the indicated meanings.

~~1. Ambient Sound Level. The amount of background noise at a given location prior to the installation of a wind energy turbine(s) which may include, but not be limited to, traffic, machinery, lawnmowers, human activity, and the interaction of wind with the landscape. The ambient sound level is measured on the dB(A) weighted scale as defined by the American National Standards Institute.~~

~~2.~~1. Anaerobic Digester. A ~~facility~~ reactor in which microorganisms break down biodegradable material in the absence of oxygen, used for industrial or domestic purposes to manage waste and/or produce energy.

~~3.~~2. Anaerobic Digestion. A process through which bacteria break down organic matter—such as animal manure, wastewater biosolids, and food wastes~~The biochemical conversion of complex organic materials, such as manure, into methane and other byproducts~~ in the absence of oxygen.

~~4.~~3. Anemometer. A temporary wind speed indicator constructed for the purpose of analyzing the potential for utilizing a wind energy turbine at a given site. This includes the tower, base plate, anchors, cables and hardware, wind direction vanes, booms to hold equipment, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resource at a given location.

~~5.~~4. At-home. A biofuel ~~facility~~ reactor that is privately produced by the owner or tenant of a single-family dwelling.

~~6.~~5. Biofuel. Any renewable fuel product, whether solid, liquid, or gas, that is derived from recently living organisms or their metabolic by-products and meets applicable quality standards, including, but not limited to, ethanol and biodiesel. ~~Biofuel does not include methane or any other fuel product from an anaerobic digester.~~

~~7.~~6. Building-Integrated Photovoltaic (BIPV) Systems. A solar energy system that consists of integrating photovoltaic modules into the building structure, such as the roof or the façade and which does not alter the relief of the roof.

~~8.~~7. Collective Solar. Solar installations owned collectively through subdivision homeowner associations, “adopt-a-solar-panel” programs or other similar arrangements.

~~9.~~8. Condominium Development**.** A development that is created under the Condominium Act.

~~10.~~9. Decibel. A unit of measure used to express the magnitude of sound pressure and sound intensity. Decibels shall be measured on the dB(A) weighted scale as defined by the American National Standards Institute.

~~11.~~10. Decommissioning. The process of terminating operation and completely removing a wind energy turbine(s) or solar array and all related buildings, structures, foundations, access roads, and equipment.

~~12.~~11. Digester Feedstocks. Organic materials that are acceptable for inclusion within an anaerobic digester include livestock manure, waste animal feed, dead animals, yard waste or grass clippings, organic food processing waste, waste grease/trap grease, food waste intended for human consumption, by-products from ethanol, biodiesel, and algal production and other digester feedstocks ~~that may be~~ approved by the Director of the Michigan Department of Natural Resources and Environment or its successor agency.

~~13.~~12. Downwind Turbine. A wind energy turbine positioned in a manner so that the wind hits the turbine blades after it hits the tower, but which does not produce any noise from the blades interacting with the tower during rotation (i.e. a thumping noise or similar sound) beyond that produced by a similar upwind turbine.

~~14.~~13. Ethanol. A substance that meets the ASTM international standard in effect on the effective date of this section as the D-4806 specification for denatured fuel grade ethanol for blending with gasoline.

~~15.~~14. Farm. That term as defined in section 2 of the Michigan Right to Farm Act, 1981 PA 93, MCL 286.472, as amended.

~~16.~~15. Flush-Mounted Solar Panel. Photovoltaic panels and tiles that are installed flush to the surface of a roof and which cannot be angled or raised.

~~17.~~16. Freestanding or Ground-Mounted Solar Energy System. A solar energy system that is a structure directly installed in the ground and is not attached or affixed to an existing structure.

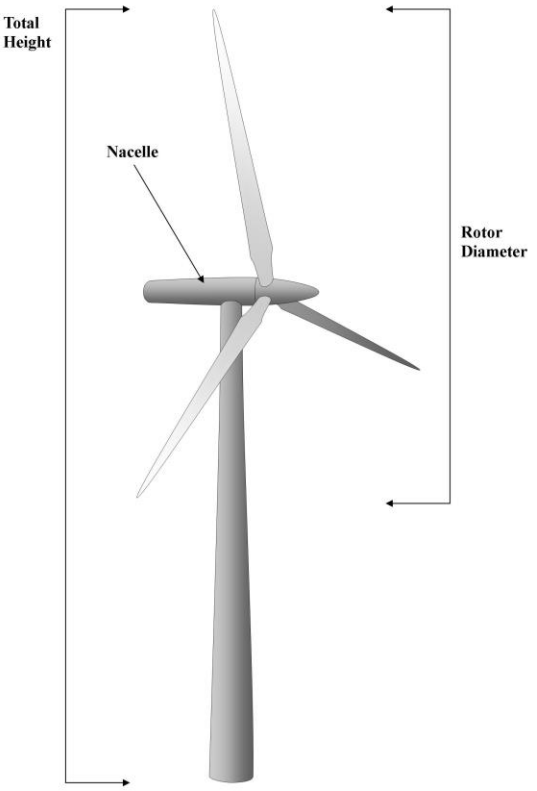
~~18.~~17. General Common Element. An area designated for use by all owners within a condominium development.

~~19.~~18. Large-Scale Solar. Solar photovoltaic systems that produce more than ten (10) kilowatts (kW) per hour of energy or solar-thermal systems, which provide energy for off-site consumption. On-site consumption is permitted as a secondary use.

~~20.~~19. Medium Wind Energy Turbine (MWET). A tower-mounted wind energy system that converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. The MWET has a maximum height of one hundred fifty (150) feet.

~~21.~~20. Nacelle. The encasement which houses all of the generating components, gear box, drive tram, and other equipment of a wind energy turbine.

~~22.~~21. Net-Metering. A billing arrangement that allows solar, anaerobic digesters, wind turbines, or other renewable energy systems to receive credit for excess electricity that they generate and deliver back to the grid so that they only pay for their net electricity usage at the end of a billing period from an electricity provider.



~~23.~~22. Occupied Building. A residence, school, hospital, church, public library, business, or any building used for public gatherings.

~~24.~~23. Operator. The entity responsible for the day-to-day operation and maintenance of a property and its uses.

~~25.~~24. Owner. The individual or entity, including any respective successors and assigns, who has an equity interest or owns a property, structure or use.

~~26.~~25. Photovoltaic (PV) Systems. A solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells that generate electricity whenever light strikes them.

~~27.~~26. Proof gallon. That term as defined in 27 Code of Federal Regulations 19.907.

~~28.~~27. Renewable Energy Systems. Structures, equipment, devices or construction techniques used for the production of heat, light, cooling and electricity or other forms of energy on site and may be attached to or separate from the principal structure.

~~29.~~28. Rooftop or Building Mounted Solar System. A solar power system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted system or as modules fixed to frames which can be tilted toward the south at an optimal angle.

~~30.~~29. Rotor Diameter. The cross-sectional dimension of the circle swept by the rotating blades of a wind energy turbine.

~~31.~~30. Shadow Flicker. The moving shadow, created by the sun shining through the rotating blades of a wind energy turbine. The amount of shadow flicker created by a wind energy turbine is calculated by a computer model that takes into consideration turbine location, elevation, tree cover, location of all structures, wind activity, and sunlight.

~~32.~~31. Small-Scale Solar. Solar photovoltaic systems that produce up to ten kilowatts (kW) per hour of energy or solar-thermal systems, which serve the building to which they are attached and do not provide energy for any other buildings.

~~33.~~32. Small Structure-Mounted Wind Energy Turbine (SSMWET). Converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. A SSMWET is attached to a structure's roof, walls, or other elevated surface. The structure must be at least twelve (12) feet high at its highest roof point and must be secured to frost-footings or a concrete slab. The SSMWET has a maximum height of fifteen (15) feet.

~~34.~~33. Small Tower-Mounted Wind Energy Turbine (STMWET). A tower-mounted wind energy system that converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. The STMWET has a maximum height of one hundred twenty (120) feet.

~~35.~~34. Solar Access. Space open to the sun and clear of overhangs or shade including the orientation of streets and lots to the sun so as to permit the use of active and/passive solar energy systems on individual properties.

~~36.~~35. Solar Collector. A solar photovoltaic cell, panel, or array, or solar hot air or water collector device, which relies upon solar radiation as an energy source for the generation of electricity or transfer of stored heat.

~~37.~~36. Solar Energy Equipment/System. Solar collectors, controls, energy storage devices, heat pumps, heat exchangers and other materials, hardware or equipment necessary to the process by which solar radiation is collected, converted into another form of energy, stored, protected from unnecessary dissipation and distributed. Solar systems include solar thermal, photovoltaic and concentrated solar.

~~38.~~37. Solar Panel. A device for the direct conversion of solar energy into electricity.

~~39.~~38. Solar Storage Battery. A device that stores electricity generated by solar energy from the sun and makes it available in an electrical form.

~~40.~~39. Solar-Thermal Systems. A system that directly heats water or other liquid using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water and heating pool water.

~~41.~~40. Total Height. The vertical distance measured from the ground level at the base of the tower to the uppermost vertical extension of any blade or antenna, or the maximum height reached by any part of a wind energy turbine, wireless communications facility or other structure permitted by this Ordinance.

~~42.~~41. Tower. A freestanding monopole that supports a wind energy turbine, wireless communications facility or other structure permitted by this Ordinance.

~~43.~~42. Upwind Turbine. A wind energy turbine positioned in a manner so that the wind hits the turbine blades before it hits the tower in order to avoid the thumping noise which can occur if the wind is disrupted by hitting the tower before the blades.

~~44.~~43. Wind Energy Turbine (WET). Any structure-mounted, small, medium, or large wind energy conversion system that converts wind energy into electricity through the use of a wind generator and includes the nacelle, rotor, tower, and pad transformer, if any.

C. Temporary Uses. Anemometers are permitted in all zoning districts as a temporary use, in compliance with this Section and applicable WET regulations.

1. The construction, installation, or modification of an anemometer tower shall require a building permit and shall conform to all applicable local, state, and federal safety, construction, environmental, electrical, and communication requirements.

2. An anemometer shall be subject to the minimum requirements for height, setback, separation, location, safety requirements, and decommissioning that correspond to the size of the WET that is proposed to be constructed on the site.

3. An anemometer shall be permitted for no more than thirteen (13) months.

D. Permitted Principal Uses.

1. Wind Energy Turbines

(i) A small structure-mounted wind energy turbine not exceeding the maximum height of the zoning district in which it is located together with the structure it is attached to, shall be considered a permitted use in all zoning districts and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

(ii) A small tower-mounted wind energy turbine not exceeding the maximum height of the zoning district in which it is located shall be considered a permitted use in ~~the Agricultural and Rural District~~ all zoning districts and shall not be erected,

constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

(iii) The above permitted uses are subject to the following minimum requirements.

