



**REGULAR OF THE
CHARTER TOWNSHIP OF COMSTOCK PLANNING
COMMISSION**

**THURSDAY, SEPTEMBER 10, 2026 at 6:00 PM
NOTICE AND AGENDA
5858 KING HIGHWAY
COMSTOCK TOWNSHIP HALL**

Call to Order

Pledge of Allegiance to the Flag of the United States of America

Approval of Agenda

Citizen Comment

A citizen may state their name and address and may speak only one time, for no more than three (3) minutes. This time may not be given to another citizen to extend their time. The person speaking has the floor and no other citizen shall speak during someone else's time. During this time, you will be making statements to the Board, without discussion from the Board members, but you are welcome to make an appointment with Planning & Zoning staff to discuss your comments further. Please keep comments clean and respectful.

Approval of Minutes

August 27 2026 - Meeting Minutes (Draft)

New Business

Old Business

CIP - Swan / Cygnet BESS Project Proposal

Comstock Center - Text Amendment

Any Other Business

Data Center Provisions

Utility Scale Solar Provisions

Citizen Comment

A citizen may state their name and address and may speak only one time, for no more than three (3) minutes. This time may not be given to another citizen to extend their time. The person speaking has the floor and no other citizen shall speak during someone else's time. During this time, you will be making statements to the Board, without discussion from the Board members, but you are welcome to make an appointment with Planning & Zoning staff to discuss your comments further. Please keep comments clean and respectful.

Updates from Other Boards

Training Updates

Informational/Future Action Items

Building Permits - Informational

Planning Commissioner Comments

Adjournment



MEMO

Charter Township of Comstock Planning Commission September 10, 2026

From: Kyle Mucha, Principal Planner

Re: August 27 2026 - Meeting Minutes (Draft)

Consideration of draft August 27, 2026 meeting minutes.

Attachments:

[DRAFT August 27 PC Minutes.docx](#)

**Charter Township of Comstock
Minutes of a Planning Commission Meeting
Held on August 27, 2026**

A regular meeting of the Charter Township of Comstock Planning Commission was conducted on August 27, 2026, commencing at 6:00 p.m. at the Township Hall, 5858 King Highway.

Call to Order

The Chairperson called the meeting to order at 6:00 p.m. and welcomed those in attendance.

Present were:

Amber Lawrence, Trustee Liaison
James Criteser, Secretary
Larry Nichols, Chairperson; ZBA Liaison
Joseph Weintraub
Greg Nowak – Vice Chair
Keith Wilkcher

Absent was:

None.

Also present was Township Zoning Administrator, Kyle Mucha; Township Engineer, Mike Presta; Township Attorney, Seth Koches; and, approximately 35 members of the public.

Approval of the Agenda

The next matter was approval of the agenda. A copy of the agenda packet was provided to the Commissioners in their meeting packet. Lawrence amended to add appointments of s new Planning Commission Chair and Vice Chair.

Criteser moved, supported by Weintraub, to approve the agenda, as revised to add an action item to elect a new Chair and a new Vice-Chair. The motion passed 6-0.

Appointment of Planning Commission Chairperson and Vice-Chairperson

The next item on the agenda was to appoint a Planning Commission Chair and Vice Chair. Amber Lawrence was appointed to the office of Township Clerk and is not eligible to continue her role as the Planning Commission Chair. Lawrence resigned her role as Chair and the Planning Commission nominated Larry Nichols to be Chair and nominated Greg Nowak as Vice-Chair.

Lawrence moved, supported by Weintraub, to approve to appoint Larry Nichols as the new Planning Commission Chair. The motion passed 6-0.

1 Criteser moved, supported by Weintraub, to approve to appoint Greg Nowak as the new Vice
2 Chair. The motion passed 6-0.

3 4 **Citizen Comment**

5
6 Tammy Keeler said that the BESS project may be stopped. She cited courts in other counties that
7 precluded BESS projects near schools. She said that the public is not able to vote for or against the
8 project. She said that electrical bills will increase. She said that there will be a negative impact on
9 the environment. She said that CIP was involved in other lawsuits and have frozen assets. She
10 asked that the community protest against the project and initiate court proceedings.

11
12 John Current said that he represents 600 electrical workers in the County. He said that he reviewed
13 the proposed CIP BESS project and that it is safe. He said that he wants his electricians to work in
14 safe environments and said that BESS projects are well designed. He said that he would not be
15 concerned sending his electricians to work at the proposed BESS project.

16
17 Nicolette Lee said that climate change needs to be taken seriously. She said that renewable energy
18 needs backup systems. She said that there can't be renewable energy without backup systems.

19
20 A citizen said that he is a professor at WMU that specializes in climate change and agrees with
21 Lee's statements. He said that BESS allows renewable energy systems to operate more efficiently.
22 He said that the proposed BESS is a chance to make a better future. He said that BESS will be part
23 of the solution. He said that climate change presents a threat to the future.

24 25 26 **Approval of Minutes**

27
28 Nichols recommended a revision to reflect the date of the August 13, 2026, Planning Commission
29 meeting minutes to reflect the minutes of the July 27, 2026, meeting minutes to be approved (page
30 2, line 1 of the draft meeting minutes.

31
32 ____ moved, supported by ____, to approve the minutes of the August 13, 2026, to reflect
33 approval of the July 27, 2026, Planning Commission meeting as revised. The motion passed 6-0.

34
35 The revisions were made in the approved minutes.

36 37 **New Business**

38 39 **5315 Wynn Road – Site Plan Review**

40
41 The next item on the agenda was site plan review for to construct a prefabricated building located
42 at 5315 Wynn Road, within the Township. The subject property is approximately 3.07 acres in
43 sign and is located in the Townships "M" District Zoning Classification; the proposed use is a
44 permitted use within the "M" District. The applicant proposes to provide electrical service to
45 commercial, industrial and general security operators.

1 Mucha prepared a staff report that was provided to the Commissioners in their agenda packets and
2 summarized it. Mucha summarized the site plan standards. Mucha confirmed the Fire Chief is not
3 requiring a fire suppression or a fire hydrant. Mucha discussed the site plan review standards
4 contained in Section 6.1 of the Township Zoning Ordinance. Mucha's staff report is incorporated
5 by reference in these meeting minutes. Mucha said that the site plan complies with the schedule of
6 regulations contained in Section 3.1.P of the Township Zoning Ordinance as well as landscaping
7 and parking lot standards are satisfied. Mucha said that the layout dimensions were satisfied, but
8 the applicant needs to submit an exterior lighting plan. The applicant discussed his site plan and
9 its design. The Commissioners agreed that the site plan was complete and compliant with
10 ordinance standards.

11
12 Lawrence moved, supported by Nowak, that based on findings of fact, fire chief review and
13 engineer review to approve the site plan for 5315 Wynn Road as presented and accept the proposed
14 maintenance plan because the standards of review for the site plan are satisfied. The motion passed
15 6-0.

16 17 **Old Business**

18 19 **Continuation of Swan Energy / Cygnet Energy – Battery Energy Storage System (BESS)**

20
21 The next item on the agenda was continued discussion of the proposed Swan/Cynet BESS project.
22 Mucha prepared his staff report, dated August 18, 2026, that was provided to the Commissioners
23 in their agenda packet and incorporated by reference into these meeting minutes. Mucha discussed
24 economic benefits of the project that was submitted by Applicant. Mucha discussed \$6.6 million
25 CIP will pay over the 20-year life of the project. Mucha said that he is not aware of any data center
26 coming into the Township. Mucha discussed PA 233 and its impact on townships. He said that the
27 Township voted to approve a BESS ordinance, which contains standards that are more restrictive
28 than the PA 233 standards.

29
30 Weintraub asked to confirm the purpose is for the water well located on site. Jan Porvaznik
31 addressed the Planning Commission on behalf of the applicant and said that there are two 30,000-
32 gallon tanks on-site available to be used if there is an emergency (fire suppression).

33
34 Mucha discussed special land use standards. He cited the MZEA requires the special land use
35 application must be approved if all applicable standards are satisfied. Mucha said that the Planning
36 Commission needs to determine whether or not the applicable standards are satisfied. Mucha said
37 that the Applicant provided the Memorandum of Understanding regarding the 100-acre open space
38 for its use. Mucha said that a full parking lot won't be needed once the project is constructed
39 because there will be limited manpower located on site. Mucha said that lighting standards are
40 satisfied. Mucha said that there are three levels of review: (1) site plan, (2) special land use
41 standards, and (3) BESS ordinance standards.

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1 Lawrence discussed concerns about a waiver regarding two separate entities named on one special
2 land use permit. She asked what evidence supports a BESS under the minimum lot size
3 requirements.

4
5 Steve Estey, attorney for the applicant, said that both LLCs are under the same CIP. He said that
6 each project is under different timelines at MISO. He said each entity will have a decommissioning
7 agreement and surety bonds, and will each be financially responsible for payments under the
8 community host agreement. He said the LLCs are part of a trillion-dollar company that is funding
9 the project. Lawrence said that financial benefit doesn't equate to health, safety benefits to the
10 Township. Estey said that the benefit is BESS projects are significantly important to support the
11 grid moving into the future. He said that the BESS provides a backbone to the grid to provide
12 reliability. He said that the state set forth renewable energy goals to be satisfied in the coming
13 years and said that the legislature recognized that timeline and enacted PA 233 to reach those goals.
14 Lawrence asked how electrons are stored during low use hours. Estey said that the BESS stores
15 excess electrons in the grid regardless of the source and stores it to be drawn upon when needed.

16
17 Porvaznik said that the consumption of electricity which is low around midnight and is higher in
18 the mornings. He said consumption maintains a less use level during the working/school hours of
19 the day. Porvaznik said that extra electrons are stored when there is lower demand. He
20 said that there is high energy consumption in the evening hours and tapers off into the night. He
21 said that the resources complement each other.

22
23 Mucha asked the Planning Commission to review his staff report's finding of fact. Mucha
24 summarized the site plan review findings. Koches said that there is no ability for the public to vote
25 to approve or deny the Applicant's project.

26
27 James Hingston presented answers to questions that were asked by the public during public
28 comment or written correspondence that was forwarded to him from Mucha. Hingston discussed
29 evacuation plans for schools. He said that evacuation orders fall under the jurisdiction of
30 emergency response. He said that the applicant is responsible for providing the necessary
31 information so emergency services can make decisions. Hingston discussed weather related
32 disasters. He said that the BESS enclosures are sealed and designed and tested to be outdoors for
33 20 years. He said that there is a grounding plan in the event of a lightning strike. He said that the
34 weight of each BESS enclosure is 100,000 pounds and is secured into the ground. He discussed
35 efficiency of the BESS during cold weather and said that the efficiency of the BESS is about 85%.
36 Hingston said that there is interconnected cooling system that manages temperature. Hingston
37 discussed benefits to Township residents. Porvaznik discussed the community host agreement and
38 increased property taxes, which averages \$1.7 - \$2 million in annual tax revenue over the 20-year
39 life of the project.

40
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1 Porvaznik said that notice of augmentation is provided to the Township assessor. Hingston said
2 that the proposed BESS will make the Township eligible for the EGLE community ready grant.
3 Porvaznik said that the 2026 Township budget is about \$4 million. He said the community benefits
4 to the Township in the first year will be double the Township budget. Hingston discussed sound
5 impact expected decibels, which is 55 DBA measured at the property line. Nichol asked why
6 insulated wood walls are used for sound mitigation. The applicant said that wood was the original
7 planned material, but it has since been changed to concrete sound walls to absorb sound impact
8 similar to sound walls seen along highways. James said that construction will be about 18-24
9 months. Hingston said that the stormwater is managed on site. Hingston said that the applicant is
10 still determining who will maintain the 100-acre open space, which will depend on how the
11 property is used.

12
13 Hingston said that CIP raises money from pensions funds, which look for stable returns. He said
14 that CIP will be contracting with the utility company for 20 years. He said the utility pays a steady
15 payment to CIP. He confirmed that the community host agreements are a separate contract and is
16 not tied to performance of the BESS. He discussed the procedure for local emergency response.
17 Hingston showed depictions of several operational BESS located in other parts of the country that
18 are located in close proximity to schools.

19
20 Mucha's staff report discussed the applicable zoning and use standards. He discussed the project
21 is located in overlay district. Mucha discussed the applicable schedule regulations. Mucha
22 discussed landscaping and screening. The Commissioners agreed that the landscaping standards
23 are satisfied. The Commissioners agreed that the parking requirements may be minimized. Mucha
24 said that the storm water plans satisfied ordinance standards, subject to other county or state
25 requirements. Mucha said that exterior lighting is dark sky friendly.

26
27 Mucha discussed the Township BESS Ordinance standards. He discussed fencing. The applicant
28 said that there will be a chain link fence, which will be 6' in height where there is no soundwall.
29 Mucha discussed a sound study and summarized its results. Mucha said that sound limitations will
30 be satisfied with the proposed soundwall. Lawrence said that she'd wait to discuss fire safety
31 concerns with the Fire Chief at the next Planning Commission meeting. Lawrence asked who bears
32 responsibility if an emergency occurs. Porvaznik said that the facility will be insured and CIP is
33 responsible for liability. Criteser expressed concern over the decommissioning plan may be
34 insufficient. Hingston said that a bond will be for 125% of the decommissioning cost. Lawrence
35 preferred that the decommissioning be guaranteed in the form of a trust instead of a letter of credit.
36 Lawrence said that the actual cost (cash) of decommissioning will be placed into the trust and
37 should name the Township as a beneficiary. Mucha said that fire response and emergency response
38 plan must be reviewed by the Fire Chief.

39
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1 Mucha concluded his summary of the BESS Ordinance standards and summarized the general
2 Special Land Use standards. Mucha discussed compatibility and impact on the Township. Mucha
3 said that the Fire Chief will need to review whether the BESS is hazardous to the community.

5 Mucha said that he received nine emails in support of the BESS project, which are incorporated
6 by reference into these meeting minutes. Being no further discussion, the Commissioners
7 continued further discussion of the application until September 10, 2026.

9 **CEDAM Corp**

11 Mucha provided a general update and provided supplemental documentation that was provided to
12 the Commissioners in their agenda packet. The Planning Commission declined moving forward
13 with this proposal.

16 **Any Other Business**

18 Mucha discussed upcoming training for the Commissioners.

20 **Citizen Comment**

22 Tammy Keeler expressed concerns that the CIP isn't providing enough insurance and the
23 Township will be responsible for the costs. She discussed a BESS infrastructure that ignited while
24 in transport. She said the community doesn't want the project.

26 John Charlie said that he wants the BESS property to be used for a golf course. He said that the
27 access roads need to be plowed for emergency access.

29 Mario Compos said that he is disappointed that Hickory Ridge is part of the project. He asked that
30 the Commissioners talk to the school districts that are located next to an operational BESS project
31 to discuss its impact. He asked why the BESS project is being sited in the Township.

33 A citizen thanked the Planning Commission for asking questions and getting answer from CIP.
34 She said that she appreciates the Planning Commission doing its due diligence.

36 **Updates From Other Boards**

38 Lawrence said that the Township has three open seats for the office of Township Trustee and is
39 still accepting letters of interest.

40

1 **Training Updates**

2
3 Mucha previously discussed training updates and had nothing additional to discuss.

4
5 **Informational/Future Action Items**

6
7 Mucha provided general updates regarding future action items.

8
9 **Planning Commissioner Comments**

10
11 Wilcher introduced himself to the Commissioners as he was recently appointed to the Planning
12 Commission. He is also the Vice-Chair of the Township DDA. The Commissioners discussed other
13 general updates. Lawrence answer questions that were raised during the second citizen comment
14 period. Lawrence said the Township Board decides how tax revenue is spent. Lawrence confirmed
15 the Township was in contact with the schools and the Township implemented a moratorium to
16 further research BESS. Nichols thanked everyone for attending the meeting.

17
18 **Adjournment**

19
20 Nichols adjourned the meeting at 8:55 p.m.

21
22
23 Respectfully submitted,

24
25
26
27 /s T. Seth Koches
28 T. Seth Koches, Recording Secretary

29
30
31 **SYNOPSIS OF ACTIONS**

32
33 The Charter Township of Comstock Planning Commission undertook the following actions at the
34 regular meeting held on August 27, 2026:

- 35
36 1. Approved the Site Plan of 5315 Wynn Road.
37 2. Continued discussion of CIP’s special land use and site plan request to construct a 400MW
38 BESS project, within the Township.

39



MEMO

Charter Township of Comstock Planning Commission September 10, 2026

From: Kyle Mucha, Principal Planner

Re: CIP - Swan / Cygnet BESS Project Proposal

Continue review analysis of the proposed 400MW facility.

Attachments:

[SLU Supplement 2026_0831.pdf](#)

[CIP BESS Supplemental Review 2026_0818.pdf](#)

[Swan BESS Impact Analysis 8-27-26.pdf](#)

[Fire Equipment Needs June 25 2026.pdf](#)

[Fire Comments June 25 2026.pdf](#)

[COMSTOCK Capability Analysis - Final.pdf](#)

[Swan Cygnet BESS_O&M Manual_2026_0904.pdf](#)



Memorandum

TO: Comstock Charter Township Planning Commission
FROM: Kyle Mucha, AICP, Principal Planner – Comstock Township Planning
SUBJECT: Battery Energy Storage System – Special Land Use Consideration
DATE: August 31, 2026

To the Comstock Charter Township Planning Commission,

Upon the request of the applicant for the CIP – Swan / Cygnet Energy Project, this supplemental review has been provided for your consideration as it pertains to the provisions for special land use. This supplemental review is based upon Article 6.2 of the Township's Zoning Ordinance.

6.2 SPECIAL LAND USES

The uses identified as special land uses in Section 3.1 Establishment of districts are recognized as possessing characteristics of such unique and special nature (relative to design, size, public utility needs, and other similar characteristics) as necessitating individual standards and conditions in order to safeguard the general health, safety, and welfare of the community.

In hearing a request for any special land use, the Planning Commission shall be governed by the following principles and conditions:

1. ***The applicant for a special land use shall have the burden of proof, which shall include the burden of going forward with the evidence and the burden of persuasion on all questions of fact which are to be determined by the Commission.***

Finding: The applicant has continued to provide resources, information and educational components regarding the proposed project to the Planning Commission upon their request. Where any potential items remain that may require further clarification, the Commission is encouraged to coordinate with the applicant to receive such clarifying documents.

2. ***A special land use may be granted and conditions imposed by the Planning Commission relative to the special use, pursuant to [Section 7.6 Imposition of conditions](#), when the Planning Commission finds from the evidence produced at the hearing and the imposition of conditions that:***
 - a. ***The proposed use does not affect adversely the General Plan for physical development of the Township as embodied in this ordinance and in any Master Plan or portion thereof adopted by the Township;***



Finding: as described in previous transmittals, the proposal does not appear to adversely impact the General Plan for physical development of the Township. Per the *BESS Ordinance*, portions of the site must remain in either open space use or recreational use. The General Plan classifies this area as *Parks and Open Space*. Per the applicant's materials, approximately 100 acres will be maintained / retained as open space & recreation, subject to an executed agreement between the Township and the applicant.

Additionally, the General Plan references renewable energy as part of the goals and objectives of said plan. As has been discussed throughout review of this project, the Michigan Public Act 233 identifies / classifies *battery energy storage systems* under the umbrella of renewable energy. Therefore, it is conceivable that the proposed project could be considered as part of the General Plan's goals & objectives.

- b. *The proposed use will not affect adversely the health and safety of residents or workers in the area and will not be detrimental to the use or development of adjacent properties or the general neighborhood;***

Finding: subject to all safety aspects being satisfied, such as engineering, fire, environmental and third-party agency reviews, this provision appears to be satisfied.

The installation of this type of equipment and land use is heavily regulated by Federal, State and local (County) entities; all such provisions of these additional regulators would need to be satisfied in accordance with said agencies regulations, in order for permitting and approval to be granted from those said agencies. While it is acknowledged that members of the general public have raised concerns with health and safety as it relates to the batteries themselves, it may be important to note that in accordance with provisions of the Township's ordinances, the applicant is expected to provide equipment listings, which would include chemical compound makeup of the material to be onsite. As a comparison, many homes in the region may have items that are not known to local emergency personnel; so should an emergency take place – such as a fire – emergency personnel have less of an understanding of what might be burning as compared to the equipment proposed with this facility.

The Planning Commission may wish to determine if the proposed project has adequate steps and precautions in place to protect the health and safety of residents and workers in the area. Based upon information provided by the applicant during their submittal and subsequent communications, it is likely that – subject to the Comstock Township Fire Department approval – any potential effect on the health and safety of the area has been properly accounted for and mitigated to the extent possible.

- c. *The standards and conditions as may be set forth for a particular use for which a special land use may be granted, can and will be met by the applicant;***

Finding: the applicant has provided documentation and confirmation that standards and conditions as may be set forth can and will be met. Some provisions, such as the decommissioning agreement and community host agreement may require additional analysis by the Township's legal counsel;



however, based upon documentation provided to-date, this provision appears to be satisfied OR has the ability to be satisfied.

- d. ***The plot plan and specifications, and all conditions, limitations and requirements imposed by the Planning Commission, shall be incorporated as a part of the special land use permit and violations of any of these at any time will cause revocation of such permit and said special land use shall cease to be a lawful use.***

Finding: Documents provided by the applicant, any conditions or limitations and requirements imposed by the Planning Commission will be incorporated as part of the special land use permit.

CONSIDERATIONS

The Planning Commission is advised to review the application in detail, review the proposed with the adopted standards of the site plan review, battery energy ordinance and special land use criteria. Upon finalization of review, the Commission should make a determination if each provision has been **satisfied**, **could be satisfied with conditions**, or **has not been satisfied**.

Respectfully,

Kyle Mucha

Kyle Mucha, AICP
Township Planning Consultant



MCKENNA

Memorandum

TO: Swan Energy Storage; Cygnet Energy Storage
CC: Comstock Charter Township Planning Commission

FROM: Kyle Mucha, AICP, Principal Planner – Comstock Township Planning

SUBJECT: 91 N 30th Street – Battery Energy Storage System Facility – Supplemental Review

DATE: August 17, 2026

To Swan Energy & Cygnet Energy,

On behalf of Comstock Charter Township, McKenna has reviewed the application, site drawing and supporting documentation for the establishment of a *battery energy storage system (BESS)* facility at 91 North 30th Street. The submission material has been reviewed against the provisions of the Township's Zoning Ordinance and Battery Energy Storage System Ordinance. This supplemental review takes into consideration revised documents provided by the applicant since the release of the July 8th review memorandum.

PROJECT SUMMARY

The applicant seeks to establish a battery energy storage system on two (2) parcels, and to be constructed in two (2) phases. The developed land area will be approximately 49.91 acres of the 140 acre site, based on site plan data. The applicant seeks to construct a facility that has a capacity of 400 MW (megawatt).

The subject parcels are currently zoned R-1C. Per Section V of the Township's BESS Ordinance, a battery energy storage system is considered a special land use in any zoning district on a parcel(s) of at least 140 contiguous acres. “



HEADQUARTERS
235 East Main Street
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F 248.596.0930
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FINDINGS OF FACT

The applicant proposes to construct a 400 mega-watt battery energy storage system. Civil plans (site plans), electrical plans, emergency response guide, hazard mitigation, tree preservation and other required documents have been submitted for consideration. McKenna has reviewed the submitted material against the requirements of the Township's Battery Energy Ordinance, Site Plan review criteria and Special Land Use criteria. **Findings** have been identified in bold, with areas that need further clarification and/or additional information have been underlined and are outlined in the table below.

*Note: contrary to public comment, this proposal is **not** for a data center. As of August 2026, Comstock Charter Township is currently in a moratorium against data centers, which prevents the submission of an application for such land use.*

Ordinance Standard	Compliance	Comments
SITE PLAN REVIEW		
Zoning and Use	Complies	Section 1
Schedule of Regulations	Waiver requested from Planning Commission	Section 1
Landscaping and Screening	Planning Commission determination needed	Section 3
Storm Water Management	See Engineering Review(s)	Section 4
Off-Street Parking	Complies based upon limited on-site staffing needs	Section 4
Exterior Lighting	Complies	Section
BESS STANDARDS		
Height	Complies	Section A
Fencing	Complies	Section B
Sound	Complies – sound walls proposed	Section C
Lighting	Complies	Section D
Signage	Complies - requires review by Fire and Engineering	Section E
Landscaping	<i>Planning Commission determination needed</i>	Section F
Access Maintenance Drives	Confirm use of crushed gravel Additional Review from Fire	Section G



Impermeable Surfaces	Confirm use of crushed gravel Additional Review from Fire	Section H
Stormwater Management	Additional Review by Township Engineer	Section I
Installation and Operational Safety	Additional Review by a 3 rd Party	Section J
Repair and Augmentation	Applicant agrees to comply	Section K
Public Safety	Additional Review by Fire	Section L
Environmental	Additional Review due to presence of endangered Indiana Bat	Section M
Decommissioning and Removal	Additional Review by Township Legal Counsel	Section N
Special Land Use and Site Plan Application	Additional Review by Fire and Engineering – Determination By Planning Commission Needed	Section O
Waiver	Additional Review by Planning Commission	Section P
Modifications	Applicant agrees to comply	Section Q
Community Host Agreement	Additional Review by Township Legal Counsel	Section R
Building Permit or Construction	Pending dependent on plan approval – Kalamazoo Area Building Authority	Section S
On-Site BESS	Complies	Section T
SPECIAL LAND USE STANDARDS		
Harmony with Zoning Code	Determination to be made by Planning Commission. Subject to meeting said standards, it is likely that this provision can be satisfied.	Section 1
Harmony with Existing Character	Additional Review Considerations – note, the Township Board in a vote 7-0 made the finding that a BESS system could be considered	Section 2



	compatible with the existing character of the Township, subject to meeting provisions of the ordinance requirements.	
Essential Character	Additional Review Considerations	Section 3
Hazardous or Disruptive	Additional Review Considerations – with proper safety and security measures, this provision may be satisfied, subject to meeting applicable Fire Code requirements.	Section 4
Adequate Public Services and Facilities	Additional Review Considerations – with proper safety and security measures, this provision may be satisfied, subject to meeting applicable Fire Code requirements.	Section 5

The proposed project offers significant investment within the community; as such, careful consideration of the site plan review criteria, special land use review criteria and supplemental use criteria is warranted. The Planning Commission is advised to review the findings listed within the planning analysis, engineering report and fire response and dialogue with the applicant to determine if all provisions have been satisfied in compliance with adopted standards.

There have been hundreds of pages of documents submitted for review; it is not anticipated that the Planning Commission will become experts on the entirety of the submission materials. Should the Commission have questions on any of the review provisions or regulations for approval, those can be further discussed during a public meeting with the applicant.

August 17, 2026: Further, in response to comments raised during the public hearing on August 13th, 2026, the Michigan Zoning Enabling Act, MCL 125.3504 – Special Land Uses; Regulations and Standards; Compliance; Conditions; Record of Conditions – notes the following:



125.3504 Special land uses; regulations and standards; compliance; conditions; record of conditions.

Sec. 504. (1) If the zoning ordinance authorizes the consideration and approval of special land uses or planned unit developments under section 502 or 503 or otherwise provides for discretionary decisions, the regulations and standards upon which those decisions are made shall be specified in the zoning ordinance.

(2) The standards shall be consistent with and promote the intent and purpose of the zoning ordinance and shall insure that the land use or activity authorized shall be compatible with adjacent uses of land, the natural environment, and the capacities of public services and facilities affected by the land use. The standards shall also insure that the land use or activity is consistent with the public health, safety, and welfare of the local unit of government.

(3) A request for approval of a land use or activity shall be approved if the request is in compliance with the standards stated in the zoning ordinance, the conditions imposed under the zoning ordinance, other applicable ordinances, and state and federal statutes.

(4) Reasonable conditions may be required with the approval of a special land use, planned unit development, or other land uses or activities permitted by discretionary decision. The conditions may include conditions necessary to insure that public services and facilities affected by a proposed land use or activity will be capable of accommodating increased service and facility loads caused by the land use or activity, to protect the natural environment and conserve natural resources and energy, to insure compatibility with adjacent uses of land, and to promote the use of land in a socially and economically desirable manner. Conditions imposed shall meet all of the following requirements:

(a) Be designed to protect natural resources, the health, safety, and welfare, as well as the social and economic well-being, of those who will use the land use or activity under consideration, residents and landowners immediately adjacent to the proposed land use or activity, and the community as a whole.

(b) Be related to the valid exercise of the police power and purposes which are affected by the proposed use or activity.

(c) Be necessary to meet the intent and purpose of the zoning requirements, be related to the standards established in the zoning ordinance for the land use or activity under consideration, and be necessary to insure compliance with those standards.

(5) The conditions imposed with respect to the approval of a land use or activity shall be recorded in the record of the approval action and remain unchanged except upon the mutual consent of the approving authority and the landowner. The approving authority shall maintain a record of conditions which are changed.

History: 2006, Act 110, Eff. July 1, 2006.

Under State law, if a project is in compliance with the standards stated in the zoning ordinance, a request for approval of a land use or activity shall be approved (125.3504.3). The Commission will need to determine if the standards have been met or could be met with conditions. The Planning Commission is therefore duty bound to uphold the Michigan Zoning Enabling Act with a thorough review of the case before them to determine if the standards have been met and approve, approve with conditions, or deny the request before them. Should additional information be warranted, a motion to table may be appropriate as well.

Respectfully submitted,

McKENNA

Kyle Mucha, AICP
Principal Planner/Township Planning Consultant



Site Plan Review

SUMMARY

Standards for Site Plan Review are set forth by Section 6.1 of the Township's Zoning Ordinance. The proposed project has been reviewed for compatibility with the Township's Zoning Ordinance, Master Plan, existing site conditions, and sound planning and design principles. We offer the following comments for your consideration; underlined items require additional discussion and/or identify outstanding items to be addressed. A summary of our findings is shown in the table below.

1. ZONING & USE

The subject site's underlying zoning district is R-1C, Cluster Housing. The Township's BESS Ordinance permits the establishment of a facility in the Overlay District. The Overlay District is established wherein a battery energy storage system large off-site [facility] is a special land use in any zoning district on a parcel(s) of at least 140 contiguous acres and meeting the additional requirements in Article 4, Section 4.61. Further, the Overlay District states that *"at least 100 acres must remain open space or can be offered by the applicant for public recreation indoor or outdoor uses. Subject to Township Planning Commission approval, as part of the special land use approval, the open space/public recreation may be split off from the facility parcel with proper assurances but shall still count towards the Township district aggregate"*.

Location	Existing Land Use	Zoning District
Subject Site	Recreation	R-1C, Cluster Housing
North	Undeveloped Utility Substation	AGR, Agricultural Residential R-1A, Single Family
South	Low Intensity Manufacturing/Industrial Residential Housing	LM, Light Manufacturing R-1C, Cluster Housing B-33, General Business
East	Residential Housing (large lot)	R-1C, Cluster Housing
West	Residential Housing (large lot)	R-1C, Cluster Housing

Review: The applicant has provided reasoning for the need to consider the proposed project as a single entity, even though the two phases will be developed under separate naming conventions. The applicant has stated that the entire facility will be managed under the umbrella of CIP. The following information regarding the proposed waiver was also provided:



“Because the Project phasing will result in two 20 acre components owned by separate entities, the Applicant seeks a waiver under Article 4, Section 4.61(B)(21) to allow for establishment of a BESS in a parcel less than 140 contiguous acres as currently required under Article 3, Section 3.1.T. Again, while the total acreage of the Applicant’s Property exceeds the 140-acre minimum requirement, the actual BESS facility will sit on 39.22 acres of the Property, split into two components of 16.95 acres (Swan) and 22.27 acres (Cygnet). The Project will designate 105.06 acres of the Property as open space for future recreational use. The Applicant remains committed to working with the Township in good faith to identify the most appropriate recreational use and implementation structure for the space.”

2. SCHEDULE OF REGULATIONS

Article 4.61 sets the standards for setback provisions of battery energy storage systems. The following table details the requirements as stipulated by said ordinance standards:

Findings.

Requirement Type	Required	Proposed	Comments
Minimum Lot Size	140 (Contiguous)	Parcel 1: 39.90 Acres Parcel 2A: 78.49 Acres Parcel 2B: 29.10 Acres Total: 147.49	Generally complies, based on information provided by applicant
Minimum Lot Width	No minimum	NA	Existing Parcels
Occupied Community Buildings Setback	300 feet	0.1 Miles (>500 feet)	Per narrative – nearest residential use is approximately 0.1 miles east and south
Public road right-of-way	100 feet	>500 feet	Facility proposed on northern portion of subject site(s)
Property line	50 feet	>100 feet	Units shown to be >100 feet away from property boundaries
Sensitive Land Uses	2,000 feet	>2,000 feet	Site plan notes 2,000 foot radius from sensitive land use outer wall (green dashed line)

3. LANDSCAPING AND SCREENING

Per 5.4(C)(1) Portions of the site not devoted to floor area, parking, access ways or pedestrian use shall be landscaped with live plant material consisting of deciduous canopy and coniferous trees, understory trees, shrubs, ground cover, and grasses and maintained in a neat and orderly manner.



Parking lot landscaping shall be designed and situated to define safe access and circulation routes, provide shade and visual relief, and diminish the scale of large lots.

Landscape features, including end islands, peninsulas, and strips shall be installed in the interior of parking lots to delineate on-site circulation, ensure adequate sight distance at the intersection of aisles and interior roadways, and to prevent diagonal vehicular movement through parking lots. Features shall be designed with sufficient radii to ensure drivers are able to make 90-degree right turns without encroaching upon landscaping or adjacent traffic lanes.

A. Site landscaping.

The application materials include a tree preservation plan (Sheet TP201), noting that there are approximately 7,047 trees on site. The applicant proposes to remove approximately 1,357 trees for site development. The subject site will then retain an approximate 5,690 trees. The following graphic provides a visualization of the tree preservation plan for the subject site. The green coloring notes trees to be saved, with the red coloring those that are proposed to be removed.

Based on the proposed tree retention plan, the application material promotes the spirit of retaining existing trees to the extent possible. Additionally, given the number of trees to be preserved, and in accordance with the Township's Landscaping provisions, tree credits can be awarded; the Planning Commission is encouraged to review the proposed preservation plan and determine if the retention of some 5,690 trees meets the spirit of the ordinance.

B. Parking lot landscaping.

The minimum size of any landscaped area shall be 300 square feet, with a minimum width of 15 feet. Further, parking lot landscaping is based on the number of spaces. Given that the site proposes 10 spaces, 15 square-feet of landscaped area is required per space, with a total of 150 square feet.

The number and type of plantings shall be determined at a rate of one (1) deciduous canopy tree and two (2) low growing shrubs per 300 square feet of interior landscaping.

Findings: It is anticipated that once the two systems are fully operational, the need for on-site parking will be limited to maintenance vehicles and service technicians. Unlike other industrial uses, battery energy facilities do not employ a significant number of staff, as these systems are designed and operated remotely. Therefore, parking for the facility itself is found to be generally not applicable. Separately however, is the parking requirements for any open space and recreational use. Dependent on the type of recreational use proposed for the remaining acreage, additional landscaping may be required, in accordance with the Ordinance.

Additional parking lot landscaping may be required, subject to determination of the type of open space / recreational use that is proposed. The property most recently was used as a golf course. The application materials do not indicate that there has been a discussion with the Parks and Recreation Department to assume the proposed 105.6 acres of open space. In the application the applicant made the following statement regarding the proposed open space:



“At least 100 acres must remain open space or can be offered by the applicant for public recreation indoor or outdoor uses. Subject to Township Planning Commission approval, as part of the special land use approval, the open space/public recreation may be split off from the facility parcel with proper assurances but shall still count towards the Township district aggregate.

RESPONSE: This requirement is met. The Applicant will be designating 105.06 acres of the Property as open space/recreation or outdoor uses pursuant to the Ordinance. The Applicant recognizes the Township's interest in the meaningful and durable community benefit that this lands provides. The Applicant further remains committed to working with the Township in good faith to identify the most appropriate recreational use, access rights, and implementation structure for this space. The Applicant proposes that the specific details such as type, scope, design, ownership structure, construction timeline, and other implementation details for the recreational use be set through a separate joint development agreement or similar mutual acceptable mechanism after the Project advances through the planning and zoning approval.”

August 17, 2026: Given that the proposed recreational use has not been fully established, due to further conversations needed with Township representatives, a separate joint development agreement will be required after the BESS project advances through the planning and zoning approval. Future development and / or expansion of a recreational use may warrant a separate review for compliance with the provisions of the Township's Zoning Ordinance.





4. STORM WATER MANAGEMENT

- A. 5.8.A.6 Stormwater management and soil erosion control plans of a site being clear cut shall be subject to review and comment by the Township Engineer. If it is determined that the erosion control measures either proposed or implemented by the applicant do not satisfy the general provisions described below, the Township reserves the right to place additional requirements on the clear cutting permit to rectify such deficiencies.

The applicant is advised that Section 5.8 – Clear cutting of trees – within the Township’s Zoning Ordinance is applicable regarding “*any activity that involves the clear cutting of one or more acres of land*”.

- B. 5.8.B.2.2 To preserve viewsheds along roadways and buffer adjoining properties, a 20-foot-wide buffer area of undisturbed vegetation shall be maintained along roadways and property lines. Clear cutting will not be permitted within buffer areas; however, harvesting of select trees within the buffer area and development of roadways may be permitted with approval from the Planning Commission. This provision shall not apply to sites, that through the site plan review process, are subject to the landscaping provisions of Section 5.4 Landscaping where a minimum 20-foot-wide greenspace will be established along the perimeter of the site.
- C. **Run off of surface water.** Per Section 5.6(F)(3) All structures and land uses hereafter established in the Township shall be established in such a manner as to prevent any additional run off of surface water onto adjoining properties.

Per Sheet C300 Erosion and Sediment Control the applicant proposes discharge to the “Michigan Central Railway ROW” with a “final outfall to Marrow Pond”.

The applicant has provided the following narrative regarding run off of surface waters:

Response: Sheet C300 is in relation to the Phase 1 Erosion Control Plan - which outlines temporary measures that need to be in place before construction/disturbance starts. The note stating the discharge is being routed to Railway ROW and Morrow Pond is a description of the existing runoff condition and anticipated final outlet point. The proposed stormwater runoff from the BESS yard and substation are routed to the on-site detention basin, where it is managed and controlled before discharging from the basin over 1,700' north of the Railroad ROW. Runoff from the proposed access road is routed to roadside swales with permanent check dam controls.

"Per Section 5.6(F)(3) All structures and land uses hereafter established in the Township shall be established in such a manner as to prevent any additional run off of surface water onto adjoining properties."

We have no control over the runoff in the existing condition, but the stormwater management plan proposed will prevent any additional runoff of surface water to adjoining properties. We call out the discharge location to Railroad ROW and Morrow Pond on the Phase 1 Erosion Control Plan to make the reviewer aware that it is an existing condition. Although off-site runoff is inevitable in the proposed condition (it is typical practice to match the existing discharge location, where possible), there will be onsite management and a reduction in peak runoff rates in comparison to the existing condition.



Further review of storm water management has been conducted by the Township's Engineer. Findings and determination will be presented in a separate memorandum.

5. OFF-STREET PARKING

- A. Parking.** Per section 5.2(D)(7) Table of Required Off-Street Parking, details the off-street parking requirements for recreational uses. As previously referenced, the primary use of the site is that of battery energy storage, which does not require significant parking spaces for employees. Further, the narrative provided notes that discussion with the Township will be undertaken regarding what type of recreation the remainder of the site will entail. Given that the recreational component has not been identified/depicted on the site plan, calculating parking requirements is not attainable at this time.

Defining the type of recreational use will need to be undertaken in order to determine compliance with this provision. However, given that the proposed facility does not generate vehicular traffic (as a commercial space may), off-street parking for on-site employees is anticipated to be negligible; the Planning Commission may wish to make a determination that the proposed plan set meets the intent of the ordinance.

August 17 2026: As referenced in the landscaping provision, further discussion and engagement with Township personnel pertaining to the recreational component of this site will need to be undertaken. Once the recreational component can be identified, additional review for parking compliance is anticipated.

- B. Layout and Dimensions.** Per the Township's Zoning Ordinance Section 5.2(E)(2) Layout, Construction and Design, parking spaces are required to be 9.5 feet wide, and 20 feet deep. Maneuvering lane width for one-way traffic is required to be a minimum of 14 feet for parking patterns that are between 54 degrees to 90 degrees.

Findings: No apparent note to parking has been established at this time. Clarification regarding parking standards will need to be provided.

August 17, 2026: Staff finds that layout and dimension of parking spaces will require further review once the recreational component (if established) has been identified. Until such time, the need for on-site parking may be limited to the level of staffing for the battery energy portion of the subject property.

6. EXTERIOR LIGHTING

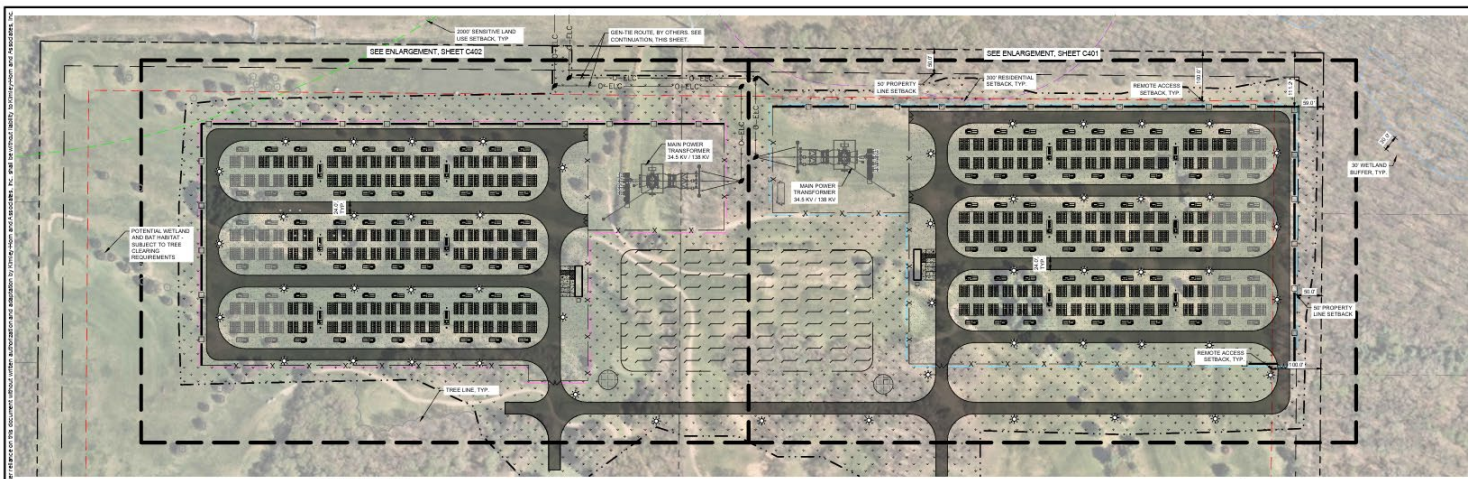
All exterior lighting. The regulations are intended to accomplish the following; Protect the public health, safety and general welfare; Provide for the fair and consistent enforcement of these regulations; Control light spillover and glare; Minimize the detrimental effect of exterior lighting on astronomical observations by the general public; Encourage lighting arrangements which conserve energy; Preserve community character; Provide for nighttime safety, utility, security and productivity.

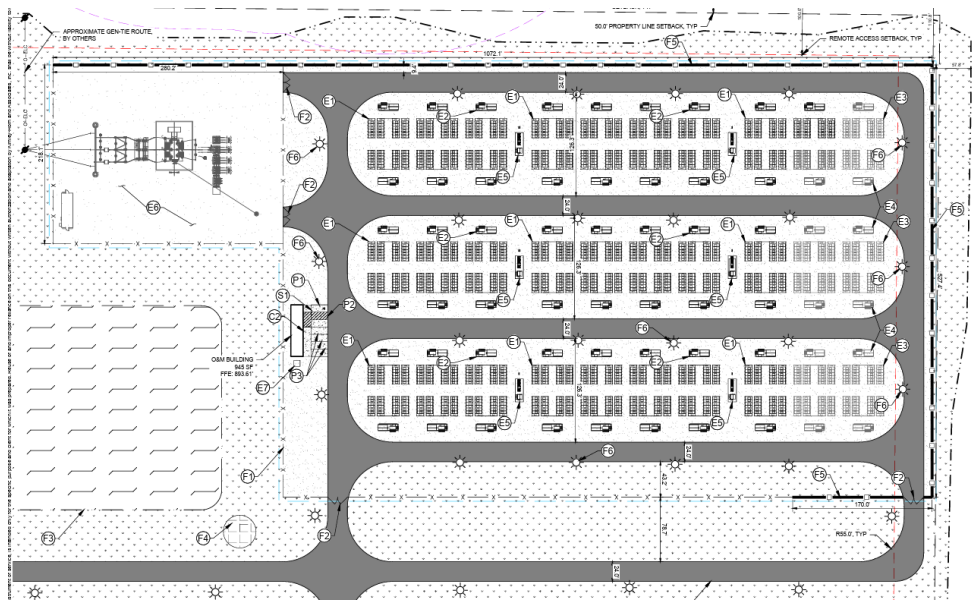
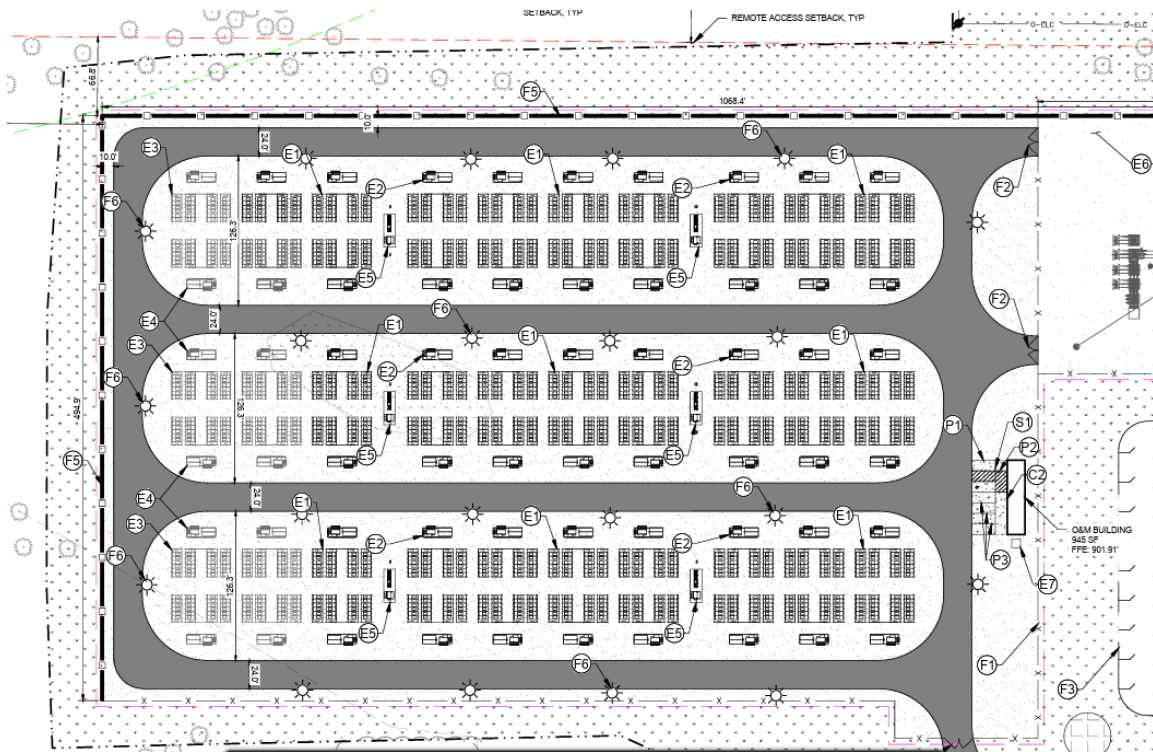
Sufficient lighting shall be required for parking areas, walkways, driveways, building entrances, loading areas and public areas to ensure the security of property and safety of people. Site and area lighting shall be designed so that light levels do not exceed 10.0 footcandles within the site.



Findings: The narrative submitted notes lighting at the front gate, operations & management building, battery yard and substation. The narrative references that additional lighting may be placed throughout the site in the form of motion activation or light sensitive (evening illumination, daytime non-illuminated). The plan set notes general placement of safety lighting along the access aisles and interior circulation system.

The following graphic, provided by the site plan, notes approximate location of lighting (for a larger image, please defer to sheet C400). A photometric plan has also been submitted within the site plan materials.







7. ADDITIONAL AGENCY REVIEWS & CONSIDERATIONS

Additional supplementary reviews from the Township's Engineer, Township's Fire Authority and any additional third-party reviewing agency will be provided separate memorandums, should their review comments be applicable to this project.

Supplemental Considerations

- A. Given the scope and size of the proposed facility, McKenna encourages the applicant to engage in a dialogue with the Township's Fire Authority to establish an identifiable grid-like system on both sites. Such grid system would be visible from aerial drones, listing an alphanumeric value along one axis of the site, and Arabic numerals along the other axis of the site. Such system would allow for ease of reference to emergency responders and monitoring call center technicians.
- B. In tandem with the proposal above, McKenna further encourages the applicant to place Arabic numerals on the containers themselves, allowing for visual reference when viewing the facility from the exterior of the property or if circumstances warrant, interior access.
- C. Per Section 5.6.B.1 stormwater management/soil erosion plan the Kalamazoo County Drain Commissioner review and approval of a stormwater management and soil erosion control plan shall be obtained and proof of a soil erosion and sedimentation control permit from the Kalamazoo County Drain Commissioner's office shall be provided prior to the commencement of any site/earth changes or work.

As a reminder to the Planning Commission (and public at large) the level of detail and information required for this type of land use is extensive; it is anticipated that further dialogue regarding material clarification will be warranted.

August 17, 2026: Supplemental documents and revised information continues to be submitted by the applicant and reviewing agencies as questions and observations arise during engagement with the Planning Commission. Should the Commission have specific information requests, additional documents can be transmitted for review. However, similar to other site plan and special land use requests, staff would encourage the Commission to consider a potential condition of approval as that of meeting all applicable standards set forth by the Township Fire Authority and any third-party reviewing agency.



A. Height. *The height of battery energy storage system structures, except for electric distribution and transmission poles, shall not exceed a height of fifteen (15) feet as measured from the natural grade of the property beneath the structure.*

SWAN AND CYGNET A-A PROFILE

The profile shows the following features and elevations:

- Proposed 14' Noise Wall, TYP:** Located at station 0+00 to 1+00, elevation 910' to 920'.
- Proposed Auxiliary Pad, TYP:** Located at station 1+00 to 2+00, elevation 910' to 920'.
- Proposed Battery Enclosure, TYP:** Located at station 2+00 to 3+00, elevation 910' to 920'.
- Proposed Chain Link Fence:** Located at station 3+00 to 4+00, elevation 910' to 920'.
- Proposed Stormwater Management Pond:** Located at station 4+00 to 5+00, elevation 910' to 920'.
- Proposed Stormwater Forebay:** Located at station 5+00 to 6+00, elevation 910' to 920'.
- Proposed 15' Channel:** Located at station 6+00 to 7+00, elevation 910' to 920'.
- Proposed Battery Enclosure, TYP:** Located at station 7+00 to 8+00, elevation 910' to 920'.
- Proposed Auxiliary Pad, TYP:** Located at station 8+00 to 9+00, elevation 910' to 920'.
- Proposed Chain Link Fence:** Located at station 9+00 to 10+00, elevation 910' to 920'.
- Proposed Stormwater Management Pond:** Located at station 10+00 to 11+00, elevation 910' to 920'.
- Proposed Stormwater Forebay:** Located at station 11+00 to 12+00, elevation 910' to 920'.
- Proposed 15' Channel:** Located at station 12+00 to 13+00, elevation 910' to 920'.
- Proposed Battery Enclosure, TYP:** Located at station 13+00 to 14+00, elevation 910' to 920'.
- Proposed Auxiliary Pad, TYP:** Located at station 14+00 to 15+00, elevation 910' to 920'.
- Proposed Chain Link Fence:** Located at station 15+00 to 16+00, elevation 910' to 920'.
- Proposed Stormwater Management Pond:** Located at station 16+00 to 17+00, elevation 910' to 920'.
- Proposed Stormwater Forebay:** Located at station 17+00 to 18+00, elevation 910' to 920'.
- Proposed 15' Channel:** Located at station 18+00 to 19+00, elevation 910' to 920'.
- Proposed Battery Enclosure, TYP:** Located at station 19+00 to 20+00, elevation 910' to 920'.
- Proposed Auxiliary Pad, TYP:** Located at station 20+00 to 21+00, elevation 910' to 920'.
- Proposed Chain Link Fence:** Located at station 21+00 to 22+00, elevation 910' to 920'.
- Proposed Stormwater Management Pond:** Located at station 22+00 to 23+00, elevation 910' to 920'.
- Proposed Stormwater Forebay:** Located at station 23+00 to 23+68.21, elevation 910' to 920'.

Findings: The applicant proposes fencing to be installed around the perimeter of the battery yard. The fence is shown to be six (6) feet in height, with one (1) additional foot of three-rung barbed wire. Gates are shown to be 24 feet in width. Additionally, the fence diagram calls out a Knox Box – a small, secure container (safe) installed on the outside of buildings, allowing fire departments and emergency services to access keys during emergencies. Based upon the submitted material, this provision appears to be satisfied.



- C. Sound.** *The system may not generate a maximum sound in excess of 55 average hourly decibels measured at the property line of an adjacent non-participating property . Decibel modeling shall use the A- weighted scale designed by the American National Standards Institute.*

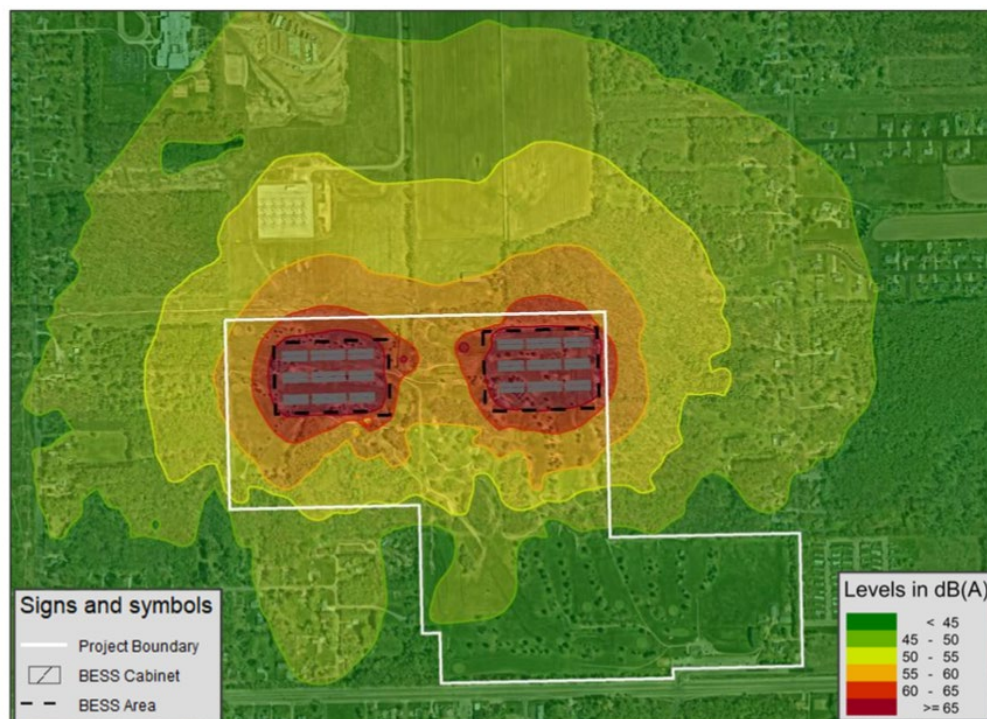
Findings: Sound has been one of the consistent concerns raised by the general public during project overview and introduction; because of this, additional scrutiny is anticipated from the public at-large regarding this specific component of the project. The study provided by *Kimley-Horn*, references “*unmitigated maximum equivalent operational noise levels at the project boundary were estimated to be near or below approximately 63 dB(A) during peak operations; therefore, mitigation is recommended at this time*”.

The sound study notes the following projected levels **without mitigation measures**:



Swan BESS and Cygnet BESS - Noise Study
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Figure 3: Anticipated Operational Noise Contours

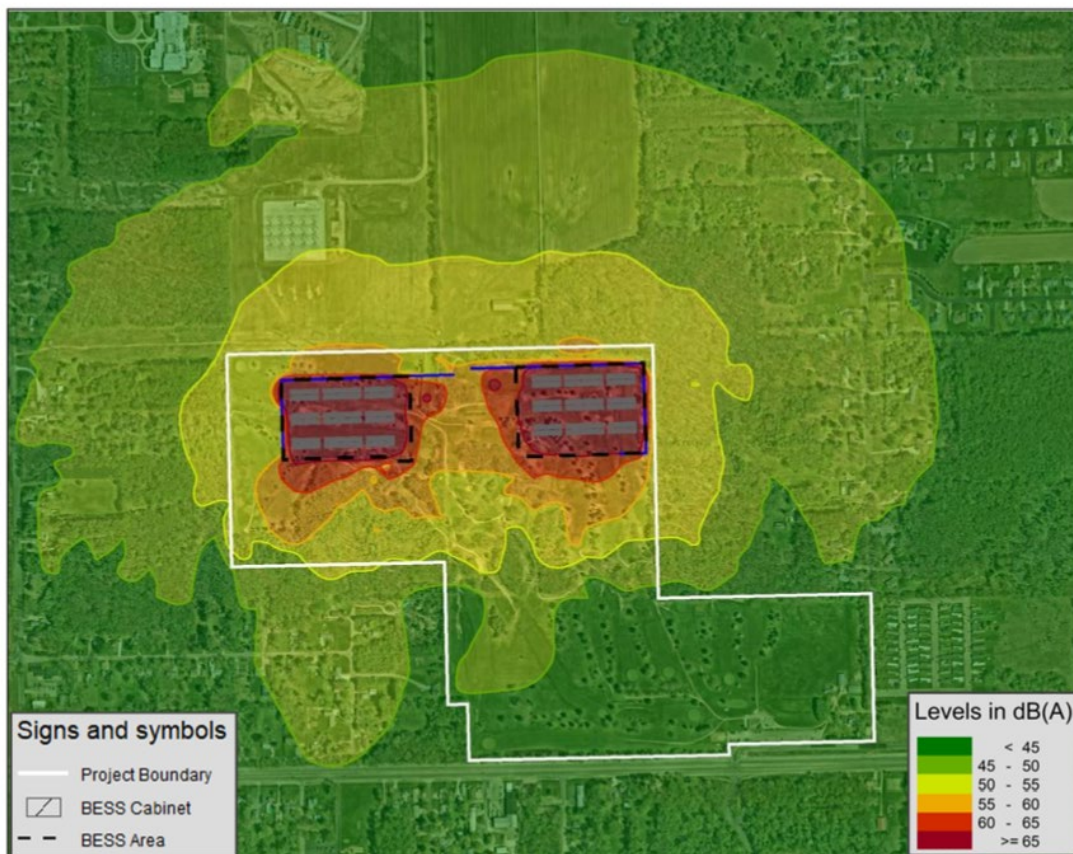


The study further proposes potential mitigation measures in order to reduce the anticipated noise levels from 63 dB(A) to 55 dB(A) or below. The study indicates that *sound walls* along the area would reduce the anticipated on-site operational noise by up to approximately 9 dB(A) at the closest property line of adjacent non-participating properties. The sound wall is proposed to be 14 feet in height and have an approximate length of 3,370 feet (shown in the below figure). The sound wall is proposed to be made out of wood.

While not part of the battery energy storage structure, the 14-foot height of the sound wall is below the maximum height permitted for storage structures (15 feet). It is also important to note that the applicant has determined that noise mitigation is required and has shown the steps in which such mitigation will be undertaken. Therefore, subject to the sound walls being constructed prior to operation of the facility, this provision can be considered satisfied.

Supplementally, the site plan notes the installation of vegetation along the northern boundary of the western facility, which may also mitigate potential noise trespass from the equipment.

Figure 4: Anticipated Operational Noise Contours with Noise Wall





August 17, 2026: For supplemental information, the State Act – Public Act 233 – stipulates that sound may not exceed 55 dba at the wall of a structure on an adjacent non-participating parcel. The Comstock Ordinance requires sound to not exceed 55 dba *at the property line*, offering further protections from sound impact onto adjacent parcels. Subject to the sound walls being installed, and a baseline sound study be conducted prior to construction in order to establish existing ambient noise, this provision can be satisfied.

D. Lighting. *The system must implement dark sky-friendly lighting solutions.*

Findings: A photometric plan has been submitted for consideration. The lighting notes provided indicate that light poles will have a height of 25 feet. The narrative provided indicates that on-site lighting will be equipped with sensors, to activate the fixtures during evening hours and discontinue their illumination during daylight hours. The general notes on the lighting plan indicate that illumination levels at the property line will not exceed 0.2 foot-candle.

While minor in nature and not detrimental to this plan review, the lighting plan references compliance with “*Township of Gun Plain Charter, Michigan Jurisdictional Standards*”. Confirmation that the **Comstock Charter Township** standards will be met is desired.

GENERAL NOTES	
1.	PROPOSED POLE MOUNTED LUMINAIRES TO BE POST TOP MOUNTED ON A 25 FOOT POLE ATOP A CONCRETE BASE FLUSHED MOUNTED WITH THE GROUND UNLESS OTHERWISE SPECIFIED. POLE MOUNTING HEIGHT CHOSEN TO COMPLY WITH THE TOWNSHIP OF GUN PLAIN CHARTER, MICHIGAN JURISDICTIONAL STANDARDS.
2.	CALCULATED VALUES ARE DERIVED THROUGH A COMPUTER BASED MODEL WITH LIGHT FIXTURE DATA AS SUPPLIED BY MANUFACTURER THROUGH IES FILES.
3.	ANY DEVIATION FROM SPECIFIED FIXTURE MODELS AND MOUNTING HEIGHTS IN THIS EXHIBIT WILL DISCOUNT THE VALIDITY OF THESE CALCULATIONS.
4.	NO EXCESS OF 0.2 FOOT-CANDLE MEASURED AT THE PROPERTY LINE.
5.	ALL LUMINAIRE SYMBOLS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO FIELD COORDINATE EXACT LOCATIONS AND SETBACKS AGAINST UNDERGROUND UTILITY AND OTHER OBSTRUCTIONS.
6.	ALL PROPOSED LUMINAIRES SHALL BE DARK SKY COMPLIANT AND SHALL HAVE A CORRELATED COLOR TEMPERATURE (CCT) OF 3000K OR LOWER. LUMINAIRES SHALL BE DESIGNED AND INSTALLED TO MINIMIZE UPLIGHT, GLARE, AND LIGHT TRESPASS IN ACCORDANCE WITH APPLICABLE LOCAL ORDINANCES.

E. Signage. *The following requirements shall apply to the entire system, or to designated components of the system, as indicated:*

- a. *Safety Signage. The system shall post signs in compliance with NFPA 70/70E or any applicable successor code in place at the time of application for approval. Additionally, signage shall be provided per NFPA 855 7.4.4, or any applicable successor code in place at the time of application for approval, including information on the system type and technology, special hazards, fire suppression system and 24-hour emergency contact information, including reach-back phone number. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.*



- b. *Other Signage: Additional signage may be permitted or required by the Planning Commission as is necessary to ensure the safe operation of the system.*
- c. *The facility shall comply with NFPA 855 "Standard for the installation of Stationary Energy Storage Systems" or any current standard adopted by the Michigan Public Service Commission at time of application submission.*

Finding: Submission materials note safety signage to be installed on site. Further review of safety signage will be conducted by the Township Engineer and Fire Department to ensure adequate compliance as it relates to those specific trades. See Sheet C800.

- F. Landscaping.** *The Planning Commission may require reasonable measures to minimize visual impacts by preserving existing natural vegetation, requiring new vegetative screening or other appropriate measures. The Planning Commission shall determine such visual screening measures as may be required, if any, on a site- specific basis pursuant to the standards for special land use approval as specified in Section 6.2 the landscaping standards of Section 5.4, and/or the standards for site plan approval as specified in Section 6.1 of this Ordinance, as well as all other applicable sections of this Ordinance. In making this determination the Planning Commission is specifically authorized to consider whether additional visual screening measures are appropriate where a system is proposed to be located on property adjoining any residential zoning district classification or residential use.*

Finding: See the proposed landscaping plan. As indicated in the site plan review, the applicant proposes to retain approximately 81% of the existing trees on site – 5,690 of the 7,047. The landscaping plan also notes the installation of new vegetation along the northern portion of the Swan site, with retention of existing vegetation along the Cygnet facility. The property located immediately north of the Swan portion of the facility is owned and maintained by Consumers Energy, as it is part of the transmission distribution line to the electrical substation. Additional screening and vegetation may not be as advantageous, above and beyond what the applicant has proposed. Long term consideration of such vegetation will need to consider its impact on the transmission lines serving the electrical substation and if the installation of additional vegetation will have a positive or negative impact on the operations of substation. See Sheet L100.

- G. Access Management Drives.** *If the system includes an access drive(s) for maintenance purposes, the surface of the access drive(s) shall be permeable (unless on brownfield land or on an already paved surface at the time of application for approval, such as a parking lot or former building foundation.)*

Findings: Based on the provided site plan, the access drive to the facility appears to be composed of permeable materials, based on the symbology. Further documentation references crushed gravel to be utilized throughout the site. Subject to the gravel being reviewed by the Township's Fire Department as meeting the weight standards to support fire apparatus, this provision can be satisfied.

- H. Impervious Pavement.** *Except as otherwise depicted on and subject to approval of the Planning Commission, the area within which the system is located shall not be paved with asphalt/concrete or*



any other surface material that is impermeable to water other than for slab foundations for structures and equipment. This shall not apply to a system located on brownfield land or on an existing paved area such as a former building slab or in an unused parking area when adequate parking remains for all other uses on the site.

Finding: See note above – subject to confirmation from the applicant, this provision appears to be satisfied.

I. *Run-off.* *All surface water runoff shall be effectively managed on-site.*

Finding: While the Township's Engineer will review the project in greater detail for stormwater management, the application material notes onsite stormwater retention, which is shown to be a shared retention basin, located in the center of the project site. The proposed topography of the site, once fully constructed, notes that surface water will drain towards the retention basin – see Sheet C304. Subject to the final construction of the site, and prior to operation of the facility, this provision appears to have a disclaimer that some runoff will go towards Morrow Lake. This should be further reviewed by the Township's Engineer.

J. *Installation and Operational Safety.* *The system shall comply with all of the following requirements:*

- a. *The system shall be designed and constructed for interconnection to a Michigan Public Service Commission or Midcontinent Independent System Operator regulated utility electrical power grid and shall be operated with such interconnection.*
- b. *The system and all foundation elements shall comply with all applicable building and electrical code requirements, and any applicable federal/state regulations. The manufacturer's engineer or another qualified engineer shall provide written certification that the design, installation (including foundations), and interconnection is compliant with the manufacturer and industry standards, all applicable local construction and electrical codes, and any applicable federal/state regulations.*
- c. *Other than transmission or distribution lines for interconnection to the electric power grid, all electrical wiring shall be buried underground; except where the manufacturer's engineer or a qualified engineer employed by the utility that owns/operates the electrical power grid to which the system shall be interconnected certifies an underground wiring installation is not permitted by an applicable code and/or applicable federal/state regulation, with attached complete documentation supporting any such certification.*
- d. *The system shall be designed, located, and maintained so as to comply with all applicable codes and regulations.*

Finding: compliance with connection requirements more aligns with review by those specific professions/trades; this review does not validate nor invalidate that this provision has been satisfied. The applicant has provided a narrative that describes their compliance with this provision. The Planning Commission could request further documentation noting compliance with this provision from those who are better aligned to evaluate full compliance.



- K. *Repair and Augmentation.*** *In addition to repairing or replacing facility components to maintain the system, the facility may at any time be augmented without the need to submit a new site plan so long as the augmentation is within the same footprint (e.g., same dedicated use building or on footings/foundations in the same location) as the original permit. If there is a change in the battery chemistry, an updated Hazard Mitigation Analysis, Fire Response Plan, and Emergency Response Plan shall be provided. When a facility is anticipated to be augmented over its lifetime by adding additional components, the applicant shall apply for the final/augmented site arrangement. A proposal to increase the size of the project footprint may be considered a new application, subject to the ordinance standards at the time of the request.*
- L. *Public Safety.*** *The Emergency Response Plan and Fire Response Plan shall provide reasonable protection of the public health, welfare and safety including but not limited to an emergency shutdown procedure in place and shall provide the local fire department site safety plans to include electrical, fire, smoke, and hazardous materials release, emergency response protocols and identification of typical hazards related to, electrical, fire, smoke and hazardous materials pertinent to the facility. Upon request, all systems shall provide first responder training at the site.*

Finding: The Township Fire Authority will further review this provision for compliance, as they are better trained and equipped to analysis the documents that are applicable to this section. To further promote the health, safety and welfare of the community, as well as first responders, McKenna encourages that the applicant and fire authority discuss the ability to create a grid-reference system on both facility sites. Such reference system would be visible from aerial drone usage, as well as from those around the perimeter of the site. Numbering and lettering would be placed along the perimeter of the fence line, as well as numbering placed on each battery unit itself.

Notes on the Emergency Response Guide

The Emergency Response Guide (ERG) provides general information, site layout, battery system precautions, fire response guidelines, fire/explosion protection guidelines, site photos and safety data sheets. Page 4 of the ERG does not list contact information, but references that such information will be finalized and provided prior to the implementation of the guide (pg 5).

The ERG references *oil-filled transformers*, but does not note the number of gallons of insulating oil to be utilized for both the auxiliary transformers nor the MV transformers. Additionally, the ERG notes safety data sheets, but without any content. While it is partially McKenna's understanding that this information will be provided upon selection of equipment, the Planning Commission may consider that as a stipulation of approval, this information is provided prior to either building permit authorization or final certificate of occupancy. A 'trigger' requirement to mandate that this information be provided may be appropriate for further consideration.

August 17, 2026: Continued collaboration with the Township's Fire Authority is underway, including a review analysis of existing fire apparatus and existing equipment. Any provisions related to public safety is recommended to be deferred the Township Fire Authority, with any subsequent standards being met as part of a conditional approval.



- M. *Environmental.*** *An applicant shall submit an environmental impact analysis that identifies potential impacts of the proposed system on the environment and natural resources and how the applicant intends to address and mitigate these impacts.*

Finding: The applicant has provided an environmental impact assessment of the subject property, with callouts related to the below. The study was prepared by SWCA Environmental Consultants, with their findings synopsized herein. For a full analysis of their report, defer to Exhibit O – Environmental.

- i. Critical Environmental Issues: no environmental fatal flaws identified.
- ii. Cultural Resources: review noted one previously recorded archaeological site within the study area. On site testing was not able to locate said finding nor was the site able to be verified by the Michigan State Historic Preservation Office (MSHPO). The applicant notes in their environmental letter that a total of 306 shovel test pits were excavated within the survey area (17 acre region) – all of which were negative for pre and post contact artifacts.
- iii. Aquatic Resources: the study noted that an aquatic resource was located in the western portion of the site. However, it appears to be a low-quality wetland and is present as an isolated feature on the landscape with no significant aquatic features present within 500 feet of its boundary.
- iv. Threatened and Endangered Species Habitat: SWCA concluded that habitat for one listed species, Indiana bat, is present in the potential project area. However, avoiding the large forested area to the west of the proposed project area and limiting large tree clearing to occur between November 1 and March 31, would result in the project not likely to adversely affect listed species.

- N. *Decommissioning and Removal.*** *The system shall comply with all of the following requirements:*

- a. *A Decommissioning Plan, including a Decommissioning Agreement in a form recordable at the Kalamazoo County Register of Deeds, shall be provided and shall address the following:*

- v. *State the anticipated life of the project;*
- vi. *Describe estimated decommissioning costs in current dollars and provide that this figure will be updated every third (3rd) year after commercial operation of the system; Township zoning administrator may administratively review and accept estimated decommissioning costs for periodic review;*
- iii. *Be signed by the party responsible for decommissioning, and shall bind all successors, heirs and assigns;*
- iv. *Define the conditions upon which decommissioning will be initiated (e.g.; end of land lease, no power storage for 12 months, etc.);*
- v. *State that all equipment, conduit, structures, fencing, roads, and foundations will be removed to a depth of four (4) feet by the end of the decommissioning period;*
- vi. *Require property to be restored as near as reasonably possible to the condition it was in prior to the development of the system;*



- vii. *Describe the timeframe for completion of decommissioning activities;*
- viii. *Describe any agreement (e.g., lease) with the landowner regarding decommissioning;*
- ix. *State the party currently responsible for decommissioning; and*
- x. *Describe any plans or circumstances requiring an update of the decommissioning plan.*

Finding: The decommissioning plan notes an expected project life of 20 years, with the option to reevaluate for continuation or decommissioning at the end of the 20-year period. The plan further outlines the responsibilities, which includes removal of above/below ground cables, equipment, structures, fences and foundations of four (4) feet; restoration of the surface grade; revegetation of restored soil areas; time frame for completion of site restoration work and when the decommissioning plan would take effect.

Page 9 of the decommissioning plan notes that *‘all decommissioning activities expected to be completed within 12 months of the project’s closure’*. Further, page 11 of the plan, under 3.12 – *restoration of site* – notes that *“the projects disturbed land will be restored to the original uses before construction. Restoration will consist of re-grading to reestablish the pre-existing topography.* The submission detail notes the area will be returned to a meadow-like state.

- b. *A recorded copy of the Decommissioning Agreement shall be executed and recorded upon issuance of a building permit or if a building permit is not required, within 7 days prior to commencement of construction. A proposed draft of the proposed Decommissioning Agreement shall be provided to the Township within 30 days after special land use approval.*
- c. *Decommissioning shall be completed within 12 months of determination by the Township Board that the system is no longer being maintained in an operable state of good repair, unless the current responsible party provides substantial evidence to the Planning Commission of the intent to maintain and reinstate operation of the system.*

Finding: the decommissioning plan notes completion by 12 months of the project’s closure. This provision appears to be satisfied.

- d. *The Decommissioning Plan shall include financial assurance in the form of a trust fund, a bond, or an irrevocable letter of credit as required by the Planning Commission. The amount of the financial assurance shall not be less than the estimated cost of decommissioning the system. Salvage value shall not be included in the estimated cost of decommissioning. The financial assurance must be posted in full (125%) before the start of commercial operation and continuously maintained for the period of the life of the system. The Township must be notified in writing at least 60 days before the bond or other financial surety is set to expire. Failure to provide proper notification and updated bond information is a violation of this ordinance. Notification under this Section must be made to the following Township officials/employees: (1) Supervisor; (2) Clerk; (3) Chair of the Planning Commission; and (4) Superintendent. Notwithstanding anything to the contrary, at all times during construction and prior to commercial operation, financial assurance must be provided in an amount to assure proper decommissioning of the site.*



Finding: The applicant is advised that salvage value shall not be included into the Decommissioning Plan. The Township's Legal Counsel will also review the document for compliance with applicable regulations and to ensure the Township is properly protected from any adverse impacts, should this plan need to be executed.

O. *Special Land Use Permit and Site Plan Application Requirements.* Applications for special land use permit approval shall comply with Section 6.2 of this Ordinance. A formal application for site plan approval for this land use shall comply with Section 6.1 of this Ordinance. An incomplete application will not be accepted. Each such application shall also be subject to the following additional submission requirements:

- a. *The site plan shall be submitted with the special land use permit application.*
- b. *The submission shall include content responsive to all the following, to the extent not otherwise provided pursuant to the above referenced sections:*
 - i. *All information and supporting materials relied upon by the applicant to demonstrate compliance with all special land use permit approval standards and site plan approval standards as specified in this Ordinance.*
 - ii. *A Fire Response Plan and an Emergency Response Plan.*
 - a). *The Fire Response Plan (FRP) shall include:*
 - 1. *Evidence of consultation or a good faith effort to consult with local fire department representatives to ensure that the FRP is in alignment with acceptable operating procedures, capabilities, resources, etc.*
 - 2. *A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies.*
 - 3. *A description of all contingency plans to be implemented in response to the occurrence of a fire emergency.*
 - 4. *A commitment to review and update the FRP with fire departments, first responders, and county emergency managers at least once every three (3) years.*
 - 5. *An analysis of whether plans to be implemented in response to a fire emergency can be fulfilled by existing local emergency response capacity. The analysis should include identification of any specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate deficiencies.*
 - 6. *The means by which firefighters and other emergency services personnel can access and shut down the system on an emergency basis. This information shall be provided to the Township or other appropriate agency managing emergency response.*



7. *A 24-hour emergency contact telephone number for use by emergency services providers.*
8. *The FRP must meet all requirements of the Clean and Renewable Energy and Energy Waste Reduction Act, as amended, MCL 460.1001 et. seq*
9. *Other information the applicant finds relevant.*
10. *Other information the Fire Department finds relevant.*

Finding: the applicant has submitted a fire response plan; as McKenna planners do not hold certification in fire safety nor hazardous substance management/response, deferment to the Township's Fire Authority is appropriate.

iii. The Emergency Response Plan (ERP) shall include:

1. *Evidence of consultation or a good faith effort to consult with local first responders and county emergency manager to ensure that the ERP is in alignment with acceptable operating procedures, capabilities, resources, etc.*
2. *An identification of contingencies that would constitute a safety or security emergency (fire emergencies are to be addressed in a separate fire response plan);*
3. *Emergency response measures by contingency;*
4. *Evacuation control measures by contingency;*
5. *Community notification procedures by contingency;*
6. *An identification of potential approach and departure routes to and from the facility site for police, fire, ambulance, and other emergency vehicles;*
7. *A commitment to review and update the ERP with fire departments, first responders, and county emergency managers at least once every three (3) years;*
8. *The means by which firefighters and other emergency services personnel can access and shut down the system on an emergency basis. This information shall be provided to the Township or other appropriate agency managing emergency response.*
9. *A 24-hour emergency contact telephone number for use by emergency services providers.*
10. *An analysis of whether plans to be implemented in response to an emergency can be fulfilled by existing local emergency response capacity, and identification of any specific equipment or training deficiencies in local emergency response capacity;*
11. *Other information the applicant finds relevant.*
12. *Other information the Fire Department and County Emergency Manager finds relevant.*



Finding: The applicant has submitted an emergency response guide; further review and analysis of the submitted documents will be conducted by those entities whom have the expertise and certification to review such plan documents.

- iv. *A report detailing the sound modeling results along with mitigation plans to ensure that sound emitted from the system will remain below the required limit throughout the operational life of the system.*

Finding: A sound study has been submitted for consideration. As identified within the site plan review of this comprehensive memorandum, the unmitigated maximum equivalent operational noise levels at the project boundary are shown to be estimated to be near or below approximately 63 dB(A) during peak operations. Such *unmitigated noise* will exceed that permitted by the Township's ordinance.

The sound study notes that a 14-foot sound wall, along the BESS areas in the northern portion of the site is recommended for implementation. Confirmation from the applicant that such sound walls will be installed, prior to any operation of the facility is warranted; the Commission may decide that a stipulation of approval (if granted) could be that such sound wall is installed prior to the initial operation of the facility. Note – it may be appropriate to have such condition be tied with the **first** operational container for energy storage and not the full operation of the entirety of the site.

Diagrams and specifications of the proposed sound wall may also be appropriate, prior to the commencement of operations. The noise study references a 'sound wall' but does not appear to further detail the specifications of such wall and its design parameters.

- v. *Hazard Mitigation Analysis that complies with NFPA 855, as amended.*

Finding: A Hazard Mitigation Analysis report has been provided for consideration; McKenna defers to the Township Fire Authority for additional review considerations and comments.

- vi. *A Groundcover and Vegetation Establishment and Management Plan shall be provided as part of the site plan. Vegetation establishment must include native species and natural seed mixes and may not include invasive plant species or noxious weeds and shall satisfy Section 226(6)(a) and Section 226(6)(b) of Michigan Public Act 233 of 2023.*

Finding: A tree preservation plan and landscaping plan have been provided by the applicant. Landscaping analysis has been conducted during the site plan review process – please defer to comments listed therein.

- vii. *Equipment specification sheet(s) for the system components, if available.*

Finding: Equipment specification sheets have been referenced within the submission material, as well as shown in Exhibit M. Prior to building permit authorization, a final equipment specification sheet(s) shall be submitted.



- viii. *All proposed changes to the landscape of the existing site, including grading, vegetation removal, fencing and vegetative screening. Views shall be minimized from adjacent properties to the extent reasonably practicable using architectural features, earth berms, landscaping or other screening methods that will harmonize with the character of the property and surrounding area while not interfering with ventilation or exhaust ports.*

Finding: Landscaping plans have been provided for review; defer to the site plan analysis portion of this review for further details.

- ix. *Drawings showing the layout of the proposed system, including distances from all existing and proposed structures/buildings and fencing on the site to all lot lines including to all boundaries of a leased site, where applicable, and to all structures/buildings on adjacent nonparticipating properties.*

Findings: Drawings and layout diagrams have been included for review, showing proposed structures and buildings and distances to property boundaries.

- x. *Preliminary Augmentation Plan demonstrating the proposed augmentation phases including which structures/components are expected to be installed and in which time frames shall be provided.*

Finding: The applicant's legal counsel has provided a response letter, which notes the following pertaining to this requirement: *"the applicant acknowledges and will comply with this requirement. If necessary, a Preliminary Augmentation Plan will be provided prior to the issuance of a Building Permit"*. As this appears to be a specific requirement, the applicant will need to provide the preliminary augmentation plan as part of their submission. McKenna notes that such a plan will be preliminary, and subject to additional modifications as engineering drawings are finalized and prepared.

- xi. *The height of all existing and proposed buildings/structures.*

Finding. Please see Sheet C520 for height of the proposed BESS units and the associated fourteen (14) foot tall sound wall. The height for both structures is within the allowed fifteen (15) foot tall height requirement.

- xii. *A preliminary electrical schematic plan for the proposed system, including disconnect and overcurrent devices.*

Finding: A preliminary electrical plan has been submitted for consideration. McKenna defers to the Township's Engineer and electrical inspector for confirmation of compliance with regulations and industry standards.

- xiii. *Preliminary Decommissioning Plan and Decommissioning Agreement as described above.*

Finding: See note in previous section regarding decommissioning.



- P.** *Waiver. The Township Planning Commission shall have the authority to review and consider alternatives in both the dimensional and physical requirements contained in this ordinance as part of the special land use review process upon a finding that such change promotes the health, safety and general welfare of the Township. In addition, the Township recognizes the ever-changing technical capabilities of battery storage infrastructure and of new technology in general, and that changing technology may result in future changes to an approved Battery Energy Storage System facility. Minor changes within the footprint of an approved Site Plan and/or Special Land Use Permit, such as, without limitation, modifying battery storage equipment with new technologies, may be administratively reviewed and approved by the Zoning Administrator.*

Finding: The applicant's narrative notes a waiver is requested for this provision due to dual ownership of the project. Section V of the BESS Ordinance (Article 3, Section 3.1) states that a *Battery Energy Storage System Large Off-Site is a special land use in any zoning district on a parcel(s) of at least 140 contiguous acres and meeting the additional requirements in Article 4 Section 4.61.* Clarification is requested as to the applicant's desire to have this provision waived; would each facility (Swan & Cygnet) be owned and operated by two separate entities, not having a shared ownership? Further explanation is requested.

August 17, 2026: Further review of this provision and any applicable waivers can continue to be discussed amongst the Planning Commission and the applicant.

- Q.** *Modifications that increase a facility's footprint or total energy capacity by 10% or more require a new site plan and special land use approval by the Planning Commission. Any increase in energy capacity requires written notification to the Township Zoning Administrator and/or designated personnel at least 30 days prior to the increase in energy capacity. All obligations, including but not limited to the community host agreement and decommissioning agreement, must be updated to reflect the increase in energy capacity. The financial surety shall be increased if there is an increase in energy capacity.*

- R.** *An executed Community Host Agreement in the amount of an annual payment of \$825 per megawatt of nameplate capacity for 20 years, which shall be executed prior to commercial operation of the Battery Energy Storage System facility. Payment to the Township shall begin upon commercial operation and it shall be the Township's option to require up to 66% of such total payment up front, not to exceed \$2 million.*

Finding: A draft community host agreement has been provided by the applicant. Further review of this document is anticipated to be completed by the Township's legal counsel.

- S.** ***Building Permit or Construction.*** *Prior to issuance of a building permit or if a building permit is not required, within 7 days prior to commencement of construction, the following information shall be provided.*
- a. Equipment specification sheets.*
 - b. Identification and contact information for the installer(s) of the proposed system.*



- c. *Approved Augmentation Plan.*
- d. *Approved Decommissioning Plan and Decommissioning Agreement in recordable form and acceptable to the Township Attorney.*
- e. *Life expectancy of the system components including the anticipated schedule for battery replacement to maintain megawatts over the system's lifetime.*
- f. *Hazard Mitigation Analysis.*
- g. *Operation and Maintenance Manual.*
- h. *Electrical schematic plan for the system, including disconnect devices.*
- i. *An approved FRP and ERP by the Fire Chief.*
- j. *Approved Decommissioning Plan, Decommissioning Agreement and proof of financial guarantee for decommissioning.*

Finding: Please defer to earlier sections regarding these requirements; as noted, some documents have not been submitted for preliminary review at this time. Preliminary documents will be needed for consideration.

T. On-Site Battery Energy Storage Systems.

- 1. *On-Site Battery Energy Storage Systems shall be allowed as permitted use in all zoning districts, subject to the provisions of the Zoning Ordinance.*
- 2. *A building permit shall be required for all on-site battery energy storage systems.*
- 3. *On-Site battery energy storage systems with an aggregate energy capacity of more than 1 megawatt are subject to additional regulations in the applicable fire code (NFPA 855, as amended), and required documentation shall be submitted along with the building/electrical permit applications.*
- 4. *Coverage. Lot coverage shall not exceed the otherwise permissible percentage of lot coverage in the applicable zoning district.*
- 5. *Setbacks. All battery energy storage system structures and related structural apparatus not physically attached to a building shall satisfy the setback requirements in the applicable zoning district, but in no circumstance may an on-site battery storage system or any related apparatus be less than 25' from a property line.*



Finding: please defer to earlier sections of this review analysis, which discuss these points in greater detail.

August 17, 2026: a *Memorandum of Understanding* has been provided by the applicant, speaking further to the recreational component of the remaining ~100 acres of the site. Further review of this memorandum may be appropriate during working sessions of the Planning Commission at upcoming meetings.



Special Land Use Review

The proposed project has been reviewed against Comstock's Zoning Ordinance and Master Plan. The following comments are offered for your consideration; underlined items require additional discussion and/or identify outstanding items to be addressed.

1. HARMONY WITH ZONING CODE

The special land use shall be harmonious with and in accordance with the general objectives, intent and purposes of this Code.

Findings: The intent of the *battery energy storage system ordinance* “is to establish minimum requirements and regulations for the construction, erection, placement, location, maintenance, modification, operation, and decommissioning of Battery Energy Storage Systems in the Township in a manner that promotes economic development and ensures that the protection of health, safety and welfare while also avoiding adverse impacts to important areas such as agricultural lands, residential areas, endangered species habitats, conservation lands, and other sensitive lands”. As described herein the totality of this report, the proposed facility has been reviewed against the adopted zoning regulations and supplemental use standards. Given the thoroughness of the submission material, it is noted that the proposal generally meets with the intent of the zoning code.

It may be beneficial to note that this project has been reviewed against **adopted** standards and **best practices**. The findings herein do not discourage the opinions and continued expression of thoughts from the general public and any interest person(s); the findings are based on evaluation of the proposed project and its relation to code requirements.

Subject to plan implementation as approved, this provision can be satisfied.

2. HARMONY WITH EXISTING CHARACTER

The special land use shall be designed, constructed, operated and maintained in a manner harmonious with the character of existing and future land uses on adjacent property and the surrounding area.

Findings: The proposed project seeks to modify approximately 49 acres of a 140+ acre parcel of land that, prior to construction, has been utilized for paid active recreation purposes. The site plan notes retention of approximately 5,700 trees on the subject parcel, which will aid in the preservation of the existing character of the area. Further, the plan set notes the installation of additional screening along the northern site boundary, adding further vegetation to the parcels. Sound walls are also proposed, which are designed to mitigate adverse impacts from the facility onto adjacent properties at the boundary line.

The applicant has further noted in their narrative that the remaining acreage, 100+, will be left in an open-space-like state or be further developed for recreational purposes, as stipulated by the supplemental ordinance requirements.



It is anticipated that the greatest impact to the area will be during construction; this is due in part to the equipment and labor-power needed in order to facilitate the erection of the battery storage site. Once the overall project is fully completed, the impact on adjacent land uses is intended to be minimal, due to the nature of the use.

Further, with the adoption of the Battery Energy Storage System Ordinance by the Township Board (7-0 vote), the Township Board has indicated that the overlay district is, partially, harmonious with the existing character of the Township.

Comstock Charter Township Master Plan – Vision 2030

The Vision 2030 plan notes the following as part of the community's goals and objectives:

Sustainability

- i. *To provide for renewable energy production, promote marginal lands, brownfields and gray fields for utility-scale solar energy systems in the agricultural and industrial districts near existing infrastructure and allow accessory solar energy systems in all districts while minimizing potential biological, agricultural, visual and other environmental impacts. And, encourage the continued operation and expansion of hydro power generation for nearby residences and businesses.*

Finding: while the master plan does not directly reference battery energy storage systems (bess), we find that the intent of this statement partially supports the development of such facilities. The facility will be located near an electrical substation, which could be classified as “*near existing infrastructure*” – further supporting this goal of the community.

Recreation

- ii. *To provide additional recreation opportunities in developing areas of the Township, amend the subdivision and site condo ordinance to require open space and sidewalks.*

Finding: the application material notes that the remaining 100(+) acres of property will be retained as either open space or recreation. Subject to the type of recreation proposed by the applicant, this objective of the Master Plan appears to be supported. Full compliance with this objective would come upon completion of the project and operation of the recreational land space. The applicant is encouraged to continue dialogue with the Township on this provision.

3. ESSENTIAL CHARACTER

The special land use shall not change the essential character of the surrounding area.

Findings: This provision can be satisfied, subject to the applicant installing sound walls, additional screening vegetation, and designing the site as proposed. It should be further noted that the Township's Master Plan calls for this area of the Township to be future planned for a higher density of residential use; therefore, it has been visioned that at some future point, this region of the Township would be modified from its current state.



It is noted that a concern may be “the installation will change the character of the surrounding area” – while this development may modify the existing use of the subject sites, in a broader picture, **any** new development would change the character of the surrounding area. This includes the construction of one (1) single home where there are not currently homes; the construction of a commercial operation on a vacant lot, etc. It is important to consider the scale in which this proposed change may happen.

The Township’s BESS Ordinance, as adopted by the full Township Board, permits the development of a BESS facility on acreage greater than 140, but no more than 200, so long as at least 100 acres is maintained for preservation and open space. It is anticipated that this project will impact approximately 33 percent (33%) of the subject site, while 66 percent remains in a state of preservation and recreation. Therefore, while some change in the character of the property is anticipated, the majority of the property will remain undisturbed and compatible with the existing character of the area.

August 17, 2026: It may be appropriate to note that **any** proposed development will have some level of impact on the essential character of the area in question for development. Therefore, it will be up to the Planning Commission to determine if a proposed project with significantly and detrimentally impact and modify the essential character of an area. On December 15, 2025, the Township Board, in a vote 7-0, made a general finding that allowing an overlay district for a battery energy storage system facility would not detrimentally impact the character of the community.

4. HAZARDOUS OR DISRUPTIVE

The special land use shall not be hazardous to adjacent property or involve uses, activities, materials or equipment which, will be detrimental to the health, safety or welfare of persons or property through the excessive production of traffic, noise, smoke, fumes or glare.

Findings: Subject to the applicant maintaining the site in accordance with national, state and local regulations as well as industry best practices, it is not anticipated that this special land use will be any more hazardous to adjacent property than that of other types of special land uses. The applicant has demonstrated at multiple public meetings and within their submission documentation that safety standards will be upheld, and hazardous materials will be mitigated to the extent possible.

If there is a concern on this specific type of land use being ‘more’ hazardous to the area than other uses, the Planning Commission is encouraged to conduct a study on large-scale retail operations, such as home goods and food stuffs and fuel stations, and how those already established uses are less hazardous than what the applicant proposes. The Planning Commission is encouraged to seek third-party expertise on provisions for protecting the health, safety and welfare of the community from those who are qualified to make such claims.

The application materials contain the following statements about the construction activities to build out the project:

“Construction is anticipated to begin early 2027 and could last up to 18 months. Construction is anticipated to be undertaken in phases that may overlap, including an initial site preparation phase, a phase during which the energy storage system will be installed, and a phase during which the power conversion station and substation will be installed. Following the installation, testing and commissioning will take place. Most of the labor force is expected to come from the surrounding communities within the Kalamazoo Metropolitan Area. There will be an estimated workforce of up to 50-100 full-time employees during construction. Construction equipment will



be primarily operated between 7:00 AM and 7:00 PM, Monday through Friday. Depending on schedule demand, working hours in the early morning, evening, nights, and weekends may occur during certain construction phases. However, this is not an expected aspect of project construction. All construction work, including any weekend work, will comply with the policies and requirements established by Comstock Township Zoning Ordinance.”

The applicant has provided the following statement about the as-built condition:

“To further clarify, no traffic impacts are expected due to the nature of the Project which will not require any day-to-day presence by a workforce after it is constructed and operating. Additionally, no displacement or any impact to the character of the surrounding area is expected to occur for the same reason; the Project will be adequately screened and will be consistent with the character of the area, which is already the site of existing electric grid infrastructure.”

Note: **McKenna is not advocating for or against this particular project**; McKenna seeks to identify concerns raised throughout this process regarding Battery Energy Storage Systems and their impact on surrounding land uses compared to other special land uses that have been approved in recent years by the Planning Commission. McKenna further defers to the applicant to address how this special land use will not be hazardous to adjacent property or involve uses that will be detrimental to the health, safety or welfare.

5. ADEQUATE PUBLIC SERVICES AND FACILITIES

The special use shall be required to be served by public sanitary sewer and water supply systems when available or other systems approved by the Health Department, and served adequately by other essential public facilities and services; such as highways, streets, drives, sidewalks, police and fire protection, drainage structures, refuse disposal, or that the persons or agencies responsible for the establishment of the proposed special use shall be able to provide adequately all such services. Further the special use shall not place demands on public services and facilities in excess of current capacity.

Findings: It is McKenna’s understanding that this proposed use will not require intensive upgrades to sanitary sewer and water supplies, given that the nature of this particular use is largely monitored and overseen from remote locations. Any need for water and sewer would be limited to service those employees whom may be onsite, once the project is fully online.

The Township’s Fire Department will further review the proposal to ensure adequate coverage is able to be maintained, based on the documents submitted for consideration.

Subject to the project being constructed in the manner in which it is approved for, it is not anticipated that additional demands on public services and facilities will exceed current capacity. Please defer to separate review memorandums by the Fire Department and the City Engineer.

Disclaimer: McKenna has been retained by the Charter Township of Comstock to conduct planning and zoning reviews, as well as administer support to the planning & zoning department. McKenna is not associated with the applicant in any manner, nor is McKenna receiving financial benefit from the applicant.