1. Siting and Design Requirements.

a. Upwind turbines and downwind turbines are permitted.

b. Visual Appearance.

i. A SSMWET or STMWET, including accessory buildings and related structures, shall be a non-reflective, non-obtrusive color (e.g. white, gray, black). The appearance of the turbine, tower, and any ancillary facility shall be maintained throughout the life of the SSMWET or STMWET.

ii. A SSMWET or STMWET shall not be artificially lighted~~, except to the extent required by the Federal Aviation Administration ("FAA") or other applicable authority, or otherwise necessary for reasonable safety and security.~~.

iii. A SSMWET or STMWET shall not be used for displaying any advertising (including flags, streamers, or decorative items), except for identification of the turbine manufacturer.

c. Ground Clearance. The lowest extension of any blade or other exposed moving component of a SSMWET or STMWET shall be at least fifteen (15) feet above the ground (at the highest point of the natural grade within thirty (30) feet of the base of the tower) and, in addition, at least fifteen (15) feet above any outdoor surfaces intended for human use, such as balconies or roof gardens, that are located directly below the SSMWET or STMWET.

d. Noise. Noise emanating from the operation of a SSMWET or STMWET shall not exceed 45dB(A), as defined by the American National Standards Institute, at all lot lines~~, at any time, the sound level that is permitted by Section 3.09 of this Ordinance.~~

e. Vibration. Vibrations shall not be produced which are humanly perceptible beyond the lot on which a SSMWET or STMWET is located.

f. Guy Wires. Guy wires shall not be permitted as part of the SSMWET or STMWET.

2. Small Structure-Mounted Wind Energy Turbine Dimensional Requirements.

a. Height. The height of a SSMWET shall not exceed fifteen (15) feet as measured from the highest point of the roof, excluding chimneys, antennae, and other similar protuberances.

b. Setback. The setback of the SSMWET shall be that of the requirements of the zoning district in which it is located and the structure on which it is located. The setback shall be measured from the furthest outward extension of all moving parts.

c. Quantity. No more than three (3) SSMWETs shall be installed on any lot.

d. Separation. If more than one (1) SSMWET is installed, a minimum distance equal to the height of the highest SSMWET must be maintained between the base of each SSMWET.

3. Small Tower-Mounted Wind Energy Turbine Dimensional Requirements.

a. Height. The total height of a STMWET shall not exceed the maximum height of the zoning district in which it is located ~~one hundred twenty (120) feet~~.

b. Occupied Building Setback. The setback from all occupied buildings on the applicant's lot shall be a minimum of twenty (20) feet measured from the base of the tower.

c. Other Setbacks. The setback shall be minimally equal to the total height of the STMWET, as measured from the base of the Tower, from the property line, public right-of-way, public easement, or overhead public utility lines. This setback may be reduced if the applicant provides a registered engineer's certification that the WET is designed to collapse, fall, curl, or bend within a distance or zone shorter than the height of the wind turbine but in no instance shall the setback be less than that of the requirements of the zoning district in which it is located.

d. Quantity. No more than one (1) STMWET shall be installed on any lot.

e. Electrical System. All electrical controls, control wiring, grounding wires, power lines, and system components shall be placed underground, to the extent practicable, within the boundary of each lot at a depth designed to accommodate the existing land use to the maximum extent practicable. Wires necessary to connect the wind generator to the tower wiring are exempt from this requirement.

4. Permit Application Requirements. All of the following information shall be included in an application for a SSMWET or a STMWET.

a. Name of lot owner(s), address, and parcel number.

b. A site plan in accordance with Article 24 of this Ordinance, which shall also include maps (drawn to scale) showing the proposed location of all components and ancillary equipment of the SSMWET(s) or STMWET, lot lines, physical dimensions of the lot, existing building(s), setback lines, right-of-way lines, public easements, overhead utility lines, sidewalks, non-motorized pathways, roads and contours. The site plan must also include adjoining properties as well as the location and use of all structures.

c. The proposed type and height of the SSMWET or STMWET to be constructed; this shall include the manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated generating capacity, dimensions, rotor diameter, and a description of ancillary facilities.

d. Documented compliance with the noise requirements set forth in this Ordinance.

e. Documented compliance with applicable local, state and national regulations including, but not limited to, all applicable safety, construction, environmental, electrical, and communication~~, and FAA~~ requirements.

f. Proof of the applicant's liability insurance.

g. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned generator and that such connection has been approved. Off-grid systems shall be exempt from this requirement.

h. Other relevant information as may be reasonably requested.

i. Signature of the applicant.

j. Total proposed number of SSMWETs.

k. A description of the methods that will be used to perform maintenance on the STMWET and the procedures for lowering or removing the STMWET in order to conduct maintenance.

5. Safety Requirements.

a. If the SSMWET or STMWET is connected to a public utility system for net-metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's then-current service regulations, meeting federal, state, and industry standards applicable to wind power generation facilities, and the connection shall be inspected by and subject to the approval of the appropriate public utility.

b. The SSMWET or STMWET shall be equipped with an automatic braking, governing or feathering system to prevent uncontrolled rotation, over-speeding, and excessive pressure on the tower structure, rotor blades and other wind energy components unless the manufacturer certifies that a braking system is not necessary.

c. A clearly visible warning sign regarding voltage shall be placed at the base of the SSMWET or STMWET.

d. The structural integrity of the SSMWET or STMWET shall conform to the design standards of the International Electrical Commission, specifically IEC 61400-1, "Wind Turbine Safety and Design," IEC 61400-2, "Small Wind Turbine Safety," IEC 61400-22, "Wind Turbine Certification," and IEC 61400-23, "Blade Structural Testing," or any similar successor standards.

6. Signal Interference. The SSMWET or STMWET shall not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, or emergency communication systems.

7. Decommissioning.

   a. The SSMWET or STMWET owner(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the SSMWET or STMWET, which shall be adjusted every five (5) years for inflation. The SSMWET or STMWET owner(s) or operator(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the owner(s) or operator(s) of the SSMWET or STMWET, and for a good cause, the Township Board may grant a reasonable extension of time. The SSMWET or STMWET will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. All decommissioning expenses are the responsibility of the owner(s) or operator(s).

   b. If the SSMWET or STMWET owner(s) or operator(s) fails to complete decommissioning within the period prescribed above, the Township Board may use the cash deposit or irrevocable letter of credit to remove the SSMWET or STMWET and may designate a contractor to complete decommissioning with any additional ~~the~~ expense thereof exceeding the cash deposit or irrevocable letter of credit amount to be charged to the violator and/or to become a lien against the lot~~.~~. ~~If the SSMWET or STMWET is not owned by the property owner(s), an irrevocable letter of credit must be provided to the Township for the cost of decommissioning each SSMWET or STMWET.~~

   c. In addition to the decommissioning requirements listed above, the STMWET shall also be subject to the following:

      i. Decommissioning shall include the removal of each STMWET, buildings, electrical components, and any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade.

ii. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s) or operator(s). If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

2. BioFuel

(i) A biofuel production facility with an annual production capacity of not more than 100,000 gallons of biofuel is a permitted use of property if all of the following requirements are met:

1. The biofuel production facility is located on a farm.

2. The biofuel production facility is located not less than one hundred (100) feet from the boundary of any contiguous property under different ownership than the property on which the biofuel production facility is located.

3. On an annual basis, not less than twenty-five (25%) of the feedstock for the biofuel production facility is produced on the farm where the biofuel production facility is located, and not less than twenty-five (25%) of the biofuel or another product or by-product produced by the biofuel production facility is used on that farm.

(ii) At-home biofuel production with an annual production capacity of not more than one thousand (1,000) gallons of biofuel for each passenger vehicle or light truck registered at the property is a permitted use on a residential property, if all of the following requirements are met:

1. Each passenger vehicle or light truck is operable, licensed to the owner or tenant of the property on which the At-home facility is located and is otherwise road worthy.

2. The parcel on which the At-home biofuel production occurs is at least one (1) acre in area.

3. The building or buildings in which the biofuel production is located shall be at least one hundred (100) feet from any adjacent principal or accessory building on a separate property.

4. All biofuel produced on the property shall never be sold, distributed or otherwise used by any other vehicle than those registered at the property and meet the aforementioned requirements.

5. An operation plan shall be submitted to the Zoning Administrator providing detail regarding at least the following and any other information requested by the township:
    a. The registered vehicle(s)
    b. Expected gallon production
    c. The building or buildings utilized for the at-home biofuel operation
    d. A site plan showing setbacks, parking, storage of fuel and surrounding uses.
    ~~d.~~e. Methods to control odor

3. Anaerobic Digesters

(i) An anaerobic digester facility is a permitted use of property if all of the following requirements are met:

1. On an annual basis, more than fifty percent (50%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.

2. An anaerobic digester shall meet the following minimum isolation distances:
    a. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.
    b. Two (2) feet above the seasonal high water table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a.
    c. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan Department of Environment, Great Lakes, and Energy or their successor organization, pursuant to the program established under the Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has

been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

d. Two hundred (200) feet from nearest non-farm residence.

3. Operators of an anaerobic digester must be qualified under the State of Michigan with both of the following:
   a. Complete an appropriate ~~the Michigan on-farm~~ anaerobic digester operator certification course.
   b. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.

4. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

4. Solar

(i) Small-Scale Solar energy collectors shall be permitted only to provide power for use by owners, lessees, tenants, residents or other occupants of the premises on which they are erected but nothing contained in this provision shall be construed to prohibit Collective Solar installations or the sale of excess power through a net billing or net-metering arrangement.

(ii) Solar Energy Equipment and Solar Energy Systems shall be permitted only if they are determined to not present any unreasonable safety risks, including but not limited to, the following:

1. Weight load
2. Wind resistance
3. Ingress and egress in the event of fire or other emergency

(iii) No Small Scale solar energy system or device shall be installed or operated except in compliance with this Section.

(iv) No solar panel shall create glare, reflection or any other deflection of light on any adjacent property below the maximum height established for each district.

(v) Building-Integrated Photovoltaic Systems and Solar-Thermal Systems are permitted in all zoning districts.

(vi) Rooftop and Building-Mounted Solar Collectors are permitted in all zoning districts subject to the following condition:

1. The maximum height of the zoning district in which the rooftop and building-mounted solar collectors are located shall not apply provided that such structures are erected only to such height as is reasonably necessary to accomplish the purpose for which they are intended to serve and that such structures do not obstruct solar access to adjacent and neighboring properties.

~~(vii) Free-Standing and Ground-Mounted Solar Collectors are permitted as accessory structures in all zoning districts, subject to the following conditions:~~

~~1. The location of the solar collectors shall meet all applicable setback requirements for accessory structures in the zoning district in which it is located.~~
~~2. All solar collectors shall be adequately screened with architectural features or landscaping such as berms, trees or bushes that prevent their visible exposure to any right-of-way and preserves the character of the property and surrounding area. An architectural or landscaping plan shall be submitted for approval to the Zoning Administrator.~~
~~3. Solar energy equipment shall be located in a manner that does not shade any adjacent property at any time of the daylight hours.~~

~~(viii)~~(vii) Safety

1. All solar collector installations shall be performed by a qualified solar installer.
2. Any connection to the public utility grid must be inspected by the appropriate public utility.
3. Solar energy systems shall be maintained in good working order.

4. If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the State of Michigan Building Code, currently in effect, when in use. Any solar storage batteries that are no longer used shall be disposed of in accordance with the laws, regulations and ordinances of the State of Michigan and the Township or any other applicable enforcing agency.
5. If a solar collector ceases to perform its originally intended function for more than twelve (12) consecutive months, the owner of the property shall remove the collector, mount and associated equipment no later than ninety (90) days after the end of the twelve (12) month period.

(viii) Noise. Noise emanating from the operation of a solar energy system shall not exceed, 45dB(A) at all lot lines, as defined by the American National Standards Institute.

(ix) Stabilization. Any exposed ground on which the solar energy system is located shall be stabilized with perennial ground cover, agricultural crops, or any other organic use, such as livestock, as permitted by the underlying zoning district.

(x) Decommissioning.

1. The solar energy system owner(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the solar energy system, which shall be adjusted every five (5) years for inflation. The solar energy system owner(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the solar energy system owner(s), and for a good cause, the Township Board may grant a reasonable extension of time. The solar energy system will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. All decommissioning expenses are the responsibility of the owner(s) or operator(s).
2. If the solar energy system owner(s) fails to complete decommissioning within the period prescribed above, the Township Board may use the cash deposit or irrevocable letter of credit to remove the solar energy system and may designate a contractor to complete decommissioning with any additional expense thereof exceeding the cash deposit or irrevocable letter of

credit amount to be charged to the violator and/or to become a lien against the lot.

3. In addition to the decommissioning requirements listed above, the solar energy system shall also be subject to the following:

   a. Decommissioning shall include the removal of each solar energy system, buildings, electrical components, and any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade.

   ~~a.~~b. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s). If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

E. Permitted Special Uses with Conditions.

~~2.~~4. Wind Energy Turbines

(i) A small structure-mounted wind energy turbine exceeding the maximum height of the zoning district in which it is located together with the structure it is attached to, shall be considered a special use in all zoning districts and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

~~(i)~~(ii) A small tower-mounted wind energy turbine (STMWET) exceeding the maximum height of the zoning district in which it is located shall be considered a special use in all zoning districts~~, except the Agricultural and Rural District~~, and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

Small structure-mounted wind energy turbines and STMWETs shall comply with Section 23.20D1 above, the site plan review requirements in Article 24, and the special use requirements in Article 20 of this Ordinance.

~~(ii)~~(iii) A MWET shall be considered a special use in the Agricultural and Rural District, Rural Estates District, Industrial District, and the Planned Unit Development District.

~~(iii)~~(iv) The special uses listed in subsection (iii) above are subject to the following minimum requirements.

1. Siting and Design Requirements.

a. Upwind turbines and downwind turbines are permitted,

b. The design of a MWET shall conform to all applicable industry standards.

c. Visual appearance.

i. Each MWET, including accessory buildings and other related structures, shall be mounted on a tubular tower and a non-reflective, non-obtrusive color (e.g. white, gray, black). The appearance of turbines, towers and buildings shall be maintained throughout the life of the MWET.

ii. Each MWET shall not be artificially lighted, except to the extent required by the FAA or other applicable authority, or otherwise necessary for reasonable safety and security.

iii. No MWET may be used for displaying any advertising (including flags, streamers, or decorative items), except for reasonable identification of the turbine manufacturer or operator(s).

d. Vibration. A MWET shall not produce vibrations humanly perceptible beyond the lot on which it is located.

e. Shadow Flicker. The MWET owner(s) and/or operator(s) shall conduct an analysis on potential shadow flicker at any occupied building with direct line-of-sight to the MWET, and at the buildable area of any vacant adjacent lot with direct line-of-sight to the MWET that could accommodate an occupied building. The analysis shall identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sun-rise to sun-set over the course of a year. The analysis shall identify situations where shadow flicker may affect the occupants of the buildings for more than thirty (30) hours per year, and describe measures that shall be taken to eliminate or mitigate the problems. Shadow Flicker on a building shall not exceed thirty (30) hours per year. The Township shall be provided with a copy of this analysis, and the Township reserves the right to require this analysis to be updated as reasonably necessary.

f. Guy Wires. Guy wires shall not be permitted as part of the MWET.

g. Electrical System. All electrical controls, control wiring, grounding wires, power lines, and all other electrical system components of the MWET shall be buried underground, to the extent practicable, within the boundary of each lot at a depth designed to accommodate the existing land use to the maximum extent practicable, and to comply with the applicable electrical code. Wires necessary to connect the MWET to the tower wiring are exempt from this requirement.

h. Noise. Any noise emanating from the operation of a MWET shall not exceed, 45dB(A), as defined by the American National Standards Institute at all lot lines.~~any time, the sound level that is permitted by Section 3.09 of this Ordinance.~~

2. Dimensional Requirements.

a. Location. The MWET shall only be located in a general common element if it is located in a condominium development. If a MWET is located on a lot with an occupied building, it shall only be located in the rear yard; however, it may be located in a side yard if it is set back at least one hundred fifty (150) feet from the front lot line as measured from the base of the tower.

b. Height. The Total height of a MWET shall not exceed one hundred and fifty (150) feet.

c. Ground Clearance. The lowest extension of any blade or other exposed moving component of a MWET shall be at least fifteen (15) feet above the ground (at the highest point of the grade level within fifty (50) feet of the base of the tower) and, in addition, at least fifteen (15) feet above any outdoor surfaces intended for human occupancy, such as balconies or roof gardens, that are located directly below the MWET.

d. Quantity. No more than one (1) MWET shall be installed for every two and one-half (2.5) acres of land included in the lot.

e. Setback and Separation.

i. Occupied Building Setback. The setback from all occupied buildings on the applicant's lot shall be a minimum of twenty (20) feet measured from the base of the tower.

ii. Property Line Setbacks. With the exception of the locations of public roads (see below), drain rights-of-way and lots with occupied buildings (see above), the internal property line setbacks shall be minimally equal to the total height of the MWET as measured from the base of the tower. This setback may be reduced to a distance agreed upon as part of the special use permit if the applicant provides a registered engineer's certification that the WET is designed to collapse, fall, curl, or bend within a distance or zone shorter than the height of the WET but in no instance shall the setback be less than that of the requirements of the zoning district in which it is located.

iii. Private or Public Road Setback. Each MWET shall be set back from the nearest private or public road a minimum distance equal to the total height of the MWET, determined at the nearest boundary of the underlying right-of-way for such private or public road.

iv. Communication and Electrical Lines. Each MWET shall be set back from the nearest above-ground public electric power line or telephone line a minimum distance equal to one and one-half (1.5) times the total height of the MWET, as measured from the base of the tower, determined from the existing power line or telephone line.

v. Tower Separation. MWET tower separation shall be based on industry standard and manufacturer recommendation.

3. Safety Requirements.

a. If the MWET is connected to a public utility system for net-metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's then-current service regulations applicable to wind power generation facilities, and the connection shall be inspected by the appropriate public utility.

b. The MWET shall be equipped with an automatic braking or governing system to prevent uncontrolled rotation, over-speeding, and excessive pressure on the tower structure, rotor blades and other wind energy components unless the manufacturer certifies that a braking system is not necessary.

c. Security measures must be in place to prevent unauthorized trespass and access. Each MWET shall not be climbable up to fifteen (15) feet above ground surfaces. All access doors to MWETs and electrical equipment shall be locked and/or fenced as appropriate, to prevent entry by non-authorized person(s).

d. All spent lubricants, cooling fluids, and any other hazardous materials shall be properly and safely removed in a timely manner.

e. Each MWET shall have one (1) sign, not to exceed two (2) square feet in area, posted at the base of the tower and on the security fence if applicable. The sign shall contain at least the following:

i. Warning high voltage;

ii. Manufacturer's and owner/operator's name;

iii. Emergency contact numbers (list more than one [1] number).

f. The structural integrity of the MWET shall conform to the design standards of the International Electrical Commission, specifically IEC 61400-1, "Wind Turbine Safety and Design," IEC 61400-22, "Wind Turbine Certification," and IEC 61400-23, "Blade Structural Testing," or any similar successor standards.

4. Signal Interference. The MWET shall not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, or emergency communication systems.

5. Decommissioning.

a. The MET owner(s) or operator(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the MET, which shall be adjusted every five (5) years for inflation. The MWET owner(s) or operator(s) shall

complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the owner(s) or the operator(s) of the MWET, and for a good cause, the Township Board may grant a reasonable extension of time. Each MWET will be presumed to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. The end of its useful life may also be established by other facts and circumstances determined by the Township. All decommissioning expenses are the responsibility of the operator(s), unless specifically assigned to the owner(s).

b. Decommissioning shall include the removal of each MWET, buildings, electrical components, and streets to a depth of sixty (60) inches below grade, as well as any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade. Following removal, the location of any remaining MWET foundation shall be identified on a map as such and recorded with the deed to the lot with the County Register of Deeds.

c. All access streets to the MWET shall be removed, cleared, and graded by the MWET owner(s), unless the property owner(s) requests, in writing, a desire to maintain the access street. The Township will not be assumed to take ownership of any access street except through official action of the Township Board.

d. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s) of the MWET. If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

e. If the MWET owner(s) or operator(s) fails to complete decommissioning within the period prescribed above the Township Board may use the cash deposit or irrevocable letter of credit to remove the MWET and may designate a contractor to complete decommissioning with the expense thereof exceeding the cash deposit or irrevocable letter of credit amount to be charged to the violator and/or to become a lien against the lot. ~~If the MWET is not owned by the lot owner(s), an irrevocable letter of credit must be provided to the Township for the cost of decommissioning each MWET.~~

6. Site Plan Requirements.

a. Site Plan Drawing. All applications for a MWET special land use permit shall be accompanied by a site plan in accordance with Article 24 of this Ordinance.

b. Site Plan Documentation. The following documentation shall be included with the site plan:

i. The contact information for the owner(s) and operator(s) of the MWET as well as contact information for all lot owners on which the MWET is located.

ii. A copy of the lease, or recorded document, with the landowner(s) if the applicant does not own the land for the proposed MWET, with a statement from the landowner(s) of the leased site that the landowner(s) will abide by all applicable terms and conditions of the special use permit, if approved.

iii. In the case of a condominium development, a copy of the condominium development's master deed and bylaws addressing the legal arrangement for the MWET.