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August 27, 2026

Mr. Jan Porvaznik
Swan Energy Storage, LLC
412 West 15th Street, 15th Floor
New York, NY 10011

Mr. Porvaznik

I have considered the likely impact of the proposed Swan Energy Storage, LLC Battery Energy Storage System (BESS) proposed to be developed in Comstock Township, Kalamazoo County, Michigan.

The scope of this assignment is to address the likely impact this use may have on adjoining property values. To this end I have reviewed the site plan and considered the visual and related potential impacts on adjoining properties. I have considered matched pair/paired sales analysis for this study. I have previously considered battery storage in connection with solar farm activity as well as stand alone use similar to this project.

This letter is a real property appraisal consulting assignment. My client is Swan Energy Storage, LLC, represented to me by Mr. Jan Porvaznik. The intended use is to assist in the request for permitting for this use. The effective date of this consultation is August 27, 2026.

The analysis and data used to form the conclusion is presented on the following pages attached to this summary letter.

Conclusion

Battery storage systems are commonly located in residential areas as shown in the data and there is no indication from these examples of a negative impact on value where there is sufficient separation and/or soundwalls or landscaping screens.

The typical factors that would trigger an impact on value, or external obsolescence, were considered and are shown to be mitigated to protect adjoining property values.

I conclude that the proposed battery storage system with the setbacks as presented will not have a negative impact on adjoining or nearby property values. The distance separating the homes and businesses in this Light Industrial district from the batteries is supported by market data as having no impact on property values and numerous examples of homes closer than the proposed distance were identified.

Sincerely,

A handwritten signature in cursive script, appearing to read "Richard C. Kirkland, Jr.", written in dark ink.

Richard C. Kirkland, Jr., MAI, ARA
NC State Certified General Appraiser #A4359
MI State Certified General Appraiser #1205076620

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I. Subject Property

Proposed Use Description

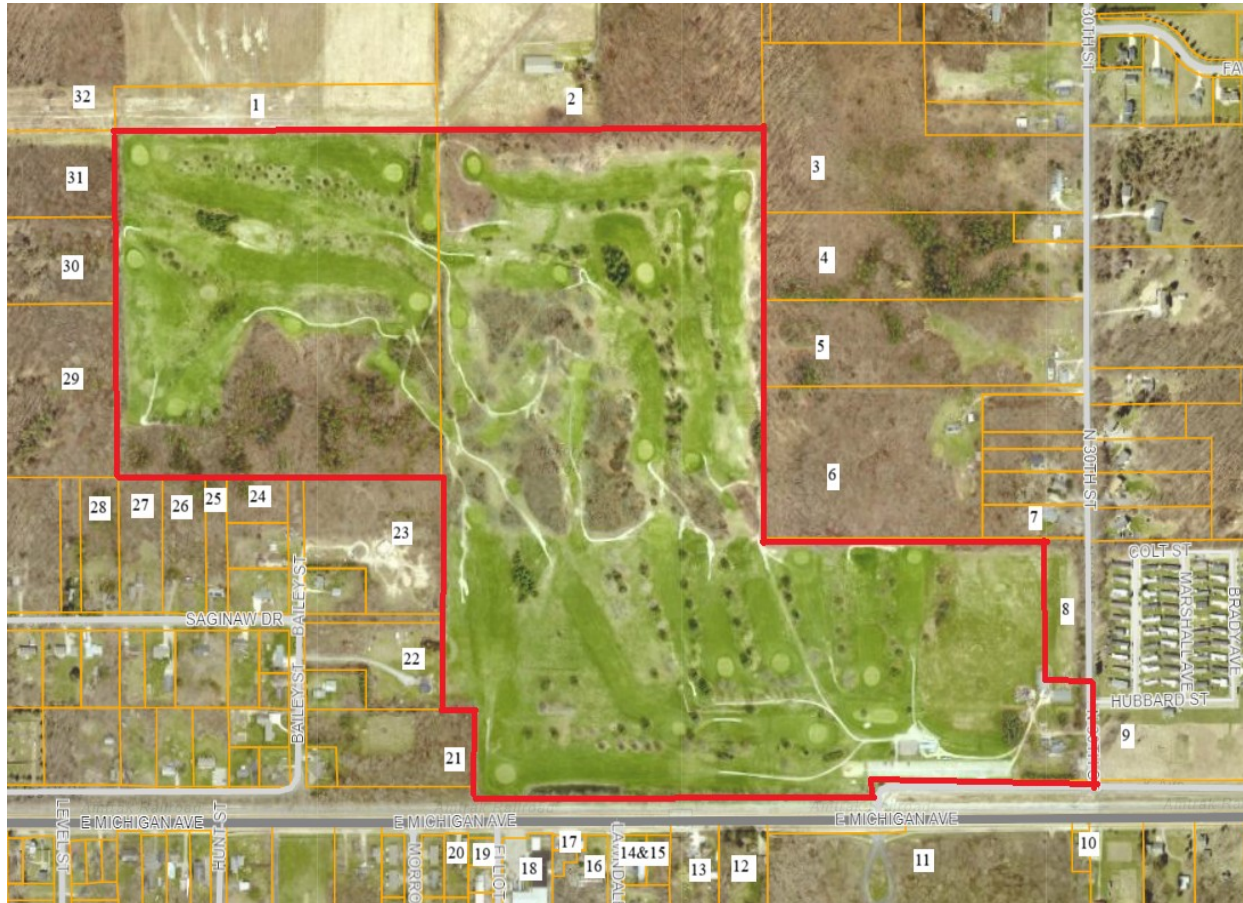
The subject property is 143.38 acres of land located on the north side of E. Michigan Avenue, Kalamazoo, Comstock Township, Kalamazoo County, Michigan.

The proposed 400 MW/1,600 MWh battery storage units will be placed in battery containers located on the northern portion of these two tracts. The entire perimeter of the battery storage area will be fenced in. There will be a sound wall on the west, north and east sides where there are closer homes. There are dense trees and a vegetation management and establishment plan. A total of 39.22 acres of the parent tract will be allocated to this development.



Adjoining Uses

The adjoining uses are primarily a mix of residential and agricultural uses. There is a large substation with associated powerline easements to the north.



Adjoining Use Breakdown

	Acreage	Parcels
Agri/Res	29.29%	6.25%
Industrial	35.47%	9.38%
Commercial	0.07%	3.13%
Residential	35.17%	81.25%
Total	100.00%	100.00%

The closest adjoining home is 365 feet to the north of the closest equipment at a location with an address of 7600 E Main Street. The second closest home is 995 feet to the south of the closest equipment. To the east, the closest home is 1,015 feet away from the equipment. To the west, the closest home is 1,450 feet.

Comstock Elementary School is to the north at a distance of 2,080 feet.

Surrounding Uses

#	MAP ID	Owner	GIS Data		Adjoin	Adjoin	Distance (ft)
			Acres	Present Use	Acres	Parcels	Home/Equip
1	07-16-180-010	Consumers	5.02	Residential	1.43%	3.13%	N/A
2	07-16-205-015	Strong	74.65	Agri/Res	21.33%	3.13%	365
3	07-16-430-016	Murphy	14.43	Residential	4.12%	3.13%	1,270
4	07-16-430-040	Burnett	9.26	Residential	2.65%	3.13%	N/A
5	07-16-430-060	Carlson	10.01	Residential	2.86%	3.13%	1,305
6	07-16-480-010	Bowsher	12.14	Residential	3.47%	3.13%	1,035
7	07-16-480-045	Herman	1.25	Residential	0.36%	3.13%	1375
8	07-16-480-050	Dart	2.25	Residential	0.64%	3.13%	N/A
9	07-15-355-011	Morrow	27.86	Agri/Res	7.96%	3.13%	1610
10	07-21-230-080	Perrin	0.26	Residential	0.07%	3.13%	1585
11	07-21-230-011	Landscape	48.42	Industrial	13.83%	3.13%	N/A
12	07-21-220-025	Fry	4.51	Residential	1.29%	3.13%	2,185
13	07-21-220-010	Mort	4.55	Residential	1.30%	3.13%	2,160
14	07-21-201-600	Lawndale	0.41	Residential	0.12%	3.13%	N/A
15	07-21-201-590	Lawndale	0.41	Residential	0.12%	3.13%	2,155
16	07-21-201-305	Willis	1.61	Residential	0.46%	3.13%	N/A
17	07-21-201-302	Schwartz	0.17	Residential	0.05%	3.13%	2,150
18	07-21-201-298	Brooks	1.71	Industrial	0.49%	3.13%	N/A
19	07-21-201-020	Porter	0.24	Commercial	0.07%	3.13%	N/A
20	07-21-201-011	Sanchez	0.56	Residential	0.16%	3.13%	2,120
21	07-16-380-290	Moss	4.23	Residential	1.21%	3.13%	N/A
22	07-16-380-195	Rimelspach	3.41	Residential	0.97%	3.13%	1,495
23	07-16-380-080	Wiederholt	5.70	Residential	1.63%	3.13%	N/A
24	07-16-380-050	Reed	1.00	Residential	0.29%	3.13%	N/A
25	07-16-380-040	Loser	1.05	Residential	0.30%	3.13%	995
26	07-16-380-025	Vany	2.10	Residential	0.60%	3.13%	1015
27	07-16-380-010	Coscarelli	2.12	Residential	0.61%	3.13%	1035
28	07-16-355-241	Haines	1.86	Residential	0.53%	3.13%	1,040
29	07-16-305-070	Dekema	14.88	Residential	4.25%	3.13%	1,595
30	07-16-305-030	Richmond	9.96	Residential	2.85%	3.13%	1,450
31	07-16-305-010	Adler	9.95	Residential	2.84%	3.13%	1,510
32	07-16-180-020	Michigan	74.01	Industrial	21.15%	3.13%	N/A
Total			349.990		100.00%	100.00%	1,473

II. Methodology

Standards and Methodology

I conducted this analysis using the standards and practices established by the Appraisal Institute and conform to the Uniform Standards of Professional Appraisal Practice. The analyses and methodologies contained in this report are accepted by all major lending institutions, and they are used in Michigan and across the country as the industry standard by certified appraisers conducting appraisals, market analyses, or impact studies and are considered adequate to form an opinion of the impact of a land use on neighboring properties. These standards and practices have also been accepted by the courts at the trial and appellate levels and by federal courts throughout the country as adequate to reach conclusions about the likely impact a use will have on adjoining or abutting properties.

The aforementioned standards compare property uses in the same market and generally within the same calendar year so that fluctuating markets do not alter study results. Although these standards do not require a linear study that examines adjoining property values before and after a new use (e.g. a solar farm) is developed, some of these studies do in fact employ this type of analysis. Comparative studies, as used in this report, are considered an industry standard.

The first type of analysis employed is a Sale/Resale Analysis. This methodology is outlined in **Real Estate Damages**, Third Edition, Pages 35-36 by Randall Bell PhD, MAI and published by the Appraisal Institute. This is a type of Paired Sales Analysis (see next paragraph) that compares the sale of the same property Before and After a change in the market to see if there is any impact on the property value due to that change. In this analysis I have used the Federal Housing Finance Agency Home Price Index to identify typical appreciation in the property market and compared that to the change in value on a home Before a BESS was announced and After the BESS was built. No other adjustments were required as I have attempted to focus on homes without renovations and with typical upkeep during the intervening period.

The second type of analysis employed is a Matched Pair Analysis or Paired Sales Analysis. This methodology is outlined in **The Appraisal of Real Estate**, Twelfth Edition by the Appraisal Institute pages 438-439. It is further detailed in **Real Estate Damages**, Third Edition, pages 33-35 by Randall Bell PhD, MAI. Paired sales analysis is used to support adjustments in appraisal work for factors ranging from the impact of having a garage, golf course view, or additional bedrooms. It is an appropriate methodology for addressing the question of impact of an adjoining BESS. The paired sales analysis is based on the theory that when two properties are in all other respects equivalent, a single difference can be measured to indicate the difference in price between them. Dr. Bell describes it as comparing a test area to control areas. In the example provided by Dr. Bell he shows five paired sales in the test area compared to 1 to 3 sales in the control areas to determine a difference. I have attempted to use 3 sales in the control areas in my analysis for each sale developed into a matched pair, but exceptions are sometimes required given the uniqueness of many rural properties.

Determining what is an External Obsolescence

An external obsolescence is a use of property that, because of its characteristics, might have a negative impact on the value of adjacent or nearby properties because of identifiable impacts. Determining whether a use would be considered an external obsolescence requires a study that isolates that use, eliminates any other causing factors, and then studies the sales of nearby versus distant comparable properties. The presence of one or a combination of key factors does

not mean the use will be an external obsolescence, but a combination of these factors tend to be present when market data reflects that a use is an external obsolescence.

External obsolescence is evaluated by appraisers based on several factors. These factors include but are not limited to:

- 1) Traffic. BESS are not traffic generators.
- 2) Odor. BESS do not produce odor.
- 3) Noise. BESS generate some noise concerns, which is why soundwalls are used in many cases where a BESS is in close proximity to homes. The information on soundwalls shown in this report supports a project with no soundwall at the distances to nearby residential uses identified.
- 4) Environmental. BESS do not produce toxic or hazardous waste and must conform to local laws regulating such uses.
- 5) Appearance/Viewshed. This is the one area that potentially applies to BESS. However, BESS are generally set back at distances to mitigate this issue or when closer use walls and/or landscaping to screen the equipment view. Furthermore, any consideration of appearance of viewshed impacts has to be considered in comparison with currently allowed uses on that site. For example, if a residential subdivision is already an allowed use, the question becomes in what way does the appearance impact adjoining property owners above and beyond the appearance of that allowed subdivision or other similar allowed uses.
- 6) Other factors. One of the issues that comes up related to BESS is fire hazards which are addressed by the client.

Market Imperfection

Throughout this analysis, I have specifically considered the influence of market imperfection on data analysis. Market imperfection is the term that refers to the fact that unlike a can of soup at the supermarket or in your online shopping cart, real estate cannot be comparison shopped for the best price and purchased at the best price for that same identical product. Real estate products are always similar and never identical. Even two adjacent lots that are identical in almost every way, have a slight difference in location. Once those lots are developed with homes, the number of differences begin to multiply, whether it is size of the home, landscaping, layout, age of interior upfit, quality of interior upfit, quality of maintenance and so on.

Neoclassical economics indicates a perfectly competitive market as having the following: A large number of buyers and sellers (no one person dominates the market), no barriers or transaction costs, homogeneous product, and perfect information about the product and pricing. Real estate is clearly not homogeneous. The number of buyers and sellers for a particular product in a particular location is limited by geography, financing, and the limited time period within a property is listed. There are significant barriers that limit the liquidity in terms of time, costs and financing. Finally, information on real estate is often incomplete or partial – especially at the time that offers are made and prices set, which is prior to appraisals and home inspections. So real estate is very imperfect based on this definition and the impact of this are readily apparent in the real estate market.

What appear to be near-identical homes that are in the same subdivision will often sell with slight variations in price. When multiple appraisers approach the same property, there is often a slight variation among all of those conclusions of value, due to differences in comparables used or analysis of those comparables. This is common and happens in every appraisal. Within each appraisal,

after making adjustments to the comparables, the appraiser will typically have a range of values that are supported that often vary more than +/-5% from the median or average adjusted value.

Based on this understanding of market imperfection, it is important to note that very minor differences in value within an impact study do not necessarily indicate either a negative or positive impact. When the impacts measured fall within that +/-5%, I consider this to be within typical market variation/imperfection. Therefore it may be that there is a negative or positive impact identified if the impact is within that range, but given that it is indistinguishable from what amounts to the background noise or static within the real estate data, I do not consider indications of +/-5% to support a finding of a negative or positive impact.

This is further supported by a study printed in the American Society of Farm Managers and Rural Appraisers (ASFMRA) 2024 Journal on Page 90 titled "By How Much Can Appraised Farm Values Differ Across Appraisers?" that considered 54 appraisal reports completed by 9 Certified General Appraisers for three Iowa farms at two points in time (2019 and 2020) to evaluate the variability of the appraised values. They found that the appraised values can differ by as much as 20%, or +/-10%. Rural properties do tend to have much greater variability in the appraised values due to the unique nature of most of those properties.

Impacts greater than that range are, however, considered to be strong indications of impacts that fall outside of typical market imperfection. I have used this as a guideline while considering the impacts identified within this report.

III. Research Into Existing Studies

The Impact of Utility-scale Battery Energy Storage System Projects on Property Values in California, Massachusetts, and New York by Yikin Gwee – The Wharton School, University of Pennsylvania May 2025

This analysis is focused on exactly the issue at hand and found no significant price changes relative to adjoining homes relative to homes further away. The range of impacts was -1.1% to +1.3%, which is consistent with market imperfection and supports a finding of no impact.

Property Value Impacts from Transmission Lines, Subtransmission Lines, and Substations by Ted Tatos, Mark Click, PHD, JD and Troy A. Lunt, MAI – The Appraisal Journal Summer 2016

This analysis is focused on powerlines and substations. I focused on the portion of this study related to substations as most related to that component of the subject property. Furthermore, the BESS equipment is inherently related to substations to the adjoining property owner's view as generic electrical equipment.

They cite numerous other studies in the article, but they focused on 125,000 home sales to identify property value impacts and found impacts but that they diminished with distance and that there are some positive impacts that they found as well. In regards to substations they found a -3% impact on homes within 50 meters (164 feet) of a substation and only a 1% impact on homes between 50 and 100 meters (165 to 328 feet). A 1% impact on homes starting at 165 feet is not a practical impact on home values given the wide disparity in home values that often appraise at differences of +/-5% based on comparables even in tight markets.

differences of +/-5% based on comparables even in tight markets.

The External Costs of Industrial Chemical Accidents: A Nationwide Property Value Study by Dennis Guignet, Robin R. Jenkins, Christoph Nolte, and James Belke – Journal of Housing Economics Volume 62, December 2023

Their findings were mixed on accidents “where the impacts (e.g. injuries, deaths, and property damage) were confined to the industrial property itself. We estimate losses to home values from such accidents of 0% to 2%.”

The Property Value Impacts of Industrial Chemical Accidents by Dennis Guignet, Robin R. Jenkins, James Belke, and Henry Mason – NCEE Working Paper 22-04, September 2022

This appears to be an earlier draft of the same research with most of the same researchers. This paper notes in the abstract “We find that the typical accident does not affect home values, but accidents resulting in offsite injuries, property damage, evacuations, or shelter-in-place orders lead to a 5% to 7% decrease in property values within five kilometers.”

Both of these studies on industrial fires are focused on larger events around industrial chemical fires such as petrochemical refineries. So the data from those studies largely overstates the likely impact for any property around a BESS that has been on fire. The more recent study of the two by the same researchers supports a finding at the low end of the range or 0%.

IV. Data Set – Existing BESS Projects

The list shown below is a list of existing BESS projects that I have researched. I have attempted to focus on projects that were in proximity to residential uses so as to focus on property value impacts.

Summary of Battery Data

#	Name	City/State	Acres	Year Built	Capacity (MW)	Distance from Closest Home	Average Distance Adjoining Home	Soundwall
1	Diablo	Pittsburg, CA	11.45	2021	200.0	320	361	4 ft
2	Bat Cave	Mason, TX	N/A	2021	100.5	1,280	1984	No
3	Gambit	Angleton, TX	6.24	2021	100.0	215	243	8 ft
4	Chisholm	Ft Worth, TX	21.74	2021	100.0	840	875	No
5	Roughneck	W. Columbia, TX	4.55	2021	50.0	460	460	No
6	Vista	Vista, CA	0.88	2023	40.0	80	184	Yes
7	Outer Cape	Provincetown, MA	N/A	2020	25.0	435	N/A	Yes
8	N. New York Energy	Burke, NY	10.47	2023	20.0	945	945	N/A
9	West Chicago	Chicago, IL	5	2015	20.0	430	450	Yes
10	McHenry	McHenry, IL	2.75	2016	20.0	260	283	No
11	Plumstead	Cream Ridge, NJ	14.39	2019	20.0	155	943	12 ft
12	Rush Springs	Marlow, OK	N/A	2020	10.0	N/A	N/A	No
13	Prospect	W. Columbia, TX	2.3	2019	10.0	400	400	Yes
14	Brazoria	Brazoria, TX	17.58	2020	10.0	130	438	No
15	Port Lavaca	Prt Lavaca, TX	1.44	2020	10.0	N/A	N/A	No
16	Magnolia	Houston, TX	0.87	2020	10.0	180	190	Yes
17	Rabbit Hill	Georgetown, TX	5.99	2020	10.0	130	338	Yes
18	Asheville	Asheville, NC	12.36	2020	9.0	130	452	Yes
19	Micanopy	Micanopy, FL	2.53	2022	8.3	255	708	No
20	East Hampton	E. Hampton, NY	17.58	2024	5.0	470	733	Yes
21	Montauk Energy	Montauk, NY	1.63	2019	5.0	N/A	N/A	Yes
22	Little Field ESS	Staten Island, NY	0.22	2023	4.3	40	84	Yes
23	Ozone Park	Queens, NY	0.35	2018	3.0	30	203	Yes
24	Pomona	Rockland, NY	28.5	2020	N/A	270	1196	No
25	Tibbits	Branch, MI	71	2024	104.9	1100	2,633	No
26	Callisto	Houston, TX	N/A	2024	200.0	685	1,391	N/A
27	KCE NY 1	Stillwater, NY	154.24	2019	20.0	N/A	N/A	No
28	KCE NY 6	Blasdell, NY	7.5	2023	20.0	N/A	N/A	No
29	Orangville Energy	Warsaw, NY	9.67	2022	24.7	1,060	2,353	No
30	Station 9	Braintree, MA	N/A	2018	2.0	N/A	N/A	No
31	Great Kiskadee Stg	Alamo, TX	50.9	2025	100.0	1,320	1,423	No
32	Caballero	Nipomo, CA	20	2025	99.7	485	836	No
33	Jarvis	Manvel, TX	8	2025	404.0	135	302	No
34	Happy Valley	Nampa, ID	10	2025	77.0	570	638	No
35	Padua	San Antonio, TX	36.65	2025	400.0	830	2,415	No
36	Lower Rio	Donna, TX	14.76	2025	60.0	310	429	No
37	Hidden Lakes	Galveston, TX	15	2025	220.0	720	720	No
38	Jackson Fuller	Colorado Springs, CO	36.56	2025	100.0	475	557	Yes
39	Mossy Branch	Shiloh, GA	20	2025	680.0	580	761	No
40	Canyon Country	Santa Clarita, CA	3.4	2024	80.0	205	205	Yes
41	Beaumont	Beaumont, CA	7	2024	100.0	165	206	No
42	KCE TX 12	Pflugerville, TX	10.76	2023	100.0	245	928	no
43	Stanton	Stanton, CA	3.18	2023	100.0	110	110	Yes
44	Goleta	Goleta, CA	1.91	2023	60.0	75	75	No
45	Elkhorn	Moss Landing, CA	262	2022	182.5	340	340	No
46	Project Cathode	Long Beach, CA	16	2023	200.0	35	111	Yes
47	Bocanova	Alvin, TX	23	2025	150.0	610	728	No
48	Kuna	Kuna, ID	9.22	2025	150.0	250	358	No
49	Connolly	Decatur, TX	15.43	2024	125.0	525	699	No
50	Beebe	Wakefield, MA	12.55	2019	3.0	160	687	No

Summary of Battery Data

#	Name	City/State	Acres	Year Built	Capacity (MW)	Distance from Closest Home	Average Distance Adjoining Home	Soundwall
51	Gateway	San Diego, CA	N/A	2020	250.0	N/A	N/A	No
52	McMicken	Surprise, AZ	N/A	2017	2.0	1,100	N/A	Yes
53	Moss Landing	Moss Landing, CA	N/A	2020	300.0	340	N/A	No
54	Paradise	San Diego, CA	N/A	N/A	N/A	N/A	N/A	N/A
55	Condor	Grand Terrace, CA	N/A	N/A	N/A	N/A	N/A	N/A
					Capacity	Distance from Closest Home	Average Distance Adjoining Home	
Average					98 MW	432	706	
Median					60 MW	330	460	
High					680 MW	1,320	2,633	
Low					2 MW	30	75	

As can be seen from this list of 55 projects, the average distance to the closest home is 432 feet and the median distance to the closest home is 330 feet.

These projects include soundwalls in some locations. The subset of projects with soundwalls is shown below with average closest home of 274 feet and median closest home at 193 feet.

Summary of Battery Data - Soundwalls

#	Name	City/State	Acres	Year Built	Capacity (MW)	Distance from Closest Home	Average Distance Adjoining Home	Soundwall
1	Diablo	Pittsburg, CA	11.45	2021	200.0	320	361	4 ft
3	Gambit	Angleton, TX	6.24	2021	100.0	215	243	8 ft
6	Vista	Vista, CA	0.88	2023	40.0	80	184	Yes
7	Outer Cape	Provincetown, MA	N/A	2020	25.0	435	N/A	Yes
9	West Chicago	Chicago, IL	5	2015	20.0	430	450	Yes
11	Plumstead	Cream Ridge, NJ	14.39	2019	20.0	155	943	12 ft
13	Prospect	W. Columbia, TX	2.3	2019	10.0	400	400	Yes
16	Magnolia	Houston, TX	0.87	2020	10.0	180	190	Yes
17	Rabbit Hill	Georgetown, TX	5.99	2020	10.0	130	338	Yes
18	Asheville	Asheville, NC	12.36	2020	9.0	130	452	Yes
20	East Hampton	E. Hampton, NY	17.58	2024	5.0	470	733	Yes
21	Montauk Energy	Montauk, NY	1.63	2019	5.0	N/A	N/A	Yes
22	Little Field ESS	Staten Island, NY	0.22	2023	4.3	40	84	Yes
23	Ozone Park	Queens, NY	0.35	2018	3.0	30	203	Yes
38	Jackson Fuller	Colorado Springs, CO	36.56	2025	100.0	475	557	Yes
40	Canyon Country	Santa Clarita, CA	3.4	2024	80.0	205	205	Yes
43	Stanton	Stanton, CA	3.18	2023	100.0	110	110	Yes
46	Project Cathode	Long Beach, CA	16	2023	200.0	35	111	Yes
52	McMicken	Surprise, AZ	N/A	2017	2.0	1,100	N/A	Yes
					Capacity	Distance from Closest Home	Average Distance Adjoining Home	
Average					50 MW	274	348	
Median					20 MW	193	291	
High					200 MW	1,100	943	
Low					2 MW	30	84	

Comparing that to the projects without a soundwall as shown below. The average closest home is 540 feet and the median closest home is 473 feet, with homes as close as 75 feet with no soundwall. Of the 34 projects with no soundwalls there are 7 that are closer than 250 feet. There are 10 that are between 250 and 570 feet and there are 17 beyond 570 feet.

Summary of Battery Data - No Soundwalls

#	Name	City/State	Acres	Year Built	Capacity (MW)	Distance from Closest Home	Average Distance Adjoining Home	Soundwall
2	Bat Cave	Mason, TX	N/A	2021	100.5	1,280	1984	No
4	Chisholm	Ft Worth, TX	21.74	2021	100.0	840	875	No
5	Roughneck	W. Columbia, TX	4.55	2021	50.0	460	460	No
8	N. New York Energy	Burke, NY	10.47	2023	20.0	945	945	N/A
10	McHenry	McHenry, IL	2.75	2016	20.0	260	283	No
12	Rush Springs	Marlow, OK	N/A	2020	10.0	N/A	N/A	No
14	Brazoria	Brazoria, TX	17.58	2020	10.0	130	438	No
15	Port Lavaca	Prt Lavaca, TX	1.44	2020	10.0	N/A	N/A	No
19	Micanopy	Micanopy, FL	22.5	2022	8.3	605	1,085	No
24	Pomona	Rockland, NY	28.5	2020	3.0	270	1196	No
25	Tibbits	Branch, MI	71	2024	104.9	1100	2,633	No
26	Callisto	Houston, TX	N/A	2024	200.0	685	1,391	N/A
27	KCE NY 1	Stillwater, NY	154.24	2019	20.0	N/A	N/A	No
28	KCE NY 6	Blasdell, NY	7.5	2023	20.0	N/A	N/A	No
29	Orangville Energy	Warsaw, NY	9.67	2022	24.7	1,060	2,353	No
30	Station 9	Braintree, MA	N/A	2018	2.0	N/A	N/A	No
31	Great Kiskadee Stg	Alamo, TX	50.9	2025	100.0	1,320	1,423	No
32	Caballero	Nipomo, CA	20	2025	99.7	485	836	No
33	Jarvis	Manvel, TX	8	2025	404.0	135	302	No
34	Happy Valley	Nampa, ID	10	2025	77.0	570	638	No
35	Padua	San Antonio, TX	36.65	2025	400.0	830	2,415	No
36	Lower Rio	Donna, TX	14.76	2025	60.0	310	429	No
37	Hidden Lakes	Galveston, TX	15	2025	220.0	720	720	No
39	Mossy Branch	Shiloh, GA	20	2025	680.0	580	761	No
41	Beaumont	Beaumont, CA	7	2024	100.0	165	206	No
42	KCE TX 12	Pflugerville, TX	10.76	2023	100.0	245	928	no
44	Goleta	Goleta, CA	1.91	2023	60.0	75	75	No
45	Elkhorn	Moss Landing, CA	262	2022	182.5	340	340	No
47	Bocanova	Alvin, TX	23	2025	150.0	610	728	No
48	Kuna	Kuna, ID	9.22	2025	150.0	250	358	No
49	Connolly	Decatur, TX	N/A	2024	125.0	360	N/A	No
50	Beebe	Wakefield, MA	N/A	2019	3.0	150	N/A	No
51	Gateway	San Diego, CA	N/A	2020	250.0	N/A	N/A	No
53	Moss Landing	Moss Landing, CA	N/A	2020	300.0	340	N/A	No

	Capacity	Distance from Closest Home	Average Distance Adjoining Home
Average	122 MW	540	952
Median	100 MW	473	761
High	680 MW	1,320	2,633
Low	2 MW	75	75

I also considered the projects over 100 MW to show relative distances for larger projects as shown below. The average distance to the closest home is 522 feet and the median closest home is 360 feet. These distances are slightly lower than the averages for the larger set suggesting that larger projects do not require additional distance or buffering.

Summary of Battery Data - By Size

#	Name	City/State	Acres	Year Built	Capacity (MW)	Distance from Closest Home	Average Distance Adjoining Home	Soundwall
1	Diablo	Pittsburg, CA	11.45	2021	200.0	320	361	4 ft
2	Bat Cave	Mason, TX	N/A	2021	100.5	1,280	1984	No
3	Gambit	Angleton, TX	6.24	2021	100.0	215	243	8 ft
4	Chisholm	Ft Worth, TX	21.74	2021	100.0	840	875	No
25	Tibbits	Branch, MI	71	2024	104.9	1100	2,633	No
26	Callisto	Houston, TX	N/A	2024	200.0	685	1,391	N/A
31	Great Kiskadee Stg	Alamo, TX	50.9	2025	100.0	1,320	1,423	No
33	Jarvis	Manvel, TX	8	2025	404.0	135	302	No
35	Padua	San Antonio, TX	36.65	2025	400.0	830	2,415	No
37	Hidden Lakes	Galveston, TX	15	2025	220.0	720	720	No
38	Jackson Fuller	Colorado Springs, CO	36.56	2025	100.0	475	557	Yes
39	Mossy Branch	Shiloh, GA	20	2025	680.0	580	761	No
41	Beaumont	Beaumont, CA	7	2024	100.0	165	206	No
42	KCE TX 12	Pflugerville, TX	10.76	2023	100.0	245	928	no
43	Stanton	Stanton, CA	3.18	2023	100.0	110	110	Yes
45	Elkhorn	Moss Landing, CA	262	2022	182.5	340	340	No
46	Project Cathode	Long Beach, CA	16	2023	200.0	35	111	Yes
47	Bocanova	Alvin, TX	23	2025	150.0	610	728	No
48	Kuna	Kuna, ID	9.22	2025	150.0	250	358	No
49	Connolly	Decatur, TX	N/A	2024	125.0	360	N/A	No
51	Gateway	San Diego, CA	N/A	2020	250.0	N/A	N/A	No
53	Moss Landing	Moss Landing, CA	N/A	2020	300.0	340	N/A	No

	Capacity	Distance from Closest Home	Average Distance Adjoining Home
Average	198 MW	522	866
Median	150 MW	360	720
High	680 MW	1,320	2,633
Low	100 MW	35	110

Separating the 100 MW and larger projects between those with soundwalls and those without soundwalls I get the following data shown below.

The over 100 MW with soundwalls have an average closest home of 231 feet and a median of 215 feet. Comparing this to the larger set with soundwalls, which showed an average closest home of 226 feet and a median 180 feet. This suggests no difference in setback for larger projects if a soundwall is employed.

The over 100 MW without soundwalls have an average closest home of 613 feet and a median of 595 feet. Comparing this to the larger set without soundwalls, which showed an average closest home of 555 feet and a median of 485 feet. This suggest a 10% increase in the setback for larger projects where no soundwall is used. This is a mild difference and none of the other sets of data suggest a greater buffer is needed, but this may support a slightly wider buffer for projects over 100 MW without a soundwall.

Summary of Battery Data - By Size with Soundwall

#	Name	City/State	Acres	Year Built	Capacity (MW)	Distance from Closest Home	Average Distance Adjoining Home	Soundwall
1	Diablo	Pittsburg, CA	11.45	2021	200.0	320	361	4 ft
3	Gambit	Angleton, TX	6.24	2021	100.0	215	243	8 ft
38	Jackson Fuller	Colorado Springs, CO	36.56	2025	100.0	475	557	Yes
43	Stanton	Stanton, CA	3.18	2023	100.0	110	110	Yes
46	Project Cathode	Long Beach, CA	16	2023	200.0	35	111	Yes

	Capacity	Distance from Closest Home	Average Distance Adjoining Home
Average	140 MW	231	276
Median	100 MW	215	243
High	200 MW	475	557
Low	100 MW	35	110

Summary of Battery Data - By Size without a Soundwall

#	Name	City/State	Acres	Year Built	Capacity (MW)	Distance from Closest Home	Average Distance Adjoining Home	Soundwall
2	Bat Cave	Mason, TX	N/A	2021	100.5	1,280	1984	No
4	Chisholm	Ft Worth, TX	21.74	2021	100.0	840	875	No
25	Tibbits	Branch, MI	71	2024	104.9	1100	2,633	No
26	Callisto	Houston, TX	N/A	2024	200.0	685	1,391	N/A
31	Great Kiskadee Stg	Alamo, TX	50.9	2025	100.0	1,320	1,423	No
33	Jarvis	Manvel, TX	8	2025	404.0	135	302	No
35	Padua	San Antonio, TX	36.65	2025	400.0	830	2,415	No
37	Hidden Lakes	Galveston, TX	15	2025	220.0	720	720	No
39	Mossy Branch	Shiloh, GA	20	2025	680.0	580	761	No
41	Beaumont	Beaumont, CA	7	2024	100.0	165	206	No
42	KCE TX 12	Pflugerville, TX	10.76	2023	100.0	245	928	no
45	Elkhorn	Moss Landing, CA	262	2022	182.5	340	340	No
47	Bocanova	Alvin, TX	23	2025	150.0	610	728	No
48	Kuna	Kuna, ID	9.22	2025	150.0	250	358	No
49	Connolly	Decatur, TX	N/A	2024	125.0	360	N/A	No
51	Gateway	San Diego, CA	N/A	2020	250.0	N/A	N/A	No
53	Moss Landing	Moss Landing, CA	N/A	2020	300.0	340	N/A	No

	Capacity	Distance from Closest Home	Average Distance Adjoining Home
Average	216 MW	613	1,076
Median	150 MW	595	818
High	680 MW	1,320	2,633
Low	100 MW	135	206

Data Set Conclusions

The data shown above shows 55 BESS examples with a breakdown of adjoining residential uses. The examples support homes for projects of similar size to the proposed project. The average capacity for the larger projects without soundwalls is 216 MW and considers projects between 100 MW and 680 MW with distances to closest homes as close as 135 feet and with a median distance of 595 feet.

The proposed project is for a 400 MW project with the closest home at 365 feet. The data set shown above is very similar to the proposed project and the larger data set shows significant consistency with the specific data set for larger projects making it reasonable to discuss smaller projects in terms of property value impacts as well.

I have used the larger data set to identify nearby sales of homes in proximity to those projects. Many of these projects are fairly new and with relatively few nearby homes which reduces the potential for finding usable sales data.

V. Market Data

I considered the following battery storage facilities in a variety of states where I was able to identify adjoining or nearby residential home sales.

1 – Diablo Energy Storage System, Pittsburg, California

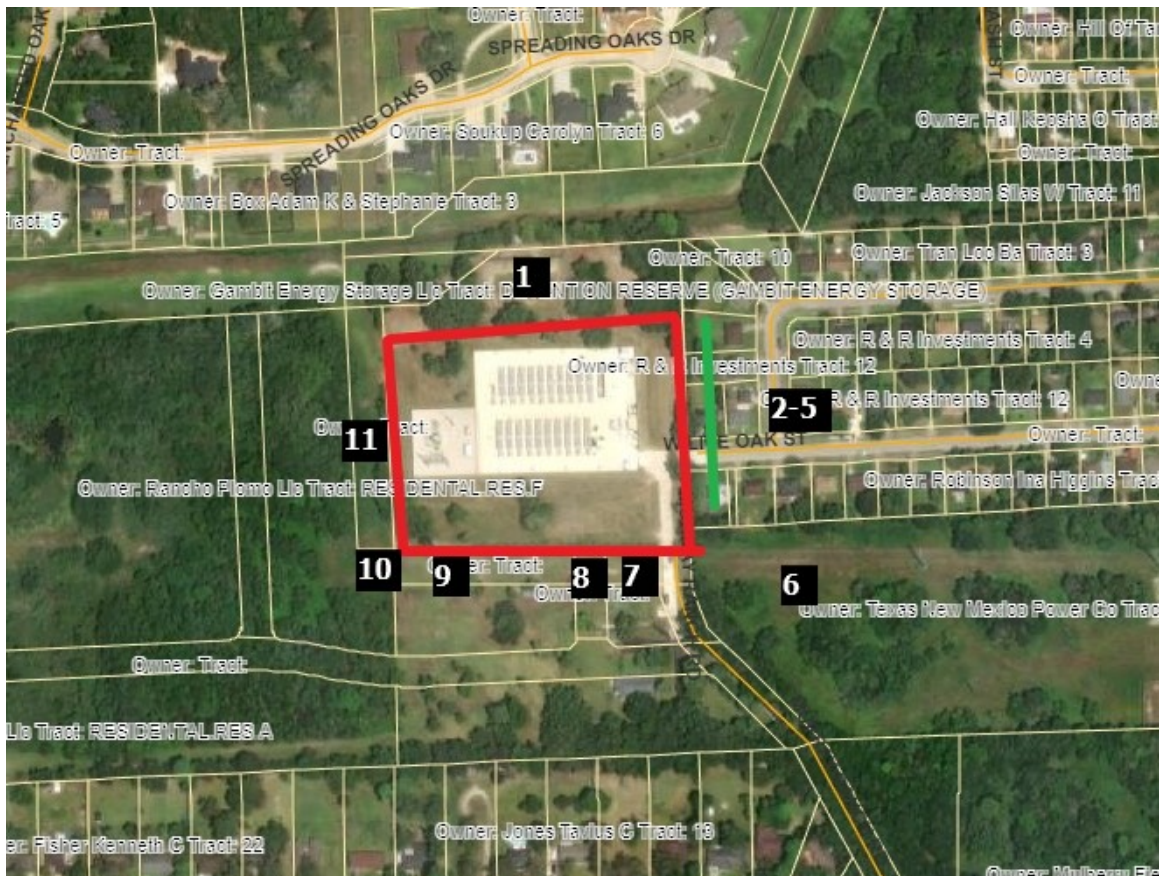
This 200 MW battery storage system is located on a parcel in Pittsburg, California with significant adjacency to industrial uses and residential uses. For these reasons it would be difficult to measure impacts due to the adjoining industrial uses that might also have an impact. Given that most of the adjoining uses are industrial a matched pair analysis is inappropriate but a Sale/Resale analysis is as the nearby industrial uses would be consistent both before and after the battery project.



The most recent and nearest sale that I identified is 401 Travis Court that is located to the southeast of the BESS at a distance of 605 feet from the nearest battery. The only sound barrier at the site is between 4 and 6 feet tall but there is an additional 6 foot wall at the rear of the homes as part of the subdivision separating the homes from the nearby industrial uses. This home sold on June 6, 2023 for \$665,000 for this 1,867 s.f., 2-story home, 2-car garage with 4 BR, 2.5 BA built in 2004 on a 0.10-acre lot. This same hold sold prior to the BESS announcement on July 28, 2017 for \$425,000. I have adjusted the 2017 sale upward based on the Federal Housing Finance Agency House Price Index for the growth in that market between those two dates, which indicates the home was expected to appreciate by 58%, or \$671,500. This is within 1% of the actual closed sales price which strongly supports a finding of no impact from the nearby BESS.

3 - Gambit Energy Storage, Angleton, Texas

This 102.4 MW battery storage system is located off W. Live Oak Street, Angleton, Texas. This is a new facility and placed online in June 2021. This system is a good location as there are no other externalities adjoining it to potentially impact the analysis. The substation associated with this is located to the east along N. Walker Street.



The adjoining homes to the north were selling with new homes ranging from \$400,000 to \$600,000 in 2022.

The most recent adjoining home sale to the west was 852 Marshall Road that sold on April 5, 2021 and presumably they were aware of the battery storage facility as it would have been under construction at the time of sale. This brick ranch with 3 BR, 1 BA with 1,220 s.f. of gross living area and built in 1980 on 0.40 acres sold for \$165,000, or \$135 per s.f.

I have compared that sale to 521 Catalpa Street that sold on September 11, 2020 for \$155,000 for a 3 BR, 2 BA brick ranch with 1,220 s.f. built in 1973 with a single car garage. Adjusting this price upward by 9% for growth in the market for time, 3.5% for difference in age, downward by \$6,000 for the additional bathroom, and \$4,000 for the garage, the adjusted indicated value of this home is \$164,375, which is right in line with 852 Marshall Road and supports a finding of no impact on property value.

I have also compared that sale to 521 W Mimosa Street that sold on February 26, 2021 for \$150,000 for this brick ranch with 3 BR, 1.5 BA with 1,194 s.f. built in 1976. Adjusting this sale upward by 4% for growth in the market over time, upward 2% for difference in age, and downward by \$5,000 for the additional half bathroom, I derive an adjusted indication of \$154,000. This is 7%

less than the home price at 852 Marshall Road which suggests an enhancement due to proximity to the battery storage system.

I have also compared this sale to 1164 Thomas Drive that sold on May 20, 2020 for \$187,000 for this brick ranch with 2-car garage, 3 BR, 2 BA with 1,259 s.f. and built in 1998. Adjusting this upward by 13% for growth over time, downward by 9% for difference in age of construction, downward by \$8,000 for the garage, downward \$6,000 for the additional bathroom, I derive an indicated value of \$180,480. This is a 9% difference suggesting a negative impact on property value. However, this comparable required the largest amount of adjustments and is not considered as heavily as the other two comparables. This home is 18 years newer and with better bathroom situation as a 1-bathroom house is a significant issue for most buyers.

The second comparable considered required the least adjustment and suggests a positive impact on property value. The median indication is the first comparable which shows no impact on property value. Given this data set I conclude that the best indication from these matched pairs supports a finding of no impact on property value. The home at 852 Marshall is 180 feet from the project outline shown.

I also considered a Sale/Resale analysis on this home. This same home at 852 Marshall sold on April 20, 2016 at \$69,900. Adjusting this upward by 38% which is typical appreciation in this area based on the FHFA HPI indicates an expected appreciation to \$96,462. However, this home was completely renovated between those two dates so this analysis is not very useful other than to show that the home was updated and sold at a higher price despite being located next to the BESS.

6 - Vista Energy Storage System, Vista, California

This 40 MW battery storage system is located off Olive Avenue, Vista, California. This facility has significant commercial development around it but also housing to the south as close as 50 feet from the closest equipment as shown in the aerial map below and an average distance of 98 feet.



I identified a sale at 508 Dove Circle that sold on April 3, 2023 for \$740,000 and is 100 feet from the nearest electrical equipment. This same home last sold on May 21, 2002 sold for \$258,000. The recent sale notes that the owner is a general contractor and kept the maintenance very well and the 2nd bath was upgraded. Based on the FHFA HPI this home was expected to appreciate over that time period from 2002 to 2023 by 177%, which works out to \$714,660. This is lower than the sales price in 2023, but that difference is readily attributable to the upgraded bathroom and supports a finding of no impact on property value due to the proximity of the BESS.

7 – Outer Cape Community, Provincetown, Massachusetts

This 25 MW battery storage system is located in Provincetown, Massachusetts. This adjoins an industrial building, small solar farm and small landfill. There are nearby houses to the east as close as 435 feet.

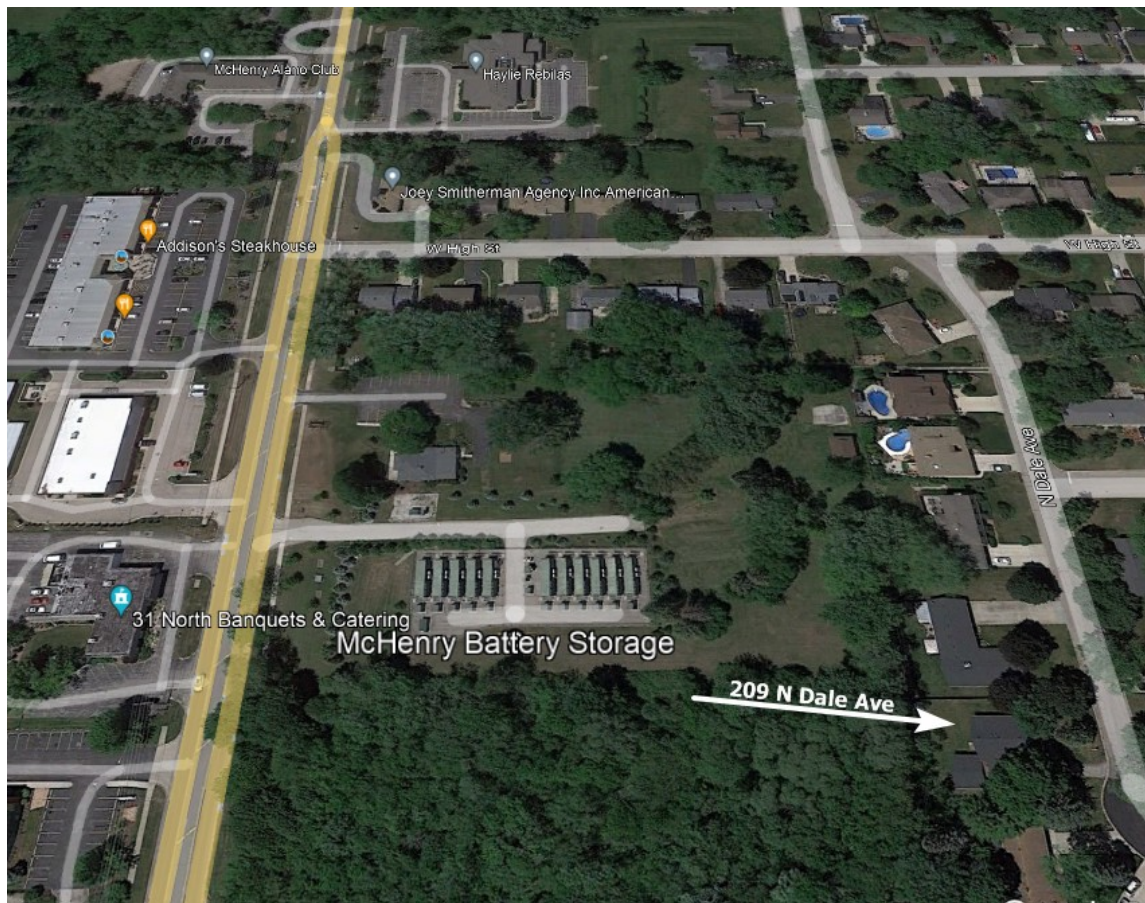


A home located at 72 Race Point Road, Provincetown sold on August 23, 2024 for \$1,400,000 for this 3,100 s.f. home with 3 BR, and 4 BA built in 2001 on a 0.16-acre lot. The prior sale of this home was on October 22, 2008 for \$625,000. Based on the FHFA HPI this home was expected to appreciate over this time difference by 113%, which works out to \$1,331,250, which is 5% less than what it actually sold for, This strongly supports a conclusion of no negative impact from the BESS. This home is 425 feet from the BESS.