iv. The proposed number, representative types and height of each MWET to be constructed; including their manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated capacity, rotor diameter, and a description of ancillary facilities.

v. Documents confirming specifications for MWET tower separation.

vi. Documented compliance with the noise and shadow flicker requirements set forth in this Ordinance.

vii. Engineering data concerning construction of the MWET and its base or foundation, which may include, but not be limited to, soil boring data.

viii. A certified registered engineer's certification that the MWET meets or exceeds the manufacturer's construction and installation standards.

ix. Anticipated construction schedule.

x. A copy of the maintenance and operation plan, including anticipated regular and unscheduled maintenance, and a description of the procedures that will be used for lowering or removing the MWET to conduct maintenance (if applicable).

xi. Documented compliance with applicable local, state and national regulations, including but not limited to all applicable safety, construction, environmental, electrical, and communication regulations. MWETs shall comply with Federal Aviation Administration (FAA) standards, and specifically including compliance with the Michigan Airport Zoning Act, Michigan Tall Structures Act, and any applicable airport overlay zone regulations.

xii. Proof of applicant's liability insurance.

xiii. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned generator and that such connection has been approved (off-grid systems shall be exempt from this requirement).

xiv. Other relevant information as may be requested by the Planning Commission to ensure compliance with the requirements of this Ordinance.

xv. Following the completion of construction, the applicant shall certify that all construction is completed pursuant to the special use permit.

xvi. A written description of the anticipated life of each MWET; the estimated cost of decommissioning; the method of ensuring that funds will be available for decommissioning and site restoration; and removal and restoration

procedures and schedules that will be employed if the MWET(s) become inoperative or non-functional.

xvii. The applicant shall submit a decommissioning plan that will be carried out at the end of the MWET's useful life, and shall describe any agreement with the landowner(s) regarding equipment removal upon termination of the lease.

xviii. The Township reserves the right to review all maintenance plans and irrevocable letters of credit under this Ordinance to ensure that all conditions of the permit are being followed.

xix. A statement indicating what hazardous materials will be used and stored on the site.

xx. A study assessing any potential impacts on the natural environment, including, but not limited to, assessing the potential impact on endangered species, eagles, birds or other wildlife, wetlands and fragile ecosystems (the study shall conform to state and federal wildlife agency recommendations based on local conditions).

xxi. Signature of the applicant.

7. Certification and Compliance.

a. The Township must be notified of a change in ownership of a MWET or a change in ownership of the property on which the MWET is located.

b. The Township reserves the right to inspect any MWET in order to ensure compliance with the Ordinance. Any cost associated with the inspections shall be paid by the owner/operator of the WET.

2. BioFuel

(i) A biofuel production facility with an annual production capacity of not more than one hundred thousand (100,000) gallons of biofuel that meets the requirements of subsection 23.20D2(i)1 and subsection 23.20D2(i)2 but that does not meet the requirements of subsection 23.20D2(i)3.

(ii) A biofuel production facility with an annual production capacity of more than one hundred thousand (100,000) gallons but not more than five hundred thousand (500,000) gallons of biofuel that meets the requirements of subsection 23.20D2(i)1 and subsection 23.20D2(i)2.

(iii) An application for special land use approval for a biofuel production facility described in subsection (i) or (ii) above shall include all of the following:

1. A site plan as required under Article 24, including a map of the property and existing and proposed buildings and other facilities.

2. A description of the process to be used to produce biofuel.

3. The number of gallons of biofuel anticipated to be produced annually.

4. An emergency access and fire protection plan that has been reviewed and approved by the appropriate responding police and fire departments.

5. For an ethanol production facility that will produce more than ten thousand (10,000) proof gallons annually, completed United States Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, forms 5000.29 (environmental information) and 5000.30 (supplemental information on water quality considerations under 33 USC 1341(a)), or successor forms, required to implement regulations under the national environmental policy act of 1969, 42 USC 4321 to 4347, and the federal water pollution control act, 33 USC 1251 to 1387.

6. Information that demonstrates that the biofuel production facility will comply with the requirements of subsection (i) or (ii) above and (iv) below.

7. Any additional information requested by the Township.

(iv) Special land use approval of a biofuel production facility described in subsection (i) or (ii) above shall be made expressly conditional on the facility's meeting all of the following requirements before the facility begins operation and no additional requirements:

1. Buildings, facilities, and equipment used in the production or storage of biofuel comply with local, state, and federal laws.
2. The owner or operator of the biofuel production facility provides the local unit of government with proof that all necessary approvals have been

obtained from the department of environmental quality and other state and federal agencies that are involved in permitting any of the following aspects of biofuel production:

a. Air pollution emissions.
b. Transportation of biofuel or additional products resulting from biofuel production.
c. Use or reuse of additional products resulting from biofuel production.
d. Storage of raw materials, fuel, or additional products used in, or resulting from, biofuel production.

3. The biofuel production facility includes sufficient storage for both of the following:

a. Raw materials and fuel.
b. Additional products resulting from biofuel production or the capacity to dispose of additional products through land application, livestock consumption, sale, or other legal use.

3. Anaerobic Digesters

(i) An anaerobic digester facility is a permitted special use of property if all of the following requirements are met:

1. On an annual basis, not less than ten percent (10%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.

2. An application for special land use approval for an Anaerobic Digester facility shall include a site plan in accordance with Article 24 of this ordinance and shall include all of the following:

3. An anaerobic digester shall meet the following minimum isolation distances:

a. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.

b. Two (2) feet above the seasonal high water table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a.

c. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan Department of Environment, Great Lakes, and Energy or their successor organization, pursuant to the program established under the Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

d. Two hundred (200) feet from nearest non-farm residence.

4 Operators of an anaerobic digester must be qualified under the State of Michigan with both the following:

a. Complete ~~the Michigan on farm~~an appropriate anaerobic digester operator certification course.

b. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.

5. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

4. Solar

(i) Small Scale Free-Standing and Ground-Mounted Solar Collectors are permitted ~~as accessory structures~~ in all zoning districts, subject to the following conditions, and that otherwise comply with the provisions of Section 23.20D4 of this ordinance:

1. The location of the solar collectors shall meet all applicable setback requirements for accessory structures in the zoning district in which it is located.
2. All solar collectors shall be adequately screened with architectural features or landscaping such as berms, trees or shrubs that prevent their visible exposure to any right-of-way and preserves the character of the property and surrounding area. An architectural or landscaping plan shall be submitted for approval to the Zoning Administrator.
3. Solar energy equipment shall be located in a manner that does not shade any adjacent property at any time of the daylight hours.

(ii)

~~(i)~~(iii) Large-Scale Solar energy collectors shall be permitted within the Agricultural and Rural District, Rural Estates District, Industrial District, and the Planned Unit Development District, as a special use only to provide power for off-site consumption. On-site consumption is permitted as a secondary use.

~~(ii)~~(iv) An application for special land use approval for a Large-Scale Solar facility shall include a site plan in accordance with Article 24 of this ordinance and shall include all of the following:

~~(iii)~~(v) Solar Energy Equipment and Solar Energy Systems shall be permitted only if they are determined to not present any unreasonable safety risks, including but not limited to, the following:

1. Weight load
2. Wind resistance
3. Ingress and egress in the event of fire or other emergency

~~(iv)~~(vi) No Large Scale Solar energy system or device shall be installed or operated except in compliance with this Section.

~~(v)~~(vii) No solar panel shall create glare, reflection or any other deflection of light on any adjacent property below the maximum height established for each district.

~~(vi)~~(viii) Building-Integrated Photovoltaic Systems and Solar-Thermal Systems are permitted.

~~(vii)~~(ix) Rooftop and Building-Mounted Solar Collectors are permitted, subject to the following condition:

1. The maximum height of the zoning district in which the rooftop and building-mounted solar collectors are located shall not apply provided that such structures are erected only to such height as is reasonably necessary to accomplish the purpose for which they are intended to serve and that such structures do not obstruct solar access to adjacent and neighboring properties.

~~(viii)~~(x) Free-Standing and Ground-Mounted Solar Collectors are permitted, subject to the following conditions:

1. The location of the solar collectors shall meet all applicable setback requirements for principal structures in the zoning district in which it is located.
2. All solar collectors shall be adequately screened with architectural features or landscaping such as berms, trees or ~~bushes~~ shrubs that prevent their visible exposure to any right-of-way and preserves the character of the property and surrounding area. An architectural or landscaping plan shall be submitted as part of site plan review.
3. Solar energy equipment shall be located in a manner that does not shade any adjacent property at any time of the daylight hours.

~~(ix)~~(xi) Safety

1. All solar collector installations shall be performed by a qualified solar installer.
2. Any connection to the public utility grid must be inspected by the appropriate public utility.
3. Solar energy systems shall be maintained in good working order.
4. If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the State of Michigan Building Code, currently in effect, when in use. Any solar storage batteries that are no longer used shall be disposed of in accordance with the laws, regulations and ordinances of the State of Michigan and the Township or any other applicable enforcing agency.
5. If a solar collector ceases to perform its originally intended function for more than twelve (12) consecutive months, the owner of the property shall remove the collector, mount and associated equipment no later than ninety (90) days after the end of the twelve (12) month period.

(xii) Noise. Noise emanating from the operation of solar energy system shall not exceed 45dB(A), as defined by the American National Standards Institute, at all lot lines.

(xiii) Stabilization. Any exposed ground on which the solar energy system is located shall be stabilized with perennial ground cover, agricultural crops, or any other organic use, such as livestock, as permitted by the underlying zoning district.

(xiv) Decommissioning.

1. The solar energy system owner(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the solar energy system, which shall be adjusted every five (5) years for inflation. The solar energy system owner(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the solar energy system owner(s), and for a good cause, the Township Board may grant a reasonable extension of time. The solar energy system will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. All decommissioning expenses are the responsibility of the owner(s) or operator(s).
2. If the solar energy system owner(s) fails to complete decommissioning within the period prescribed above, the Township Board may use the cash deposit or irrevocable letter of credit to remove the solar energy system and may designate a contractor to complete decommissioning with any additional expense thereof exceeding the cash deposit or irrevocable letter of credit amount to be charged to the violator and/or to become a lien against the lot.
3. In addition to the decommissioning requirements listed above, the solar energy system shall also be subject to the following:
    a. Decommissioning shall include the removal of each solar energy system, buildings, electrical components, and any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade.
    b. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s). If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

~~5.~~2.