The closest home sold on November 28, 2023 after the batteries were put in place for \$1,750,000 for this 2,454 s.f. home built in 2005 located at 64 Race Point Road. The most recent sale of this same home prior to the BESS was in 2002 which was just for the lot prior to construction of the home so I was not able to do any analysis on this.

10 - McHenry Battery Storage, McHenry, Illinois

This 19.8 MW battery storage system is located off Illinois Highway 31, McHenry, Illinois that was built around 2016. This facility fronts on the highway but has rear adjacency to a number of houses.



I have considered the recent sale of 209 N Dale Avenue that adjoins the battery storage site and is 290 feet from the nearest equipment.

That home sold on June 30, 2021 for \$265,000 for a vinyl-siding ranch with 3 BR, 2.5 BA, built in 1960 with a gross living area of 1,437 square feet, or \$184.41 per s.f. The property has 5 attached garage spaces. As identified in the listing the home was completely renovated with stainless steel appliances and granite countertops. This was listed by Lynda Steidinger with Berkshire Hathaway HomeServices Starck Real Estate and the buyer's agent was Ivette Rodriguez Anderson with Keller Williams. The heavy renovations make it impossible to do a Sale/Resale analysis, so I have looked at paired sales instead.

The home directly across the street, 208 N Dale Avenue, sold on June 16, 2021 for \$275,000 for a cedar siding and stone ranch with 3 BR, 2.5 BA, built in 1961, with a gross living area of 1,446 s.f., or \$190.18 per s.f. This home also has 1,101 square feet of finished basement space that is currently used as an office but could be an additional bedroom. This home also has been updated and includes stainless steel appliances and granite counter tops.

The size difference is nominal and the additional 3-car garage bays at the 209 N Dale is considered to be balanced by the finished basement space at 208 N Dale, though the finished office space is

somewhat superior to garage space. But balancing those two factors out the difference in price per square foot is 3%. This is considered negligible and attributable to the slightly superior finished basement space and not any impact relative to the battery storage facility.

I also looked at 3802 Clover Avenue, which is two blocks to the north. This stone and siding ranch with 3 BR, 2 BA, built in 1956, with a gross living area of 1,200 s.f. sold on October 21, 2021 for \$231,000 or \$192.50 per s.f. The property has been updated with a new kitchen and a new bay window and includes a partially finished basement with an additional bathroom in it and the total basement area is an additional 1,200 s.f. This is the smallest home in the neighborhood that I found and it further illustrates that the price per square foot typically goes up as the size goes down. Adjusting this gross sale price upward by \$36,498 for the smaller size based on 80% of the price per square foot for this purchase, I derive an adjusted sales price to compare to the subject property of \$267,498. I consider the basement to balance out the extra garage space at the subject. This indicates a difference of 1% from the purchase price of the 209 N Dale Avenue, which is attributable to the 4 months difference in time. I consider this comparable to further support a finding of no impact on value.

There are numerous recent home sales in the neighborhood ranging from \$172,000 to \$306,000, but most of these homes are also over 2,000 square feet in size. The subject property sold for more per square foot than most of these other sales partly due to the smaller overall size, partly due to the significant renovations, and partly due to the additional garage space. Still, this shows that the 209 N Dale Avenue sale is not being impacted by the battery storage facility and has in fact been updated above what is typical for the neighborhood, though given the similar updates at 208 N Dale Avenue, this may be the trend for the area.

The two sales compared to the 209 N Dale Avenue sale supports a finding of no impact on property value due to the battery storage facility.

I also looked at a more recent sale of 205 N Dale Avenue which adjoins 209 N. Dale to the south. This home sold on May 31, 2023 for \$255,000 for this 3 BR, 2 BA home with 1,592 s.f. with a 2-car garage built in 1962 on a 0.40-acre lot. This home sold earlier that year for significantly less and underwent heavy renovations. The property was advertised as backing up to woods, it is 1 lot off adjacent to the BESS and shows no sign of impact. The heavy renovations make it difficult to compare this to other non-updated homes in the area, but someone purchased it for updating and sold it for more after the BESS was built.

Another home located at 3815 W High Street sold on October 28, 2022 for \$260,000. This home also adjoins a medical office which makes matched pair analysis difficult and the prior sale is much older and not suitable for Sale/Resale analysis.

Another home located at 2813 W High Street sold on April 14, 2022 for \$180,000. This home also adjoins a medical office and was sold "as-is" and therefore not appropriate for analysis.

18 - Asheville Energy Storage System, Asheville, NC

This 9 MW battery storage system is located on a parcel with a substation built in 2020 (substation was built much earlier).



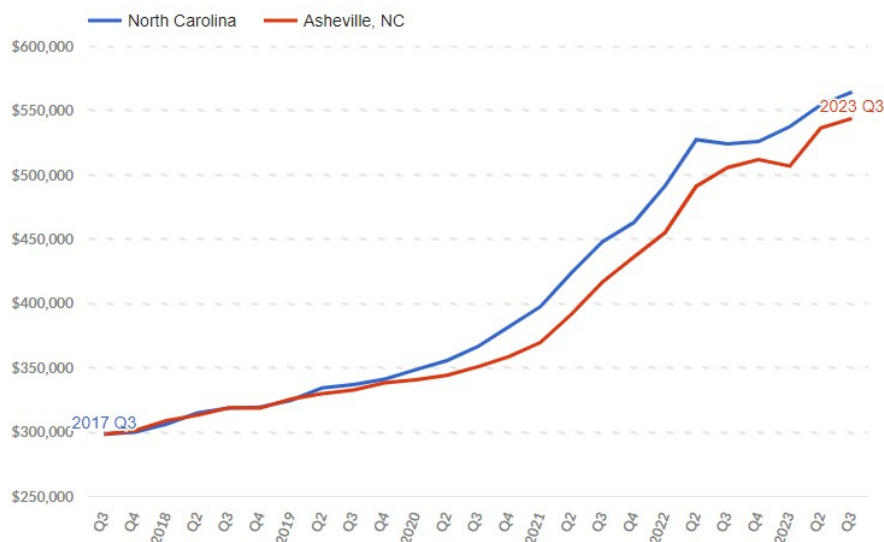
There is a nearby home sale that is located on Tax Parcel 8047 (just below the identifier for Parcel 9). This home is 550 feet from the nearest battery equipment and most of that distance is heavily wooded. This home has a street address of 95 Forest Lake Drive, Asheville, NC and it sold on April 26, 2022 for \$510,000 for this 4 BR/3 BA ranch with 1,931 square feet including the daylight basement area. The home also has a 2-car garage. I did not attempt a paired sale as this home has no visibility of the BESS despite the proximity and arguably has a better view with less screening to the substation, which is also closer to the home.

Similarly, new homes are being built to the south on Rangley Drive with prices ranging from \$431,000 to \$566,000. These homes include those that back up to the Parcels 11 through 14 in the adjacent parcel map.

Also, Parcel 4 sold in March of 2022, but it has the substation between it and the BESS, which makes it challenging to draw conclusions from and I attempted no analysis.

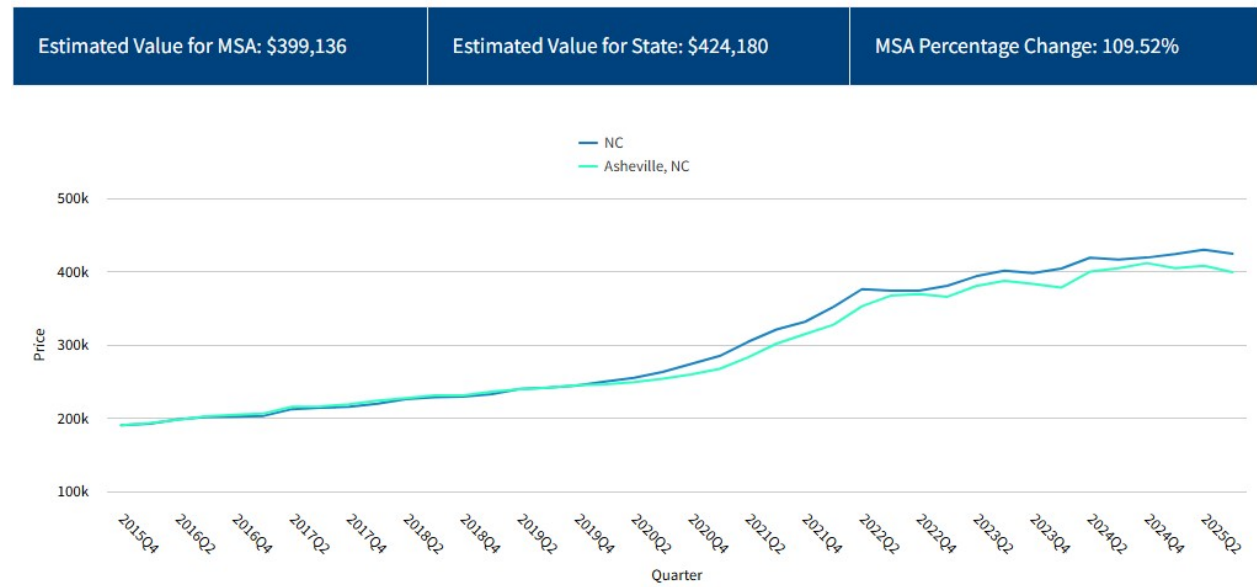
I did look at 129 Graham Lane, Asheville, which is Adjoining Parcel 11. It sold on November 6, 2023 for \$550,000 for this 4 BR, 3 BA home with 2,913 s.f. with a 2 car garage built in 1970 on a 1.21-acre lot. This home last sold on August 2, 2017 for \$298,500 prior to the BESS being constructed. Adjusting this earlier sale using the Federal Housing Finance Agency Home Price Index over that time period, homes in the area indicate that the home should have appreciated to \$544,000 as shown below. The home actually sold for slightly more than this which supports a finding of no impact on property value. This home was 510 feet from the BESS and was screened.

Purchase Quarter	Valuation Quarter	Percentage Change
2017 Quarter 3	2023 Quarter 3	82.2%
Purchase Value	Estimated Value for MSA	
\$298,500	\$544,000	



I also looked at 106 Graham Lane that sold on December 9, 2025 for \$399,000 for this 1,580 s.f. ranch with 2 BR, 2 BA and solar panels on the roof. This home was built in 2000 on 0.29 acres. This same home last sold on November 25, 2015 for \$190,500. Adjusting this earlier sale using the Federal Housing Finance Agency Home Price Index over that time period, homes in the area indicate that the home should have appreciated to \$399,136 as shown below. The home actually sold for

almost exactly that figure showing no impact from proximity to the BESS. This home was 335 feet from the BESS and was screened.



22 – Littlefield Energy Storage System, Richmond County, New York

This 4.3 MW battery storage system is located on a 4.25-acre parcel and built in 2023 in Staten Island, Richmond County, New York. Adjoining uses are a mix of commercial and residential. The closest adjoining home is 40 feet from the closest electrical equipment.



A home located at 89 Littlefield Avenue sold on October 10, 2024 for \$695,000 which is 100 feet from the BESS, but also a unit of a duplex that adjoins a gas station but on the far side from the gas station. This same home sold previously on April 27, 2021 for \$420,000. Based on the FHFA HPI this home should have appreciated at 28% over this time period, which works out to \$537,600, which is well below the actual sales price. However, the listing indicates that this home was entirely updated, which makes a Sale/Resale analysis unreliable. I reached out to the listing agent Gennady Gary Papirov (917-856-2012) with Homes R Us Realty of NY for comments. When I asked if the nearby BESS had any impact on the marketing or sales price, he indicated that the adjoining gas station had a significant impact. I asked him again about the BESS and he said that the gas station was the main impact and had no comments on the BESS. I also reached out to the buyer's agent Malic Klobucista with Better Homes and Gardens Real Estate Safari (malic1968@yahoo.com, or 973-296-9498).

23 - Ozone Park Batteries, Queens, New York

This system is located on 99th Street in Jamaica, Queens, New York. The below image shows the battery pack parcel outlined in red with a bowling alley to the north, a school to the south and homes to the east and west as well as a church to the west. Based on aerial imagery, this site was installed in early to mid-2018.

The two closest structures are the school at 65 feet and a church at 30 feet from the batteries. The nearby homes are on the opposing blocks, but the proximity to the school does illustrate a high confidence in public safety related to the battery facility and acceptance within that community.



I looked at a sale at 10726 101st Street that sold on October 9, 2018, after the battery storage facility was installed. This home is 345 feet from the closest battery and has a very obstructed view of that area based on the shrubs around the battery storage site as well as a strip of landscape greenery between the two sites. The sales price was \$600,000 for this 3 BR/1.5 BA home that was built in 1930 on a 0.06-acre site.

I compared this to a similar home built in 1930 in the same style and same size that sold on the same day at 10762 101st Street on October 9, 2018 for \$590,000. This home is just down the street but further from the battery storage system and sold on the same day for \$10,000 less. The proximity to the battery does not correlate to value impact in this instance as the home further away sold for less. This second home is across the street from the three-story John Adams High School which likely accounts for the lower price for this second property compared to the first which was adjacent to the same school, but not across from the building itself.

The matched pairs support a finding of no impact on value due to proximity to the battery system.

I identified a sale at 10624 98th Street that sold on November 13, 2023 for \$1,150,000. This home last sold on August 26, 2015 for \$485,000. Considering the FHFA HPI this price point should have appreciated by 62% over that time frame to \$785,700. However, it appears this home was heavily renovated and it does not provide a credible analysis and I will not rely on this sale as I was not able to speak to a broker about this transaction.

25 – Tibbits Energy Storage, Branch County, Michigan

This 104.9 MW battery storage system is near Coldwater Michigan and was built in 2025.



I did not identify any nearby home sales and the closest home is about 1,100 feet from the nearest equipment and is located just to the west as shown in the map above.

The closest home sale that I identified is located at 564 E State Road to the east of I-69 approximately 1,750 feet from the nearest equipment, but with the Interstate being closer than the BESS. This home sold for \$165,000 on December 13, 2024 for this 3 BR, 2 BA ranch with 1,612 s.f. built in 1960 on 0.70 acres. There is no good analysis I could do on this home sale given the proximity to the Interstate, the distance from the BESS and the proximity to the Asama Coldwater Manufacturing plant just south of this BESS that is in similar proximity to this home.

34 – Happy Valley, Nampa, ID

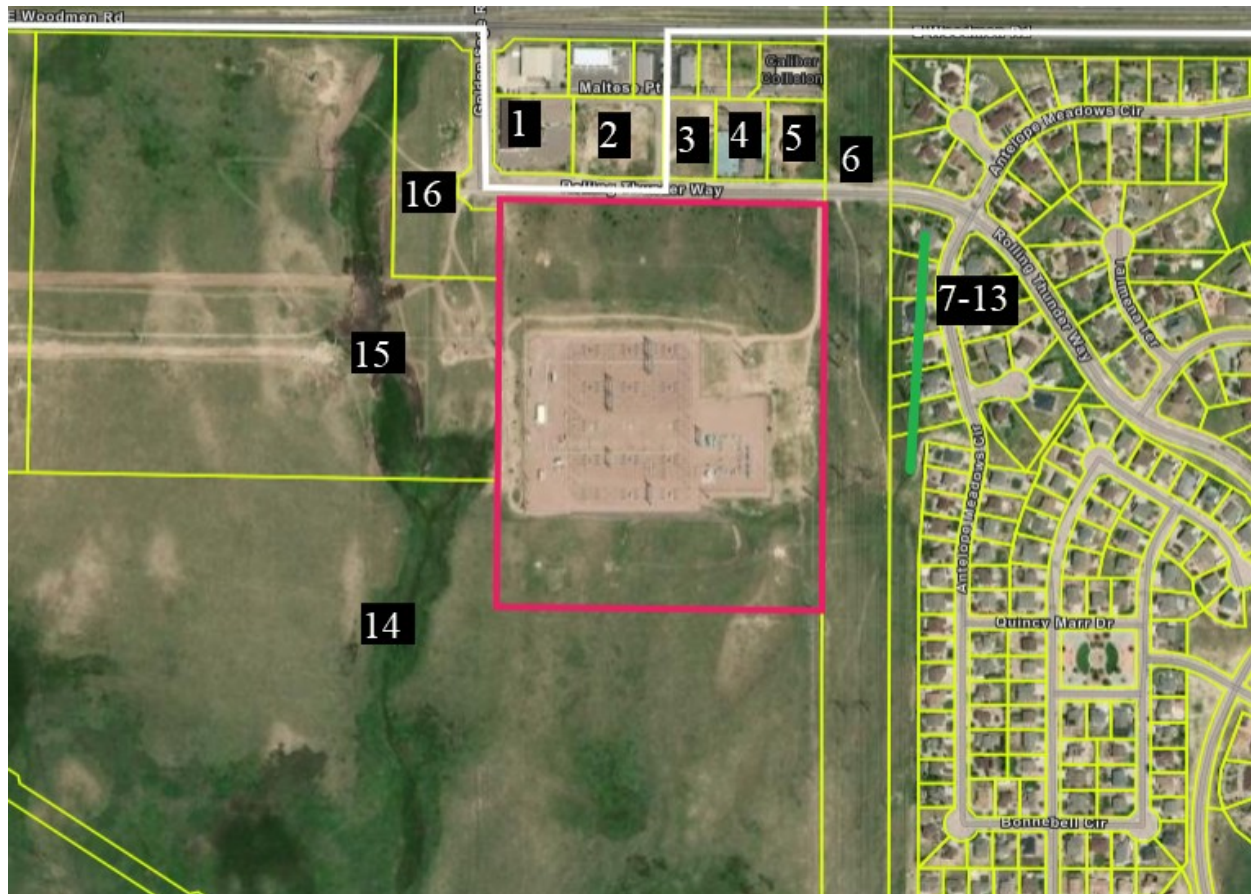
This 77 MW battery storage system was built in 2025 and there is a new subdivision being developed across the street as shown in the image below.



There are a number of new home sales in that subdivision that may be useful for analysis, but I currently have not gathered that information as Idaho is a non-reporting state and I do not have access to the local MLS. This is an area that I hope to explore in more detail in the future.

38 – Jackson Fuller, Colorado Springs, CO

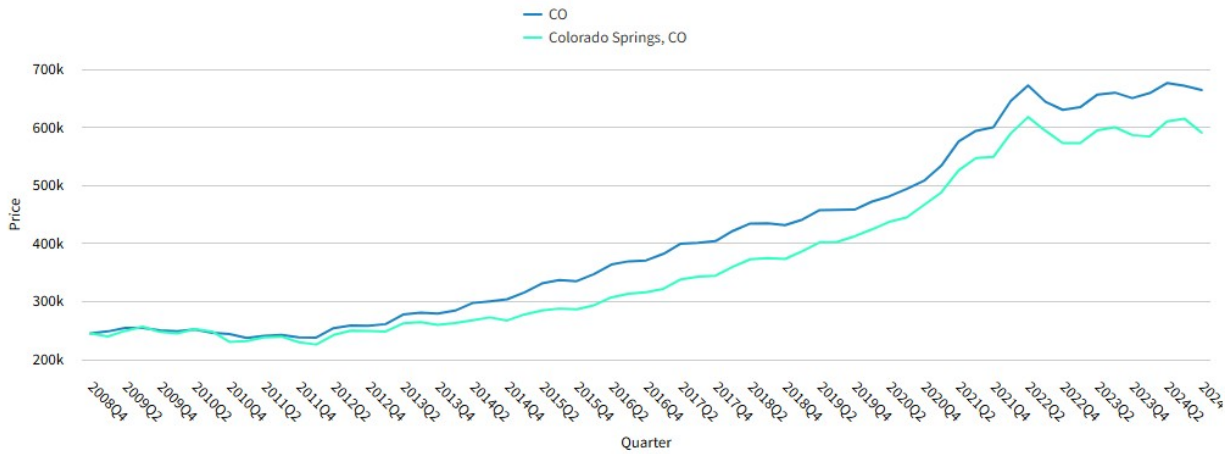
This 100 MW battery storage system was built in 2025.



I identified a sale at 7725 Antelope Meadows Circle, Peyton, Colorado that is located 470 feet east of the northern section of batteries. Since this home backs up to a powerline and the substation that pre-existed the batteries, I could only do a Sale/Resale analysis on this home. The substation and powerlines existed in proximity to this home both in the earlier sale and the sale after the BESS, so it accurately identifies any changes associated with the BESS only.

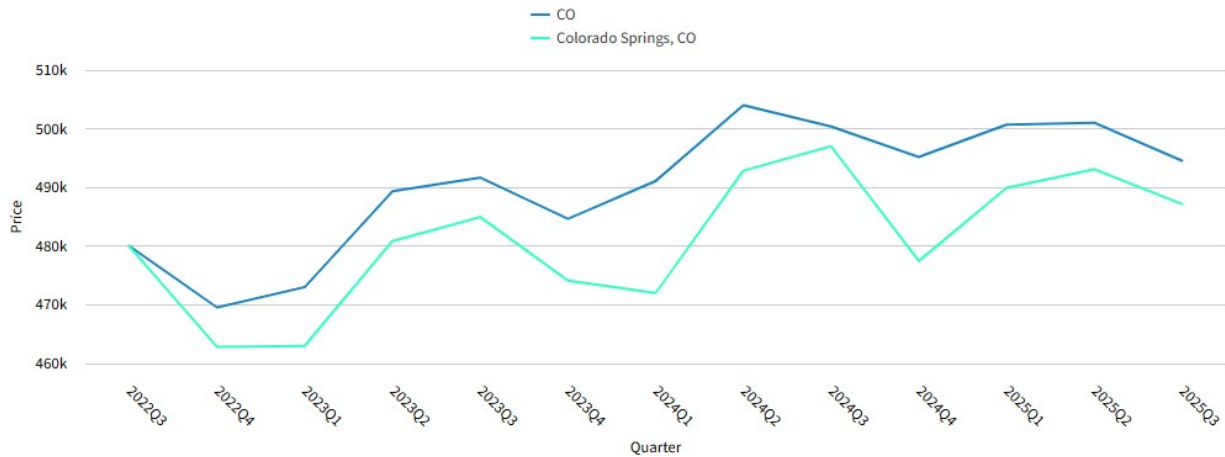
This home sold during the construction of the batteries on September 9, 2024 for \$565,000 for this 2,790 s.f. home with 3 BR, 3.5 BA built in 2006 with a 3-car garage on 0.52 acres. This same home sold on November 20, 2008 for \$245,000. Based on the FHFA House Price Index, the growth in value for this home was expected to increase from 2008 to the time of the 2024 sale to \$590,929. This is a difference of -5%. However, the tax card specifically notes that this was a sale between related parties, which likely explains the discount. Even if you treat this as an arm's length transaction, it still supports a finding of no impact as it is within typical market imperfection.

Estimated Value for MSA: \$590,929	Estimated Value for State: \$664,493	MSA Percentage Change: 141.2%
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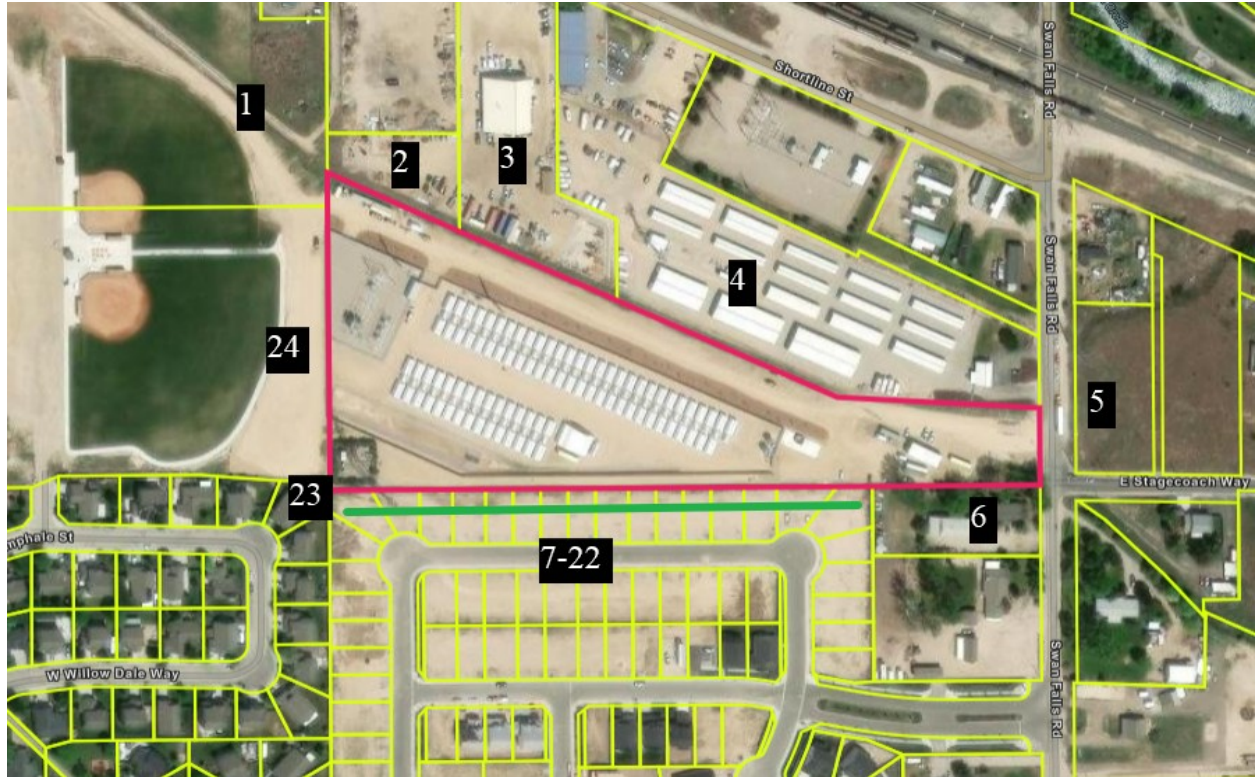
I also considered a sale at 7815 Antelope Meadows Circle that sold on January 6, 2026 for \$515,600. This home backs up to the lower section of the BESS and is 900 feet from the nearest equipment of the BESS. This is a 2,996 s.f. 2-story home, with 3 BR, 2.5 BA, built in 2007 on 0.29 acres with a 2-car garage. This home last sold on July 20, 2022 before the BESS for \$480,000. Based on the FHFA HPI, the home should have increased to \$487,182 by 3rd quarter 2025. The FHFA HPI is not current beyond that date, but the sales price is currently showing a 6% increase over the anticipated value which strongly supports a finding of no impact on property value.

Estimated Value for MSA: \$487,182	Estimated Value for State: \$494,561	MSA Percentage Change: 1.5%
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48 – Kuna BESS, Kuna, ID

This battery storage system is located at 411 S Swan Falls Road in Kuna, ID and was built in 2025 for this 150 MW facility.



There is a new subdivision being developed just south of this BESS with new homes being sold, but at this time I don't have access to this sales data. This is an area that would likely provide good sales data as these are new homes being built with home sites as close as 100 feet from this project.

49 – Connolly BESS, Decatur, TX

This battery storage system is located at 116 County Rd 4511, Decatur, TX 76234 and was built in November 2024 but operational in 2025 for this 125 MW, 250 MWH facility.



I identified a sale of 5046 County Road 4010, Decatur for 2.62 acres of unimproved land on February 18, 2025 for \$125,000. This same property sold previously on March 27, 2023 for \$117,900. I considered a Sale/Resale analysis looking at the FHFA House Price Index and applied in to appreciation for this lot over that time period, which indicated it should have appreciated to \$123,260. The lot sold for \$125,000 after the project was built, which strongly supports a finding of no impact. The likely homesite on this lot is 630 feet based on the homes built on either side of this lot.

Estimated Value for MSA: \$121,837	Estimated Value for State: \$123,260	MSA Percentage Change: 3.34%
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50 – Beebe Substation Battery Storage, Wakefield, Massachusetts

This 3 MW battery storage system is in Wakefield, Massachusetts built in 2019. The closest adjoining home is 150 feet away to the southwest.



I looked at 4 Twilight Road to the south that is 600 feet away. It sold in September 2023, but that home is closer to a large powerline easement that makes it difficult to complete a paired sales analysis.

I also looked at 22 Pheasant Wood Drive that sold on August 2023 for \$1,050,000 for a 3,038 s.f. brick ranch with 3 BR, 3.5 BA, 2 car garage built in 1992 on 0.33 acres. This home has a finished basement with a full in-law suite with kitchen. The price per square foot works out to \$345.62. This home is 480 feet to the north of the battery system.

I have compared this to 7 June Circle that sold December 2023 for \$1,109,000 for a 3,473 s.f. 2 story home built in 1971 on 0.36 acres. The home has 5 BR, 4.5 BA, 2 car attached garage and 2 car detached garage with finished basement and a pool. The purchase price works out to \$319.32 per s.f. Adjusting this price upward by 10% for the difference in year built, this price is adjusted to \$351.24 per s.f. and multiplying that by the square footage at 22 Pheasant Wood Drive works out to \$1,067,067. This is within 1.6% of the Pheasant Wood sale and supports a finding of no impact on value.

51 – Gateway BESS, 641 Camino De La Fuente Court, San Diego, California

This 250 MW/250 MWH battery storage system is broke into fire on May 15, 2024 with periodic flare ups until May 28, 2024. This system began operation in August 2020 and is adjacent to the Pio Pico and Otay Mesa natural gas-fired power station.



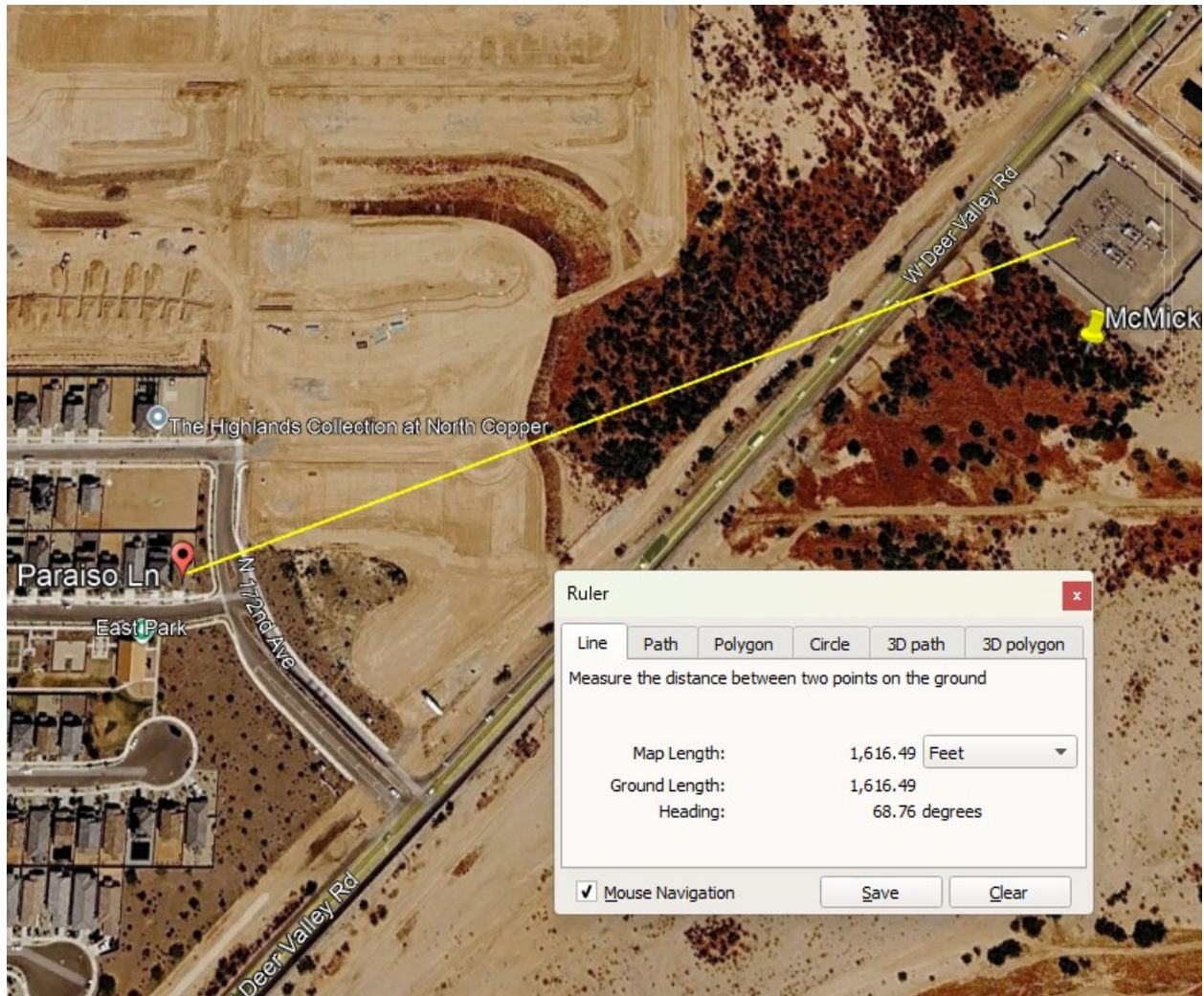
The data around this project is not readily useful for this type of analysis given the surrounding industrial uses, significant open space, and the Mexico border that is in close proximity to the south. The closest home that I identified on the USA side of the border is over 3 miles away. There are some apartments that are closer but they are not well suited to this type of analysis.

52 – McMicken BESS, W Deer Valley Road, Surprise, Arizona

This 2 MW/2.16 MWH battery storage system is located off W Deer Valley Road. This system had a reported explosion and fire in April 2019. This system was built in 2017. This system was decommissioned after the fire. I have pulled data that is Before and After this fire for impact, but this is considered less useful given the battery itself was retired following the fire.



The map below shows nearby residential uses to the north and the west. Just off the map to the southeast is additional housing. I have focused on looking at homes to the north and the west, which are the closest nearby homes to this BESS.



I have compared this to other homes that sold in a similar time frame in this market but further from the BESS as shown below. I had difficulty in finding similar 2-story homes in this market as most are 1-story. So the comparables considered are in the same development but further to the west at distances as shown in the chart.

The analysis actually shows that the home closest to the BESS sold for more per square foot and more overall than any of the similar homes that were further away, including the one that sold within 30 days of the closer home with an identical floorplan.

BESS	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style
Nearby	17208 W Paraiso	0.10	11/20/2025	\$423,965	2025	1,957	\$216.64	3/2.5	2-Car	2 Story
Not	17386 W Patrick	0.10	9/24/2024	\$400,000	2022	1,850	\$216.22	3/2.5	2-Car	2 Story
Not	17395 W Villa Chula	0.08	11/24/2025	\$405,000	2025	1,894	\$213.83	3/2.5	2-Car	2 Story
Not	17287 W Patrick	0.10	12/15/2025	\$421,470	2025	1,957	\$215.37	3/2.5	2-Car	2 Story

Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
17208 W Paraiso							\$423,965			1616
17386 W Patrick	\$12,000	\$6,000	\$9,254		\$0	\$0	\$427,254	-1%		2608
17395 W Villa Chula	\$0	\$0	\$5,389		\$0	\$0	\$410,389	3%		2726
17287 W Patrick	\$0	\$0	\$0		\$0	\$0	\$421,470	1%		2020
									1%	

I have also considered a sale at 17217 W Daley Lane that sold for \$397,000 on August 28, 2025 for this 3 BR, 2 BA, 1,388 s.f. ranch with 2-car garage built in 2025 on 0.17 acres. This home is 1,720 feet from the nearest electrical component of the BESS as shown in the map below. As this is a ranch I can compare it to homes much further away as this is a much more common design in this area.



I have compared this home sale to similar one-story homes in the market but over 1-mile from the BESS. The data shows no impact on the home value relative to similar homes over 1-mile from the BESS.

Nearby Residential Sales After Fire

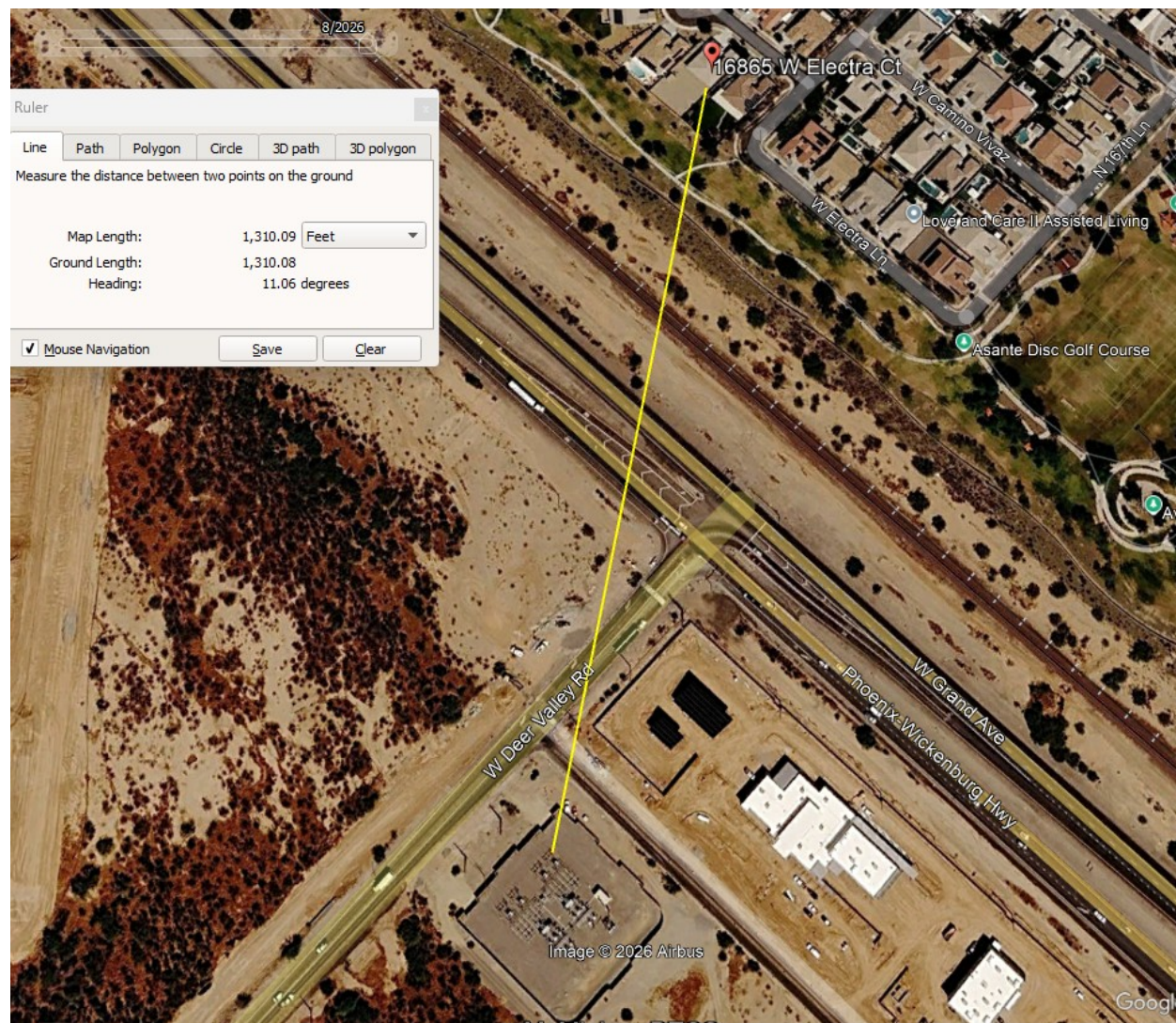
	BESS	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style
#	Adjoins	17217 W Daley	0.17	8/28/2025	\$397,000	2025	1,388	\$286.02	3/2	2-Car	Ranch
	Not	25493 N 173rd	0.12	11/24/2025	\$415,480	2025	1,411	\$294.46	3/2	2-Car	Ranch
	Not	17032 W Cavedale	0.13	8/25/2025	\$394,990	2025	1,440	\$274.30	3/2	2-Car	Ranch
	Not	16996 W Fetlock	0.13	6/30/2025	\$395,388	2025	1,460	\$270.81	3/2	2-Car	Ranch

Adjoining Sales Adjusted									Avg	
Address	Time	YB	GLA	BR/BA	Park	Other	Total	% Diff	% Diff	Distance
17217 W Daley							\$397,000			1720
25493 N 173rd	-\$3,081	\$0	-\$2,709		\$0	\$0	\$409,690	-3%		
17032 W Cavedale	\$0	\$0	-\$5,705		\$0	\$0	\$389,285	2%		
16996 W Fetlock	\$1,966	\$0	-\$7,799		\$0	\$0	\$389,554	2%		
									0%	

Given the nature of this assignment I have attempted to locate homes that were built and had sold prior to the BESS Construction in 2017 or prior to the fire in 2019 that have sold again since that time in order to provide a Sale/Resale analysis. This is a better method for isolating impacts when the only adjustments required between the first and second sale is a time adjustment which I have supported by using the Federal Housing Finance Agency House Price Index for the Phoenix AZ MSA.

All of the nearby homes to the west are of newer construction and that new construction is very telling from the fact that the developer would not be investing in that location if they anticipated negative impacts for homes in that area. But given they are all newer to the west, the Sale/Resale analysis is limited to homes that are located to the north as being nearby and pre-existing the BESS and/or BESS fire.

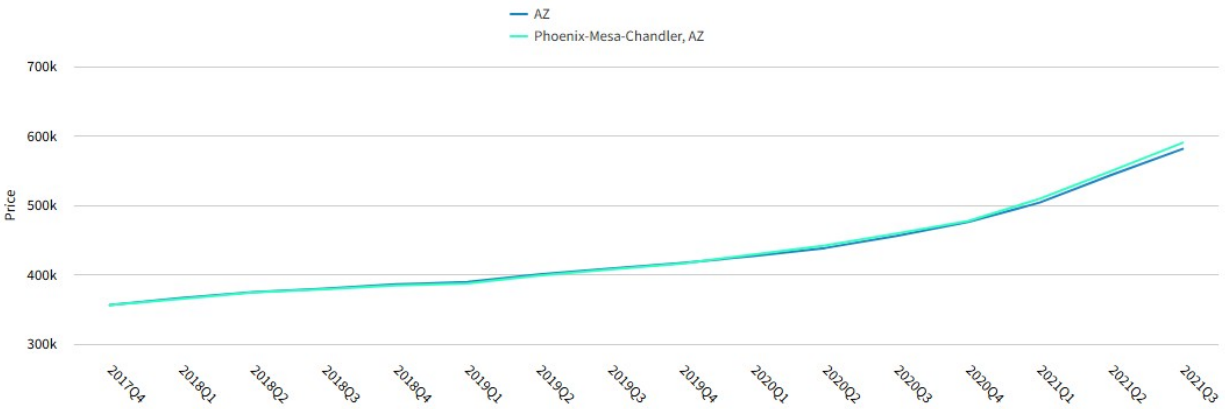
I identified a sale at 16865 W Electra Court that sold on December 22, 2017 for \$356,190 for this 4 BR, 3 BA, 2,860 s.f. ranch with 2-car garage built in 2017 on 0.32 acres. This home sold after the BESS was built but before the fire. This same home sold again on September 13, 2021 for \$595,000. Using the FHFA HPI the 2017 sale was expected to increase to \$581,275. This suggests a 3% positive impact, which is typical market imperfection and well supports a finding of no impact on property value (and not enhancement).



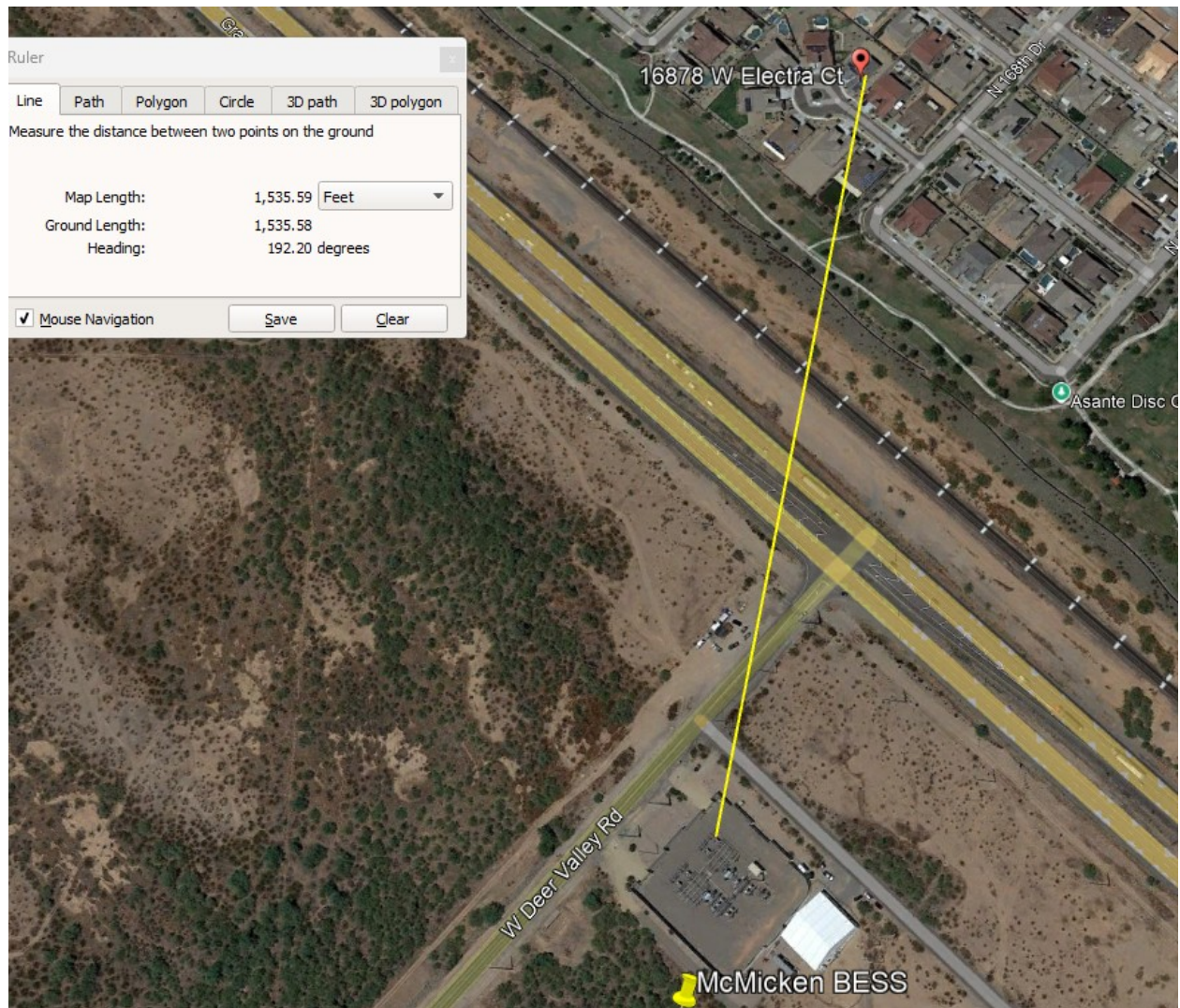
Estimated Value for MSA: \$590,184

Estimated Value for State: \$581,275

MSA Percentage Change: 65.69%



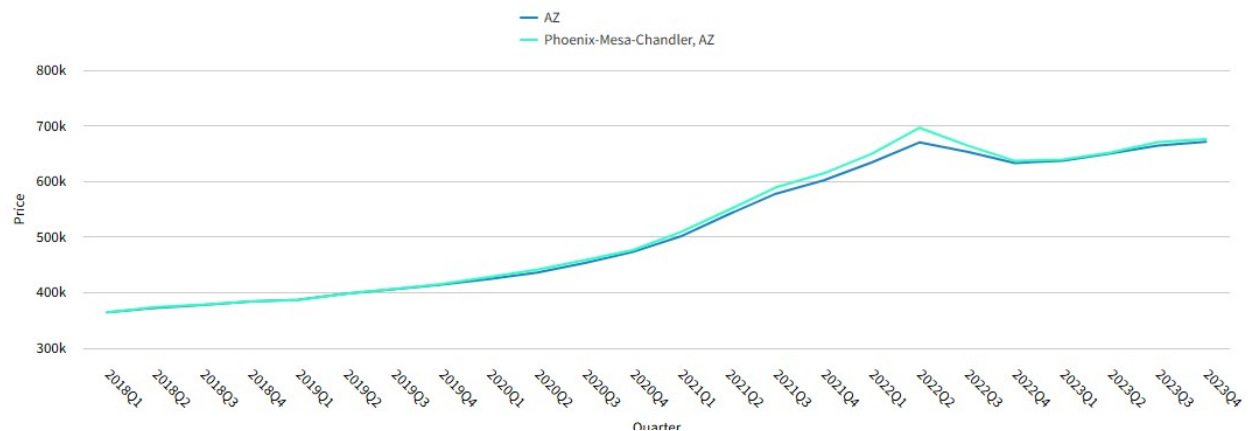
I identified a sale at 16878 W Electra Court that sold on February 23, 2018 for \$344,290 for this 4 BR, 3 BA, 2,599 s.f. ranch with 2-car garage built in 2017 on a 0.24-acre lot. This home sold again on November 16, 2023 for \$640,000. Between these two sales a pool was built in 2019. A Redfin analysis from 2019 identified that pools add approximately 5.87% of a home value or about \$11,591. I have used that information to adjust the earlier 2018 purchase price upward to \$364,500 for this analysis. The FHFA HPI shows the earlier sale was expected to appreciate to \$675,985, which suggests a -5% impact from the BESS fire. This is at the edge of market imperfection but still within the range. This home is 1,535 feet from the BESS equipment.



Estimated Value for MSA: \$675,985

Estimated Value for State: \$671,261

MSA Percentage Change: 85.46%



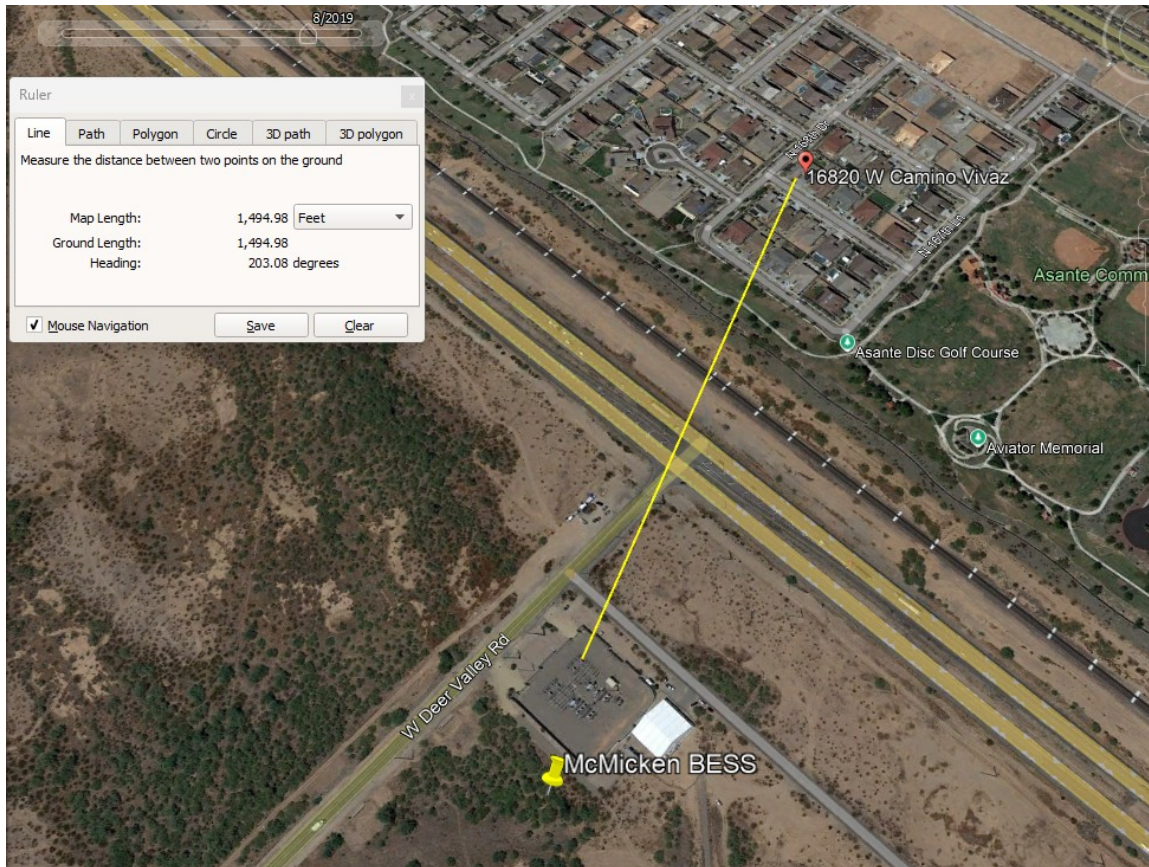
I identified a sale at 16820 W Camino Vivaz that sold on September 29, 2017 for \$374,390 for this 5 BR, 3 BA, 2,959 s.f. ranch with 2-car garage built in 2017 on 0.23 acres. This home sold again on October 2, 2024 for \$603,700. The FHFA HPI indicates the home should have appreciated to \$736,781. This is a substantial difference and suggests a problem with the model in that this home was already at the high end of the market in 2017 for the first sale and it did not appreciate at the same rate as average homes.

For comparison, I have compared this home sale to similar homes in the market that sold in the same time frame but focusing on homes that are more than 1-mile from the BESS. Given the paired sales data I see no basis for any impact from proximity to the BESS and the calculated method using the FHFA HPI is clearly significantly off the market and not reliable for that comparable sale.

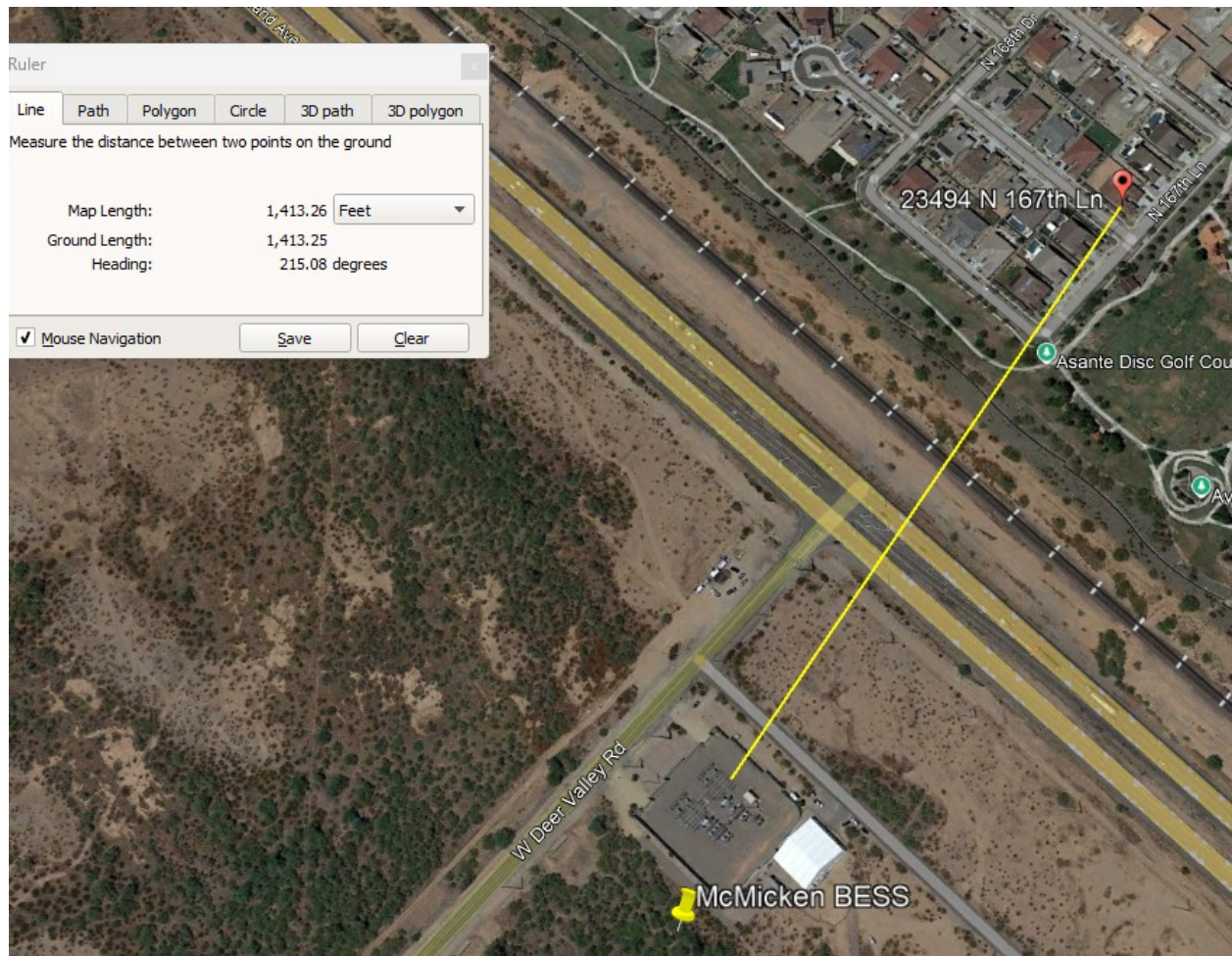
Nearby Residential Sales After Fire

BESS	Address	Acres	Date Sold	Sales Price	Built	GBA	\$/GLA	BR/BA	Park	Style
Nearby	16820 W Camino	0.23	10/2/2024	\$603,700	2017	2,959	\$204.02	5/3	2-Car	Ranch
Not	24477 N 170th	0.21	6/20/2024	\$609,990	2024	2,862	\$213.13	4/3	2-Car	Ranch
Not	24498 N 172nd	0.24	2/1/2024	\$600,000	2024	2,862	\$209.64	4/3	2-Car	Ranch
Not	16063 W Charlotte	0.15	5/17/2024	\$640,000	2022	3,095	\$206.79	5/4	2-Car	Ranch

Address						Adjoining Sales Adjusted		Avg		Distance
						Time	YB	GLA	BR/BA	
1011 Plymouth										1494
1630 Haverhill						\$6,100	-\$21,350	\$8,270		
1720 Williams						\$12,000	-\$21,000	\$8,134		
1710 Cambridge						\$12,800	-\$16,000	-\$11,249	-\$10,000	
										0%



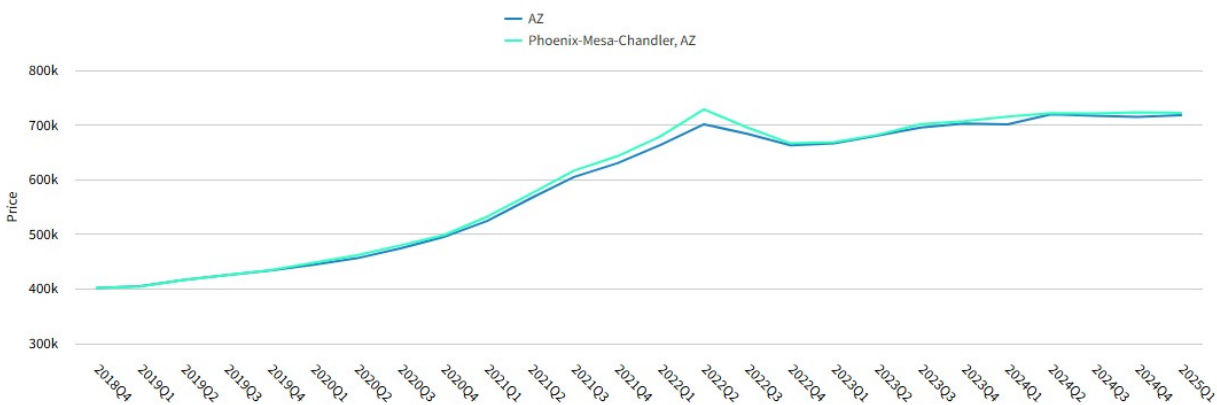
I identified a sale at 23494 N 167th Lane that sold on November 30, 2018 for \$379,500 for this 5 BR, 3 BA, 2,848 s.f. home with 3-car garage built in 2018 on 0.24 acres. This home is 1,413 feet from the nearest BESS equipment and is across the street from a large park. A pool was built in 2019 which requires adjusting the 2018 purchase price upward by 5.87% as noted earlier for an adjusted starting price of \$401,777. This home sold again on January 22, 2025 for \$725,000. Using the FHFA HPI this should have appreciated between those two sales to \$722,315. This is very closely supported by the actual sales price which actually closed slightly higher but essentially at this price. I considered comparing this to other sales to check on the sales price similar to the 16820 W Camino sale, but the pool and the proximity to the park make it more challenging as this is a very well situated home. The Sale/Resale supports a finding of no impact on property value and the other comparable sales in the area were inferior in that they did not have frontage/proximity to the large park.



Estimated Value for MSA: \$722,315

Estimated Value for State: \$717,819

MSA Percentage Change: 79.78%



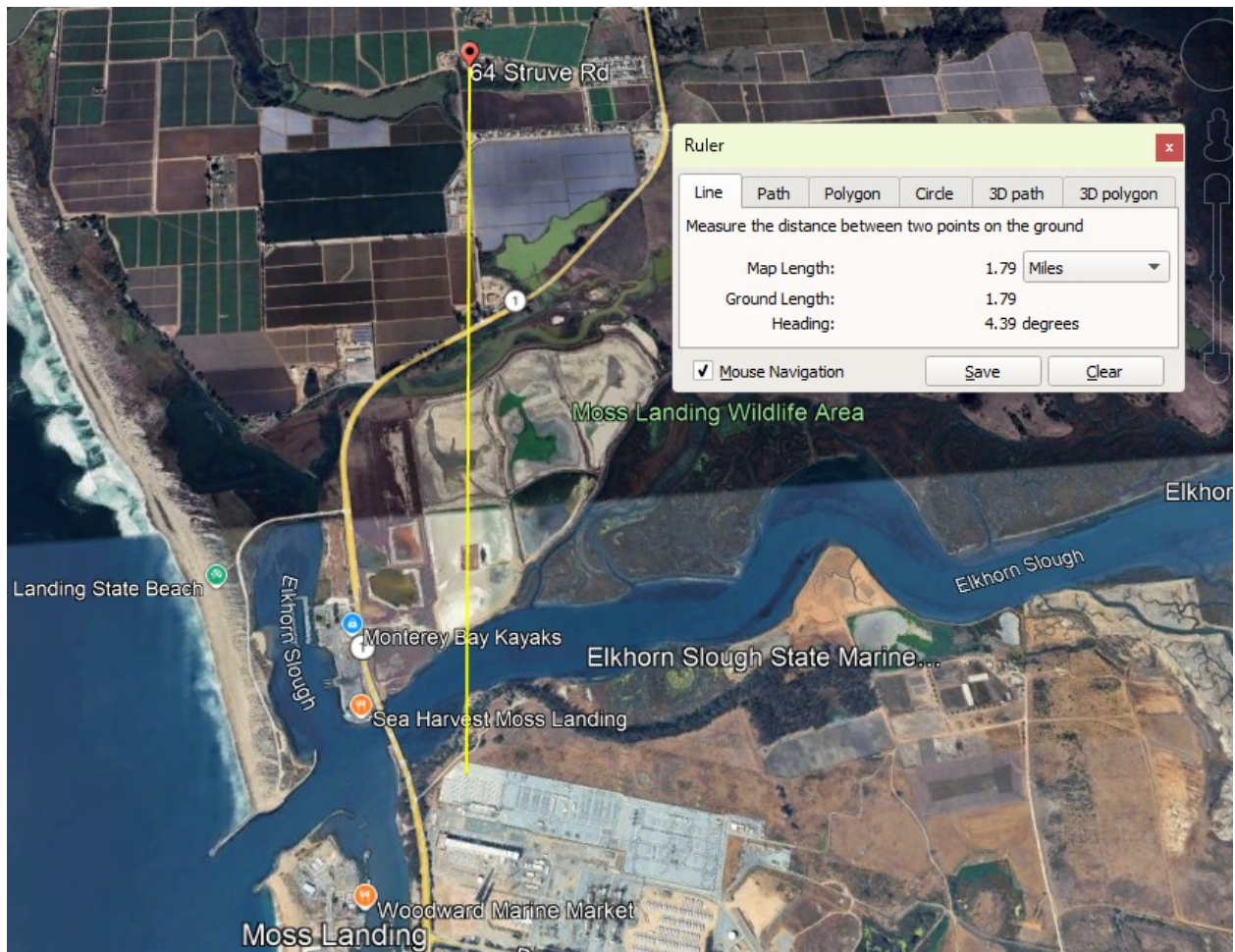
53 – Moss Landing BESS, 7301 Highway 1, Moss Landing, California

This 300 MW battery storage system is located at the Moss Landing Vistra Power Plant.

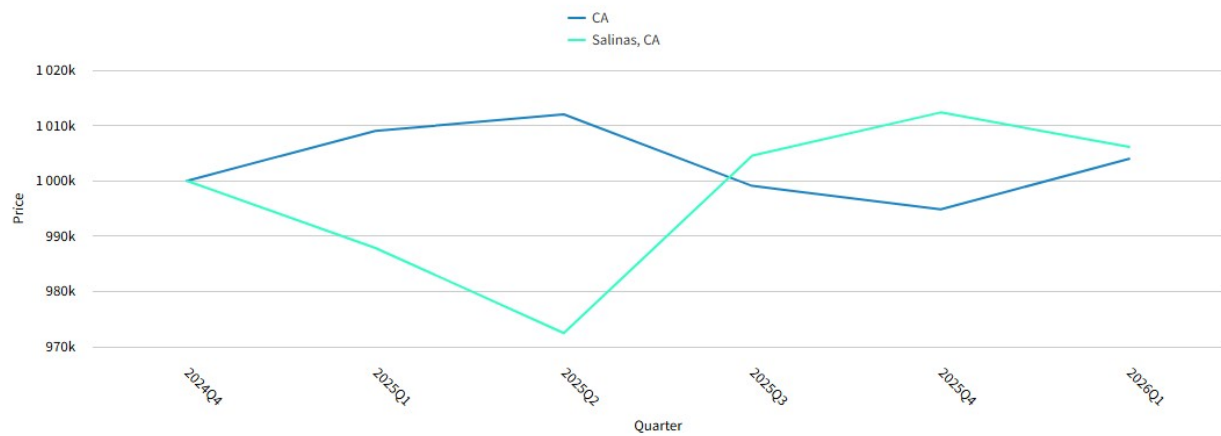


The closest adjoining home is 340 feet from the BESS and is located directly to the north. This is the parcel labeled “1” in the map above. This home is currently on the market but it is very challenging to do any comparative analysis on this site. This property is 86.93 acres of land with what is described in the listing as a “Family Compound, Private Retreat Center. The property has 4,000 feet of water frontage and has historic significance as well as being in an environmentally and ecologically important areas being in the Audobon top 10 birdwathing destinations. The property includes four residential structures, a cabin/studio and a studio/office with multiple out buildings. I reached out to the broker, Paul Zech at 831-247-3007, for comments on the listing and whether he believes the fire had any impact on the marketing of this property.

I identified a sale at 64 Struve Road that sold on April 23, 2026 for \$1,030,000 for this 2,541 s.f. ranch with 3 BR, 2 BA built in 2004 on 5 acres. This same home sold on September 11, 2024 for \$1,000,000. Using the FHFA HPI, the home was expected to appreciate to \$1,003,974 as shown in the chart below. This strongly supports a finding of no impact from the fire on this home. This home is 1.79 miles from the BESS as shown in the map below. I also reached out to the listing broker Shiing Li at 415-613-0084.



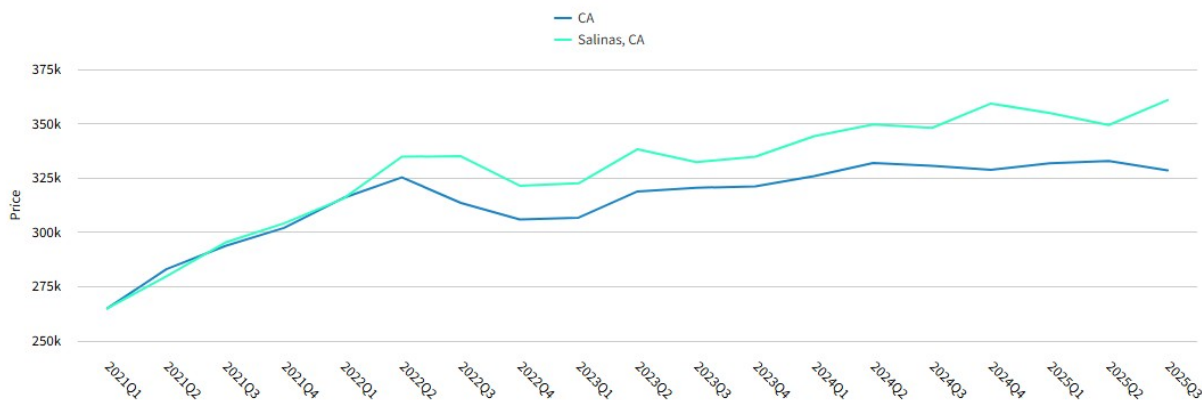
Estimated Value for MSA: \$1,006,136	Estimated Value for State: \$1,003,974	MSA Percentage Change: 0.61%
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I also identified a sale at 1900 Highway 1 Spc 94 that sold on August 22, 2025 for \$385,000 for this 1,502 s.f. doublewide with 3 BR, 2 BA built in 2005 within a mobile home park. It had previously sold on April 12, 2021 for \$265,000. The FHFA HPI indicates it was expected to appreciate to \$328,537 between those two sales, which strongly supports a finding of no impact from the BESS fire. This home is 1.77 miles from the BESS.



Estimated Value for MSA: \$360,915	Estimated Value for State: \$328,537	MSA Percentage Change: 36.19%
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I also identified a sale at 8507 Laguna Place that sold on February 23, 2026 for \$915,000 for this 3 BR, 2 BA, 1,262 s.f. ranch with a garage built in 1968 on 0.18 acres. This home last sold in 2005, which is too long ago for Sale/Resale. Given the proximity to the coast and the powerplant it is challenging to do a matched pair analysis on this sale. I do note that the original asking price was \$895,000 and sold for \$20,000 over the asking price. This is 1.2 miles from the BESS, but it is 0.25 miles from the beach and the powerplant lies between this home and the BESS.



I also identified a sale at 501 Trail Road that sold on November 10, 2025 for \$850,000 for this 3 BR, 2 BA, 1,440 s.f. ranch with 2-car garage built in 1977 on 3.09 acres of land. This is 2.5 miles from the BESS location. This last sold in March 15, 2002 which is too long ago for Sale/Resale.



I also identified a lot sale at 5000 Laguna Place that is 0.23 acres that sold for \$375,000 on August 15, 2025 for this lot that backs up to Old Salinas River and is 0.25 miles from the beach and 0.50 miles from the powerplant. Given the proximity to the beach, powerplant and the uniqueness of the area I did not attempt any matched pair analysis and I did not find a former sale of this lot for Sale/Resale analysis.

54 – Paradise Energy Storage, Skyline Drive, San Diego, California

This system is located on the north side of Skyline Drive in close proximity to numerous homes and directly north of Morse High School.



55 – Condor Energy Storage, 21658 W Main Street, Grand Terrace, California

This system is located on the north side of W. Main Street adjoining the Grand Terrace High School as shown in the map below as well as near significant housing to the southeast.



Summary

From the sales data presented on the prior pages, I was able to compile the following summary of the findings. While I looked at all of the identified BESS projects for sales data, these are the ones that had sales data that could be analyzed. I did identify a number of areas where additional research could be continued, especially in Idaho.

Residential Dwelling Sale/Resale and Paired Sale Analysis/Broker Opinion

Pair	BESS#	BESS	State	MW	Approx Distance	Address	Date	Sale Price	Adj. Sale Price	% Diff	Sound Wall
1	1	Diablo	CA	200	605	401 Travis	Jun-23	\$665,000			4 ft
						401 Travis	Jul-17	\$425,000	\$671,500	-1%	
2	3	Gambit	TX	102.4	180	852 Marshall	Apr-21	\$165,000			8 ft
						521 Catalpa	Sep-20	\$155,000	\$164,375	0%	
3	6	Vista	CA	40	100	508 Dove	Apr-23	\$740,000			Yes
						508 Dove	May-02	\$258,000	\$714,660	3%	
4	7	Outer Cape	MA	25	425	72 Race Point	Aug-24	\$1,400,000			Yes
						72 Race Point	Oct-08	\$625,000	\$1,331,250	5%	
5	10	McHenry	IL	20	290	209 N Dale	Jun-21	\$265,000			No
						3802 Clover	Oct-21	\$231,000	\$267,498	-1%	
6	18	Asheville	NC	9	510	129 Graham	Nov-23	\$550,000			Yes
						129 Graham	Aug-17	\$298,500	\$544,000	1%	
7	18	Asheville	NC	9	335	106 Graham	Dec-25	\$399,000			Yes
						106 Graham	Nov-15	\$190,500	\$399,136	0%	
8	22	Littlefield	NY	4.3	100	89 Littlefield	Oct-24	\$695,000			Yes
						Broker Comment: Gennady Gary Papirov				0%	
9	23	Ozone	NY	3	345	10726 101st	Oct-18	\$600,000			Yes
						10762 101st	Oct-18	\$590,000	\$590,000	2%	
10	38	Jackson Ful	CO	100	470	7725 Antelope	Sep-24	\$565,000			Yes
						7725 Antelope	Nov-08	\$245,000	\$590,929	-5%	
11	38	Jackson Ful	CO	100	900	7815 Antelope	Jan-26	\$515,600			Yes
						7815 Antelope	Jul-22	\$480,000	\$487,182	6%	
12	49	Connolly	TX	125	630	5046 CR 4010	Feb-25	\$125,000			No
						5046 CR 4010	Mar-23	\$117,900	\$123,260	1%	
13	50	Beebe	MA	3	480	22 Pheasant Wood	Aug-23	\$1,050,000			No
						7 June Cir	Dec-23	\$1,109,000	\$1,067,067	-2%	

Comparable Stats

	Avg. MW	Distance		Indicated Impact
Avg	56.98	413	Average	1%
Med.	25.00	425	Median	0%
High	200.00	900	High	6%
Low	3.00	100	Low	-5%

Comparable Stats Over 100 MW

	Avg. MW	Distance		Indicated Impact
Avg	125.48	557	Average	0%
Med.	102.40	605	Median	0%
High	200.00	900	High	6%
Low	100.00	180	Low	-5%

The sales data includes 5 sales comparables adjoining projects of 100 MW or larger and they show very consistent findings with the larger data set with the exception of the larger buffer. Overall the buffer averages about 400 feet, while the larger projects have buffers averaging 550 feet. The closest comparable identified for analysis to a 100 MW or larger facility is at Gambit in Texas at 180 feet.

Only one of the data points for over 100 MW has no soundwall and that sale shows no impacts at 630 feet in Connolly in Texas. I do note that the Diablo project in California is a 200 MW facility and it has just a 4 ft high wall that is not a typical soundwall but likely has some sound mitigation effect.

The Sale/Resale analysis set of data has impacts of -5% to +6% with an average of +1% and median of 0%. All of this strongly supports a finding of no impact on value as this is a very tight range and easily explained by market imperfection.

I also communicated with a broker involved in the sale of a home within 100 feet of Littlefield Energy Storage System in Staten Island who noted that the BESS was not a significant factor in the decision process.

It's also notable that the home prices involved show a wide range with adjoining home sales ranging from \$165,000 up to \$1,400,000.

Not included in the cart are the data points near the projects where recent fires were identified as the homes near McMicken are not considered as reliable as the other data points due to the fact that it was decommissioned after the fire. The Moss Landing data is all for homes over 1 mile from the project which makes it less useful but does support a finding of no impact on homes after a fire at such a distance.

Conclusion

I conclude that based on the comparable data presented that the proposed facility will not have a negative impact on adjoining property values. Furthermore, there are numerous examples in the data set of homes that are closer than that distance to batteries which reinforces the opinion developed based on the paired sales analysis and sale/resale analysis.

The two adjoining homes in proximity to the BESS are already in proximity to several large powerline easements that are in similar proximity to the homes as the proposed BESS.

I note that an article published in Summer 2016 in The Appraisal Journal by Ted Tatos, Mark Glick, PHD, JD and Troy A. Lunt, MAI titled **Property Value Impacts from Transmission Lines, Subtransmission Lines, and Substations** addresses substations in particular. They measured impacts around substations with value impacts for projects less than 50 meters and impacts for projects greater than 50 meters between home and substations. At greater than 50 meters they found no impact and at less than 50 meters they found -2.92% impact on home values. Given that 50 meters would be 164 feet and the closest electrical equipment will be 365 feet, I consider that to be additional strong support for no impact on property value. Substations are taller and harder to screen than a typical BESS operation.

Given the lack of impact for battery projects at distances as close as 100 feet, the nearby large powerlines, and this study, I consider the distance to the proposed BESS to be a non-factor and no impact would be expected.

VI. Specific Factors Related To Impacts on Value

I have completed a number of Impact Studies related to a variety of uses and I have found that the most common areas for impact on adjoining values typically follow a hierarchy with descending levels of potential impact. I will discuss each of these categories and how they relate to a battery energy storage system.

1. Hazardous material
2. Odor
3. Noise
4. Traffic
5. Stigma
6. Appearance

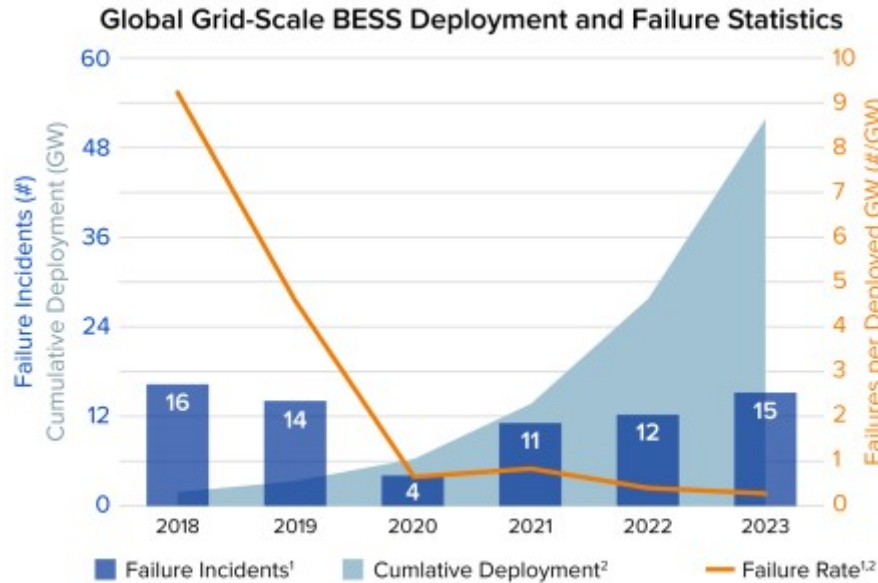
1. Hazardous material

Typically where hazardous material presents an impact on adjoining or nearby property values is due to pollution, risk of spillage, or other impacts that could get into the soil, water table, or into the air. Examples include heavy industrial uses, coal burning uses, or even some heavy agricultural uses.

According to Ms. Judy McElroy, president of Fractal Energy out of Austin Texas, she has been studying battery storage systems since 2012. She indicated that the risk of fire is very limited and that they typically use a closet system as a failsafe to contain and control if a fire did occur. She indicated that any of the gases that would escape from such a fire would be similar to the chemicals that would be released if your kitchen garbage caught on fire and therefore no risk to the surrounding properties even in such an extreme situation.

A battery storage facility presents no potential hazardous waste byproduct as part of normal operation. According to Ms. McElroy, there is no risk to the soils, water supply, or air from the operation of a battery storage facility.

The EPRI Battery Energy Storage System Failure Incidence Database was initiated in 2021 as part of BESS safety research and tracks data back to 2018 globally. The following chart shows that while incident rates are relatively consistent across the time period, the actual failure rate has dropped precipitously on a failure per GW. So despite substantial growth of over 8 times the GW installed since 2020 to 2023, the failure rate is dropping.



Based on that information I conclude that the proposed battery storage system does not have the characteristics of a hazardous material byproduct and no related external obsolescence on adjoining property value.

2. Odor

Odor is the next category that has the second highest potential impact on nearby property values. Odor is an impact often considered with waste water treatment facilities, solid waste facilities, manufacturing, and related uses. There is no significant odor related to a battery storage system and therefore no impact on adjoining or nearby properties related to odor.

3. Noise

Noise is the next category that has the next highest potential for impact on property values. Noise impacts are found near airports, railroads, heavy industry, or other significant generators of noise including outdoor music venues and the like.

I have reviewed three different noise studies by three different experts on this topic specific to BESS, which all support a finding of no impact on property value related to noise concerns.

The systems shown in the market data include a system adjoining a school, a church, and in close proximity to numerous homes including rural homes near park land. I conclude that the battery storage system is not a significant contributor to noise at the distances identified for this project and therefore would not have a negative impact on adjoining property values.

4. Traffic

Traffic impacts come from traffic patterns related to a site that could cause queuing outside the property or putting too much new traffic within a confined area.

The battery storage system would be remotely monitored and other than occasional maintenance would not have a significant number of trips per day. In fact it would have fewer trips per day than

a single-family dwelling. I therefore conclude that traffic related to this use will not have a negative impact on adjoining property values.

5. Stigma

There is a possibility of stigma associated with battery storage facilities, but again the data presented shows no impact on property value which suggests this possibility is low or not significant enough to impact property value.

Stigma is most often associated with adult establishments and would not typically be connected with infrastructure like this use.

6. Appearance

Appearance or viewshed impacts are typically more for scenic areas where there could be premiums for a view, but also include negative impacts related to less aesthetic uses in proximity to housing. This is a category that could be considered for a battery storage facility.

However, the boxes will be screened by the existing wooded buffer. The distances to the nearest homes are further than what was identified in many of the other BESS examples, which substantially mitigates visual impacts even if there were not a landscaping screen.

Substations are much taller and harder to effectively screen, whereas the proposed battery storage use would be lower to the ground. Furthermore, the wind turbines in the area are much larger and are necessarily unscreened.

Given the similar use of screens for taller substations, I consider this a good mitigation method for the appearance of the subject property.

Whenever you consider the impact of a proposed project on viewshed or what the adjoining owners may see from their property it is important to distinguish whether or not they have a protected viewshed or not. Enhancements for scenic vistas are often measured when considering properties that adjoin preserved open space and parks. However, adjoining land with a preferred view today conveys no guarantee that the property will continue in the current use. Any consideration of the impact of the appearance requires consideration of the wide variety of other uses a property already has the right to be put to which could include significant industrial structures.

VII. Conclusion

The proposed use of the subject property is consistent with adjoining agricultural and residential uses as shown by the similar projects. They also show compatibility with schools, churches, apartments, and parks.

The market data in seven different states illustrate that the battery storage facilities had no impact on the nearby home sales prices at ranges as close as 100 feet so long as a sound wall is employed and as close as 290 feet if no soundwall is employed. The closest home at the subject property will be 365 feet.

The breakdown of potential factors that cause a negative impact (or external obsolescence) on adjoining property value shows how each factor of concern is mitigated or otherwise addressed, for example the appearance, which is well addressed through the landscaping and setbacks. Landscaping was a mitigating factor used with many of the projects identified.

Based on those various considerations, I conclude that there is no reasonable basis to anticipate a negative impact on adjoining property value.



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PROFESSIONAL EXPERIENCE

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PROFESSIONAL AFFILIATIONS

MAI (Member, Appraisal Institute) designation #11796	2001
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NC State Certified General Appraiser # A4359	1999
VA State Certified General Appraiser # 4001017291	
SC State Certified General Appraiser # 6209	
KY State Certified General Appraiser # 5522	
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GA State Certified General Appraiser # 321885	
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OH State Certified General Appraiser # 2021008689	
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EDUCATION

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CONTINUING EDUCATION

Uniform Standards of Professional Appraisal Practice Update	2026
National Valuation Bias and Fair Housing Laws and Regulations	2026
Advanced Exam Preparation Course - ARA	2025
Valuation of Residential Solar	2025
Fair Housing Bias and Discrimination	2025
The Cost Approach	2025
Uncovering and Valuing Current Luxury Home Trends	2025
Uniform Standards of Professional Appraisal Practice Update	2024
ASFMRA Integrated Approaches to Value (A360)	2024
ASFMRA Best in Business Ethics	2023

Appraising Natural Resources Series – Oil, Gas & Minerals	2023
Appraisal of Industrial and Flex Buildings	2023
Commercial Land Valuation	2023
Fair Housing, Bias and Discrimination	2023
Pennsylvania State Mandated Law for Appraisers	2023
What NOT to Do (NCDOT Course)	2023
The Income Approach – A Scope of Work Decision	2023
Valuation of Residential Solar	2022
Introduction to Commercial Appraisal Review	2022
Residential Property Measurement and ANSI	2022
Business Practices and Ethics	2022
Uniform Standards of Professional Appraisal Practice Update	2022
Sexual Harassment Prevention Training	2021
Appraisal of Land Subject to Ground Leases	2021
Michigan Appraisal Law	2020
Uniform Standards of Professional Appraisal Practice Update	2020
Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book)	2019
The Cost Approach	2019
Income Approach Case Studies for Commercial Appraisers	2018
Introduction to Expert Witness Testimony for Appraisers	2018
Appraising Small Apartment Properties	2018
Florida Appraisal Laws and Regulations	2018
Uniform Standards of Professional Appraisal Practice Update	2018
Appraisal of REO and Foreclosure Properties	2017
Appraisal of Self Storage Facilities	2017
Land and Site Valuation	2017
NCDOT Appraisal Principles and Procedures	2017
Uniform Standards of Professional Appraisal Practice Update	2016
Forecasting Revenue	2015
Wind Turbine Effect on Value	2015
Supervisor/Trainee Class	2015
Business Practices and Ethics	2014
Subdivision Valuation	2014
Uniform Standards of Professional Appraisal Practice Update	2014
Introduction to Vineyard and Winery Valuation	2013
Appraising Rural Residential Properties	2012
Uniform Standards of Professional Appraisal Practice Update	2012
Supervisors/Trainees	2011
Rates and Ratios: Making sense of GIMs, OARs, and DCFs	2011
Advanced Internet Search Strategies	2011
Analyzing Distressed Real Estate	2011
Uniform Standards of Professional Appraisal Practice Update	2011
Business Practices and Ethics	2011
Appraisal Curriculum Overview (2 Days – General)	2009
Appraisal Review - General	2009
Uniform Standards of Professional Appraisal Practice Update	2008
Subdivision Valuation: A Comprehensive Guide	2008
Office Building Valuation: A Contemporary Perspective	2008
Valuation of Detrimental Conditions in Real Estate	2007
The Appraisal of Small Subdivisions	2007
Uniform Standards of Professional Appraisal Practice Update	2006
Evaluating Commercial Construction	2005
Conservation Easements	2005
Uniform Standards of Professional Appraisal Practice Update	2004

Condemnation Appraising	2004
Land Valuation Adjustment Procedures	2004
Supporting Capitalization Rates	2004
Uniform Standards of Professional Appraisal Practice, C	2002
Wells and Septic Systems and Wastewater Irrigation Systems	2002
Appraisals 2002	2002
Analyzing Commercial Lease Clauses	2002
Conservation Easements	2000
Preparation for Litigation	2000
Appraisal of Nonconforming Uses	2000
Advanced Applications	2000
Highest and Best Use and Market Analysis	1999
Advanced Sales Comparison and Cost Approaches	1999
Advanced Income Capitalization	1998
Valuation of Detrimental Conditions in Real Estate	1999
Report Writing and Valuation Analysis	1999
Property Tax Values and Appeals	1997
Uniform Standards of Professional Appraisal Practice, A & B	1997
Basic Income Capitalization	1996

CHARTER TOWNSHIP OF COMSTOCK

Department of Fire & Rescue

Matt Beauchamp
Fire Chief

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Comstock, Michigan 49041

Kevin Thompson
Deputy Chief

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Phone: (269) 345-9244 • Fax: (269) 345-8356

Michael Kessler
Fire Marshal

Date: June 23, 2026

To: Comstock Planning Commission

Re: Battery Energy Storage System / Fire Department Equipment Needs

A Battery Energy Storage System (BESS) facility introduces specialized fire and hazardous materials risks to the community. These incidents may involve thermal runaway, fire, explosion potential, toxic or flammable gas release, contaminated smoke, extended-duration operations, and evacuation or shelter-in-place decisions.

The following equipment and training needs would strengthen the Fire Department's ability to safely and effectively respond to these hazards. These resources would improve responder safety, support better incident command decisions, and help reduce risk to the public during a BESS-related emergency.

1. Self-Contained Breathing Apparatus (SCBA) Systems

The Department is requesting replacement and upgrade of fifty-six (56) self-contained breathing apparatus (SCBA) units, five (5) rapid intervention team (RIT) air packs, fifty-six (56) spare SCBA cylinders, and one (1) SCBA air compressor/cascade/fill station with new equipment meeting the most current applicable National Fire Protection Association (NFPA) standards. This would outfit all 3 fire stations.

SCBAs and related equipment are the top priority because they allow firefighters to safely breathe in smoke-filled, toxic, or unknown atmospheres. A battery fire or thermal runaway event can produce dangerous gases and smoke that may be immediately dangerous to life and health. Firefighters may need respiratory protection for fire attack, exposure protection, rescue, evacuation support, investigation, overhaul, air monitoring, and extended operations.

This equipment must be replaced as a complete, interoperable system to ensure safe and effective operations. All personnel need compatible facepieces, regulators, air cylinders, personal alert safety systems (PASS), RIT connections, filling connections, and maintenance procedures. Replacing only part of the system creates safety concerns, training issues, and operational confusion during multi-station responses.

SCBA is addressed through NFPA 1970, Standard on Protective Ensembles for Structural and Proximity Firefighting, Work Apparel, Open-Circuit Self-Contained Breathing Apparatus for Emergency Services, and Personal Alert Safety Systems. The previous NFPA 1981 and NFPA 1982 standards addressed SCBA and PASS requirements and remain useful reference points for existing equipment and service-life planning. The requested air compressor/cascade/fill station is also tied to NFPA 1989, Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection.

For planning purposes, the Department uses an estimated 15-year replacement cycle for SCBA equipment. The fill station is directly applicable because an extended-duration emergency may require repeated air cylinder changes and refilling. Without local refill capability, the Department's ability to safely continue operations could be limited.

2. Air Monitoring Equipment

The Department is requesting three (3) multi-gas air monitoring meters, three (3) photoionization detectors (PIDs) for detecting volatile organic compounds, three (3) hydrogen fluoride (HF) air monitoring devices, and the necessary calibration equipment to maintain these devices. This would outfit all 3 fire stations.

Air monitoring is the second priority. BESS emergencies may involve toxic, flammable, or otherwise hazardous gases that cannot be safely identified by sight or smell alone. Thermal runaway and battery failure may produce hazardous gases, including hydrogen fluoride, carbon monoxide, hydrogen, and other flammable or toxic products.

Multi-gas meters would allow responders to monitor for common hazardous atmospheres such as oxygen deficiency, carbon monoxide, hydrogen sulfide, and flammable gas levels. Photoionization detectors would allow responders to screen for volatile organic compounds that may be present in smoke, vapors, or other off-gassing conditions. Hydrogen fluoride monitoring is specifically applicable to lithium-ion battery failure because hydrogen fluoride can be produced during thermal runaway and may create a serious inhalation hazard.

Air monitoring gives the Incident Commander real-time information to help determine whether the atmosphere is safe for firefighters and whether additional public protective actions are needed. This capability supports decisions related to responder safety, hazard zones, evacuation or shelter-in-place recommendations, downwind monitoring, safe staging locations, re-entry into the area, and coordination with hazardous materials teams or environmental agencies. These decisions may need to be made early in an incident, before outside technical resources arrive.

NFPA 855, Standard for the Installation of Stationary Energy Storage Systems, addresses energy storage system fire protection, emergency planning, hazard mitigation, and related safety concerns. Air monitoring directly supports those goals by helping the Department identify atmospheric hazards during an emergency.

For planning purposes, the Department uses an estimated 5-year replacement cycle for air monitoring equipment due to sensor life, calibration needs, maintenance, and technology changes. This capability supports time-critical life safety decisions before outside technical resources arrive.

3. Thermal Imaging Cameras (TICs)

The Department is requesting ten (10) NFPA-rated thermal imaging cameras (TICs) with vehicle charging equipment. This would outfit all 3 fire stations.

TICs allow firefighters to evaluate heat conditions from a safer distance. During a battery energy storage emergency, this is especially important because responders may be operating around energized equipment, toxic smoke, flammable gases, and the possibility of delayed re-ignition or fire spread to nearby units.

Thermal imaging capability supports exposure monitoring, surface temperature checks, fire spread assessment, overhaul decisions, and command-level situational awareness. This allows crews to monitor heat conditions while limiting unnecessary exposure to hazardous areas.

The requested quantity is intended to provide two TICs on each engine, with additional units available for ladder, rescue, and special response apparatus. This helps avoid gaps when apparatus respond first-due, are committed to another incident, or are positioned at different access points during a large or extended-duration emergency.

Thermal imaging cameras for fire service use are addressed through NFPA 1801, Standard on Thermal Imaging for the Fire Service. For planning purposes, the Department uses an estimated 10-year replacement cycle for TICs, though replacement may be needed sooner based on damage, reliability, battery life, manufacturer support, or changes in technology.

4. Drone Program

The Department is requesting one (1) public safety drone program package with emergency response capabilities. The package includes two (2) drones: one (1) automated deployment drone and one (1) manually deployed drone, along with initial training for eight (8) operators and annual refresher training to maintain operator proficiency and program readiness.

A drone program would improve scene size-up and responder safety during a facility emergency involving battery energy storage. These sites may involve large areas, limited access, electrical hazards, smoke movement, and possible explosion or projectile hazards. In some situations, getting close enough to visually inspect the site may create unnecessary risk for firefighters.

The automated deployment drone would provide rapid initial situational awareness and allow command staff to begin assessing conditions early in the incident. The manually deployed drone would provide flexibility for extended operations, alternate launch locations, closer coordination with the Incident Commander, or use when the automated system is unavailable or not appropriate for the incident conditions.

This program would assist with identifying visible fire or smoke conditions, monitoring smoke movement, checking access points, identifying exposure concerns, supporting evacuation decisions, and reducing unnecessary firefighter exposure. If BESS equipment is marked or mapped for aerial identification, drone capability would also assist command staff in quickly identifying the involved area or unit.

The drone program is not a replacement for firefighters or required safety equipment, but it is a valuable situational awareness tool that enhances command decision-making while reducing firefighter exposure to unnecessary risk.

For planning purposes, the Department uses an estimated 10-year replacement cycle for the drone program equipment. Annual refresher training is needed to maintain operator skill, safe flight operations, and program readiness. The drone program should also comply with applicable Federal Aviation Administration (FAA) requirements for public safety drone operations.

5. Personal Protective Equipment / Turnout Gear

The Department is requesting twenty-five (25) sets of structural firefighting turnout gear to match current Department specifications. This would outfit half of our current roster.