5. ~~Alternative Energies~~

~~For renewable energies not identified herein, the Planning Commission may allow them by special use, and only if the following are provided:~~

~~Compliance with the best practices of the relevant national organization that provides accreditation for the use, or the best practices that are generally accepted in the industry, absent of a national organization. Those best practices shall include, but not necessarily be limited to:~~

~~Noise control~~
~~Odor control~~
~~Setbacks and/or isolation distances~~
~~Height maximum~~
~~Quantity per acre~~
~~Safety plan~~

~~A site plan in accordance with Article 24 of this ordinance.~~
~~Documented compliance with applicable local, state and national regulations including, but not limited to, all applicable safety, construction, environmental, electrical, and communication regulations.~~
~~Proof of the applicant's liability insurance.~~
~~A decommissioning plan.~~

SECTION 23.20 RENEWABLE ENERGIES.

A. Purpose

Renewable energies are a resource that can prevent fossil fuel emissions and reduce energy load. The purpose and intent of renewable energies is to promote the compatible use of solar, biofuel, anaerobic digesters, and wind to assist in decreasing the dependence of the Township on non-renewable energy systems through the accommodation of proper renewable energy systems and equipment within the township. The purpose of this Section is to establish guidelines for siting solar, biofuel, anaerobic digesters, wind energy uses, and other renewable energies that meet this purpose. The goals are as follows.

1. Promote the safe, effective, and efficient use of solar, biofuel, anaerobic digesters, wind energy uses, and other alternative energies in order to reduce the consumption of fossil fuels in producing electricity.

2. Preserve and protect public health, safety, welfare, and quality of life by minimizing the potential adverse impacts of solar, biofuel, anaerobic digesters, wind energy uses, and other alternative energies.

3. Establish standards and procedures by which the siting, design, engineering, installation, operation, and maintenance of solar, biofuel, anaerobic digesters, wind energy uses, and other alternative energies shall be governed.

B. Definitions

As used in this Chapter, the following terms shall have the indicated meanings.

1. Anaerobic Digester. A reactor in which microorganisms break down biodegradable material in the absence of oxygen, used for industrial or domestic purposes to manage waste and/or produce energy.

2. Anaerobic Digestion. A process through which bacteria break down organic matter—such as animal manure, wastewater biosolids, and food wastes in the absence of oxygen.

3. Anemometer. A temporary wind speed indicator constructed for the purpose of analyzing the potential for utilizing a wind energy turbine at a given site. This includes the tower, base plate, anchors, cables and hardware, wind direction vanes, booms to hold equipment, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of time for either instantaneous wind information or to characterize the wind resource at a given location.

4. At-home. A biofuel reactor that is privately produced by the owner or tenant of a single-family dwelling.

5. Biofuel. Any renewable fuel product, whether solid, liquid, or gas, that is derived from recently living organisms or their metabolic by-products and meets applicable quality standards, including, but not limited to, ethanol and biodiesel.

6. Building-Integrated Photovoltaic (BIPV) Systems. A solar energy system that consists of integrating photovoltaic modules into the building structure, such as the roof or the façade and which does not alter the relief of the roof.

7. Collective Solar. Solar installations owned collectively through subdivision homeowner associations, "adopt-a-solar-panel" programs or other similar arrangements.

8. Condominium Development. A development that is created under the Condominium Act.

9. Decibel. A unit of measure used to express the magnitude of sound pressure and sound intensity. Decibels shall be measured on the dB(A) weighted scale as defined by the American National Standards Institute.

10. Decommissioning. The process of terminating operation and completely removing a wind energy turbine(s) or solar array and all related buildings, structures, foundations, access roads, and equipment.

11. Digester Feedstocks. Organic materials that are acceptable for inclusion within an anaerobic digester include livestock manure, waste animal feed, dead animals, yard waste or grass clippings, organic food processing waste, waste grease/trap grease, food waste intended for human consumption, by-products from ethanol, biodiesel, and algal production and other digester feedstocks approved by the Director of the Michigan Department of Natural Resources and Environment or its successor agency.

12. Downwind Turbine. A wind energy turbine positioned in a manner so that the wind hits the turbine blades after it hits the tower, but which does not produce any noise from the blades interacting with the tower during rotation (i.e. a thumping noise or similar sound) beyond that produced by a similar upwind turbine.

13. Ethanol. A substance that meets the ASTM international standard in effect on the effective date of this section as the D-4806 specification for denatured fuel grade ethanol for blending with gasoline.

14. Farm. That term as defined in section 2 of the Michigan Right to Farm Act, 1981 PA 93, MCL 286.472, as amended.

15. Flush-Mounted Solar Panel. Photovoltaic panels and tiles that are installed flush to the surface of a roof and which cannot be angled or raised.

16. Freestanding or Ground-Mounted Solar Energy System. A solar energy system that is a structure directly installed in the ground and is not attached or affixed to an existing structure.

17. General Common Element. An area designated for use by all owners within a condominium development.

18. Large-Scale Solar. Solar photovoltaic systems that produce more than ten (10) kilowatts (kW) per hour of energy or solar-thermal systems, which provide energy for off-site consumption. On-site consumption is permitted as a secondary use.

19. Medium Wind Energy Turbine (MWET). A tower-mounted wind energy system that converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. The MWET has a maximum height of one hundred fifty (150) feet.

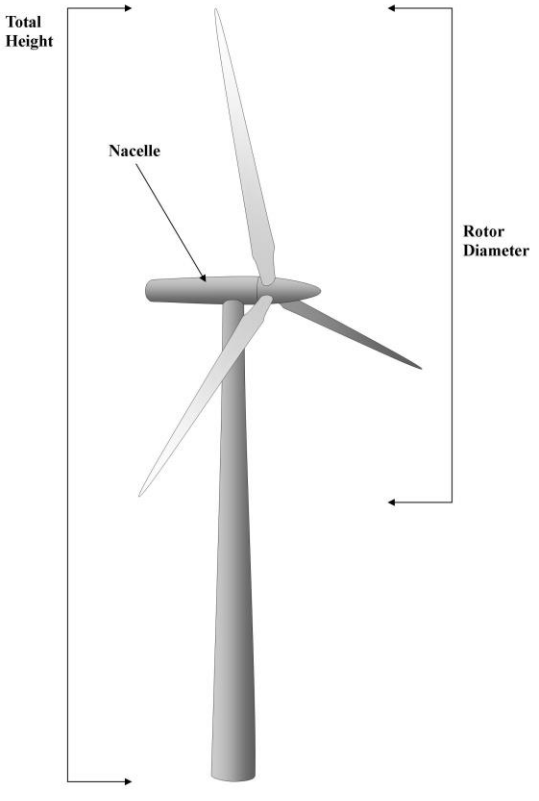
20. Nacelle. The encasement which houses all of the generating components, gear box, drive tram, and other equipment of a wind energy turbine.

21. Net-Metering. A billing arrangement that allows solar, anaerobic digesters, wind turbines, or other renewable energy systems to receive credit for excess electricity that they generate and deliver back to the grid so that they only pay for their net electricity usage at the end of a billing period from an electricity provider.

22. Occupied Building. A residence, school, hospital, church, public library, business, or any building used for public gatherings.

23. Operator. The entity responsible for the day-to-day operation and maintenance of a property and its uses.

24. Owner. The individual or entity, including any respective successors and assigns, who has an equity interest or owns a property, structure or use.



25. Photovoltaic (PV) Systems. A solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells that generate electricity whenever light strikes them.

26. Proof gallon. That term as defined in 27 Code of Federal Regulations 19.907.

27. Renewable Energy Systems. Structures, equipment, devices or construction techniques used for the production of heat, light, cooling and electricity or other forms of energy on site and may be attached to or separate from the principal structure.

28. Rooftop or Building Mounted Solar System. A solar power system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted system or as modules fixed to frames which can be tilted toward the south at an optimal angle.

29. Rotor Diameter. The cross-sectional dimension of the circle swept by the rotating blades of a wind energy turbine.

30. Shadow Flicker. The moving shadow, created by the sun shining through the rotating blades of a wind energy turbine. The amount of shadow flicker created by a wind energy turbine is calculated by a computer model that takes into consideration turbine location, elevation, tree cover, location of all structures, wind activity, and sunlight.

31. Small-Scale Solar. Solar photovoltaic systems that produce up to ten kilowatts (kW) per hour of energy or solar-thermal systems, which serve the building to which they are attached and do not provide energy for any other buildings.

32. Small Structure-Mounted Wind Energy Turbine (SSMWET). Converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. A SSMWET is attached to a structure's roof, walls, or other elevated surface. The structure must be at least twelve (12) feet high at its highest roof point and must be secured to frost-footings or a concrete slab. The SSMWET has a maximum height of fifteen (15) feet.

33. Small Tower-Mounted Wind Energy Turbine (STMWET). A tower-mounted wind energy system that converts wind energy into electricity through the use of equipment which includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, vane, wire, inverter, batteries, or other components used in the system. The STMWET has a maximum height of one hundred twenty (120) feet.

34. Solar Access. Space open to the sun and clear of overhangs or shade including the orientation of streets and lots to the sun so as to permit the use of active and/passive solar energy systems on individual properties.

35. Solar Collector. A solar photovoltaic cell, panel, or array, or solar hot air or water collector device, which relies upon solar radiation as an energy source for the generation of electricity or transfer of stored heat.

36. Solar Energy Equipment/System. Solar collectors, controls, energy storage devices, heat pumps, heat exchangers and other materials, hardware or equipment necessary to the process by which solar radiation is collected, converted into another form of energy, stored, protected from unnecessary dissipation and distributed. Solar systems include solar thermal, photovoltaic and concentrated solar.

37. Solar Panel. A device for the direct conversion of solar energy into electricity.

38. Solar Storage Battery. A device that stores electricity generated by solar energy from the sun and makes it available in an electrical form.

39. Solar-Thermal Systems. A system that directly heats water or other liquid using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water and heating pool water.

40. Total Height. The vertical distance measured from the ground level at the base of the tower to the uppermost vertical extension of any blade or antenna, or the maximum height reached by any part of a wind energy turbine, wireless communications facility or other structure permitted by this Ordinance.

41. Tower. A freestanding monopole that supports a wind energy turbine, wireless communications facility or other structure permitted by this Ordinance.

42. Upwind Turbine. A wind energy turbine positioned in a manner so that the wind hits the turbine blades before it hits the tower in order to avoid the thumping noise which can occur if the wind is disrupted by hitting the tower before the blades.

43. Wind Energy Turbine (WET). Any structure-mounted, small, medium, or large wind energy conversion system that converts wind energy into electricity through the use of a wind generator and includes the nacelle, rotor, tower, and pad transformer, if any.

C. Temporary Uses. Anemometers are permitted in all zoning districts as a temporary use, in compliance with this Section and applicable WET regulations.

1. The construction, installation, or modification of an anemometer tower shall require a building permit and shall conform to all applicable local, state, and federal safety, construction, environmental, electrical, and communication requirements.

2. An anemometer shall be subject to the minimum requirements for height, setback, separation, location, safety requirements, and decommissioning that correspond to the size of the WET that is proposed to be constructed on the site.