Turnout gear is the protective clothing worn by firefighters during fire response, including the coat, pants, helmet, gloves, hood, boots, and related protective components. Turnout gear remains essential for operations involving heat, smoke, debris, and contaminated environments. During an energy storage system fire, firefighters may operate near fire conditions, contaminated runoff, damaged equipment, or smoke-impacted areas.

Structural firefighting personal protective equipment (PPE) is addressed through NFPA 1970, Standard on Protective Ensembles for Structural and Proximity Firefighting, Work Apparel, Open-Circuit Self-Contained Breathing Apparatus for Emergency Services, and Personal Alert Safety Systems. Selection, care, cleaning, maintenance, repair, and retirement of firefighting protective clothing are addressed through NFPA 1851, Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.

For planning purposes, the Department uses a 10-year replacement cycle for turnout gear, though gear may need to be removed from service sooner if damaged, contaminated, or unable to pass inspection.

This item is ranked below SCBA, air monitoring, and TICs because respiratory protection, atmospheric hazard identification, and temperature assessment are more immediate BESS-specific responder safety needs. However, adequate turnout gear is still necessary to support safe operations, crew rotation, and continued township coverage during a long-duration emergency.

6. Training and Site Familiarization

The Department is requesting initial BESS emergency response training, annual refresher training, site familiarization, and any training materials, props, or other resources needed to prepare responders.

Equipment alone is not enough. The Department also needs training before any BESS facility becomes operational and refresher training throughout the life of the project. Training should include site layout and access points, thermal runaway, battery fire behavior, electrical isolation, air monitoring, TIC use, hazard zones, evacuation and shelter-in-place decisions, defensive fire operations, water supply and runoff concerns, incident command, and coordination with facility representatives and hazardous materials teams.

NFPA 855 supports the need for emergency planning, hazard mitigation, and coordination with local emergency responders for stationary energy storage systems. Training and site familiarization help ensure that the Fire Department can apply emergency response plans in a way that matches local staffing, apparatus, equipment, and operating procedures.

Battery energy storage emergencies are low-frequency, high-risk events. Responders need site-specific training so they understand the hazards, the facility layout, the emergency contacts, and the safest operating procedures before an emergency occurs. Training ensures that personnel can effectively use the requested equipment and apply safe operational strategies during these types of incidents.

Summary

The Department's highest priority response needs are SCBA, air monitoring, and TICs. These directly affect responder safety and the Department's ability to operate in or near a toxic, hazardous, unknown, or heat-impacted environment.

Drone capability, turnout gear, and training also support safe and effective response, but they are secondary to ensuring firefighters can breathe safely, monitor the atmosphere, assess heat conditions, and make informed command decisions during the emergency.

These requests are based on the Department's actual operational needs for safe emergency response across all three stations, not reduced quantities tied to grant limitations. While the Department will continue to respond with the resources available, these improvements would provide a safer, more effective, and more prepared response capability for a BESS-related emergency.

Respectfully Submitted,



Matt Beauchamp
Fire Chief

CHARTER TOWNSHIP OF COMSTOCK

Department of Fire & Rescue

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MICHAEL KESSLER
Fire Marshal

To: Kyle Mucha, Zoning Administration
FROM: Michael Kessler
DATE: June 25, 2026
RE: Project Number 161262002

The Fire Marshal's office has reviewed the site plan for 65 N 30th Street, located in Comstock Township for compliance with NFPA 1 Fire Code 2024 and NFPA 855 Standard for the Installation of Stationary Energy Storage System.

Based upon the documentation provided, the Fire Marshal office has the following recommendation:

Approved
X Approved with Requirements (See below)
Not approved

Requirements:

With approval from the Planning / Zoning Board on the Battery Energy Storage System / Fire Department Equipment needs are meant.

Michael Kessler



Fire Marshal

FIRE DEPARTMENT CAPABILITY ANALYSIS

Comstock Fire and Rescue



PREPARED FOR

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Report #: 1MSN26002
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PREPARED BY

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JENSEN HUGHES

Revision Record Summary

Revision	Revision Summary
0	Initial Draft
1	Client Suggested Revisions
2	Revisions to Title Page
3	Fire Department Suggested Revisions

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Executive Summary

Copenhagen Infrastructure Partners (CIP) has proposed developing Swan and Cygnet Energy Storage in Comstock Charter Township, Michigan. The system will consist of battery compartment units and a power substation. The proposed development will be located on an approximate 39-acre site that is currently a golf course with farmland adjacent to the north.

Jensen Hughes was engaged to assess Comstock Fire and Rescue's current capabilities related to battery energy storage systems (BESS) and the anticipated impact of the Swan and Cygnet Energy Storage project. Key findings include:

- + **Department Readiness:** Comstock Fire and Rescue is a combination (career, part-time, and paid on call), all-hazards fire department with appropriate staffing, training, and equipment to support its response mission. The department operates from three (3) strategically located fire stations throughout the township, staffed with a combination of full-time, part-time, and paid-on-call personnel.
- + **Response Times:** The proposed development is well within the National Fire Protection Association (NFPA) 1750 benchmarks for arrival times, ensuring rapid emergency response.
- + **Impact of Incidents:** The anticipated impact of emergency incidents is extremely low because of the engineered systems and designed safety measures inherent to BESS facilities. The facility should not prove to be burdensome to the fire department or its members.
- + **Mutual Aid:** Comstock Fire and Rescue's existing local mutual aid and automatic aid agreements and their participation in the regional Michigan Mutual Aid Box Alarm System (MI-MABAS) ensure supplemental staffing, apparatus, and command support when incidents exceed local capacity.
- + **Infrastructure:** Comstock Fire and Rescue operates out of three (3) full-time staffed fire stations. Although their department needs to expand to keep up with operational demands, this problem existed before the Swan Energy Center's development. The department's fleet and equipment are suitable for the community's existing needs and for responding to the Swan and Cygnet Energy Storage after its installation.
- + **Special Considerations:** The fire department's members should receive initial and annual refresher training from experts on emergency response to BESS facilities. The department should also develop and maintain standard operating procedures or guidelines, collaborating with experts to ensure an effective emergency response for Swan and Cygnet Energy Storage.

The Swan and Cygnet Energy Storage project will not alter the current operational profiles within the fire department, and no significant gaps in emergency service delivery are anticipated. Comstock Fire and Rescue is well-positioned to maintain its current level of service after the project's completion, provided that ongoing collaboration among the township, the fire department, and the developer continues.

1.0 Project Overview

Copenhagen Infrastructure Partners (CIP) engaged Jensen Hughes to provide consultative services about emergency response for the proposed development of a battery energy storage system (BESS) in southwestern Michigan, known as Swan and Cygnet Energy Storage. The Authority Having Jurisdiction (AHJ) for the development is the Charter Township of Comstock. The Comstock Township Department of Fire and Rescue provides fire protection and emergency services in that area. Because the development could potentially impact the level of service that Comstock Fire and Rescue provides, CIP proactively commissioned a capability analysis of the fire department. Through a combination of virtual meetings, plan and document reviews, site visits, information gathering, and analysis, Jensen Hughes has evaluated the current level of service provided by Comstock Fire and Rescue and projected the impact on service levels after development is completed.

1.1 FIRE DEPARTMENT CAPABILITY ANALYSIS

A fire department capability analysis is a comprehensive assessment of a fire department's ability to respond to and mitigate emergencies within its service area effectively. The analysis evaluates the department's resources, training, service area, and response times. Emphasis is placed on assessing staffing and personnel, the department's apparatus and equipment, and the location and condition of fire stations.

Fire department capability analyses aim to assess the AHJ's current service delivery, identify gaps in service capability that may arise after development is completed, and suggest mitigation strategies.

1.2 BATTERY ENERGY STORAGE SYSTEMS

In today's rapidly evolving energy landscape, ensuring a consistent and reliable electricity supply is more critical than ever. Battery Energy Supply Stations offer a flexible and efficient solution by storing electricity and making it available precisely when needed.

These stations operate as large-scale, high-capacity battery systems that charge when electricity is available and discharge when demand rises, or supply is interrupted. This ability to shift energy use across time makes them essential to modern energy infrastructure.

Each station typically includes integrated battery units, often housed in containerized enclosures, along with a power conversion system that controls the flow of electricity. A battery management system oversees safety and performance, while an energy management system coordinates the station's overall operation. These technologies work together to deliver fast, reliable responses to the grid's needs.

Battery Energy Supply Stations enhance grid stability by responding instantly to fluctuations in electricity demand. They support peak load periods by supplying power when consumption is highest, reducing strain on the power grid and avoiding the need for costly backup generators. During a power outage, they can also provide backup electricity, ensuring essential systems continue to run without interruption.

Unlike traditional power plants, battery stations operate silently, require minimal maintenance, and produce no emissions. They can be installed close to where energy is needed, reducing transmission losses and improving overall system efficiency.

Battery Energy Supply Stations represent a more innovative and agile approach to energy management. They do not generate electricity; they store it and deliver it precisely, making our power systems more resilient, responsive, and prepared for future challenges.

1.3 KALAMAZOO COUNTY

Kalamazoo County is in southwestern Michigan between the metropolitan areas of Chicago and Detroit, providing access to major population centers and regional markets throughout the Midwest. The county encompasses approximately 562 square miles and is home to nearly 264,000 residents. Its communities include a mix of urban centers, suburban neighborhoods, agricultural lands, industrial areas, and rural townships.

The county is supported by an established transportation network that includes Interstate 94, U.S. Highway 131, several state highways, rail service, and the Kalamazoo/Battle Creek International Airport. These transportation corridors support the movement of residents, workers, commercial traffic, and goods throughout the region.

Kalamazoo County maintains a diverse economy centered on healthcare, higher education, manufacturing, life sciences, logistics, and professional services. Major institutions, including Western Michigan University, regional healthcare systems, and several large manufacturing employers, contribute to the local workforce and economic base. The combination of established communities, transportation access, educational institutions, and a varied employment base makes Kalamazoo County an important regional center within southwestern Michigan.



Figure 1 Kalamazoo County Boundaries

1.4 COMSTOCK CHARTER TOWNSHIP

Comstock Charter Township is a mature suburban community located immediately east of the City of Kalamazoo in southwest Michigan. Encompassing approximately 35 square miles and home to roughly 15,500 residents, the township serves as an important residential, commercial, and industrial hub within the greater Kalamazoo metropolitan area. Its strategic location along Interstate 94 and several major state highways provides excellent regional connectivity while supporting a diverse mix of land uses, including established residential neighborhoods, commercial shopping districts, manufacturing and industrial facilities, warehouses, schools, parks, and agricultural properties. Unlike many rapidly expanding suburban communities, Comstock has experienced relatively stable population growth, with development primarily occurring through redevelopment, commercial investment, and infill construction rather than large-scale residential expansion. This diverse land use pattern creates a broad range of emergency service demands, from residential fires and emergency medical incidents to commercial, industrial, transportation, and hazardous materials responses.

Comstock Township operates under Michigan's Charter Township Act, providing enhanced local governmental authority while retaining the township form of government. The township has been governed as a charter township since 1979 and is led by a seven-member elected Township Board consisting of a Supervisor, Clerk, Treasurer, and four Trustees, each serving four-year terms. The Township Board serves as the legislative and policy-making body responsible for adopting the annual budget, establishing local ordinances, overseeing municipal services, and guiding long-term community planning and development. Day-to-day administrative functions are carried out by professional staff under the direction of the township administration, allowing elected officials to focus on governance, fiscal oversight, and strategic policy decisions. This governance structure provides local control while supporting coordinated planning efforts necessary to meet the community's evolving needs in infrastructure, public safety, and economic development.

1.5 COMSTOCK FIRE AND RESCUE

Comstock Fire & Rescue provides all-hazards fire protection and emergency response services to Comstock Charter Township, protecting approximately 15,500 residents across nearly 35 square miles from three strategically located fire stations. The department operates as a combination organization, utilizing a hybrid staffing model that combines career firefighters with paid-on-call personnel to provide around-the-clock emergency response. Current deployment places a minimum of two (2) firefighters on duty at two of the township's three fire stations with a minimum of three (3) firefighters on duty at the remaining station, providing an immediate seven (7) person initial response that is supplemented by paid-on-call personnel for larger or extended incidents. In addition to fire suppression, the department provides emergency medical first response, technical rescue, hazardous materials response, fire prevention, code enforcement, fire investigations, public education, and community risk reduction programs. The department responds to more than 2,500 incidents annually, reflecting a steady increase in service demand and the community's diverse emergency response needs.



Figure 2 CFR Logo

Although Comstock is a relatively small suburban township, the department protects a complex and diverse hazard profile. Response responsibilities include established residential neighborhoods, commercial shopping

corridors, manufacturing and industrial facilities, warehouses, schools, agricultural properties, and numerous critical infrastructure assets. Major transportation corridors, including Interstate 94, state highways, and both freight and passenger rail lines, create a heightened risk for serious motor vehicle collisions, hazardous materials incidents, and transportation-related emergencies. The department also protects portions of the Kalamazoo River and other waterways, requiring water rescue capabilities and specialized operational preparedness. This broad range of occupancies and hazards requires a flexible, all-hazards response organization capable of addressing everything from routine emergency medical calls to complex industrial fires and technical rescue incidents.

Over the past several years, Comstock Charter Township has made a deliberate investment in strengthening the department's operational capabilities through the addition of career staffing, continued emphasis on training, and expanded community risk reduction initiatives. These investments have enabled the department to maintain an Insurance Services Office (ISO) Public Protection Classification of 3, reflecting a high level of fire protection capability for a community of its size. Looking toward the future, the township has identified replacement of Station 9-3 as a strategic priority, recognizing that the existing headquarters facility no longer adequately supports the department's operational, administrative, and apparatus needs. Continued investments in facilities, staffing, and equipment will be important to ensure the department can effectively meet increasing service demands while maintaining reliable emergency response and supporting the township's long-term growth and development objectives.

2.0 Proposed Development

Copenhagen Infrastructure Partners seeks to develop property at 91 N 30TH St, Comstock, MI 49048. The parcel is currently a golf course bordered by farmland and an existing electrical substation to the north and by East Michigan Avenue to the south.

Figure 3 shows the proposed location of the Swan and Cygnet Energy Center.

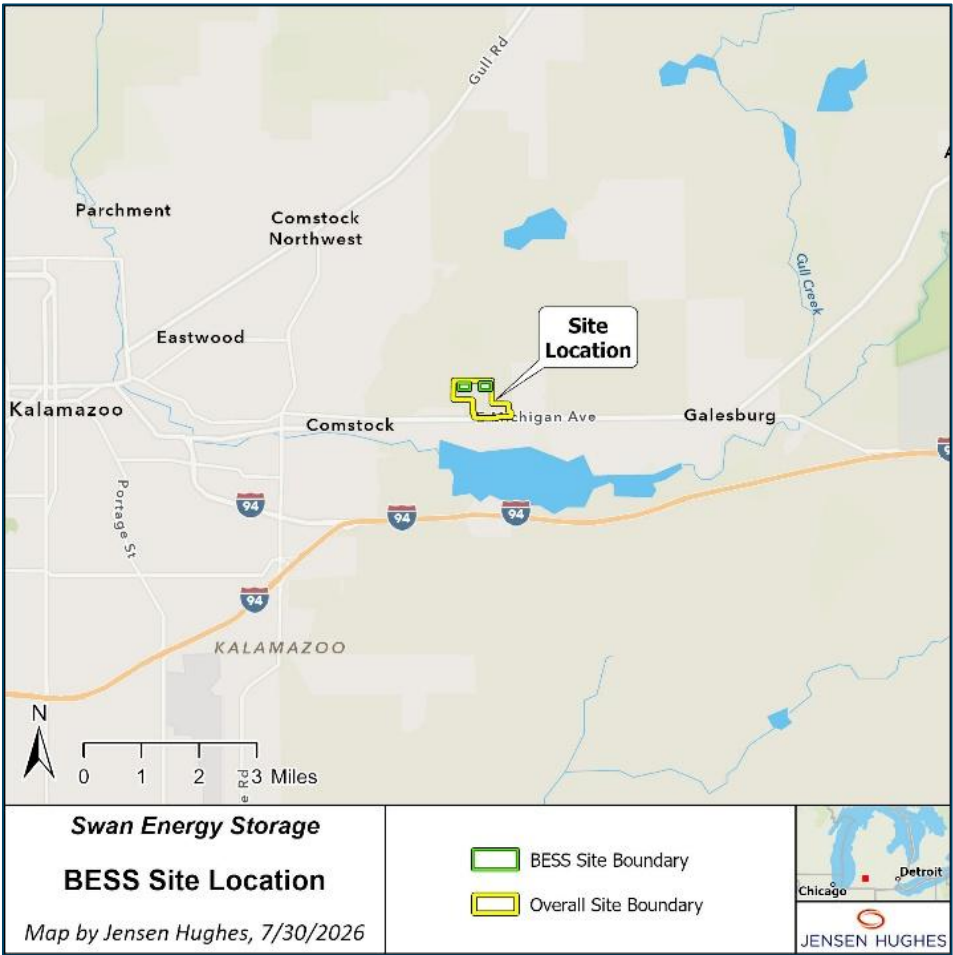


Figure 3 Proposed Location of Swan and Cygnet Energy Storage

A developed subdivision lies along the eastern boundary; however, a forested buffer separates the site from residential homes. An additional subdivision is situated on the western boundary of the property. The entire facility would be isolated by a security fence and noise walls encompassing approximately 39 acres. At full buildout, the plans call for four hundred and eighty (480) battery containment units that would house lithium-ion batteries, have built-in gas detection and active venting systems, fire detection and alarm systems, and meet the requirements of NFPA 855 and UL9540A. An adjacent power substation would also be part of the proposed development, situated on a fenced 1.4-acre parcel. The facility will be unstaffed daily and monitored remotely utilizing a battery management system (BMS).

Figure 4 displays the boundaries of the proposed Swan and Cygnet Energy Center.

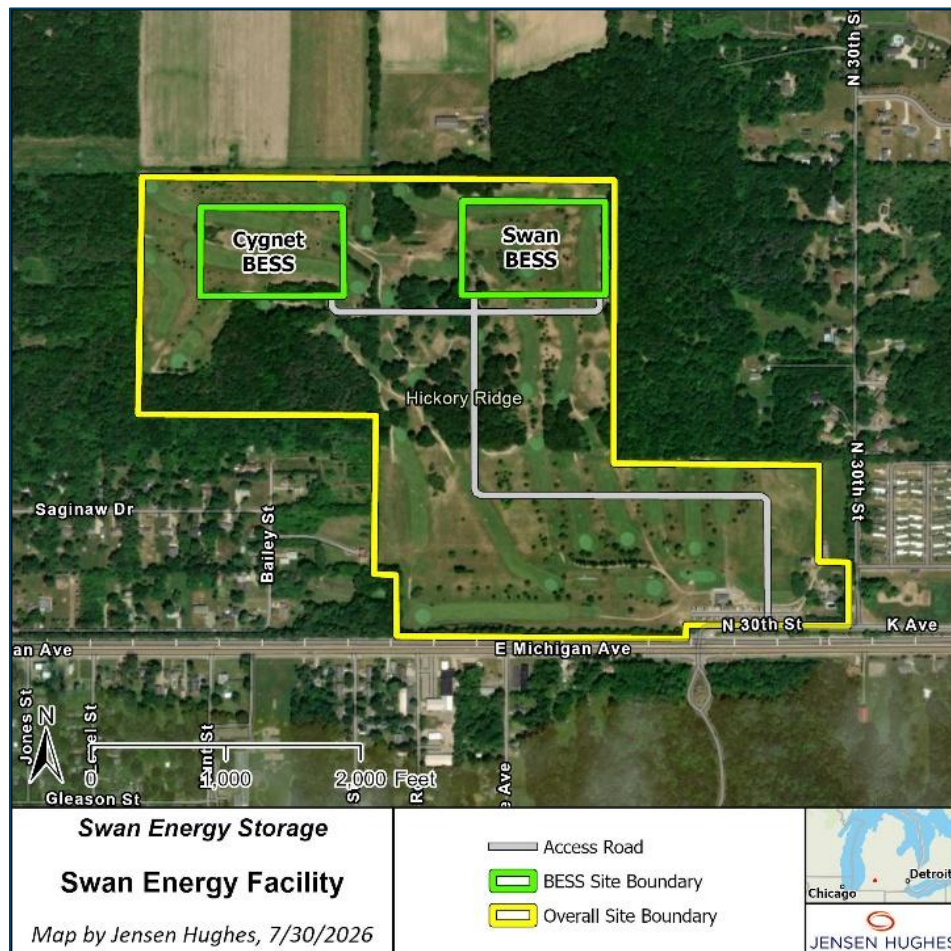


Figure 4 Site Boundaries for the Proposed Swan and Cygnet Energy Center

2.1 EXPOSURES

The primary external hazard to the facility is wildfire originating in surrounding grass, brush, and tree fuels. A fast-moving vegetation fire presents the most likely pathway for structural involvement at the site. For this reason, early suppression of nearby vegetation fires is critical to prevent exposure to the Swan and Cygnet Energy Storage.

Risk from flame contact can be significantly reduced through defensible space measures. A noncombustible buffer, such as gravel, should be installed and maintained around all BESS equipment. NFPA 855, Standard for the Installation of Stationary Energy Storage Systems, requires that areas within ten (10) feet of outdoor Energy Storage Systems be cleared of combustible vegetation and growth. This clearance must be routinely maintained to ensure the buffer zone remains effective.

Fire spread between battery containers (auto-exposure) is also a potential hazard. The proposed site layout provides compliant spacing and access pathways that meet NFPA 855 separation requirements, reducing the likelihood of fire propagation between containers.

2.2 HUMAN FACTORS

The human contact associated with the proposed BESS facility will be limited. There will not be on-site personnel staffing the facility on a day-to-day basis. Periodically, personnel may be on site to perform routine maintenance, repairs, or inspections. The risk for these individuals is low, as they will be adequately certified to perform these tasks and will have appropriate training on safe practices to ensure their duties are performed safely.

The fenced property significantly reduces the risk posed by trespassers and interlopers. This, along with warning signage, should be more than adequate as safety precautions.

The fire protection and life safety systems will be designed and implemented in full compliance with all applicable electrical and fire codes. These systems will be engineered to support typical human behavior as anticipated by the codes, ensuring that present personnel can respond predictably and effectively during an emergency. This includes proper egress design, alarm notification, and fire suppression features that align with code-intended evacuation and safety scenarios.

2.3 SAFETY CONSIDERATIONS



Figure 5 Example of Battery Management System

Like any high-energy system, the installation presents hazards that require careful evaluation and control. The primary concerns include fire and thermal runaway events, release of toxic gases, and electrical hazards. Without appropriate mitigation measures, these conditions could endanger personnel, impact the environment, and affect nearby communities.

One primary safety concern associated with large-scale battery systems is the risk of thermal runaway. This phenomenon occurs when a battery cell overheats, triggering a self-sustaining chemical reaction that releases heat that can spread to adjacent cells and escalate into a fire or explosion.

Modern battery stations incorporate multiple layers of protection to significantly reduce the likelihood and impact of thermal runaway compared with systems produced just a few years ago. Advancements include temperature monitoring systems, automated cooling mechanisms, and thermal insulation between battery modules. Additionally, advanced battery management systems (BMS) are programmed to detect early signs of overheating and initiate shutdown procedures before a critical threshold is reached. Some systems also include fire detection and suppression equipment explicitly tailored for lithium-ion battery fires, which require specialized extinguishing agents.

In the event of thermal runaway or battery failure, toxic and flammable gases such as hydrogen fluoride (HF), carbon monoxide (CO), and other volatile organic compounds can be released. These gases pose health risks to personnel and first responders and can contaminate the air in the immediate vicinity of the facility if not adequately contained.

Adequate ventilation and gas detection systems are key components of a safe battery energy storage design. Facilities often have air quality sensors and exhaust systems that automatically activate when gas concentrations exceed safe thresholds. In some designs, battery enclosures are sealed and vented through filtered pathways to prevent the release of harmful gases into the environment. Safety protocols also require the use of personal protective equipment (PPE) and the establishment of emergency response plans, including air

monitoring and evacuation procedures. Jensen Hughes will also be developing an emergency response plan for the facility, which will be a separate document from this analysis.

Battery energy storage systems operate at high voltages and current levels, posing significant electrical hazards, including electric shock, arc flash, and short circuits. Improper handling, equipment failure, or maintenance errors can lead to injury or equipment damage.

To mitigate electrical risks, systems are designed with insulated enclosures, lock-out/tag-out (LOTO) procedures, and ground-fault detection. Routine inspections and preventive maintenance ensure that cables, connectors and circuit protection devices function properly. Personnel working near or within battery systems must undergo specialized electrical safety training and follow strict operational protocols to minimize exposure to energized components.



Figure 6 Example of BESS Units

Overall, the safety of Battery Energy Storage Stations is managed through a comprehensive risk management framework. This includes utilizing advanced technology for real-time monitoring, employing predictive analytics to identify potential failure points, and adhering rigorously to industry standards and regulations. Design and operational best practices continue to evolve, with ongoing research, incident data, and collaboration across the energy storage sector informing their development.

Through proactive design, engineering controls, and training, the risks associated with battery energy systems can be effectively minimized, allowing these systems to safely support the growing demand for flexible, resilient power infrastructure.

3.0 Comstock Fire and Rescue



Figure 7 CFR Fire Station #3

Comstock Fire and Rescue is an all-hazards fire department staffed, trained, and equipped to handle a broad spectrum of emergencies that may occur in its community. The fire department's primary services are, fire suppression, vehicle accident extrication, and emergency medical services (EMS). With full-time staff supported by part-time and paid-on-call members, Comstock Fire and Rescue has been proudly serving its community since its establishment in 1924. The members of the department truly embody the spirit of neighbors helping neighbors. Comstock Fire and Rescue has earned respect and support from its community and township administration.

With a service area encompassing approximately thirty-five (35) square miles, the department protects a wide variety of landscapes ranging from the built environment

to agricultural land. The response district is very diverse, ranging from suburban development, industrial, agricultural, and open lands.

A challenge that the fire department must routinely adapt to is the inconsistency of a water supply throughout its response area. Many homes outside the township's developed neighborhoods obtain their water from individual wells that draw from regional aquifers. Within the developed neighborhoods, water is provided by a municipal distribution system. Approximately 50% of the response area is equipped with the municipal water supply system and fire hydrants. In the remaining approximately 50% of the response area, they rely on water-shuttle operations from mutual-aid agencies. Surrounding fire departments are equipped with 1,000-gallon water tenders. The department has strong relationships with these agencies, and they are well-trained and equipped to provide an adequate water supply, even in areas that lack a municipal water supply.

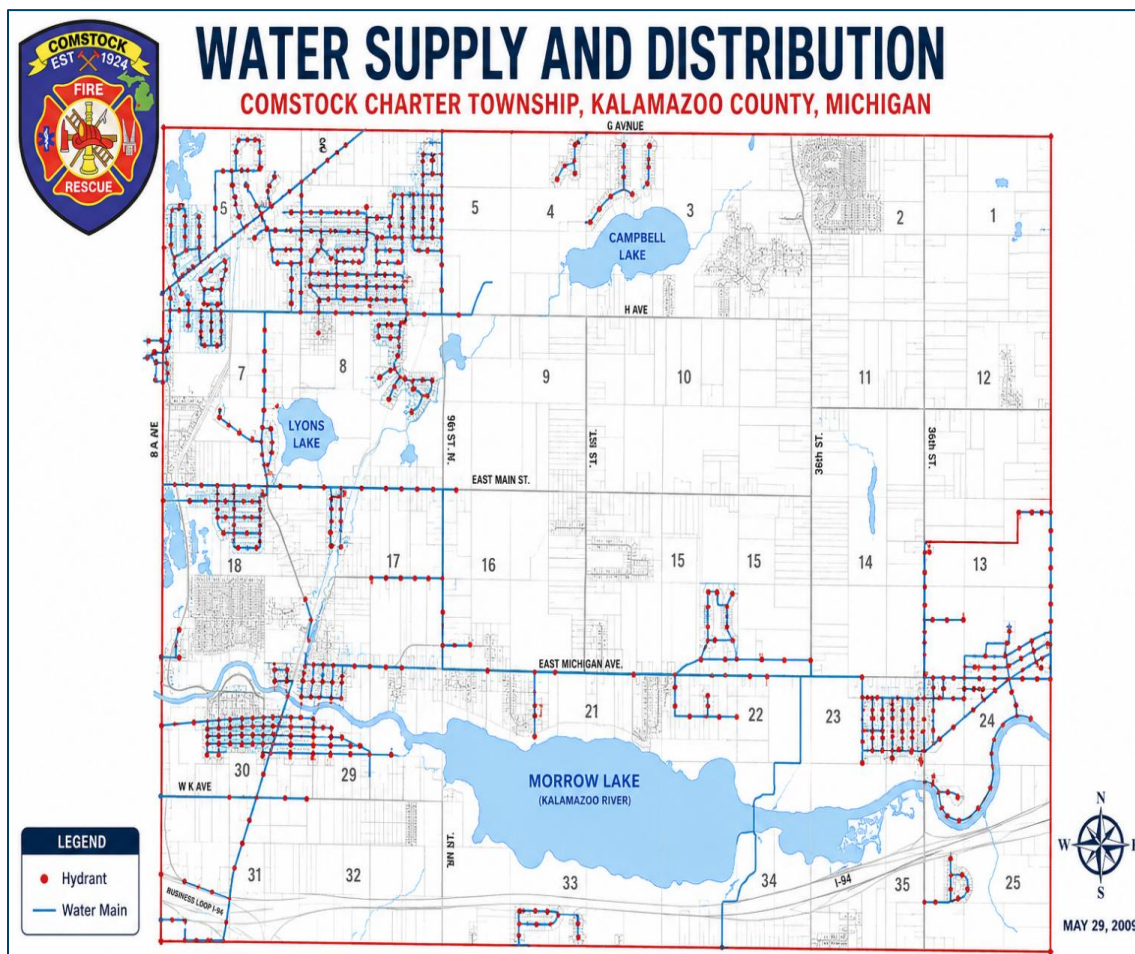


Figure 8 Comstock Township Water Supply

The fire department is well integrated with mutual aid companies in areas without a municipal water source, where continuous water supplies are created and maintained through water shuttle operations. Fortunately, the recommended practice for fires at BESS facilities is not to deliver high-gallon-per-minute fire flows onto the battery compartments. In contrast, the strategy is to protect exposures and extinguish vegetation fires. Both strategies are commonplace for Comstock Fire and Rescue and are attainable given their training and resources.

As mentioned, the department is prepared to respond to multiple hazards and offers a range of services. These services include, but are not limited to:

- + Fire Suppression
- + Vehicle Accident Extrication
- + Emergency Medical Services
- + Hazardous Materials Response
- + Wildfire Suppression
- + Public Education and Risk Reduction Programs

To assess the potential impact of the proposed development, Jensen Hughes analyzed staffing levels, response times, facilities, apparatus, operational procedures, and aid agreements for Comstock Fire and Rescue. The study was conducted through information gathering, research, virtual meetings, and site visits.

3.1 STAFFING LEVELS

Department leadership indicated that the department maintains an expected minimum daily staffing level of seven (7) personnel distributed among its three stations. Station 91 is staffed with three (3) personnel, while Stations 92 and 93 are each staffed with two. The department has fifteen (15) full-time firefighters, with five assigned to each shift; however, part-time/paid-on-call personnel are routinely scheduled to fill vacancies necessary to maintain the 3-2-2 staffing model. These personnel are generally used to maintain minimum staffing rather than increase the number of personnel on duty when additional members are available.

In addition to scheduled personnel, the department maintains a paid-on-call component that can supplement the on-duty response force during certain incidents. Paid-on-call members respond from home and are eligible to respond to specific incident types, including structure fires, vehicle accidents with entrapment, gas leaks, and other significant emergencies. They do not routinely respond to medical incidents. Department policy requires these members to participate in at least 17 percent of eligible incidents over a six-month period or, alternatively, maintain an average of 16 hours of scheduled shift work per week.

While this model provides the department with an additional pool of trained personnel, department leadership was clear that the availability of paid-on-call members cannot be considered guaranteed. A structure fire may generate approximately four (4) to five (5) additional paid-on-call responders, but participation varies based on individual availability. Leadership specifically noted that operational planning must be based on the personnel who are scheduled and available rather than assuming additional members will respond from home. This represents an important distinction when evaluating the department's effective response force for larger or more complex incidents.

The department has already adjusted its staffing model in response to the declining reliability of the traditional on-call system. Leadership indicated that there was a point when sufficient numbers of on-call personnel could no longer be consistently generated for incidents, resulting in an increased emphasis on scheduled staffing. Paid-on-call members now frequently fill scheduled vacancies, while off-duty response is generally reserved for more significant incidents. This transition demonstrates a proactive effort to improve response reliability while retaining the additional capacity provided by the paid-on-call membership.

For incidents requiring resources beyond the department's immediately available personnel, additional staffing and apparatus are obtained through alarm escalation and mutual aid. A second alarm redispaches available department personnel member while also bringing additional neighboring resources through established box

cards and the MABAS system. The department also maintains one chief officer available as the duty chief, providing command capability for significant incidents even though it does not operate a traditional battalion chief staffing model.

Overall, the department's staffing model provides a predictable baseline response through scheduled personnel while retaining paid-on-call members as an important supplemental resource. The model is more reliable than one based primarily on members responding from home; however, the relatively small on-duty force means that significant incidents will continue to depend on the timely arrival of paid-on-call personnel and neighboring departments.

Figure 9 displays the CFR Personnel.



Figure 9 CFR Personnel

The department's typical response model is that when an alarm notification is received, on-duty crews respond to the scene. Paid-on-call staff can respond directly to the scene in accordance with established policy. In certain cases, paid-on-call staff can report to the fire station to staff the apparatus and ensure the appropriate apparatus responds to the incident scene based on the type of emergency.

4.0 Response Time Modeling

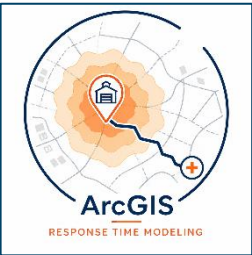


Figure 10 Response Time Modeling Graphic

The Fire Station drive-time analysis was calculated using ESRI ArcGIS Network Analyst. Weather, terrain, road networks, population density, and traffic congestion impact response speeds. An industry-standard RAND Corporation study indicates that a fire engine response to an incident averages thirty-five miles per hour (35mph) over average terrain, with average traffic and weather conditions, and slows at intersections. This provided the basis for using a speed of 35 mph for all drive time calculations in the analysis. This differs from the results of Google Maps and other driving programs, which base their speeds on posted speed limits or traffic patterns. However, fire engines do not typically adhere to these requirements.

Currently, the closest fire station to the Swan and Cygnet Energy Storage is the Comstock Fire and Rescue Station 9-3. The distance from the fire station to the proposed BESS facility is one (1) mile, with a calculated driving time of less than two (2) minutes. This meets the NFPA 1720 first due engine company arrival standard of fourteen (14) minutes.

Figure 11 shows the drive time from the Comstock Fire and Rescue stations to the proposed development site.



Figure 11 Drive Times from CFR Fire Stations to the Proposed Site

4.1 NFPA 1750

NFPA 1750, Standard for the Organization and Deployment of Fire and Emergency Services Operations, establishes nationally recognized best practices for organizing, staffing, deploying, and operating fire and emergency service agencies. The standard provides performance-based guidance for emergency response capabilities, including fire suppression, emergency medical services, technical rescue, hazardous materials response, community risk reduction, training, and incident management. By consolidating several legacy NFPA standards into a single comprehensive framework, NFPA 1750 provides a consistent benchmark for evaluating an organization's ability to respond safely and effectively to risks within its jurisdiction.

The standard provides a risk-based framework for evaluating whether a department has the personnel, equipment, training, and operational resources necessary to respond safely and effectively to the hazards within its jurisdiction. For the purposes of this assessment, NFPA 1750 serves as a benchmark for evaluating Comstock Fire & Rescue's existing response capabilities relative to the anticipated hazards associated with the proposed Battery Energy Storage System (BESS). This evaluation focuses on the department's current operational capacity, available resources, and mutual aid network, rather than determining compliance with any specific staffing or deployment standard.

Comstock Fire & Rescue serves a predominantly suburban jurisdiction with a diverse mix of residential, commercial, industrial, agricultural, and undeveloped land uses. Although portions of the township retain rural characteristics and active agricultural operations, the overall risk profile is more representative of a suburban community, with a broad range of structural, transportation, industrial, and wildland-interface hazards.

5.0 Emergency Responses, Apparatus, Equipment, and Facilities

5.1 EMERGENCY RESPONSES

Comstock Fire and Rescue provides all-hazards emergency response across a community with diverse and evolving risks. The Comstock Department of Fire & Rescue's emergency response profile reflects the evolving role of the modern fire service, in which emergency medical incidents are the primary driver of operational demand. While the department continues to respond to a diverse range of emergencies, EMS-related calls account for the largest share of the annual workload, underscoring the importance of maintaining highly trained personnel, effective medical response capabilities, and strong coordination with regional healthcare and transport providers.

Beyond emergency medical responses, the department regularly responds to service calls, good-intent calls, hazardous conditions, false alarms, and other non-fire emergencies requiring rapid assessment and intervention. These incidents, while often less visible than structure fires, consume significant operational resources and demonstrate the department's broad all-hazards mission. Together, these call types require personnel to remain proficient across a wide range of emergency disciplines while maintaining the flexibility to respond to the community's changing service demands.

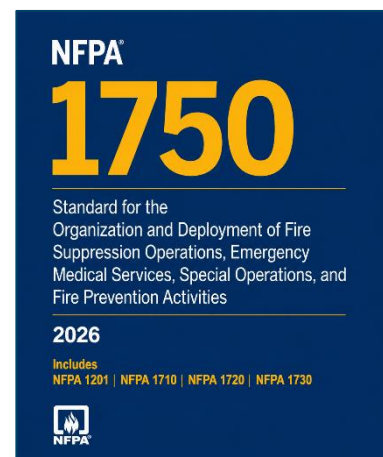


Figure 12 Cover of NFPA 1750

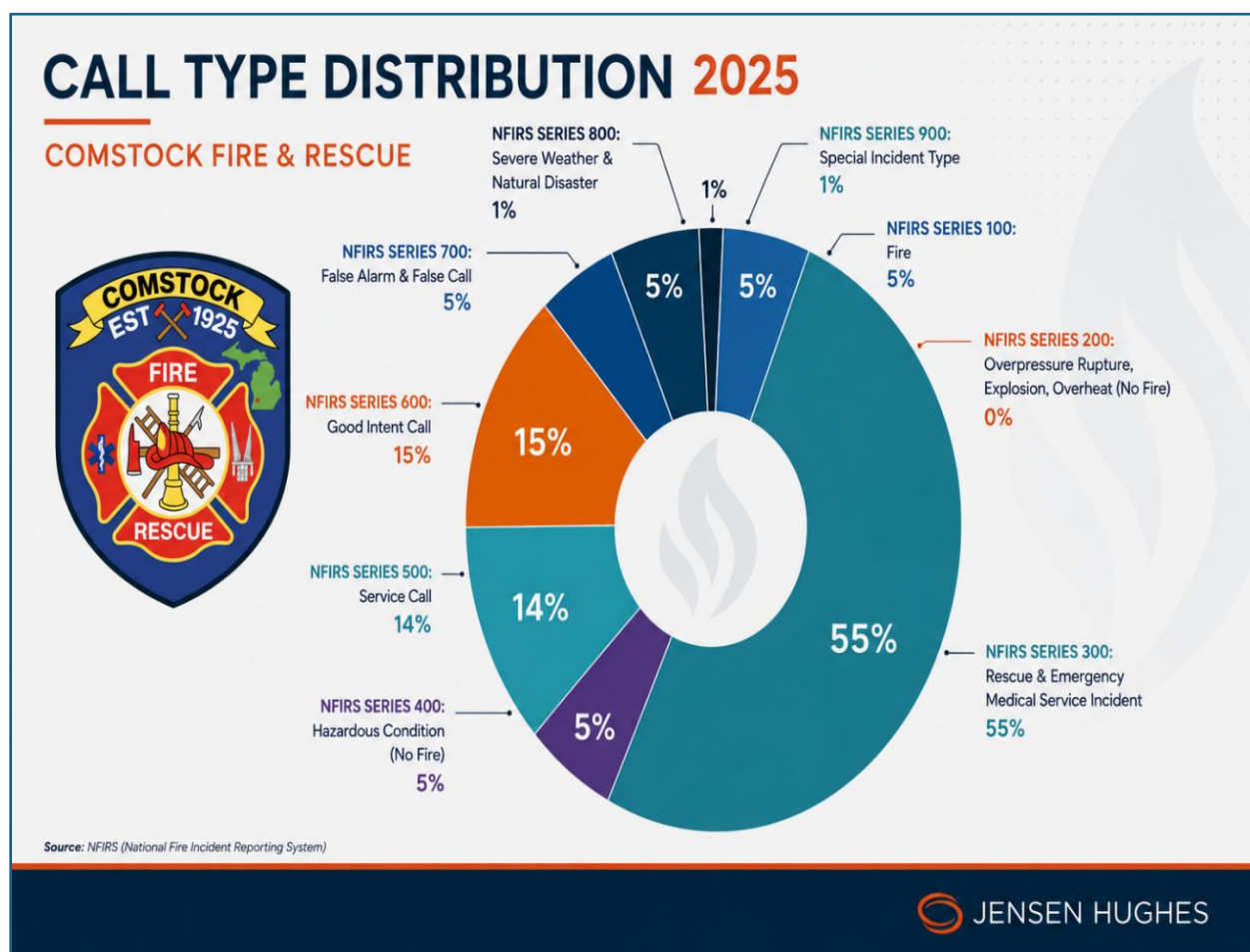


Figure 13 CFR Distribution by Incident Type

Although fire incidents account for a smaller portion of the department's overall workload, they remain among the most complex and resource-intensive emergencies the organization encounters. Structure fires continue to account for most fire responses, followed by vehicle, vegetation, and outside fires. These incidents reinforce the ongoing need to maintain well-equipped apparatus, highly trained personnel, and robust fire-suppression capabilities despite the increasing demand for emergency medical and other non-fire services. The department's response profile reflects the balanced approach required of today's fire service, where preparedness for low-frequency, high-consequence incidents remains equally as important as effectively managing the high-volume calls that occur each day.

Figure 14 displays a historical perspective of incident types by year.

SUMMARY BY INCIDENT TYPE CATEGORY (ALL INCIDENTS)

COMSTOCK FIRE & RESCUE | 2025



INCIDENT TYPE CATEGORY	2025	2024	2023
 Fires (100-173)	128	126	134
 Overpressure Rupture, Explosion, Overheat Calls (200-251)	0	3	1
 Rescue and EMS Calls (300-381)	1,441	1,298	1,315
 Hazardous Condition Calls (400-482)	119	96	156
 Service Calls (500-571)	363	348	207
 Good Intent Calls (600-672)	399	354	346
 False Alarm and False Calls (700-751)	133	143	124
 Severe Weather and Natural Disaster Calls (800-815)	5	1	1
 Special Incident Type Calls (900-911)	17	11	15
 Unknown or Not Reported	0	0	0
GRAND TOTAL	2,605	2,380	2,299

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Figure 14 Incidents by Type and Year

Based on these established response patterns, the introduction of a Battery Energy Storage System (BESS) facility is highly unlikely to result in a measurable increase in call volume for the department. BESS facilities are typically remotely monitored, engineered with layered safety systems, and designed for low-frequency emergency interventions, particularly compared with the routine incidents that comprise most fire department responses. As a result, while BESS installation poses a specialized hazard that requires targeted training and planning, it is not expected to significantly increase overall service demand, response frequency, or the department's workload.

5.2 OPERATIONAL PROCEDURES AND TRAINING

The department currently maintains well-established, formally adopted operational policies and procedures that provide personnel with clear guidance on emergency response. This includes existing policies addressing utility-scale lithium-ion battery incidents. Department leadership also indicated that personnel have recently completed training related to lithium-ion battery response, demonstrating that the department has already begun preparing its members for the hazards associated with emerging battery technologies.

The department does not currently maintain a policy specifically addressing response to a Battery Energy Storage System (BESS) facility. Prior to the facility becoming operational, the department should develop and adopt a site-specific BESS response policy or procedure. This should be developed collaboratively with the facility owner/operator and appropriate subject-matter experts to ensure that departmental procedures reflect

the specific technology, hazards, emergency systems, and recommended response strategies associated with the facility.

Initial training and site familiarization should also be provided before the facility becomes operational. Thereafter, BESS-specific training can be incorporated into the department's existing training program and periodically revisited as personnel, technology, or facility conditions change. The department currently utilizes a three-year rotating training calendar, which provides an existing mechanism for incorporating this continuing education without unnecessarily adding a separate annual training requirement.

The State of Michigan regulates firefighter safety and training through the Michigan Occupational Safety and Health Administration (MIOSHA) and the Michigan Fire Fighters Training Council (MFFTC). MIOSHA Part 74, Fire Fighting, requires that firefighters be trained and qualified for the duties they are expected to perform, including interior structural firefighting operations. The MFFTC offers the Fire Fighter I and II certification program, based on NFPA 1001 professional qualifications and commonly used by departments to establish competency standards.

Michigan regulations do not prescribe a fixed annual training hour requirement; however, departments are required to provide ongoing training sufficient to maintain proficiency and operational readiness. The department provides continuing training to ensure personnel remain qualified to safely perform assigned fireground tasks.

Comstock Fire and Rescue has demonstrated its commitment to training by integrating training props into its existing fire stations. They were also observed conducting training on a new piece of apparatus during the site visit. This commitment to training can directly translate into firefighter safety and preparedness to respond to emergencies in their community.



Figure 15 CFR Firefighters Training with New Apparatus

The fire department complies with the National Incident Management System (NIMS) requirements. The department reports that its members meet the minimum requirements and that several members, particularly those in supervisory positions, exceed these standards by completing additional training.

To date, the fire department has not received any training specific to the hazards posed by incidents involving battery energy storage systems or on mitigating such incidents. The leadership of Comstock Fire and Rescue has expressed a desire to receive initial and annual refresher training from subject-matter experts provided by the facility's owners. The department is committed to making personnel and resources available for this training. The training would mutually benefit both parties by promoting life safety, early incident stabilization, and property conservation.

5.3 APPARATUS AND EQUIPMENT



Figure 16 CFR Fire Engine

The department maintains a diverse fleet of fire suppression, rescue, brush, medical, utility, and specialty apparatus distributed among its three fire stations. Frontline engine companies provide the department's primary structural firefighting capability, supported by reserve apparatus and specialty vehicles that provide aerial, extrication, vegetation-fire, medical, and other emergency-response capabilities. Several department vehicles are configured for multiple purposes, allowing the department to maximize the operational value of its fleet within its existing staffing model.

The department also maintains aerial capability; however, not all specialty apparatus is independently staffed. During significant incidents, qualified paid-on-call personnel may respond from home and bring additional apparatus to the incident. This model allows the department to expand both personnel and apparatus resources as an incident escalates while maintaining its regularly staffed frontline response units.

The department maintains two larger brush vehicles equipped with skid units as well as a smaller side-by-side/UTV equipped with a skid unit and approximately 80 gallons of water. The larger brush apparatus is a multipurpose vehicle and can also support medical response. Although vegetation fires represent a relatively small portion of the department's current workload, these resources provide an existing capability to access and suppress smaller vegetation and exposure fires.

Preventive maintenance and repair of department apparatus are contracted through Emergency Vehicle Products. The contractor also performs required pump and aerial ladder testing. Apparatus replacement is incorporated into the department's capital planning process, with leadership indicating an approximate seven-year replacement cycle for smaller vehicles and approximately twenty (20) years for large fire apparatus.



Figure 17 CFR Brush Unit

Overall, the department maintains an apparatus fleet appropriate for its current all-hazards response responsibilities. Of relevance to the proposed BESS facility, the department already possesses structural firefighting apparatus, aerial capability, smaller brush and UTV resources, thermal imaging equipment, and

atmospheric monitoring equipment. The proposed facility, therefore, does not create a need for an entirely new apparatus type; rather, future considerations should focus primarily on maintaining, replacing, or selectively enhancing existing equipment and capabilities.

Table 1 Comstock Fire and Rescue Apparatus Inventory

STATION AND EQUIPMENT INVENTORY COMSTOCK FIRE & RESCUE 								
STATION 9-1			STATION 9-2			STATION 9-3		
EQUIPMENT	YEAR	ASSIGNMENT	EQUIPMENT	YEAR	ASSIGNMENT	EQUIPMENT	YEAR	ASSIGNMENT
Pierce Saber	2003	Engine 921	Pierce Saber	2010	Engine 922	Pierce Enforcer	2021	Engine 913
Pierce Enforcer	2018	Engine 911	Pierce Saber	2025	Engine 912	Ford F 550	2018	Rescue 953
Ford F 550	2019	Rescue 951	Ford F350	2022	Rescue 952	Ford F150	2025	980
SMT Impact Trailer	2022	988	Pierce International	1996	Engine 932	Ford F150	2020	Utility 983
Ford F150	2022	982	Polaris 900XP Quad	2019	Rescue 986	Ford Maverick Pickup	2024	985
Ford F150	2022	981	Antique Seagrave	1943	943 - Parade vehicle	Boat	2022	Rescue 987
Ford F250	2018	984						
Runabout Boat	1999	Rescue 989						


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The department maintains structural firefighting personal protective equipment (PPE), self-contained breathing apparatus (SCBA), thermal imaging cameras (TICs), and atmospheric monitoring equipment to support its existing all-hazards response responsibilities.

Of the equipment evaluated during the site visit, the department's SCBA inventory represents the most significant current need for replacement. Department leadership indicated that its existing SCBAs are approximately twelve (12) years old, are two replacement cycles behind, and are beginning to experience maintenance issues. The department currently uses Scott SCBAs but is not committed to a specific manufacturer as it evaluates a future replacement. Department leadership identified replacement of the existing SCBA inventory as its highest-priority equipment need. This is an existing need and is independent of any proposed growth and development within the township. The most appropriate pathway to replacement would be through the capital improvement planning process.

The department currently maintains TICs on its frontline apparatus. Leadership indicated that the department has historically maintained this equipment reasonably well; however, portions of the current inventory are

beginning to reach replacement age. The department also has limited redundancy, with frontline apparatus having assigned TICs without a corresponding reserve or backup inventory. While the need for replacement is preexisting, the installation and operation of a BESS facility would require the use of TICs in the event of a potential emergency. Adding a small number of TICs to replace units that have reached the end of their service life and to create redundancy so that reserve units are present in the event of required preventive maintenance or damage to the primary units would be advisable.

Atmospheric monitoring equipment is also maintained on the frontline apparatus. Frontline engines are equipped with MSA Altair 4X four-gas monitors that detect combustible gases, oxygen, hydrogen sulfide, and carbon monoxide. Engines 911, 912, and 913 also carry individual hydrogen cyanide monitors, and the department maintains limited additional specialized monitoring capability. Additional resources are available through the county hazardous materials team. Several of the department's atmospheric monitors are also nearing the end of their service life. Likewise, adding a small number of monitors to replace units that have reached the end of their service life and to create redundancy, ensuring reserve units are available in the event of required preventive maintenance or damage to the primary units, would be advisable.



Figure 18 CFR Atmospheric Monitors and TICs

Structural firefighting turnout gear is managed through an established replacement program, with leadership indicating that the department generally follows a ten-year replacement cycle. The current inventory was described as generally adequate; however, some personnel lack a complete second set of turnout gear. Department leadership identified the need to increase its inventory of personal protective equipment. This is an existing need and is independent of any proposed growth and development within the township. The most appropriate pathway to replacement would be through the capital improvement planning process.

The department possesses the fundamental PPE, respiratory protection, thermal imaging, and atmospheric monitoring capabilities necessary for its existing emergency response mission. However, several components of the inventory have existing replacement or redundancy needs. Most notably, the age and condition of the SCBA and PPE inventory represent a known departmental capital need that predates the proposed BESS facility. Any project-specific recommendations should therefore distinguish between the department's existing replacement needs and additional capabilities that may be directly attributable to response requirements associated with the proposed facility.

5.4 WATER SUPPLY AND DISTRIBUTION

Comstock Charter Township is served by a combination of municipal water infrastructure and rural water supply operations. Developed areas of the township are served by a municipal water distribution system with fire hydrants capable of supporting fire suppression operations, subject to the system's available capacity. These areas with municipal water supplies and hydrants allow the department to establish reliable water supplies for structural firefighting and reduce reliance on mobile water shuttle operations.

Portions of the township remain outside the municipal water distribution system and lack access to fire hydrants. In these areas, the Comstock Department of Fire & Rescue relies on the onboard water carried by its engine companies to initiate fire attack while additional water-supply operations are established. Each frontline engine is equipped with a 1,000-gallon water tank, providing an initial water supply that supports fire suppression until a sustained water source can be secured.

Although the department does not operate water tenders, it benefits from strong automatic and mutual aid partnerships with neighboring agencies that maintain tender apparatus capable of supporting rural water supply operations. During incidents in areas that lack municipal water supplies and hydrants, these mutual aid resources can establish tanker shuttle operations and provide sustained water delivery to the fireground. This regional approach allows Comstock Fire and Rescue to effectively protect both hydranted and non-hydranted portions of the township while avoiding the cost and staffing requirements associated with maintaining a dedicated tender fleet.

5.5 EMERGENCY ALERTING SYSTEM

Kalamazoo County Emergency Management currently maintains access to the Integrated Public Alert and Warning System (IPAWS), providing an established capability to issue emergency notifications to the public through various warning channels when incident conditions warrant. As a result, a recognized and nationally accepted public alerting capability already exists for incidents occurring within Kalamazoo County.

The proposed Swan and Cygnet Energy Storage Facility does not create a unique need for a new emergency public notification system. However, these systems provide benefits across a broad spectrum of hazards, including severe weather, hazardous materials incidents, wildland fires, transportation accidents, and other emergencies. As such, they are most appropriately evaluated, funded, implemented, and maintained as components of the Township's comprehensive emergency management plan rather than as a mitigation measure attributable to the Swan and Cygnet Energy Storage Facility.

6.0 Facilities

6.1 FIRE STATION 9-1



Figure 19 CFR Fire Station 9-1

Station 9-1, located at 1960 River Street, serves as one of the department's three operating fire stations and houses Engine 9-1-1 as a frontline engine and Engine 9-2-1 as a reserve engine. The station also houses a multipurpose rescue/brush vehicle, a utility vehicle that serves as a licensed backup medical response unit, and additional department support vehicles.

6.2 FIRE STATION 9-2



Figure 20 CFR Fire Station 9-2

Station 9-2 is located at 5947 E H Avenue and houses Engine 9-1-2 and additional rescue and specialty response resources. The station also houses a side-by-side/UTV equipped with a skid unit and approximately 80 gallons of water, providing a maneuverable resource for vegetation and brush fire response. Some apparatus have been temporarily relocated within the station system as the department manages available apparatus-bay space.

6.3 FIRE STATION 9-3



Figure 21 CFR Fire Station 9-3

The existing Station 9-3 is located at 8700 East Michigan Avenue. The department is moving forward with the construction of a replacement station at 10080 East Michigan Avenue in Galesburg, with completion anticipated by January 31, 2028. Department leadership indicated that the existing facility will likely be sold following completion of the replacement station.

The relocation of Station 9-3 is intended to improve the department's overall geographic deployment. The new location will provide improved access across the river via 35th Street, improve coverage into the northern portion of the jurisdiction, reduce existing overlap between station response areas, and create a more balanced distribution of fire department resources. Preliminary modeling conducted by the department showed strong overall coverage within approximately eight minutes following the relocation.

Station 9-3 also currently houses MSU 3, a regional mass-casualty medical services unit that is housed and deployed by the department but is not department-owned. Existing bay-space limitations have necessitated the temporary relocation of some apparatus, and the new facility is expected to provide additional space for departmental resources.

7.0 Automatic- and Mutual-Aid

Comstock Department of Fire & Rescue maintains an extensive network of automatic and mutual aid agreements with neighboring fire departments throughout Kalamazoo County, reflecting the highly interconnected nature of emergency response within the region. On a day-to-day basis, automatic aid resources are dispatched simultaneously with Comstock units for predetermined incident types, based on response plans developed through the Kalamazoo County Consolidated Dispatch Authority. Depending on the location and nature of the emergency, these agreements provide immediate assistance from neighboring agencies, including Kalamazoo Township, the City of Kalamazoo, the City of Portage, Pavilion Township, Cooper Township, Richland Township, Galesburg/Charleston Township, and Augusta-Ross Township. Annual response data indicate that Comstock serves as a net provider of mutual and automatic aid, responding to neighboring jurisdictions more frequently than assistance is requested within the township. This collaborative response model improves response reliability, ensures adequate initial staffing for incidents, and allows participating departments to manage emergencies that routinely extend beyond jurisdictional boundaries more effectively.

In addition to its local agreements, Comstock Department of Fire & Rescue is a participating member of the Michigan Mutual Aid Box Alarm System (MI-MABAS), a statewide mutual aid network that provides standardized procedures for requesting and deploying resources during large-scale or complex incidents. While automatic aid agreements govern routine daily responses, MABAS provides access to specialized regional and statewide resources, including strike teams, incident management teams, hazardous materials assets, technical rescue resources, and other specialty capabilities that exceed the capacity of any single department. Participation in MI-MABAS allows Comstock to seamlessly integrate with neighboring jurisdictions during major emergencies while benefiting from standardized resource typing, common operating procedures, legal protections, and coordinated emergency management throughout Michigan. Together, the department's local automatic aid agreements and participation in MI-MABAS provide a scalable regional response system capable of supporting both routine emergencies and large-scale incidents requiring significant interagency coordination.

Figure 21 displays the drive time to the proposed site for mutual aid agencies.

MUTUAL-AID

An agreement where departments collaborate to share resources and support each other across jurisdictional boundaries during emergencies

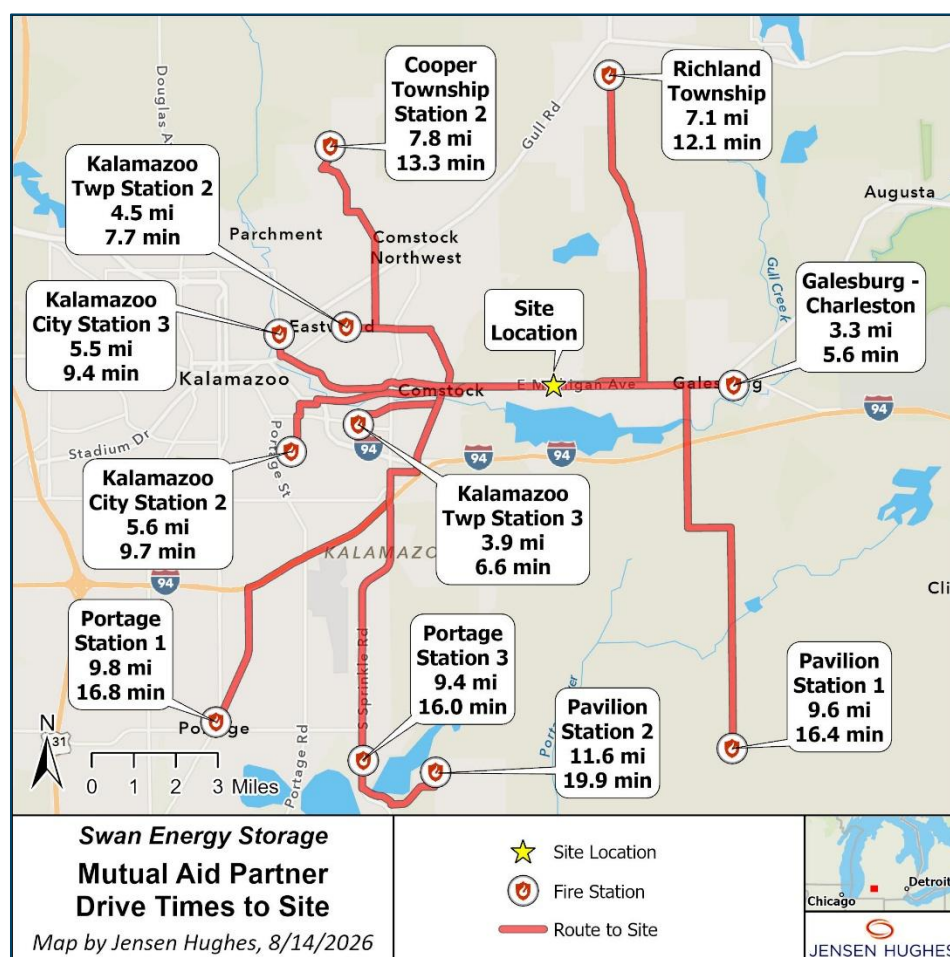


Figure 22 Drive Times to Site for Mutual Aid Agencies

7.1 POTENTIAL IMPACT ON MUTUAL-AID AGENCIES

The realistic expectation is that Swan and Cygnet Energy Storage should generate a limited number of incidents. The anticipated impact on Comstock Fire and Rescue's mutual aid partners is expected to be minimal. Area departments maintain established working relationships and are familiar with one another's equipment, response models, and operational practices.

Given the rural and semi-rural characteristics of portions of the township, surrounding agencies are experienced in managing water supply through tanker operations, shuttle systems, and coordinated rural water movement. The number and proximity of neighboring departments to Comstock Fire and Rescue and Swan and Cygnet Energy Storage site, along with Comstock Fire and Rescue's established mutual aid relationships locally and regionally, provide sufficient personnel, apparatus, and water supply resources to support sustained fireground operations, should a significant incident occur.

8.0 Hazardous Materials Response

The department maintains an established hazardous materials response capability supported by both internal personnel and regional resources. Department personnel are trained at the hazardous materials operations

level, while approximately four members currently serve on the countywide hazardous materials response team at the technician level. Technician-level members also assist with hazardous materials training for department personnel, providing the organization with additional internal expertise and familiarity with specialized hazardous materials operations.

The department's initial response to a hazardous materials incident generally focuses on identifying the hazard, isolating the affected area, denying entry, and activating the county hazardous materials team when technician-level capabilities are required. Department leadership is also directly involved with the county team. One chief officer serves as an assistant team coordinator, while the Fire Chief chairs the team's executive board and has reportedly participated with the team since its inception in approximately 2004. This direct involvement provides the department with an established connection to specialized hazardous materials resources and personnel.

The department maintains baseline atmospheric monitoring and detection equipment, including four-gas monitors, pH paper, radiation meters, thermal imaging cameras, hydrogen cyanide monitors, and additional gas detection equipment. Frontline engines are equipped with MSA Altair 4X monitors that detect combustible gases, oxygen, hydrogen sulfide, and carbon monoxide. Additional specialized detection equipment, including photoionization detectors, is available through the county hazardous materials team. Department leadership expressed a need and a desire for the countywide hazardous materials response team to be able to detect and monitor hydrogen fluoride gas, as it is a common byproduct when utility-scale lithium-ion batteries experience thermal runaway. Currently, the response time does not support this capability, and this type of gas detector would need to be purchased.

Incidents exceeding county capabilities can be escalated through an established regional response system. Department leadership identified the 51st Civil Support Team as an available specialized resource, followed by additional regional hazardous materials capabilities from Battle Creek, Grand Rapids, and other resources as the complexity of an incident increases. The department and county hazardous materials team maintain a strong working relationship with the 51st CST, including recurring training and technical support.

9.0 Sources of Revenue

Comstock Department of Fire & Rescue is primarily funded through a dedicated township fire special assessment, providing a stable and predictable source of revenue to support personnel, daily operations, apparatus, facilities, and capital improvements. This dedicated funding structure allows the department to maintain consistent emergency response capabilities while planning for long-term operational needs, including apparatus replacement, facility maintenance, and staffing investments. By relying on a locally controlled funding mechanism, the department can align financial planning with the community's service expectations and future growth.

In addition to local property-based funding, the department actively pursues state and federal grant opportunities to supplement major capital investments and specialized equipment purchases. Recent grant initiatives have focused on funding a replacement headquarters facility and acquiring specialized response equipment, demonstrating the department's commitment to leveraging outside funding sources whenever possible. Supplemental revenue from fire inspections, plan reviews, and other cost-recovery programs further supports departmental operations, although these sources account for a relatively small portion of the overall budget. Together, these funding mechanisms provide a diversified financial foundation that supports the department's ability to maintain reliable emergency services while preparing for future operational and infrastructure needs.

10.0 Department Needs and Recommendations

- + **Enhance Atmospheric Monitoring Capabilities** - Enhance the department's existing atmospheric monitoring capabilities with BESS-specific detection equipment, including the ability to monitor for hydrogen fluoride and other identified hazards.
- + **Update Thermal Imaging Capabilities** - Provide a limited number of additional updated thermal imaging cameras to improve the department's ability to remotely monitor battery units, identify abnormal heating, and evaluate potential fire propagation.
- + **Training and Site Familiarization** - Provide initial BESS-specific training and site familiarization to ensure personnel understand the facility, battery technology, hazards, emergency systems, and appropriate response strategies.
- + **Develop and Adopt a Formal Emergency Response Plan and Standard Operating Procedure** - Develop a facility-specific emergency response and pre-incident plan in coordination with the fire department and appropriate subject matter experts.

11.0 Conclusion

Jensen Hughes was engaged to assess the Comstock Fire and Rescue's current capabilities and the anticipated impact of the Swan and Cygnet Energy Storage project. Key findings include:

- + **Department Readiness:** Comstock Fire and Rescue is a combination fire department with a staff of career firefighters and part-time, paid-on-call firefighters who are trained and equipped to carry out their all-hazards response mission.
- + **Response Times:** The proposed development is well within the National Fire Protection Association (NFPA) 1750 benchmarks for arrival times, ensuring rapid emergency response.
- + **Impact of Incidents:** The anticipated impact of emergency incidents is extremely low because of the engineered systems and designed safety measures inherent to BESS facilities. The facility should not prove to be burdensome to the fire department or its members.
- + **Mutual Aid:** Comstock Fire and Rescue maintains strong mutual aid relationships with surrounding agencies and participates in the MABAS system, providing access to additional personnel, apparatus, and specialized resources as incident needs escalate.
- + **Infrastructure:** Comstock Fire and Rescue operates out of three (3) strategically located fire stations throughout its response area. Station 9-3 has already been identified for replacement to improve facility capacity and geographic coverage.
- + **Apparatus:** Overall, the department maintains an apparatus fleet appropriate for its current all-hazards response responsibilities. Of relevance to the proposed BESS facility, the department already possesses structural firefighting apparatus, aerial capability, smaller brush and UTV resources, thermal imaging equipment, and atmospheric monitoring equipment. The proposed facility, therefore, does not necessitate an entirely new apparatus type; rather, future considerations should focus primarily on maintaining, replacing, or selectively enhancing existing equipment and capabilities.
- + **Special Considerations:** The fire department's members should receive initial and annual refresher training from experts on emergency response to BESS facilities. The department should also develop

standard operating procedures or guidelines, in collaboration with experts, for an emergency response to the Swan and Cygnet Energy Storage.

The Swan and Cygnet Energy Storage project will not alter the current operational profiles within the fire department, and no significant gaps in emergency service delivery are anticipated. Comstock Fire and Rescue is well-positioned to maintain its current level of service after the project's completion, provided that ongoing collaboration among the township, the fire department, and the developer continues.

OPERATION AND MAINTENANCE (O&M) MANUAL - GRAVEL ACCESS ROADS

SWAN BESS CYGNET BESS

COMSTOCK CHARTER TOWNSHIP KALAMAZOO COUNTY, MI

PREPARED FOR:

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1. EXECUTIVE SUMMARY

1.1 PROJECT OVERVIEW

The Swan BESS and Cygnet BESS Projects are located at 65 M 30th Street, in Comstock Township, Kalamazoo County, Michigan. This Operation & Maintenance (O&M) Manual provides guidance for the inspection, maintenance, and repair of gravel access roads associated with the project. The intent of this manual is to preserve roadway functionality, ensure safe and reliable site access, and extend the service life of site infrastructure through routine inspection and proactive maintenance.

Infrastructure covered by this manual includes:

- Gravel access roads
- Vegetation Management

2. GRAVEL ACCESS ROAD O&M GUIDE

The gravel road operation and maintenance guidance presented in this section reflects established gravel roadway condition assessment practices (**Appendix B**) in combination with project-specific geotechnical characteristics and recommendations applicable to Swan BESS and Cygnet BESS Project (**Appendix A**). Together, these sources provide the basis for interpreting observed roadway conditions, prioritizing maintenance needs, and relating surface distress to underlying strength and drainage behavior.

The Gravel PASER Manual (**Appendix B**) evaluates gravel road condition based on the extent of surface distress and the type of treatment required, with particular emphasis on drainage effectiveness, gravel adequacy, and surface deformation.

2.1 INSPECTION APPROACH

Gravel access roads should be reviewed periodically, with additional inspections following significant rainfall events or periods of increased traffic. Gravel road conditions may change relatively quickly due to weather and operational demands; therefore, maintaining consistent observation over time supports evaluation of long-term performance trends. Inspection efforts may consider:

- Surface condition and uniformity
- Evidence of rutting, potholes, or depressions
- Drainage effectiveness and evidence of ponding
- Aggregate washout
- Wind erosion of aggregate surface

Surface distress such as rutting, potholes, washboarding, dust, and loose aggregate may indicate underlying conditions such as insufficient drainage, inadequate gravel thickness, or subgrade weakening, particularly during or following wet conditions.

2.2 CONDITIONS TO MONITOR

Inspections should consider both roadway surface condition and drainage behavior, as these factors collectively influence long-term performance. Emphasis should be placed on identifying changes that may affect drainage, material stability, or structural support.

Observations may include overall roadway shape and surface condition, including any evidence of flattening, depressions, or edge buildup that could limit surface drainage or allow water to remain within the roadway section. Drainage performance is a key consideration, including areas of ponding, erosion, or reduced ability for water to move away from the traveled surface and adjacent areas.

The gravel surface should be evaluated for adequacy and uniformity. Thinning or material loss, particularly in high-traffic areas such as turning locations or segments with high-slopes, may contribute to surface deformation over time. Exposed aggregate surfaces typically require ongoing maintenance and may become more susceptible to distress when subjected to repeated loading or moisture.

Surface distress such as rutting, potholes, washboarding, dust, loose aggregate, and erosion should be documented as indicators of broader performance conditions rather than isolated defects. These conditions may reflect underlying factors such as insufficient drainage, reduced gravel thickness, or changes in subgrade support.

Performance may also be influenced by moisture conditions within the subgrade. Increased saturation can reduce support and contribute to deformation or loss of stability, particularly during and shortly after wet weather. Continued trafficking during these periods may further accelerate deterioration and affect roadway accessibility.

2.3 MAINTENANCE AND REPAIR CONSIDERATIONS

Routine grading may be used to address minor surface irregularities and maintain the intended roadway cross slope or crown, provided drainage paths remain unobstructed. Where loss of effective cross slope or ponding is observed, reworking of the roadway surface, including scarification and reshaping, may be necessary to restore positive drainage. In locations where rutting becomes repetitive or increases in depth, particularly where native soils are susceptible to moisture, maintenance actions may need to escalate to reworking, recompaction, and addition of suitable material to restore roadway strength and stability. Drainage improvements, including ditch cleaning and culvert maintenance, should be implemented where drainage capacity is reduced.

To ensure continuous site accessibility, all gravel access roads leading to the BESS yard and project substation shall be regularly plowed and maintained throughout the winter season. Plowing operations should be completed within 12-24 hours of any snow accumulation exceeding 2 inches, clearing roads to a minimum width of 20 feet to accommodate heavy emergency and operational vehicles. All cleared snow must be deposited into designated staging areas that do not obstruct perimeter fencing, access gates, safety signage, or stormwater drainage systems. Following the spring thaw, a comprehensive gravel road inspection and repair cycle shall be conducted. Maintenance personnel shall re-grade the roadways to restore the crown and ensure proper stormwater drainage, recover and re-spread any gravel displaced during winter plowing, and compact the aggregate to eliminate potholes, ruts, or washboarding.

Use of PASER Road Surface Ratings for Condition Assessment and Treatment Planning

The Gravel PASER Manual includes a five-level surface rating system (Ratings 5 through 1) that can be used as a consistent framework to assess roadway condition and identify appropriate maintenance or rehabilitation needs. The rating system is intended to reflect the type of treatment required, not just the visual appearance of the roadway (Gravel PASER Manual, p. 13).

In general terms:

- Rating 5 (Excellent) represents newly constructed or fully reconstructed roads with excellent crown or cross slope, drainage, and gravel condition, requiring little to no maintenance.
- Rating 4 (Good) indicates roads with good crown or cross slope and drainage that may exhibit minor traffic effects such as dust, loose aggregate, or slight washboarding, typically addressed through routine maintenance.
- Rating 3 (Fair) applies to roads showing noticeable traffic effects and early structural distress, where regrading, minor drainage work, and spot gravel placement may be needed to maintain performance.
- Rating 2 (Poor) reflects roads with significant deficiencies in crown or cross slope, drainage, or gravel thickness, where additional aggregate and major drainage improvements are generally required, and travel speeds may be reduced.
- Rating 1 (Failed) describes roads with severe structural failure, extensive rutting and potholes, inadequate drainage, and little remaining gravel, where complete rebuilding is typically required.

The PASER Manual emphasizes that individual road segments may not exhibit all distress types associated with a given rating and that ratings should be based on the overall condition and dominant treatment needs. For the Swan BESS and Cygnet BESS Project, PASER ratings can be used as a screening and prioritization tool to compare roadway segments across phases, identify areas requiring more immediate corrective action, and support long-term maintenance planning, while allowing flexibility in selecting specific repair methods based on observed conditions.

3. VEGETATION MANAGEMENT GUIDE

The site should be periodically inspected for evidence of erosion, rilling, or other signs of slope instability. Areas exhibiting erosion, rilling, or vegetation loss should be evaluated and stabilized, which may include revegetation or other appropriate corrective measures.

Vegetation growth within the BESS yard, project substation yard, and along access roads should be managed to maintain safe site access, visibility, drainage functionality, and operational reliability. Vegetation growth, including saplings, brush, and large weeds, should be removed as necessary. Areas outside the energy storage facility may be maintained less frequently, provided vegetation does not interfere with site operations, access, drainage infrastructure, or stormwater management features. Areas near the BESS yard and along access road shall be mowed to the following schedule:

A three-year stewardship program is necessary to ensure proper establishment and health of ground cover, to control invasive species, and to prevent overgrowth and shading of equipment. After the third growing season, the program is to be reduced to a minimum of one visit per year, dependent upon site conditions and required strategies to maintain good health of the site such as dethatching, additional mowing, or herbicide treatments. All assessments made during monitoring visits should identify any presence of invasive species as defined by the Michigan Invasive Species Program, including additional species of invasive or weedy vegetation as defined by the Michigan Department of Agriculture and Rural Development (MDARD), Michigan Department of Natural Resources (MDNR), Environment, Great Lakes, and Energy (EGLE), and the U.S. Department of Agriculture. Assessments should include planned action to manage and remove identified weedy species.

First Year:

The earliest possible seed application may occur in the spring of the first year. No maintenance actions are required to be performed during the first season of application. If seed application takes place in summer or fall of the first year, maintenance and monitoring should start the following season.

Site visits are recommended to be performed one to three times throughout the summer and an additional one to three times throughout the fall, with monitoring and evaluation of vegetation height and presence of invasive species occurring at each visit. If weedy species are identified during an observation, measures to control invasive woody and herbaceous flora through physical removal or spot herbicide treatments are required. Mowing should be conducted during the first year in areas of the site identified to have vegetation over 18 inches in height. Areas with groundcover height under 18 inches may remain until the next scheduled monitoring visit. Newly seeded areas should be cut back to 9 inches in height, if possible, as the lower mowing height helps to reduce opportunistic weedy species.

Second Year:

Site visits are recommended to be performed one to three times throughout the spring, summer, and fall, with monitoring and evaluation of vegetation height and presence of invasive species occurring at each visit. During the first visit of the year, mowing should occur to cut back any vegetation to a height of 9 inches and remove dead stalks and seed heads from the previous growing season. If weedy species are identified during an observation, measures to control invasive woody and herbaceous flora through physical removal or spot herbicide treatments are required.

Mowing should be conducted at each additional visit in areas of the site identified to have vegetation over 24 inches in height. Areas with groundcover height under 24 inches may remain until the next scheduled monitoring visit. Vegetative areas should be cut back to 12 inches in height.

Third Year:

Site visits are recommended to be performed one-to-two times during the early spring, summer, and fall with monitoring and evaluation of vegetation height and presence of invasive species occurring at each visit. During the first visit of the year, mowing should occur to cut back any vegetation to a height between 9 and 12 inches to remove dead stalks and seed heads from the previous growing season. If weedy species are identified during an observation, measures to control invasive woody and herbaceous flora through physical removal or spot herbicide treatments are required.

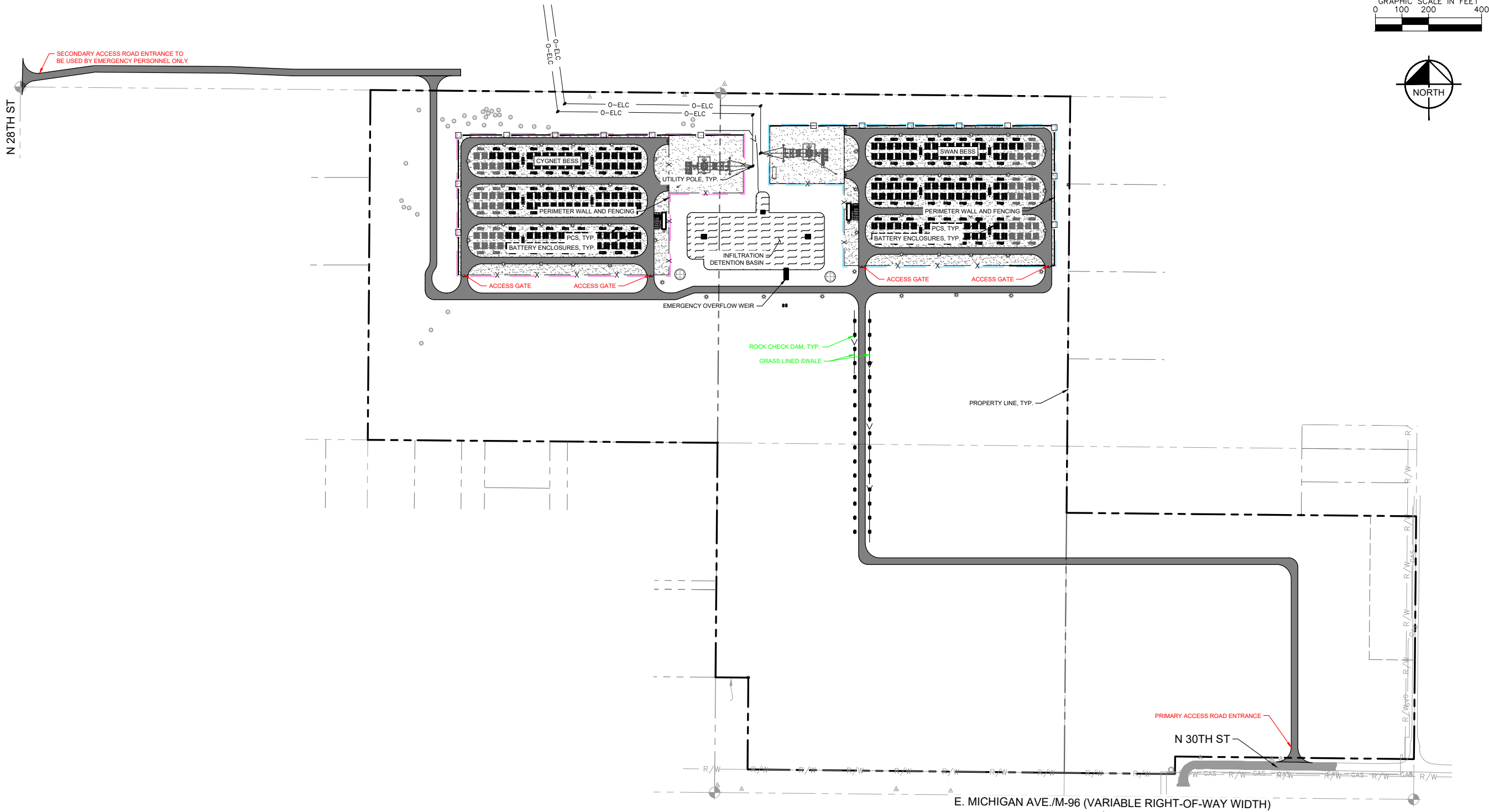
Mowing should be conducted in areas of the site identified to have vegetation over 36 inches in height. Areas with groundcover height under 36 inches may remain until the next scheduled monitoring visit. Vegetative areas should be cut back to 12 inches in height.

Following the Third Year:

Site visits are recommended to be performed at least once a year, during the early spring, with monitoring and evaluation of vegetation height and presence of invasive species occurring during the visit. During the spring, mowing should occur to cut back any vegetation to a height between 9 and 12 inches to remove dead stalks and seed heads from the previous growing season. If weedy species are identified during an observation, measures to control invasive woody and herbaceous flora through physical removal or spot herbicide treatments are required.

For the remainder of the year, mowing may only be necessary in areas that are identified to have invasive or weedy vegetation. Vegetative areas should be cut back to 12 inches in height.

Appendix A: O&M Plan



ISSUED FOR PERMIT - NOT FOR CONSTRUCTION

SWAN BESS AND
CYGNET BESS
PREPARED FOR
SWAN ENERGY STORAGE LLC AND
CYGNET ENERGY STORAGE LLC
COMSTOCK
TOWNSHIP

SHEET NUMBER

EX-1 158

O&M PLAN

KHA PROJECT	161262002
DATE	06/08/2026
SCALE	AS SHOWN
DESIGNED BY	JLL
DRAWN BY	EAS
CHECKED BY	BRG

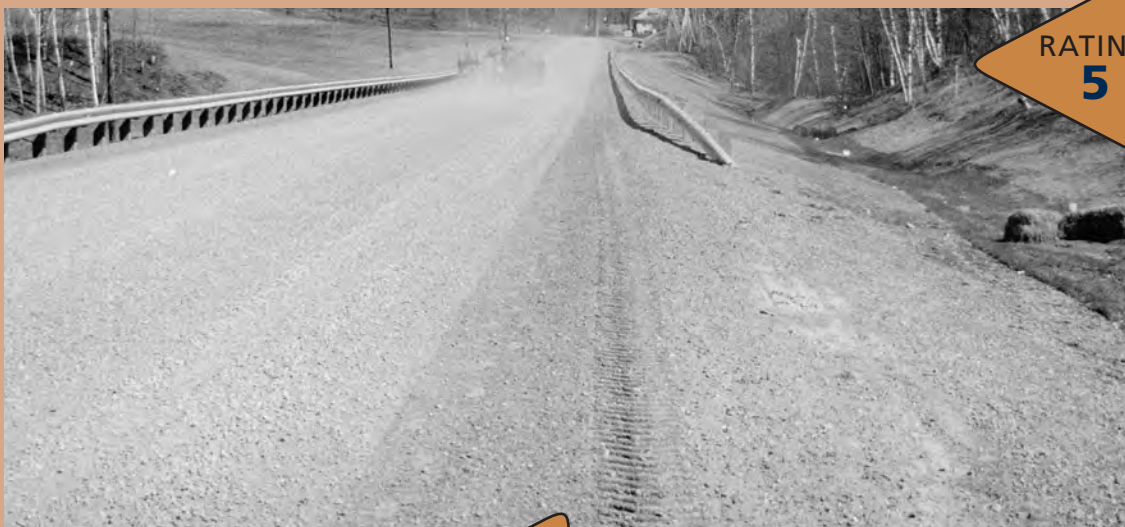


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No.	REVISIONS	DATE	BY
1	ENTITLEMENT SET	08/07/2026	BRG
2	ENTITLEMENT SET	06/08/2026	BRG

Appendix B: Gravel PASER Manual

PASER Gravel Roads Manual



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This manual is intended to assist local officials in understanding and rating the surface condition of gravel roads. It describes types and causes of distress and provides a simple system to visually rate the road segment's condition. The rating procedure can be used as condition data for the Wisconsin DOT local road inventory and as part of a computerized pavement management system like PASERWARE.

Produced by the T.I.C. with support from the Federal Highway Administration, the Wisconsin Department of Transportation, and the University of Wisconsin-Extension. The T.I.C., part of the nationwide Local Technical Assistance Program (LTAP), is a Center of the College of Engineering, Department of Engineering Professional Development, University of Wisconsin-Madison.

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Printed on recycled paper.

Pavement Surface Evaluation and Rating

PASER Manual

Gravel Roads

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Pavement Surface Evaluation and Rating

Gravel PASER Manual

There are many miles of unsurfaced roads in this country. Wisconsin alone has over 22,000 miles of gravel roads under the jurisdiction of local governments. Maintaining and improving these roads is a major responsibility for local governments.

Gravel roads may service very remote areas and very few vehicles. On the other hand it is common to have gravel roads providing service to agricultural, logging, and recreational areas with fairly high traffic volumes. Many urban areas also have some gravel roads. Heavy trucks and residential traffic can combine to make very heavy demands on these unsurfaced roads.

This manual is intended to help you plan the maintenance and overall management of gravel roads. It discusses common problems and typical repairs. A simple system for evaluating conditions and rating roads is included.

The Wisconsin Transportation Information Center also has PASER manuals for other pavement types (see inside back cover). The rating systems are similar and compatible so that local road agencies can work with a comprehensive condition rating method. The rating procedure can be used as condition data for the Wisconsin DOT local road inventory (WISLR) and as part of a computerized pavement management system like PASERWARE.

Taking an organized approach to roadway management has many benefits. By documenting the actual conditions of roads you can set realistic budgets, make timely repairs, and set up cost effective maintenance procedures. Developing an overall plan for the roadway system lets local agencies develop budgets and plan for future needs. When detailed information is available, local officials can respond more effectively to questions from the public. A planned approach is easier to explain and receives greater public support.

Several key steps are necessary to develop a meaningful roadway management plan. First, you must inventory the existing condition. This is normally done by dividing the roadway into segments with similar conditions. During the inventory you collect information on construction history, roadway width, etc. Then you need some method for assessing the condition of the existing roadway. This Gravel PASER Manual uses a visual approach. Other information from material sampling, testing, and traffic counts can be useful for a more detailed system plan.

Another necessary step is setting priorities for roadway improvements. You can use roadway condition and the local importance of these roads to assign priorities. Then budgets can be developed based on cost estimates for the projected improvements. Since not all improvements can be made in one year, you can set up a multi-year budget plan. You can make a capital improvement plan for three to five years. Normally this is updated annually.

Gravel road evaluation

Evaluating and rating gravel roads requires a different perspective than similar evaluations of asphalt or concrete pavements. This is due to the nature of gravel roads and their variability. Surface conditions on gravel roads can change literally overnight. Heavy rains and local heavy traffic can dramatically change the surface characteristics of gravel roads from one day to the next. In addition, routine maintenance activities, such as one pass of a motor grader, could improve the surface conditions of a gravel road significantly.

Since the evaluation or rating of a road could vary depending on recent weather conditions or recent maintenance activities, it should be based on major factors. Detailed surface conditions should be secondary.

The most important factors in evaluating a gravel road are the road cross section, drainage, and adequacy of the gravel layer. The gravel road cross section must contain adequate crown and good lateral drainage systems. The crown should be approximately 6", the adjacent ditches should be deep enough to contain surface water, and the culvert systems should be clean and sized to prevent any serious impoundment of water against the roadway.

The depth of the gravel layer will obviously depend on the existing soils and the amount of heavy traffic. For most conditions, a minimum gravel thickness of 6" is required. Heavier layers are necessary for very poor soils and/or very heavy traffic loads. Using geotextiles in very poor subgrade soil conditions can also significantly improve the performance of a gravel road.

Surface distress, such as ruts and potholes, indicates a lack of strength. This could be caused by improper drainage, by lack of adequate gravel cover, or possibly both. Therefore, surface distress becomes an important indicator of the primary concern for drainage and adequate gravel. The level of service that a gravel road provides to the driver also depends on smooth ride and dust control. Therefore distress such as washboarding, loose rock, and dust are important in the overall service of the road. However, these conditions are secondary since they can change quickly due to weather and maintenance activities. They should not influence the primary evaluation of the roadway.

It may be difficult to distinguish between a poorly maintained gravel road and an unimproved (dirt) road. The local road agency must first decide if they plan to maintain the road with a gravel surface or as an unimproved road. A minimum of 1½"–2" of gravel surfacing is generally necessary to be considered a gravel road. More gravel is needed to provide a good level of service.

Surface conditions and defects

The *Gravel PASER Manual* presents a method for visually assessing and rating the conditions of existing roadways. It is based on understanding the conditions and defects common on gravel roads. To set a rating you assess both the extent of problems on the road and the appropriate repairs or reconstruction needed.

It is helpful to separate the various conditions common to gravel roads. Five road conditions can be used to evaluate and rate gravel roads.

Crown

The height and condition of crown, and an unrestricted slope of roadway from the center across the shoulders to the ditches.

Drainage

The ability of roadside ditches and under-road culverts to carry water away from the road.

Gravel layer

Adequate thickness and quality of gravel to carry the traffic loads.

Surface deformation

Washboarding, potholes and ruts.

Surface defects

Dust and loose aggregate.

Each of these is described in some detail in this manual. Assessing the condition of an actual roadway usually involves looking for different combinations of conditions.

In reviewing different conditions and defects, it is important to consider their severity and extent. Generally problems begin slowly and progressively become more serious. Slight defects will grow into moderate and then severe conditions. At first, defects may be found in only a few isolated places. As the condition worsens, more defects will show up on the surface. Examples in this manual will help you identify conditions and determine both how bad they are and how extensive they are.

CROWN

An unsurfaced road must be built so water drains quickly off the roadway. If it is not, water stays in ponds or puddles, soaks into the roadbed, and softens it. Building a crown into the road—making the center of the road higher than the shoulder—enhances drainage. Normally, a gravel road will have 4"–6" of crown, or fall, from its center to the edge.

A roadway that has no crown will pond water. A windrow of soil or a high shoulder may also trap water on the roadway and impede drainage. In severe cases the crown is reversed—

lower than the edges—so that the road is in a bowl shape. Naturally, this traps water and rapidly deteriorates the roadway, especially under traffic.

Inadequate crown can be restored by regrading with a motor patrol grader. Light blading will restore minor irregularities. Restoring crown to a flat roadway may require complete reworking. This involves scarifying, or cutting loose, 3"–4" of gravel and reshaping the crown. It is helpful to apply water and use compaction to establish the crown.

If the surface gravel on the roadway is inadequate you may need to add gravel to construct a road with proper crown. Use good quality aggregate.

Hard and sound aggregate will prevent the breakdown of large aggregate into small particles under traffic. A proper mixture of aggregate sizes (gradation) is also important. You need an adequate amount of fines to bind the gravel together on the road. See Wisconsin Transportation Bulletins No. 4, *Road Drainage* and No. 5, *Gravel Roads* for more information.

When you do routine maintenance grading, take care to grade the roads to allow free drainage from the center of the road to the shoulder and into the ditch. Improper grading can create a secondary ditch.

► **Excellent crown.**
No restriction to water flow from centerline to ditch.



Flat crown with poor grading has created secondary ditch preventing free drainage into roadside ditch.
▼



▲ **Poorly graded crown traps water**
causing it to run down center of road.

DRAINAGE

Roadside ditches and culverts must be able to handle surface water flow. Without adequate ditches, water will pond on the roadway and soften the road base. The ditch must be wide and deep enough to accommodate all the surface water. It must slope so water drains and doesn't form local ponds. A ditch bottom which is several feet below the top of the road is best. This will provide thorough drainage of the roadbed and prevent flooding. Deeper and wider ditches may be necessary to

accommodate very heavy surface water flow. Ditches must be maintained to prevent erosion or the buildup of debris.

Drainage across roadways is handled with culverts or bridges. These drainage structures must be maintained to prevent ponding and water backup. Culvert headwalls and riprap are very helpful in directing water flow and preventing erosion of the roadbed.

Ditch cleaning is a routine maintenance procedure necessary to keep water flowing properly. Spoil material from a ditch may be used along the roadway if there is room. Major ditch

cleaning may require loading and hauling excess material. Take care to maintain uniform ditch slopes. Seed the soil or install additional erosion control after major ditching repairs.

Roadway culverts tend to fill with debris and silt. They must be cleaned routinely to maintain their water carrying capacity. Replacing headwalls and riprap is also necessary to prevent erosion. Collapsed or damaged culverts must be replaced.



◀
Excellent drainage with wide deep ditches.

Partial drainage. Ditch and new culvert being added on left. Little or no drainage on right.



▲ **Good ditches.**



DRAINAGE

Continued

►
Poor drainage due to
little or no ditch, no
driveway culverts.

Shallow, narrow ditch
cannot carry surface
water causing ditch
erosion and temporary
roadway flooding. ▼



◀
Shallow
ditch and
partially
filled
culvert.
Ditch needs
cleaning
and culvert
should be
lowered to
allow a
minimum
of 12" of
aggregate
cover.

►
No ditch. Road is
actually trenched
into roadside forcing
water onto surface.



►
Excellent
gravel
layer.



GRAVEL LAYER

Traffic loads require an adequate layer of gravel to carry and distribute the loads to the subsoils. The thickness needed will vary with the amount of heavy traffic and the stability of the subsoils. A minimum layer of 6" is normally required. Heavier layers, up to 10" or more, are sometimes used for heavy loads or poor soil conditions.

The gravel must be of good quality to provide long term service. The gradation and durability of the gravel (measured by hardness and soundness testing) are important. A proper gradation contains a mixture of larger aggregate (1"), sand-sized aggregate, and fines. More fines (8%–15%) are recommended for surfacing gravel than are normally used in base gravel. See Transportation Information Bulletin No. 5, *Gravel Roads*, for more information.



◄
Adequate gravel
layer. No ruts or
potholes.



◄
Little or
no gravel
layer.

SURFACE DEFORMATION*Washboard*

Traffic action can dislodge aggregate and create a washboard effect on the surface. This washboarding or corrugation develops across the road, perpendicular to the direction of traffic. It is more prevalent under heavy traffic and under loose aggregate conditions. It may also tend to develop on hills or curves, near intersections, or in areas where traffic is accelerating or decelerating. Soft roadbeds and improper grader operation can also cause washboards.

Light washboarding can be removed with routine grading. Washboarding that is moderate or severe often requires scarification, cutting down 3"-4", and regrading. If there is insufficient material, new gravel will be required. Select an aggregate with sufficient fines to resist future washboarding.

Since washboarding may be concentrated at specific locations, spot regrading is often required. Take care to blend the regraded sections into the adjoining roadway. Since moisture is needed for compaction, correcting washboarding after a rain is more effective. Maintain the crown, and super-elevation, and match bridges and intersections when repairing spot corrugations.

Operating a motor patrol grader at a high rate of speed can actually create corrugations during routine maintenance. Speeds below 10 mph are recommended. Proper blade angle and pitch, and proper tire inflation, are also essential.

▼ Moderate washboarding in center of road.



►
**Severe
washboarding
traps water.**



Potholes

Potholes and depressions can develop in the gravel or surface. They're caused when surface material is worn away or soft spots develop in underlying soils. They may fill with water and are accelerated in roads without adequate crown. Isolated potholes may be repaired by hand. This can involve putting granular material into the holes and compacting it.

- ◀ **Small, isolated potholes.** Routine regrading should eliminate them.
- ▶ **Series of moderate potholes** require scarification and regrading.



- ▶ **Potholes at bridge** may require scarification and hand patching. Gravel and debris should be cleaned off bridge deck.
- ◀ **Severe potholes covering most of road** need additional gravel and regrading.