3. An anemometer shall be permitted for no more than thirteen (13) months.

D. Permitted Principal Uses.

1. Wind Energy Turbines

(i) A small structure-mounted wind energy turbine not exceeding the maximum height of the zoning district in which it is located together with the structure it is attached to, shall be considered a permitted use in all zoning districts and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

(ii) A small tower-mounted wind energy turbine not exceeding the maximum height of the zoning district in which it is located shall be considered a permitted use in all zoning districts and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

(iii) The above permitted uses are subject to the following minimum requirements.

1. Siting and Design Requirements.

a. Upwind turbines and downwind turbines are permitted.

b. Visual Appearance.

i. A SSMWET or STMWET, including accessory buildings and related structures, shall be a non-reflective, non-obtrusive color (e.g. white, gray, black). The appearance of the turbine, tower, and any ancillary facility shall be maintained throughout the life of the SSMWET or STMWET.

ii. A SSMWET or STMWET shall not be artificially lighted.

iii. A SSMWET or STMWET shall not be used for displaying any advertising (including flags, streamers, or decorative items), except for identification of the turbine manufacturer.

c. Ground Clearance. The lowest extension of any blade or other exposed moving component of a SSMWET or STMWET shall be at least fifteen (15) feet above the ground (at the highest point of the natural grade within thirty (30) feet of the base of the tower) and, in addition, at least fifteen (15) feet above any outdoor surfaces intended for human use, such as balconies or roof gardens, that are located directly below the SSMWET or STMWET.

d. Noise. Noise emanating from the operation of a SSMWET or STMWET shall not exceed 45dB(A), as defined by the American National Standards Institute, at all lot lines

e. Vibration. Vibrations shall not be produced which are humanly perceptible beyond the lot on which a SSMWET or STMWET is located.

f. Guy Wires. Guy wires shall not be permitted as part of the SSMWET or STMWET.

2. Small Structure-Mounted Wind Energy Turbine Dimensional Requirements.

a. Height. The height of a SSMWET shall not exceed fifteen (15) feet as measured from the highest point of the roof, excluding chimneys, antennae, and other similar protuberances.

b. Setback. The setback of the SSMWET shall be that of the requirements of the zoning district in which it is located and the structure on which it is located. The setback shall be measured from the furthest outward extension of all moving parts.

c. Quantity. No more than three (3) SSMWETs shall be installed on any lot.

d. Separation. If more than one (1) SSMWET is installed, a minimum distance equal to the height of the highest SSMWET must be maintained between the base of each SSMWET.

3. Small Tower-Mounted Wind Energy Turbine Dimensional Requirements.

   a. Height. The total height of a STMWET shall not exceed the maximum height of the zoning district in which it is located.

   b. Occupied Building Setback. The setback from all occupied buildings on the applicant's lot shall be a minimum of twenty (20) feet measured from the base of the tower.

   c. Other Setbacks. The setback shall be minimally equal to the total height of the STMWET, as measured from the base of the Tower, from the property line, public right-of-way, public easement, or overhead public utility lines. This setback may be reduced if the applicant provides a registered engineer's certification that the WET is designed to collapse, fall, curl, or bend within a distance or zone shorter than the height of the wind turbine but in no instance shall the setback be less than that of the requirements of the zoning district in which it is located.

   d. Quantity. No more than one (1) STMWET shall be installed on any lot.

   e. Electrical System. All electrical controls, control wiring, grounding wires, power lines, and system components shall be placed underground, to the extent practicable, within the boundary of each lot at a depth designed to accommodate the existing land use to the maximum extent practicable. Wires necessary to connect the wind generator to the tower wiring are exempt from this requirement.

4. Permit Application Requirements. All of the following information shall be included in an application for a SSMWET or a STMWET.

   a. Name of lot owner(s), address, and parcel number.

   b. A site plan in accordance with Article 24 of this Ordinance, which shall also include maps (drawn to scale) showing the proposed location of all components and ancillary equipment of the SSMWET(s) or STMWET, lot lines, physical dimensions of the lot, existing building(s), setback lines, right-of-way lines, public easements, overhead utility lines, sidewalks, non-motorized pathways, roads and contours. The site plan must also include

adjoining properties as well as the location and use of all structures.

c. The proposed type and height of the SSMWET or STMWET to be constructed; this shall include the manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated generating capacity, dimensions, rotor diameter, and a description of ancillary facilities.

d. Documented compliance with the noise requirements set forth in this Ordinance.

e. Documented compliance with applicable local, state and national regulations including, but not limited to, all applicable safety, construction, environmental, electrical, and communication requirements.

f. Proof of the applicant's liability insurance.

g. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned generator and that such connection has been approved. Off-grid systems shall be exempt from this requirement.

h. Other relevant information as may be reasonably requested.

i. Signature of the applicant.

j. Total proposed number of SSMWETs.

k. A description of the methods that will be used to perform maintenance on the STMWET and the procedures for lowering or removing the STMWET in order to conduct maintenance.

5. Safety Requirements.

a. If the SSMWET or STMWET is connected to a public utility system for net-metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's then-current service regulations, meeting federal, state, and industry standards applicable to wind power generation facilities, and the connection shall be inspected by and subject to the

approval of the appropriate public utility.

b. The SSMWET or STMWET shall be equipped with an automatic braking, governing or feathering system to prevent uncontrolled rotation, over-speeding, and excessive pressure on the tower structure, rotor blades and other wind energy components unless the manufacturer certifies that a braking system is not necessary.

c. A clearly visible warning sign regarding voltage shall be placed at the base of the SSMWET or STMWET.

d. The structural integrity of the SSMWET or STMWET shall conform to the design standards of the International Electrical Commission, specifically IEC 61400-1, "Wind Turbine Safety and Design," IEC 61400-2, "Small Wind Turbine Safety," IEC 61400-22, "Wind Turbine Certification," and IEC 61400-23, "Blade Structural Testing," or any similar successor standards.

6. Signal Interference. The SSMWET or STMWET shall not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, or emergency communication systems.

7. Decommissioning.

a. The SSMWET or STMWET owner(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the SSMWET or STMWET, which shall be adjusted every five (5) years for inflation. The SSMWET or STMWET owner(s) or operator(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the owner(s) or operator(s) of the SSMWET or STMWET, and for a good cause, the Township Board may grant a reasonable extension of time. The SSMWET or STMWET will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. All decommissioning expenses are the responsibility of the owner(s) or operator(s).

b. If the SSMWET or STMWET owner(s) or operator(s) fails to complete decommissioning within the period prescribed above, the Township Board may use the cash deposit or irrevocable letter of credit to remove the SSMWET or STMWET and may designate a contractor to complete decommissioning with any additional

expense thereof exceeding the cash deposit or irrevocable letter of credit amount to be charged to the violator and/or to become a lien against the lot.

c. In addition to the decommissioning requirements listed above, the STMWET shall also be subject to the following:

i. Decommissioning shall include the removal of each STMWET, buildings, electrical components, and any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade.

ii. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s) or operator(s). If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

2. Biofuel

(i) A biofuel production facility with an annual production capacity of not more than 100,000 gallons of biofuel is a permitted use of property if all of the following requirements are met:

1. The biofuel production facility is located on a farm.

2. The biofuel production facility is located not less than one hundred (100) feet from the boundary of any contiguous property under different ownership than the property on which the biofuel production facility is located.

3. On an annual basis, not less than twenty-five (25%) of the feedstock for the biofuel production facility is produced on the farm where the biofuel production facility is located, and not less than twenty-five (25%) of the biofuel or another product or by-product produced by the biofuel production facility is used on that farm.

(ii) At-home biofuel production with an annual production capacity of not more than one thousand (1,000) gallons of biofuel for each passenger vehicle or light truck registered at the property is a permitted use on a residential property, if all of the following requirements are met:

1. Each passenger vehicle or light truck is operable, licensed to the owner or tenant of the property on which the At-home facility is located and is otherwise road worthy.

2. The parcel on which the At-home biofuel production occurs is at least one (1) acre in area.

3. The building or buildings in which the biofuel production is located shall be at least one hundred (100) feet from any adjacent principal or accessory building on a separate property.

4. All biofuel produced on the property shall never be sold, distributed or otherwise used by any other vehicle than those registered at the property and meet the aforementioned requirements.

5. An operation plan shall be submitted to the Zoning Administrator providing detail regarding at least the following and any other information requested by the township:
    a. The registered vehicle(s)
    b. Expected gallon production
    c. The building or buildings utilized for the at-home biofuel operation
    d. A site plan showing setbacks, parking, storage of fuel and surrounding uses.
    e. Methods to control odor

3. Anaerobic Digesters

(i) An anaerobic digester facility is a permitted use of property if all of the following requirements are met:

1. On an annual basis, more than fifty percent (50%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.

2. An anaerobic digester shall meet the following minimum isolation distances:
    a. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.

b. Two (2) feet above the seasonal high water table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a.

c. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan Department of Environment, Great Lakes, and Energy or their successor organization, pursuant to the program established under the Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

d. Two hundred (200) feet from nearest non-farm residence.

3. Operators of an anaerobic digester must be qualified under the State of Michigan with both of the following:
   a. Complete an appropriate anaerobic digester operator certification course.
   b. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.

4. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

4. Solar

(i) Small-Scale Solar energy collectors shall be permitted only to provide power for use by owners, lessees, tenants, residents or other occupants of the premises on which they are erected but nothing contained in this

provision shall be construed to prohibit Collective Solar installations or the sale of excess power through a net billing or net-metering arrangement.

(ii) Solar Energy Equipment and Solar Energy Systems shall be permitted only if they are determined to not present any unreasonable safety risks, including but not limited to, the following:

1. Weight load
2. Wind resistance
3. Ingress and egress in the event of fire or other emergency

(iii) No Small Scale solar energy system or device shall be installed or operated except in compliance with this Section.

(iv) No solar panel shall create glare, reflection or any other deflection of light on any adjacent property below the maximum height established for each district.

(v) Building-Integrated Photovoltaic Systems and Solar-Thermal Systems are permitted in all zoning districts.

(vi) Rooftop and Building-Mounted Solar Collectors are permitted in all zoning districts subject to the following condition:

1. The maximum height of the zoning district in which the rooftop and building-mounted solar collectors are located shall not apply provided that such structures are erected only to such height as is reasonably necessary to accomplish the purpose for which they are intended to serve and that such structures do not obstruct solar access to adjacent and neighboring properties.

(vii) Safety

1. All solar collector installations shall be performed by a qualified solar installer.
2. Any connection to the public utility grid must be inspected by the appropriate public utility.
3. Solar energy systems shall be maintained in good working order.
4. If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the State of Michigan Building Code,

currently in effect, when in use. Any solar storage batteries that are no longer used shall be disposed of in accordance with the laws, regulations and ordinances of the State of Michigan and the Township or any other applicable enforcing agency.

5. If a solar collector ceases to perform its originally intended function for more than twelve (12) consecutive months, the owner equipment no later than ninety (90) days after the end of the twelve (12) month period.

(viii) Noise. Noise emanating from the operation of a solar energy system shall not exceed, 45dB(A) at all lot lines, as defined by the American National Standards Institute.

(ix) Stabilization. Any exposed ground on which the solar energy system is located shall be stabilized with perennial ground cover, agricultural crops, or any other organic use, such as livestock, as permitted by the underlying zoning district.

(x) Decommissioning.

1. The solar energy system owner(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the solar energy system, which shall be adjusted every five (5) years for inflation. The solar energy system owner(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the solar energy system owner(s), and for a good cause, the Township Board may grant a reasonable extension of time. The solar energy system will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. All decommissioning expenses are the responsibility of the owner(s) or operator(s).
2. If the solar energy system owner(s) fails to complete decommissioning within the period prescribed above, the Township Board may use the cash deposit or irrevocable letter of credit to remove the solar energy system and may designate a contractor to complete decommissioning with any additional expense thereof exceeding the cash deposit or irrevocable letter of credit amount to be charged to the violator and/or to become a lien against the lot.
3. In addition to the decommissioning requirements listed above, the solar energy system shall also be subject to the following:

a. Decommissioning shall include the removal of each solar energy system, buildings, electrical components, and any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade.
b. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s). If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

E. Permitted Special Uses with Conditions.

4. Wind Energy Turbines

(i) A small structure-mounted wind energy turbine exceeding the maximum height of the zoning district in which it is located together with the structure it is attached to, shall be considered a special use in all zoning districts and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

(ii) A small tower-mounted wind energy turbine (STMWET) exceeding the maximum height of the zoning district in which it is located shall be considered a special use in all zoning districts, and shall not be erected, constructed, installed, or modified as provided in this Ordinance unless a building permit has been issued to the owner(s) or operator(s).

Small structure-mounted wind energy turbines and STMWETs shall comply with Section 23.20D1 above, the site plan review requirements in Article 24, and the special use requirements in Article 20 of this Ordinance.

(iii) A MWET shall be considered a special use in the Agricultural and Rural District, Rural Estates District, Industrial District, and the Planned Unit Development District.

(iv) The special uses listed in subsection (iii) above are subject to the following minimum requirements.

1. Siting and Design Requirements.

a. Upwind turbines and downwind turbines are permitted,

b. The design of a MWET shall conform to all applicable industry standards.

c. Visual appearance.

i. Each MWET, including accessory buildings and other related structures, shall be mounted on a tubular tower and a non-reflective, non-obtrusive color (e.g. white, gray, black). The appearance of turbines, towers and buildings shall be maintained throughout the life of the MWET.

ii. Each MWET shall not be artificially lighted, except to the extent required by the FAA or other applicable authority, or otherwise necessary for reasonable safety and security.

iii. No MWET may be used for displaying any advertising (including flags, streamers, or decorative items), except for reasonable identification of the turbine manufacturer or operator(s).

d. Vibration. A MWET shall not produce vibrations humanly perceptible beyond the lot on which it is located.

e. Shadow Flicker. The MWET owner(s) and/or operator(s) shall conduct an analysis on potential shadow flicker at any occupied building with direct line-of-sight to the MWET, and at the buildable area of any vacant adjacent lot with direct line-of-sight to the MWET that could accommodate an occupied building. The analysis shall identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sun-rise to sun-set over the course of a year. The analysis shall identify situations where shadow flicker may affect the occupants of the buildings for more than thirty (30) hours per year, and describe measures that shall be taken to eliminate or mitigate the problems. Shadow Flicker on a building shall not exceed thirty (30) hours per year. The Township shall be provided with a copy of this analysis, and the Township reserves the right to require this analysis to be updated as reasonably necessary.

f. Guy Wires. Guy wires shall not be permitted as part of the MWET.

g. Electrical System. All electrical controls, control wiring, grounding wires, power lines, and all other electrical system components of the MWET shall be buried underground, to the extent practicable, within the boundary of each lot at a depth designed to accommodate the existing land use to the maximum extent practicable, and to comply with the applicable electrical code. Wires necessary to connect the MWET to the tower wiring are exempt from this requirement.

h. Noise. Any noise emanating from the operation of a MWET shall not exceed, 45dB(A), as defined by the American National Standards Institute at all lot lines.

2. Dimensional Requirements.

a. Location. The MWET shall only be located in a general common element if it is located in a condominium development. If a MWET is located on a lot with an occupied building, it shall only be located in the rear yard; however, it may be located in a side yard if it is set back at least one hundred fifty (150) feet from the front lot line as measured from the base of the tower.

b. Height. The Total height of a MWET shall not exceed one hundred and fifty (150) feet.

c. Ground Clearance. The lowest extension of any blade or other exposed moving component of a MWET shall be at least fifteen (15) feet above the ground (at the highest point of the grade level within fifty (50) feet of the base of the tower) and, in addition, at least fifteen (15) feet above any outdoor surfaces intended for human occupancy, such as balconies or roof gardens, that are located directly below the MWET.

d. Quantity. No more than one (1) MWET shall be installed for every two and one-half (2.5) acres of land included in the lot.

e. Setback and Separation.

i. Occupied Building Setback. The setback from all occupied buildings on the applicant's lot shall be a minimum of twenty (20) feet measured from the base of the tower.

ii. Property Line Setbacks. With the exception of the locations of public roads (see below), drain rights-of-way and lots with occupied buildings (see above), the internal property line setbacks shall be minimally equal to the total height of the MWET as measured from the base of the tower. This setback may be reduced to a distance agreed upon as part of the special use permit if the applicant provides a registered engineer's certification that the WET is designed to collapse, fall, curl, or bend within a distance or zone shorter than the height of the WET but in no instance shall the setback be less than that of the requirements of the zoning district in which it is located.

iii. Private or Public Road Setback. Each MWET shall be set back from the nearest private or public road a minimum distance equal to the total height of the MWET, determined at the nearest boundary of the underlying right-of-way for such private or public road.

iv. Communication and Electrical Lines. Each MWET shall be set back from the nearest above-ground public electric power line or telephone line a minimum distance equal to one and one-half (1.5) times the total height of the MWET, as measured from the base of the tower, determined from the existing power line or telephone line.

v. Tower Separation. MWET tower separation shall be based on industry standard and manufacturer recommendation.

3. Safety Requirements.

a. If the MWET is connected to a public utility system for net-metering purposes, it shall meet the requirements for interconnection and operation as set forth in the public utility's then-current service regulations applicable to wind power generation facilities, and the connection shall be inspected by the appropriate public utility.

b. The MWET shall be equipped with an automatic braking or governing system to prevent uncontrolled rotation, over-speeding, and excessive pressure on the tower structure, rotor blades and other wind energy components unless the manufacturer certifies

that a braking system is not necessary.

c. Security measures must be in place to prevent unauthorized trespass and access. Each MWET shall not be climbable up to fifteen (15) feet above ground surfaces. All access doors to MWETs and electrical equipment shall be locked and/or fenced as appropriate, to prevent entry by non-authorized person(s).

d. All spent lubricants, cooling fluids, and any other hazardous materials shall be properly and safely removed in a timely manner.

e. Each MWET shall have one (1) sign, not to exceed two (2) square feet in area, posted at the base of the tower and on the security fence if applicable. The sign shall contain at least the following:

i. Warning high voltage;

ii. Manufacturer's and owner/operator's name;

iii. Emergency contact numbers (list more than one [1] number).

f. The structural integrity of the MWET shall conform to the design standards of the International Electrical Commission, specifically IEC 61400-1, "Wind Turbine Safety and Design," IEC 61400-22, "Wind Turbine Certification," and IEC 61400-23, "Blade Structural Testing," or any similar successor standards.

4. Signal Interference. The MWET shall not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, or emergency communication systems.

5. Decommissioning.

a. The MET owner(s) or operator(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the MET, which shall be adjusted every five (5) years for inflation. The MWET owner(s) or operator(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the owner(s) or the operator(s) of the MWET, and for a good cause, the Township Board may grant a reasonable extension of time. Each MWET will

be presumed to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. The end of its useful life may also be established by other facts and circumstances determined by the Township. All decommissioning expenses are the responsibility of the operator(s), unless specifically assigned to the owner(s).

b. Decommissioning shall include the removal of each MWET, buildings, electrical components, and streets to a depth of sixty (60) inches below grade, as well as any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade. Following removal, the location of any remaining MWET foundation shall be identified on a map as such and recorded with the deed to the lot with the County Register of Deeds.

c. All access streets to the MWET shall be removed, cleared, and graded by the MWET owner(s), unless the property owner(s) requests, in writing, a desire to maintain the access street. The Township will not be assumed to take ownership of any access street except through official action of the Township Board.

d. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s) of the MWET. If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.

e. If the MWET owner(s) or operator(s) fails to complete decommissioning within the period prescribed above the Township Board may use the cash deposit or irrevocable letter of credit to remove the MWET and may designate a contractor to complete decommissioning with the expense thereof exceeding the cash deposit or irrevocable letter of credit amount to be charged to the violator and/or to become a lien against the lot.

6. Site Plan Requirements.

a. Site Plan Drawing. All applications for a MWET special land use permit shall be accompanied by a site plan in accordance with Article 24 of this Ordinance.

b. Site Plan Documentation. The following documentation shall be included with the site plan:

i. The contact information for the owner(s) and operator(s) of the MWET as well as contact information for all lot owners on which the MWET is located.

ii. A copy of the lease, or recorded document, with the landowner(s) if the applicant does not own the land for the proposed MWET, with a statement from the landowner(s) of the leased site that the landowner(s) will abide by all applicable terms and conditions of the special use permit, if approved.

iii. In the case of a condominium development, a copy of the condominium development's master deed and bylaws addressing the legal arrangement for the MWET.

iv. The proposed number, representative types and height of each MWET to be constructed; including their manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated capacity, rotor diameter, and a description of ancillary facilities.

v. Documents confirming specifications for MWET tower separation.

vi. Documented compliance with the noise and shadow flicker requirements set forth in this Ordinance.

vii. Engineering data concerning construction of the MWET and its base or foundation, which may include, but not be limited to, soil boring data.

viii. A certified registered engineer's certification that the MWET meets or exceeds the manufacturer’s construction and installation standards.

ix. Anticipated construction schedule.

x. A copy of the maintenance and operation plan, including anticipated regular and unscheduled maintenance, and a description of the procedures that will be used for lowering or removing the MWET to conduct maintenance (if applicable).

xi. Documented compliance with applicable local, state and national regulations, including but not limited to all applicable safety, construction, environmental, electrical, and communication regulations. MWETs shall comply with Federal Aviation Administration (FAA) standards, and specifically including compliance with the Michigan Airport Zoning Act, Michigan Tall Structures Act, and any applicable airport overlay zone regulations.

xii. Proof of applicant's liability insurance.

xiii. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned generator and that such connection has been approved (off-grid systems shall be exempt from this requirement).

xiv. Other relevant information as may be requested by the Planning Commission to ensure compliance with the requirements of this Ordinance.

xv. Following the completion of construction, the applicant shall certify that all construction is completed pursuant to the special use permit.

xvi. A written description of the anticipated life of each MWET; the estimated cost of decommissioning; the method of ensuring that funds will be available for decommissioning and site restoration; and removal and restoration procedures and schedules that will be employed if the MWET(s) become inoperative or non-functional.

xvii. The applicant shall submit a decommissioning plan that will be carried out at the end of the MWET's useful life, and shall describe any agreement with the landowner(s)

regarding equipment removal upon termination of the lease.

xviii. The Township reserves the right to review all maintenance plans and irrevocable letters of credit under this Ordinance to ensure that all conditions of the permit are being followed.

xix. A statement indicating what hazardous materials will be used and stored on the site.

xx. A study assessing any potential impacts on the natural environment, including, but not limited to, assessing the potential impact on endangered species, eagles, birds or other wildlife, wetlands and fragile ecosystems (the study shall conform to state and federal wildlife agency recommendations based on local conditions).

xxi. Signature of the applicant.

7. Certification and Compliance.

a. The Township must be notified of a change in ownership of a MWET or a change in ownership of the property on which the MWET is located.

b. The Township reserves the right to inspect any MWET in order to ensure compliance with the Ordinance. Any cost associated with the inspections shall be paid by the owner/operator of the WET.

2. Biofuel

(i) A biofuel production facility with an annual production capacity of not more than one hundred thousand (100,000) gallons of biofuel that meets the requirements of subsection 23.20D2(i)1 and subsection 23.20D2(i)2 but that does not meet the requirements of subsection 23.20D2(i)3.

(ii) A biofuel production facility with an annual production capacity of more than one hundred thousand (100,000) gallons but not more than five hundred thousand (500,000) gallons of biofuel that meets the requirements of subsection 23.20D2(i)1 and subsection 23.20D2(i)2.

(iii) An application for special land use approval for a biofuel production facility described in subsection (i) or (ii) above shall include all of the following:

1. A site plan as required under Article 24, including a map of the property and existing and proposed buildings and other facilities.

2. A description of the process to be used to produce biofuel.

3. The number of gallons of biofuel anticipated to be produced annually.

4. An emergency access and fire protection plan that has been reviewed and approved by the appropriate responding police and fire departments.

5. For an ethanol production facility that will produce more than ten thousand (10,000) proof gallons annually, completed United States Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, forms 5000.29 (environmental information) and 5000.30 (supplemental information on water quality considerations under 33 USC 1341(a)), or successor forms, required to implement regulations under the national environmental policy act of 1969, 42 USC 4321 to 4347, and the federal water pollution control act, 33 USC 1251 to 1387.

6. Information that demonstrates that the biofuel production facility will comply with the requirements of subsection (i) or (ii) above and (iv) below.

7. Any additional information requested by the Township.

(iv) Special land use approval of a biofuel production facility described in subsection (i) or (ii) above shall be made expressly conditional on the facility's meeting all of the following requirements before the facility begins operation and no additional requirements:

1. Buildings, facilities, and equipment used in the production or storage of biofuel comply with local, state, and federal laws.
2. The owner or operator of the biofuel production facility provides the local unit of government with proof that all necessary approvals have been obtained from the department of environmental quality and other state and federal agencies that are involved in permitting any of the following aspects of biofuel production:

   a. Air pollution emissions.

b. Transportation of biofuel or additional products resulting from biofuel production.
c. Use or reuse of additional products resulting from biofuel production.
d. Storage of raw materials, fuel, or additional products used in, or resulting from, biofuel production.

3. The biofuel production facility includes sufficient storage for both of the following:

a. Raw materials and fuel.
b. Additional products resulting from biofuel production or the capacity to dispose of additional products through land application, livestock consumption, sale, or other legal use.

3. Anaerobic Digesters

(i) An anaerobic digester facility is a permitted special use of property if all of the following requirements are met:

1. On an annual basis, not less than ten percent (10%) of the feedstock for the anaerobic digester facility shall be produced on the farm where the facility is located.

2. An application for special land use approval for an Anaerobic Digester facility shall include a site plan in accordance with Article 24 of this ordinance and shall include all of the following:

3. An anaerobic digester shall meet the following minimum isolation distances:

a. Two hundred (200) feet from waters of the state as defined in R 287.651(1)(u)(i) to (viii) of the Department of Agriculture and Rural Development.
b. Two (2) feet above the seasonal high water table, as defined by NRCS 313 Waste Storage Facility Conservation Practice Standard, and adopted by reference in R 287.651a.
c. Not within a 10-year time-of-travel zone designated as a wellhead protection area as recognized by the Michigan Department of Environment, Great Lakes, and Energy or their successor organization, pursuant to the program established under the

Michigan safe drinking water act, PA 399 of 1976, MCL 325.1001 to 325.1023, unless approved by the local unit of government administering the wellhead protection program. Where no designated wellhead protection area has been established, construction shall not be closer than the minimum isolation distance as stated on the well permit for a Type I or Type IIa public water supply. Facilities shall not be constructed closer than eight hundred (800) feet to a Type IIb or Type III public water supply unless the structure is located in accordance with Table 1 of the Natural Resources Conservation Service Technical Guide Waste Storage Facility (No) 313.

d. Two hundred (200) feet from nearest non-farm residence.

4 Operators of an anaerobic digester must be qualified under the State of Michigan with both the following:

a. Complete an appropriate anaerobic digester operator certification course.

b. Obtain certification by the Michigan Department of Agriculture and Rural Development as an anaerobic digester operator.

5. The disposition of digestate may be by direct application to soils, sale, or other transfer of ownership. Application to soils shall be done in accordance with the recommendations within the Generally Accepted Agricultural and Management Practices for Nutrient Utilization, January 2010, as specified in 1981 PA 93, MCL 286.471

4. Solar

(i) Small Scale Free-Standing and Ground-Mounted Solar Collectors are permitted in all zoning districts, subject to the following conditions, and that otherwise comply with the provisions of Section 23.20D4 of this ordinance:

1. The location of the solar collectors shall meet all applicable setback requirements for accessory structures in the zoning district in which it is located.
2. All solar collectors shall be adequately screened with architectural features or landscaping such as berms, trees or shrubs that prevent their visible exposure

to any right-of-way and preserves the character of the property and surrounding area. An architectural or landscaping plan shall be submitted for approval to the Zoning Administrator.

3. Solar energy equipment shall be located in a manner that does not shade any adjacent property at any time of the daylight hours.

(ii) Large-Scale Solar energy collectors shall be permitted within the Agricultural and Rural District, Rural Estates District, Industrial District, and the Planned Unit Development District, as a special use only to provide power for off-site consumption. On-site consumption is permitted as a secondary use.

(iii) An application for special land use approval for a Large-Scale Solar facility shall include a site plan in accordance with Article 24 of this ordinance and shall include all of the following:

(iv) Solar Energy Equipment and Solar Energy Systems shall be permitted only if they are determined to not present any unreasonable safety risks, including but not limited to, the following:

1. Weight load
2. Wind resistance
3. Ingress and egress in the event of fire or other emergency

(v) No Large Scale Solar energy system or device shall be installed or operated except in compliance with this Section.

(vi) No solar panel shall create glare, reflection or any other deflection of light on any adjacent property below the maximum height established for each district.

(vii) Building-Integrated Photovoltaic Systems and Solar-Thermal Systems are permitted.

(viii) Rooftop and Building-Mounted Solar Collectors are permitted, subject to the following condition:

1. The maximum height of the zoning district in which the rooftop and building-mounted solar collectors are located shall not apply provided that such structures are erected only to such height as is reasonably necessary to accomplish the purpose for which they are intended to serve and that such structures do not obstruct solar access to adjacent and neighboring properties.

(ix) Free-Standing and Ground-Mounted Solar Collectors are permitted, subject to the following conditions:

1. The location of the solar collectors shall meet all applicable setback requirements for principal structures in the zoning district in which it is located.
2. All solar collectors shall be adequately screened with architectural features or landscaping such as berms, trees or shrubs that prevent their visible exposure to any right-of-way and preserves the character of the property and surrounding area. An architectural or landscaping plan shall be submitted as part of site plan review.
3. Solar energy equipment shall be located in a manner that does not shade any adjacent property at any time of the daylight hours.

(x) Safety

1. All solar collector installations shall be performed by a qualified solar installer.
2. Any connection to the public utility grid must be inspected by the appropriate public utility.
3. Solar energy systems shall be maintained in good working order.
4. If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the State of Michigan Building Code, currently in effect, when in use. Any solar storage batteries that are no longer used shall be disposed of in accordance with the laws, regulations and ordinances of the State of Michigan and the Township or any other applicable enforcing agency.
5. If a solar collector ceases to perform its originally intended function for more than twelve (12) consecutive months, the owner of the property shall remove the collector, mount and associated equipment no later than ninety (90) days after the end of the twelve (12) month period.

(xi) Noise. Noise emanating from the operation of solar energy system shall not exceed 45dB(A), as defined by the American National Standards Institute, at all lot lines.

(xii) Stabilization. Any exposed ground on which the solar energy system is located shall be stabilized with perennial ground cover, agricultural crops, or any other organic use, such as livestock, as permitted by the underlying zoning district.

(xiii) Decommissioning.

1. The solar energy system owner(s) shall post a cash deposit or irrevocable letter of credit with the Township in an amount necessary to decommission the solar energy system, which shall be adjusted every five (5) years for inflation. The solar energy system owner(s) shall complete decommissioning within twelve (12) months after the end of the useful life. Upon request of the solar energy system owner(s), and for a good cause, the Township Board may grant a reasonable extension of time. The solar energy system will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. All decommissioning expenses are the responsibility of the owner(s) or operator(s).
2. If the solar energy system owner(s) fails to complete decommissioning within the period prescribed above, the Township Board may use the cash deposit or irrevocable letter of credit to remove the solar energy system and may designate a contractor to complete decommissioning with any additional expense thereof exceeding the cash deposit or irrevocable letter of credit amount to be charged to the violator and/or to become a lien against the lot.
3. In addition to the decommissioning requirements listed above, the solar energy system shall also be subject to the following:
    a. Decommissioning shall include the removal of each solar energy system, buildings, electrical components, and any other associated facilities. Any foundation shall be removed to a minimum depth of sixty (60) inches below grade, or to the level of the bedrock if less than sixty (60) inches below grade.
    b. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s). If the site is not to be used for agricultural practices following removal, the site shall be seeded to prevent soil erosion.