Extensive potholes require reworking and major regrading. It is usually necessary to add granular material to repair them. Scarify the area prior to repair to insure a good blend. You may need to reshape the road to restore a crown and make drainage improvements to restore surface stability and prevent future potholes.

Ruts

Traffic can create a surface depression or rut over a portion of a gravel road. The ruts may be caused by dislodging some of the surface gravel. Loose unstable gravel may be displaced by traffic causing minor surface ruts. Severe rutting (over 3") may be caused by weak underlying soils. Poor crown and drainage conditions weaken the base and accelerate rutting.

Slight rutting can be removed by blading and restoring the crown. Severe rutting caused by unstable subsurface soils will require improvements in drainage and addition of aggregate.



- ▲ Rut in wheel path needs regrading to eliminate ponding and prevent further road deterioration.

Numerous ruts and very poor drainage create soft roadbed conditions and need major

- ▼ regrading and new aggregate.



SURFACE DEFECTS

Dust

Traffic on dry gravel roads can generate dust. Good quality gravel used in the construction of gravel roads has a combination of large aggregate, sand, and fine material or binder. These fines can be picked up under the action of traffic and become airborne.

Dust on gravel roads creates several problems. Visibility can be severely restricted under heavy dust conditions,

creating traffic safety hazards. Dust is a form of air pollution and can be very objectionable to nearby property owners. The loss of the fine material from a well-graded gravel surface can eventually lead to a loss of stability. Without the fine binder material, the larger particles become unstable and are dislodged by traffic.

Rolling and compacting a new gravel surface will help maintain a tight and impervious surface or crust. Under traffic and during extended dry periods this crust may be disturbed and heavy

dust conditions result. Controlling dust with liquid calcium chloride or other surface treatment agents can be very helpful.

It is essential to replace the fines in the gravel mix to maintain the road and keep it stable under traffic. Fines can often be reclaimed from the shoulder edge and regraded and mixed with existing gravel. This should be done as routine maintenance while restoring and maintaining the crown.



◀
Heavy dust obscures vision and causes loss of roadway fine material. A dust control chemical may be advisable in areas of heavy traffic.

Loose aggregate

Loose aggregate or unstable surface gravel conditions can develop from loss of fines through heavy dust action or from erosion due to an improper gradation mix of the original aggregate. Vehicles can move loose or unstable aggregate forming ridges or windrows in the direction of traffic. Generally gravel will be moved from the wheel path and form ridges at the center of lanes and at roadway edges. Loose aggregate can also accumulate at places where vehicles frequently turn or stop.

Loose aggregate may be temporarily bladed to the shoulder although you have to be careful not to restrict drainage. By remixing loose aggregate with fines from the road edge it may be possible to produce a well graded mix. However, a severe accumulation of loose aggregate usually requires mixing with additional well graded surface gravel.



▲ Loose aggregate over most of road. Light grading and compaction during wet weather would improve stability and develop a surface crust.

► Heavy accumulation of loose aggregate on outside of roadway. Regrading and possibly new aggregate are needed.



Rating road surface condition

A simplified rating system has been developed to help manage gravel roads. It uses a scale of 1 to 5—5 is **excellent** condition and 1 is **failed**. In a normal progression the road will start out in excellent condition and gradually deteriorate under the effects of traffic and weather. Routine grading and minor patching may be sufficient to restore the road to excellent condition. As conditions worsen, more extensive maintenance

may be required; complete rebuilding may eventually be necessary.

To select a rating first assess the crown, drainage, and gravel layer. Then review the individual defects and select the type of maintenance or rehabilitation necessary. The rating should reflect the condition and type of maintenance or repairs required. Look at the photographs in this section to become more familiar with the ratings and conditions.

Ratings are related to needed maintenance or repair

- Rating 5** Newly constructed road. Excellent crown and drainage. No maintenance required.
- Rating 4** Good crown and drainage. Routine maintenance.
- Rating 3** Roadway shows traffic effects. Needs regrading, minor ditch maintenance, and spot gravel application.
- Rating 2** Road needs additional aggregate layer, major drainage improvements.
- Rating 1** Travel is difficult. Complete rebuilding required.

Surface rating	Visible distress*	General condition/treatment measures
5 Excellent	No distress. Dust controlled. Excellent surface condition and ride.	New construction—or total reconstruction. Excellent drainage. Little or no maintenance needed.
4 Good	Dust under dry conditions. Moderate loose aggregate. Slight washboarding.	Recently regraded. Good crown and drainage throughout. Adequate gravel for traffic. Routine grading and dust control may be needed.
3 Fair	Good crown (3"–6"). Adequate ditches on more than 50% of roadway. Gravel layer mostly adequate but additional aggregate may be needed in some locations to correct washboarding or isolated potholes and ruts. Some culvert cleaning needed. Moderate washboarding (1"–2" deep) over 10%–25% of the area. Moderate dust, partial obstruction of vision. None or slight rutting (less than 1" deep). An occasional small pothole (less than 2" deep). Some loose aggregate (2" deep).	Shows traffic effects. Regrading (reworking) necessary to maintain. Needs some ditch improvement and culvert maintenance. Some areas may need additional gravel.
2 Poor	Little or no roadway crown (less than 3"). Adequate ditches on less than 50% of roadway. Portions of the ditches may be filled, overgrown and/or show erosion. Some areas (25%) with little or no aggregate. Culverts partially full of debris. Moderate to severe washboarding (over 3" deep) over 25% of area. Moderate rutting (1"–3"), over 10%–25% of area. Moderate potholes (2"–4") over 10%–25% of area. Severe loose aggregate (over 4").	Travel at slow speeds (less than 25 mph) is required. Needs additional new aggregate. Major ditch construction and culvert maintenance also required.
1 Failed	No roadway crown or road is bowl shaped with extensive ponding. Little if any ditching. Filled or damaged culverts. Severe rutting (over 3" deep), over 25% of the area. Severe potholes (over 4" deep), over 25% of area. Many areas (over 25%) with little or no aggregate.	Travel is difficult and road may be closed at times. Needs complete rebuilding and/or new culverts.

* Individual road sections will not have all of the types of distress listed for any particular rating. They may have only one or two types.

RATING 5

EXCELLENT — Little or no maintenance required

New construction with excellent crown, drainage and gravel layer. Little or no distress.

►
Newly constructed road with excellent crown, drainage and gravel layer.



►
Road has excellent crown. Gravel has been stabilized for dust control. Very good drainage.



**RATING 4**

GOOD — Routine maintenance may be required

Good crown, drainage and gravel layer. Distress limited to traffic effects such as dust, loose aggregate, and slight washboarding.



Good crown, ditches, and gravel layer. Slight traffic effects, washboarding, and loose gravel.



Good crown and gravel, ditch appears good throughout. Occasional routine grading for traffic effects.



Plenty of crown and excellent ditch. Needs routine grading to eliminate slight secondary ditch and loose gravel.

RATING 3

FAIR — Regrading and drainage improvement, spot gravel application needed

Adequate drainage and crown on more than 50% of roadway. Gravel layer is adequate with only need for spot replacement. Regrading needed to improve crown and repair washboarding and slight ruts or potholes.



► Good gravel and crown but ditch partially blocked. Needs cleaning or additional culvert.



► Heavy accumulation of loose gravel requires regrading. Ditch cleaning needed on right side.



► Fair crown and good gravel layer. Shallow ditch needs improvement.

RATING 3**FAIR** — *(continued)***Regrading and drainage improvement, spot gravel application needed**

◀
Fair crown and gravel layer.
Needs ditching on right and more crown.



◀
Adequate drainage and fair crown. A few small potholes indicate need for regrading and additional gravel.

RATING 2

POOR — More gravel and major drainage improvements required

Travel at slow speeds (25 mph) may be necessary. Additional gravel layer needed to carry traffic. Little or no crown. Ditching is inadequate on more than 50% of roadway.

► Some gravel and crown but almost no ditch. Driveway culvert required.



▲ Little gravel and almost no ditches or crown.

▼ No crown, poor drainage, and needs gravel.



▲ Lack of ditch on right causes ruts. Needs gravel.

Numerous potholes indicate additional gravel most likely required to restore crown. Needs extensive reworking. ►



**RATING 1****Failed — Reconstruction required**

Needs complete rebuilding. Travel is difficult; road may be closed at times.

◀
**Ruts. No ditch
or aggregate.**



▲ **Deep ruts and potholes.
No drainage. Travel is
difficult.**



▲ **Complete failure.
Restricted travel.**

Practical advice on rating roads

Inventory and field inspection

Most agencies routinely observe roadway conditions as a part of their normal work and travel. However, an actual inspection means looking at the entire roadway system and preparing a written summary of conditions. This inspection has many benefits over casual observations. Useful comparisons between segments can be made and more dependable decisions are likely because the entire roadway system is considered.

An inspection also encourages a review of specific conditions important in roadway maintenance—drainage and adequate strength, for example.

A simple written inventory is useful in making decisions where other people are involved. You do not have to trust your memory, and you can usually answer questions in more detail. Having a written record also improves your credibility with the public.

Finally, a written inventory is very useful in documenting the changing roadway conditions. Without records extending over several years, it is impossible to know if your road conditions are improving, holding their own, or declining.

Annual budgets and long range planning are best done when based on actual needs as documented with a written inventory.

The Wisconsin DOT local road inventory (WISLR) is a valuable resource for managing your local roads. Adding PASER surface condition ratings is an important improvement.

Averaging and comparing sections

For evaluation, divide the local road system into individual segments which are similar in construction and condition. Rural segments may vary from 1/2 mile to a mile long, while some sections in urban areas will likely be 1-4 blocks long or more. If you are starting with the WISLR inventory, the segments have already been established. You may want

to review them for consistent road conditions. Obviously no roadway segment has entirely consistent conditions. Some “averaging” will be necessary. Also, individual road segments will not have all of the types of distress listed for any particular rating; they may have only one or two. The objective is to rate the condition that represents the majority of the roadway. Small or isolated conditions should not influence the rating. It is useful to note these special conditions on the inventory form so this information can be used in project design. For example, some spot repairs may be required.

Occasionally pavement conditions vary significantly. For example, short sections of good condition may be followed by sections of poor pavement conditions. In these cases it is best to rate the pavement according to the worst conditions and note the variation on the form.

The overall purpose of condition rating is to provide a relative comparison of the condition of all your pavement segments. Therefore, comparing any two pavement segments would show the better pavement having a higher rating. Within a given rating, say 3, not all pavements will be exactly the same. However, they should all be considered to be in better condition than those with lower ratings, say 2. Sometimes it is helpful in rating a difficult segment to compare it to other previously rated segments. For example, if it is better than one you rated 2, and worse than a typical 4, then a rating of 3 is appropriate. Having all road segments rated in the proper relative order is most important and useful.

Separating road function from conditions

Gravel roads often are found in very low volume applications. This sometimes is confusing. People rating roads are more willing to accept poor condition on a road if it is little used. In higher traffic situations, they expect a road in better condition.

Therefore, there may be a tendency in evaluating the condition of a road to evaluate the condition more harshly in higher traffic volume situations and to be more lenient in evaluating little-used roads. This tendency should be avoided. The evaluation of the actual roadway condition must be objective.

You will also consider the road's function or importance but this must be done separately. Roads can be categorized by their use or their function. In selecting project improvements, you will likely consider both the road condition and the road's importance to select the most needed projects.

Planning maintenance and repair

We have found that relating a normal maintenance or rehabilitation procedure to the surface rating scheme helps local officials use the rating system. However, an individual surface rating should not automatically dictate the final maintenance or rehabilitation technique. You should consider safety, future traffic projections, original construction, and roadway strength since these may dictate a more comprehensive rehabilitation than the rating suggests.

Summary

Using local road funds most efficiently requires good planning and accurate identification of appropriate rehabilitation projects. Assessing roadway conditions is an essential first step in this process. The PASER evaluation procedure has proven effective in improving decision making and using highway funds more efficiently. It can be used directly by local officials and staff. It may be combined with additional testing and data collection in a more comprehensive pavement management system. For additional training and information, contact the Wisconsin Transportation Information Center.

**Transportation
Information
Center
Publications**

Pavement Surface Evaluation and Rating (PASER) Manuals

- Asphalt PASER Manual**, 28 pp.
- Brick and Block PASER Manual**, 8 pp.
- Concrete PASER Manual**, 28 pp.
- Gravel PASER Manual**, 20 pp.
- Sealcoat PASER Manual**, 16 pp.
- Unimproved Roads PASER Manual**, 12 pp.

Drainage Manual

Local Road Assessment and Improvement, 6 pp.

SAFER Manual

Safety Evaluation for Roadways, 40 pp.

Flagger's Handbook (pocket-sized guide), 22 pp.

Work Zone Safety, Guidelines for Construction, Maintenance, and Utility Operations, (pocket-sized guide), 58 pp.

Wisconsin Transportation Bulletins

- #1 Understanding and Using Asphalt
- #2 How Vehicle Loads Affect Pavement Performance
- #3 LCC—Life Cycle Cost Analysis
- #4 Road Drainage
- #5 Gravel Roads
- #6 Using Salt and Sand for Winter Road Maintenance
- #7 Signing for Local Roads
- #8 Using Weight Limits to Protect Local Roads
- #9 Pavement Markings
- #10 Seal Coating and Other Asphalt Surface Treatments
- #11 Compaction Improves Pavement Performance
- #12 Roadway Safety and Guardrail
- #13 Dust Control on Unpaved Roads
- #14 Mailbox Safety
- #15 Culverts-Proper Use and Installation
- #16 Geotextiles in Road Construction/Maintenance and Erosion Control
- #17 Managing Utility Cuts
- #18 Roadway Management and Tort Liability in Wisconsin
- #19 The Basics of a Good Road
- #20 Using Recovered Materials in Highway Construction
- #21 Setting Speed Limits on Local Roads
- #22 Pre-wetting and Anti-icing
- #23 Meeting Minimum Sign Retroreflectivity Standards

PASER



*Transportation
Information Center*

University of Wisconsin–Madison

Gravel Roads



MEMO

Charter Township of Comstock Planning Commission September 10, 2026

From: Kyle Mucha, Principal Planner

Re: Comstock Center - Text Amendment

Continuation of text amendment discussion pertaining to use types allowed in the Comstock Center Zoning District.

Attachments:

[Kerney Text Amendment - DHHS - 2026_0804.pdf](#)

[HTM Kerney Foundation Support Ltr-Data 2026 0826.pdf](#)

[Comstock Center - District Regulations.pdf](#)



Memorandum

TO: Comstock Charter Township Planning Commission
FROM: Kyle Mucha, AICP – Principal Planner/Township Planning Consultant
SUBJECT: Text Amendment Proposal – *Child Foster Care Logistics Support Office and Emergency Shelter*
DATE: August 4, 2026

Dear Comstock Charter Township Planning Commission,

A request for a zoning ordinance text amendment has been submitted for consideration to the Township Board, in which the applicant seeks to modify the *Comstock Center* District to permit foster care support services, centering around logistics management and emergency shelter. The applicant proposes to collaborate with the Department of Health and Human Services (DHHS), who has provided the following synopsis of the proposed amendment:

The idea of the space would be an office space where trainings and/or support groups for foster parents could attend, visitations for parents and children or sibling visitations could take place, retention events for foster parents could take place, youth in foster care could go to cool down and have a space away from the home, as well as a space to spend time until placement was secured as opposed to sitting in the office. It would be ideal if youth could be in this space overnight if needed. – Tamah Allen, Licensing Specialist, Kalamazoo DHHS (Department of Health and Human Services).

The following analysis and proposed text language have been prepared for consideration before the Comstock Charter Township Planning Commission.

COMSTOCK CENTER (CC) - PERMITTED USES, DISTRICT SPECIFIC

The intent of the CC, Comstock Center District states the following:

The zoning ordinance regulates the intensity and use of development, which is appropriate in most areas of the Township. There are also areas within the Township in which the master plan and other planning documents place greater emphasis on regulating form and character of development as well as use and intensity of use. The Comstock Center district (CC) zones use form-based provisions to accomplish this, with a special sensitivity to the contextual relevance of four unique Comstock Center zones within the overall district. This unique zoning district allows the Township more flexibility to regulate land use for this important area to encourage a viable, dynamic mix of uses.

Physically, the Comstock Center district is focused on increased and sustained land use intensity and improved public amenities that are oriented as much to the needs of the pedestrian as to those of the automobile. The flexibility in use inherent in the overall CC provisions, paired with the prescriptive physical development regulations will result in a compact, walkable environment that creates new opportunities for investment while protecting positive attributes of the existing area.

Specifically, the CC will do the following:



- a) *Promote economic development opportunities by allowing a wider range of potential uses and creative redevelopment techniques that will expand the variety of businesses in the area and the value of land.*
- b) *Promote mixed-use development in both a horizontal and vertical form.*
- c) *Ensure that development is of human scale, primarily pedestrian-oriented and designed to create attractive streetscapes and pedestrian spaces.*
- d) *Provide a simple, predictable, efficient way to allow innovative development that would otherwise require special planning procedures.*
- e) *Encourage the expansion of the residential element within Comstock Center to build upon the mixed use environment.*
- f) *Allow for a development pattern in which new buildings and building modifications enhance and improve upon the character of the built environment and work toward implementing the Comstock Township Master Plan and Comstock Center Place Plan for Redevelopment and Prosperity.*
- g) *Orient building entrances and storefronts to the street to add visual interest, increase pedestrian traffic, create outdoor spaces and for place-making.*
- h) *Enhance a sense of place and contribute to the sustainability of Comstock Center and the Township.*

The Township's Zoning Ordinance, pages 3-32 to 3-34 list the permitted by right (P), special land use (S) and not permitted (NP) within the four (4) subdistricts of the CC zoning classification. A full permitted use table listing has been provided as an appendix to this report. Currently, the CC district regulates the following type of care facilities:

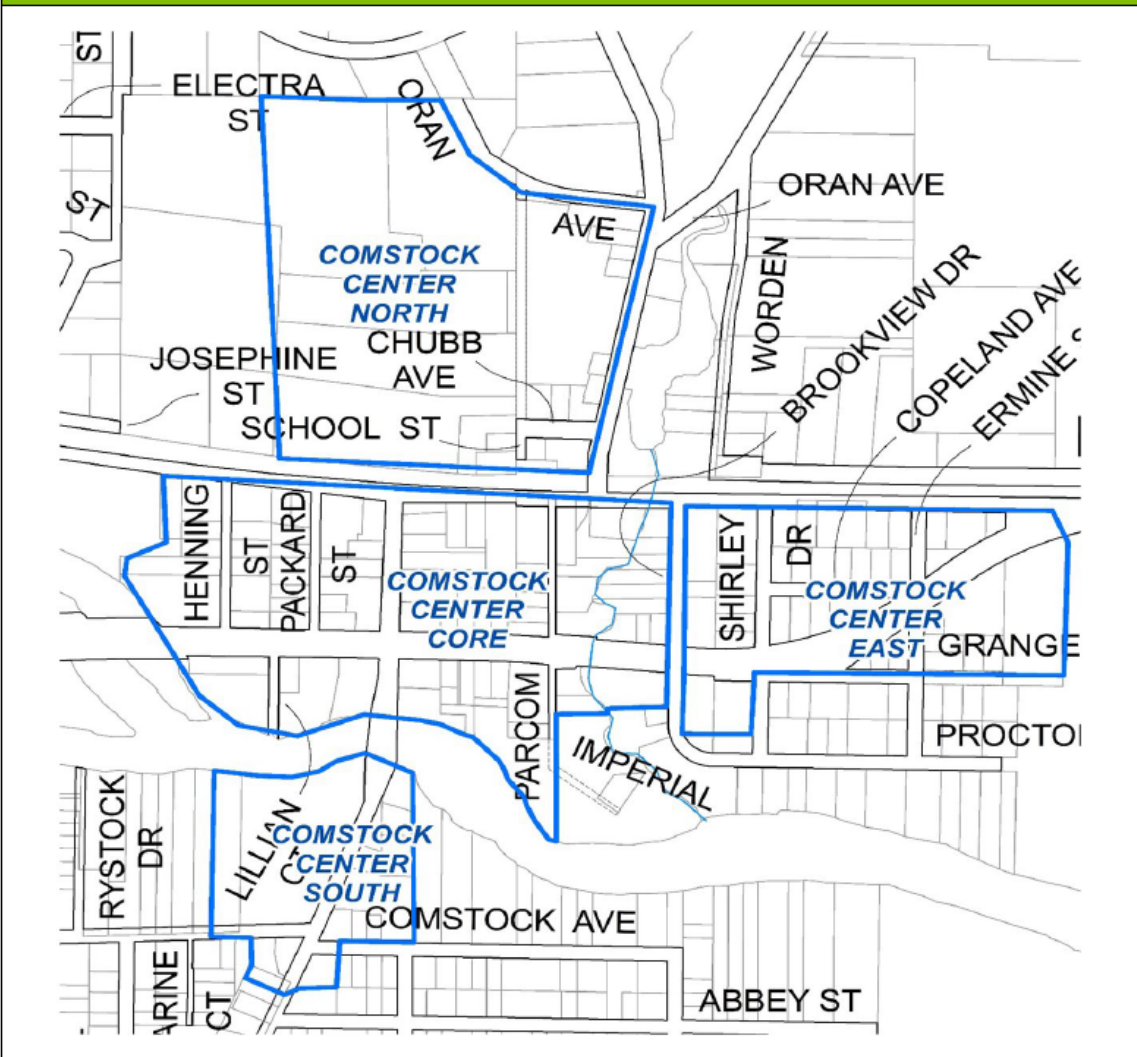


Table 3.1(J)(3) List of Uses - CC Comstock Center					
Use	Zones				Use Standard (if any)
	CC-C	CC-S	CC-E	CC-N	
Adult day care centers ¹	NP	P	P	P	
Adult day care family home ¹	P	P	P	P	
Adult day care group home ¹	NP	S	S	S	
Adult foster care family home ¹	NP	P	P	P	
Adult foster care small group home ¹	NP	NP	NP	S	
Automobile repair facilities ¹	S	S	S	NP	\$4.1
Automobile service stations ¹	S	S	S	NP	\$4.7
Battery Energy Storage Systems, On-Site ¹	P	P	P	P	\$4.62
Bed and breakfast	P ¹	P	P	P	
Brewpubs, ¹ without a drive-up service window	P	P	NP	NP	\$4.9
Business service establishments ¹	P	P	P	P	
Child care centers ¹	NP	NP	S	S	\$4.13
Craft and trade service establishments ¹	S	S	S	S	
Distilleries ¹ and wineries ¹	S	S	NP	P	
Essential services ¹	S	S	S	S	\$4.18
Family child care homes ¹	P	P	P	P	\$4.13
Financial establishments, with drive-in or drive-up service	NP	NP	S	NP	
Financial establishments, ¹ without a drive-thru window	P	P	P	P	
Funeral homes	P	P	P	S	
Group child care homes ¹	NP	NP	S	S	\$4.59
Human care, residential facilities for ¹	NP	NP	NP	P	\$4.44

Findings: the applicant seeks to allow for this additional care-type use and emergency shelter within the Comstock Center Core portion of the District. As noted above in the permitted use table, the CC-C District only permits adult care family home(s), with all other types of care facilities and use-types being classified as NP, Not Permitted. The particular site that the applicant has proposed for this suggested use would be located within the CC-C region. Given that only one of the listed type of care facilities is considered *permitted* in the core region, the Planning Commission may seek to review the entirety of the uses classified as permitted, special land use and not permitted within this subarea to determine if additional modifications to the table are warranted.



Table 3.1.J(6)(e) Map of Comstock Center Zones





CONSIDERATIONS

As noted in the previous section, the Comstock Center – Core District is limited on care facility (use) options. As summarized previously, the applicant seeks to modify the zoning ordinance in order to permit emergency shelter and logistical support for the foster care system. The following is offered for consideration by the Planning Commission.

A. Definition

The following definition is offered for consideration:

Child Foster Care Logistics Support Office and Emergency Shelter

A facility operated by a licensed child welfare, foster care, or social service organization that provides administrative, operational, and support services for foster care programs, including case management, staff coordination, training, transportation dispatch, family support services, intake and assessment activities, and the storage and distribution of supplies for foster children and foster families. The use may also include a temporary emergency shelter component providing short-term, supervised accommodation for children who are awaiting foster placement, reunification, protective services intervention, or other authorized care arrangements. Such accommodations shall not constitute a permanent residential use and shall be limited to temporary occupancy in accordance with applicable state licensing requirements.

B. Use Type – Permitted or Special Land Use

The Planning Commission should discuss whether to make this type of use a *permitted* or *special land use*. For clarification, *special land uses*, per the Township's Zoning Ordinance, “*are recognized as possessing characteristics of such unique and special nature (relative to design, size, public utility needs, and other similar characteristics) as necessitating individual standards and conditions in order to safeguard the general health, safety and welfare of the community.*”

While the applicant has received the supplemental descriptive text from a local agent with the Department of Health and Human Services, further questions pertaining to this particular land use and the intent should be directed to the applicant themselves, in order to better describe the vision and intent of the ordinance amendment.

The Commission should consider the other types of uses similar to that being proposed, and how the ordinance classifies such uses (permitted, special use, not permitted) in order to determine if the proposed use meets the intent and character of the Comstock Center – Core District vision.

For clarification, a permitted use would be allowed ‘by-right’ without the need for additional scrutiny as is required via a special land use. A special land use would require a public hearing and notification to every property within a 300-foot radius of a subject site in which this particular use would seek to operate.

C. Use Standards

As the Commission may be aware, established uses within the Zoning Ordinance may have additional regulations above and beyond that of general requirements – for a full listing, please defer to Article 4 – Use Standards. These additional standards take into consideration the potential impact an identified land use type may have on its surroundings, often offering further protections to adjacent land owners in order to lessen any



perceived or potential adverse impact. Because of what the applicant proposes to establish within the Comstock Center – Core District, the Commission may wish to consider use standards that address the following. Note, the below should not be considered an exhaustive list, but may be utilized as a starting point for discussion.

- i. Minimum Square Footage – Sleeping Space.
- ii. Maximum Bed Count
- iii. Minimum Floor Area – Square Footage
- iv. Hours of Operation – If Applicable
- v. Proximity to Adjacent Residential Dwellings
- vi. Separation Requirements From Other Sensitive Land Uses

The above listing is not intended to detract from that which the applicant seeks; however, the listing is to generate thoughtful discussion amongst the Planning Commission as to any potential adverse impacts and unintended consequences this type of land use may have on the area.

Further, given the lack of supporting documentation the applicant has provided pertaining to this request, the guidance that can be offered *at this time* is limited. Should the applicant be able to provide further documentation and supporting educational resources pertaining to this particular land use, it is anticipated that the preliminary findings of this analysis would be modified to account for this new information.

It may be acceptable for the Commission to find that no additional use standards are required or warranted; however, that determination should be made after review of the requested amendment.

NEXT STEPS

The Planning Commission is encouraged to review the documentation provided by the applicant – Tim Kerney – and discuss this proposed land use in the context of the Comstock Center – Core District. Further dialogue with the applicant is encouraged in order to better understand the intent and vision for this proposal.

In addition to reviewing this particular request, the Commission is encouraged to analyze similar land uses within the Comstock Center District and determine if such uses are appropriately classified (permitted, special use, not-permitted) and if modifications to such uses are warranted.

Respectfully,

McKenna

Kyle Mucha, AICP
Principal Planner
Comstock Township Planning & Zoning



STATE OF MICHIGAN

GRETCHEN WHITMER
GOVERNOR

DEPARTMENT OF HEALTH AND HUMAN SERVICES
KALAMAZOO COUNTY

AMY EPKEY
ACTING DIRECTOR

August 26, 2026

To Whom It May Concern:

On behalf of the Michigan Department of Health & Human Services-Kalamazoo County (MDHHS-Kalamazoo), I am pleased to provide this letter in support of H.T.M. Kerney Foundation (Foundation) and its efforts to renovate facilities that could help address the needs of children and youth in our community.

Our department continues to value and welcome new community placement resources. During emergency removals or when a placement is not immediately available, youth may spend extended periods of time waiting for a placement. This can include sitting with staff in our local office. It is greatly appreciated that the H.T.M. Kerney Foundation is willing to help support children already experiencing an already difficult and uncertain situation.

There is also an ongoing need for resources for older youth transitioning from foster care into adulthood, including safe and stable housing and opportunities to build independent living skills. To the extent that these facilities could help address these or other gaps in services, they have the potential to be an important resource for young people in our community.

We appreciate the Foundation's willingness to explore community-based solutions to these challenges and its commitment to supporting vulnerable children and youth. MDHHS-Kalamazoo supports the Foundation's efforts to seek funding for this project and appreciates the opportunity to partner in identifying ways these facilities may help meet needs within our community.

Sincerely,

Matt Kuzma, Director
Michigan Department of Health & Human Services-Kalamazoo County
269-337-5000

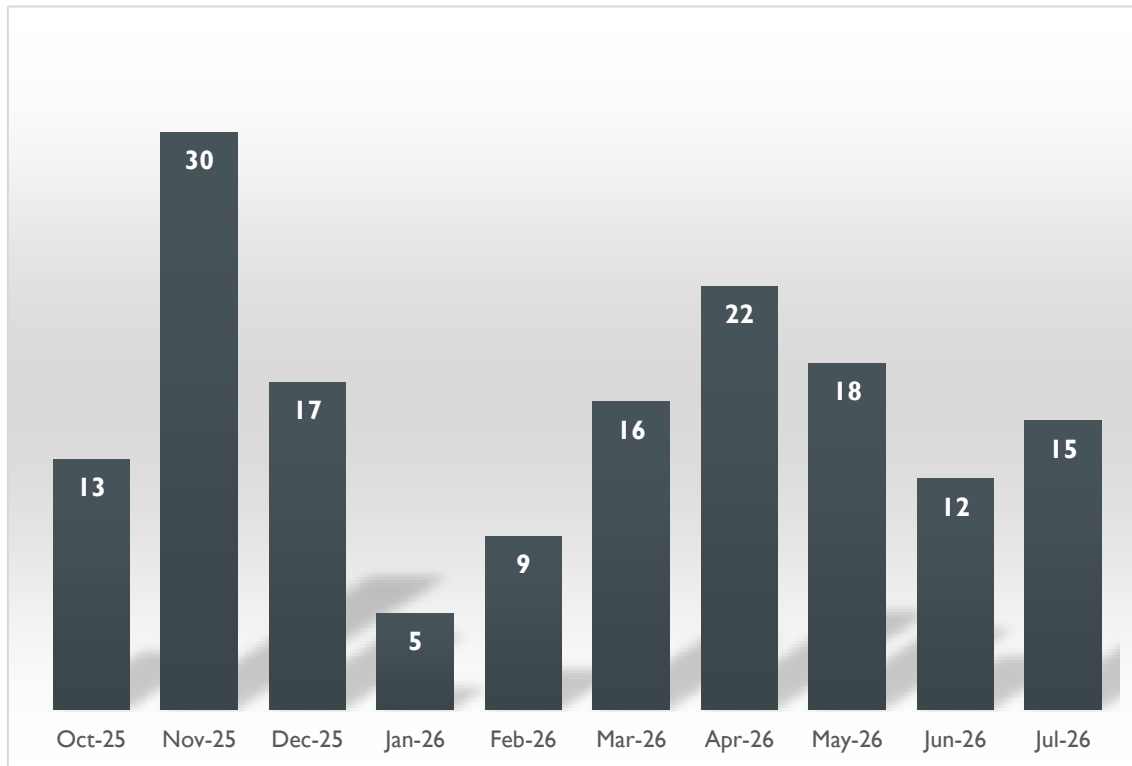


KALAMAZOO DHHS CHILD WELFARE DATA

REMOVALS AND CHILDREN IN CARE – 08/2026

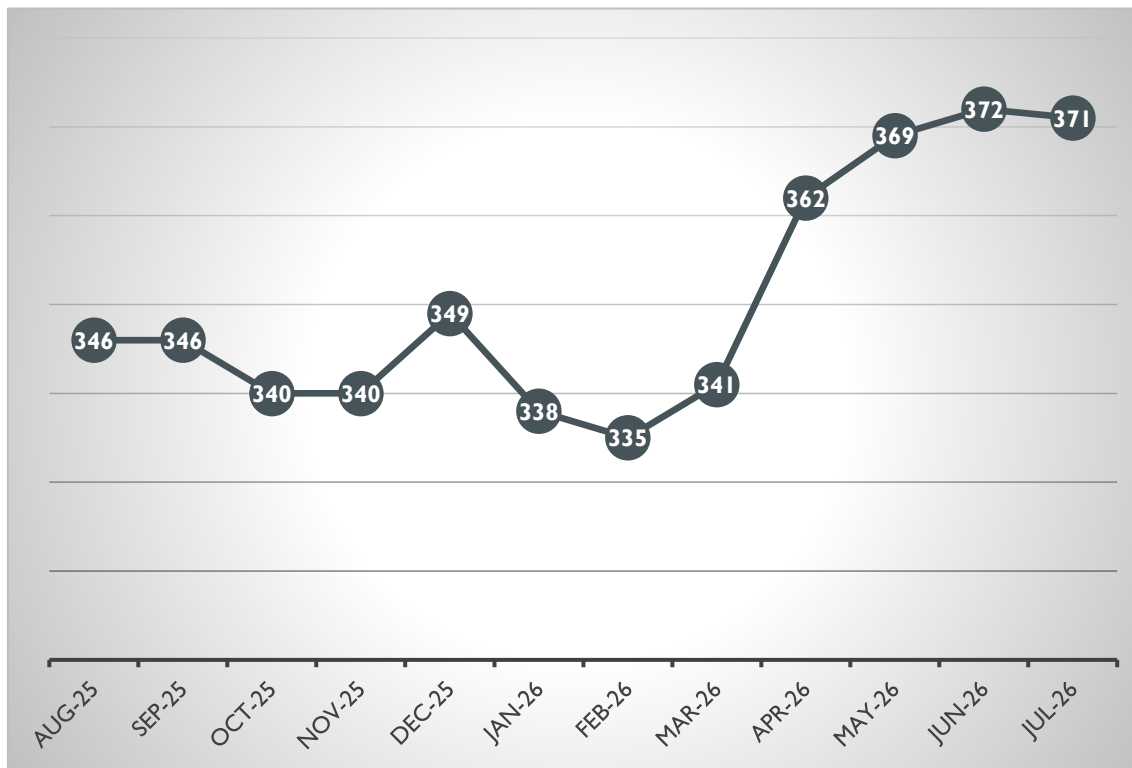


CPS REMOVALS PER MONTH – FY26



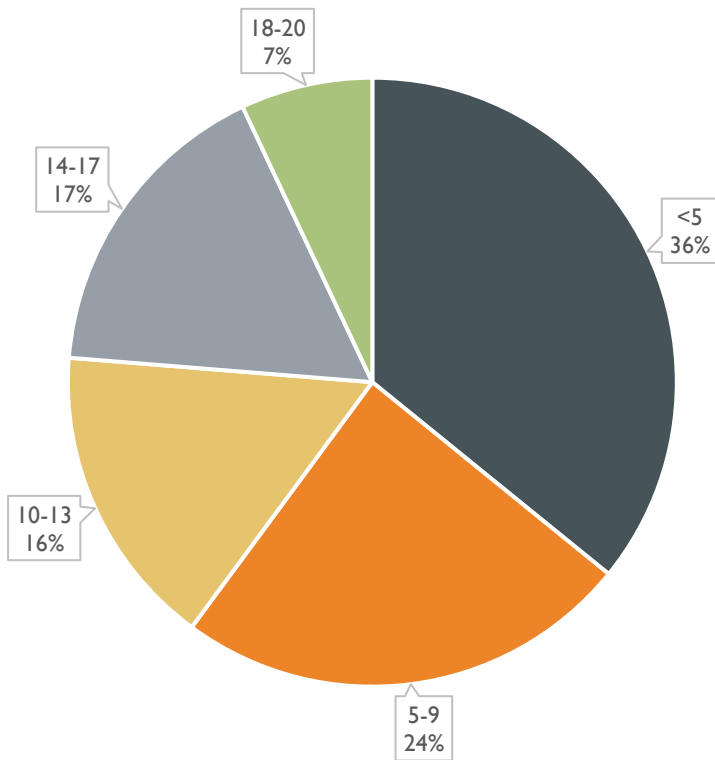
- Fiscal Year to Date:
 - Kalamazoo has removed 157 children
 - 35% increase over Fiscal Year 25, with two months remaining.

FOSTER CARE – NUMBER OF CHILDREN IN CARE

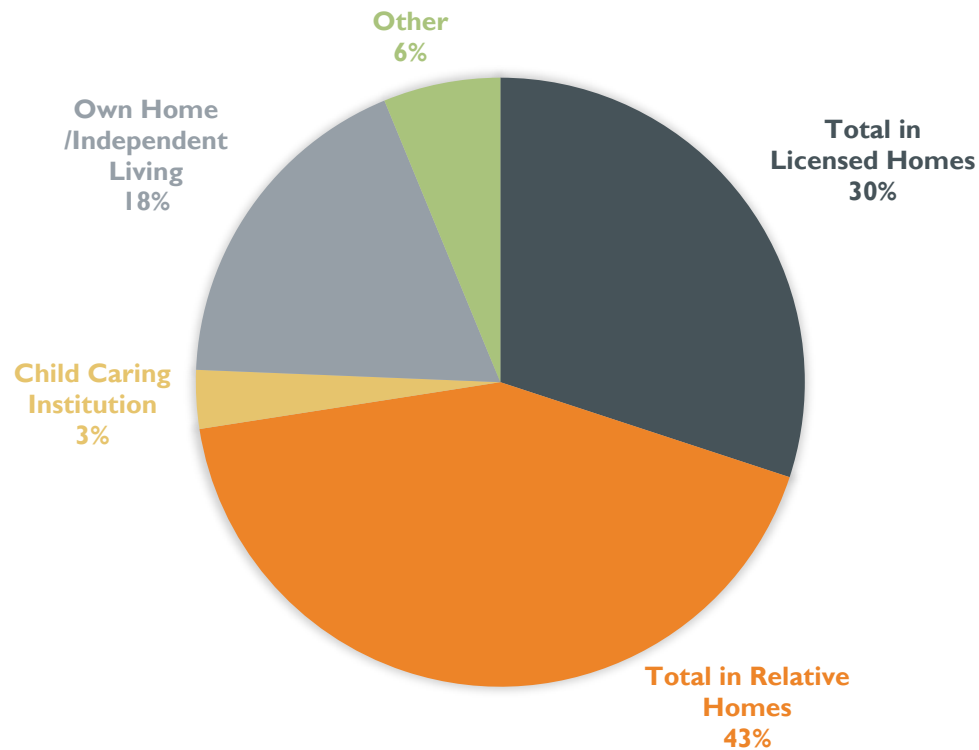


- Kalamazoo County has seen a 7% increase in the number of children in care since the start of the fiscal year.

FOSTER CARE – CHILDREN IN CARE - AGE



FOSTER CARE – CHILDREN IN CARE – LIVING ARRANGEMENT



- Other placements Includes adoptive home, emergency shelter home/facility, community justice center; detention; jail; DHHS training school; mental health facility; court treatment facility, boarding school, runaway (AWOL); service facility, hospital; unrelated caregiver.

3.1.J CC Comstock Center

2. Applicability and organization

Any new use, building, or expansion of an existing use or building, unless otherwise noted herein, shall comply with the requirements of this district and other applicable requirements of this ordinance. Uses, buildings and structures that are nonconforming to the requirements of this district are subject to the regulations of [Section 7.13 Nonconforming uses and buildings](#) except as may be exempted herein.

- a. The CC is divided into four Zones. These four Zones are identified as the Comstock Center Core (CC-C), Comstock Center East (CC-E), Comstock Center South (CC-S) and Comstock Center North (CC-N). These Zones are identified on the zoning map as separate and distinct Zones within the overall CC zoning classification.
- b. The standards of [subsection 4\(b\)](#), Landscape and streetscape elements, and [subsection 5](#), Design standards, shall not apply to:
 - i. Continuation of an existing permitted use within an existing building provided the use is permitted in the Zone of the CC where the site is located.
 - ii. Reoccupation of an existing building with a use provided the new use is permitted in the Zone of the CC where the site is located.
 - iii. The expansion of an existing building, whether conforming or legally nonconforming, by less than 500 square feet or five percent, whichever is less, when the building will be occupied or reoccupied by a use permitted in the Zone of the CC where the site is located.
 - iv. Change of use within existing buildings provided the new use is permitted in the Zone of the CC where the site is located.
 - v. Normal repair and maintenance of existing buildings that do not increase their size.
 - vi. Continuation of a legal nonconforming use, building, and/or structure.
- c. This section contains a set of regulations unique to the CC. Specifically, these include:
 - i. General standards that apply to all CC properties and special provisions for parking, landscape and streetscape elements.
 - ii. [Table 3.1\(J\)\(3\) List of Uses - CC Comstock Center](#) that provides for a dynamic mix of uses throughout the Zones.
 - iii. Design standards applicable to all CC properties.
 - iv. Form-based dimensional requirements for the Zones. These include special provisions not found in other zoning districts, including the following:
 - (1) Minimum and maximum height.
 - (2) Required building lines and setback lines.
 - (3) Exemptions and modifications from form-based provisions for streetscape elements.
 - (4) Parking placement.
 - (5) Lot coverage and open space.

1. Purpose & Intent

2. Definitions

3. Zoning Districts

4. Use Standards

5. Site Standards

6. Development Procedures

7. Administration & Enforcement

3.1.J

CC Comstock Center

3. Uses allowed

Allowed uses are identified in [Table 3.1\(J\)\(3\) List of Uses - CC Comstock Center](#). If a use is not listed but is similar to other uses within a category, the Zoning Administrator may make the interpretation that the use is similar to other uses and is permitted to the same extent and under the same conditions as the similar use.

Table 3.1(J)(3) List of Uses - CC Comstock Center

Use	Zones				Use Standard (if any)
	CC-C	CC-S	CC-E	CC-N	
Adult day care centers ¹	NP	P	P	P	
Adult day care family home ¹	P	P	P	P	
Adult day care group home ¹	NP	S	S	S	
Adult foster care family home ¹	NP	P	P	P	
Adult foster care small group home ¹	NP	NP	NP	S	
Automobile repair facilities ¹	S	S	S	NP	§4.1
Automobile service stations ¹	S	S	S	NP	§4.7
Battery Energy Storage Systems, On-Site ¹	P	P	P	P	§4.62
Bed and breakfast	P ¹	P	P	P	
Brewpubs, ¹ without a drive-up service window	P	P	NP	NP	§4.9
Business service establishments ¹	P	P	P	P	
Child care centers ¹	NP	NP	S	S	§4.13
Craft and trade service establishments ¹	S	S	S	S	
Distilleries ¹ and wineries ¹	S	S	NP	P	
Essential services ¹	S	S	S	S	§4.18
Family child care homes ¹	P	P	P	P	§4.13
Financial establishments, with drive-in or drive-up service	NP	NP	S	NP	
Financial establishments, ¹ without a drive-thru window	P	P	P	P	
Funeral homes	P	P	P	S	
Group child care homes ¹	NP	NP	S	S	§4.59
Human care, residential facilities for ¹	NP	NP	NP	P	§4.44
Places of worship	P	P	P	P	§4.37
Housing for the elderly	NP	NP	NP	P	§4.24
Laundry/laundromats, ¹ self-service	P	P	P	NP	

Uses are permitted by right (P), as a use subject to special land use approval (S), not permitted (NP), or permitted on upper floors only (UP).

¹ Not permitted on lots with majority of lot frontage on King Highway or Michigan Avenue.

² Subject to §3.14, subsection C.

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Table 3.1(J)(3) List of Uses - CC Comstock Center (Continued)

Use	Zones				Use Standard (if any)
	CC-C	CC-S	CC-E	CC-N	
Laundry or dry cleaning outlets,  with drive-in or drive-up service	NP	NP	S	NP	§4.28
Laundry or dry cleaning outlets,  without drive-up service	S	S	S	NP	§4.28
Low impact research and development	NP	NP	NP	P	
Micro breweries 	S	S	NP	P	
Mobile vendors 	P	P	P	P	§4.31
Multiple-family dwellings  and loft apartments ²	UP	P	P	P	§4.17
Multiple-family dwellings  architecturally designed as townhomes/row houses ²	P	P	P	P	§4.17
Open air businesses 	P	P	P	NP	§4.35
Personal service establishments 	P	P	P	NP	
Physical culture establishments 	S	S	S	S	
Private service clubs, fraternal organizations and lodge halls	P	P	P	P	§4.39
Office buildings and uses	S	P	P	P	
Medical or dental clinics	S	P	P	P	
Laboratories	S	P	P	P	
Publicly owned buildings including libraries, post offices, community centers, and museums	P	P	P	P	
Public utility transformer stations and substations, telephone exchanges and public utility offices	NP	NP	NP	S	
Recreational facilities,  indoor 	NP	NP	NP	S	
Restaurants,  carry out 	P	P	NP	NP	§4.45
Restaurants,  fast food 	P	P	NP	NP	§4.45
Restaurants,  outdoor dining 	P	P	NP	NP	§4.45
Restaurants,  sit down 	P	P	NP	NP	§4.45
Retail establishments 	P	P	NP	NP	
Schools, private	NP	NP	NP	P	§4.59
Schools, vocational and technical	NP	NP	NP	P	§4.59
Single-family dwellings 	P ¹	P	P	P	§4.17

Uses are permitted by right (P), as a use subject to special land use approval (S), not permitted (NP), or permitted on upper floors only (UP).

¹ Not permitted on lots with majority of lot frontage on King Highway or Michigan Avenue.

² Subject to §3.14, subsection C.

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Table 3.1(J)(3) List of Uses - CC Comstock Center (Continued)

Use	Zones				Use Standard (if any)
	CC-C	CC-S	CC-E	CC-N	
Studios for musical, dance, or artistic instruction	P	P	P	P	
Temporary outdoor sales and service	P	P	P	P	§4.50
Temporary use for anemometers and supporting towers	S	S	S	S	§4.52
Two-family dwellings,  attached (duplexes)	P ¹	P	P	P	§4.17
Veterinary offices, hospitals, and clinics	S	S	S	S	§4.58
Uses are permitted by right (P), as a use subject to special land use approval (S), not permitted (NP), or permitted on upper floors only (UP). ¹ Not permitted on lots with majority of lot frontage on King Highway or Michigan Avenue. ² Subject to §3.14, subsection C.					

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4. Standards applicable to Comstock Center Zones

- a. **Parking.**
 - i. **CC-C Zone and CC-S Zone parking.** To encourage redevelopment within the CC-C Zone and the CC-S Zone, a change of use that is required by this ordinance to provide less than 10 parking spaces as determined through the site plan review process shall be exempt from providing any new parking.
 - ii. **CC-E Zone and CC-N Zone parking.** Parking shall be provided for CC-E Zone and CC-N Zone sites in accordance with the provisions of [Section 5.2 Off-street parking requirements](#) of this ordinance.
 - iii. **Parking location.** When provided on-site, whether required or not, parking must comply with the following:
 - (1) When parking is located in a side yard but fronts on a required building line, no more than 25 percent of the building line not occupied by a building or 60 feet, whichever is greater, shall have parking abutting.
 - (2) For a corner lot or lot with multiple frontages, no more than 25 percent of the required building lines not occupied by a building or 60 feet, whichever is greater, shall have parking abutting.
- b. **Landscape and streetscape elements** shall be required in accordance with [Section 5.4 Landscaping](#) of this ordinance and the following. Whenever provisions of [Section 5.4 Landscaping](#) (or any other provisions of this ordinance) conflict with provisions of this district, the provision of this district shall prevail.
 - i. Street furniture shall be provided at a ratio of one element for every 30 linear feet of frontage along a right-of-way in Zone CC-C and Zone CC-S and one element for every 100 feet in Zone CC-E and Zone CC-N. Street furniture features may be located in the right-of-way or on private property, provided it is located between the front building line and the back-of-curb. Permitted street furniture features include the following:
 - (1) A permanently mounted seating fixture constructed of decorative metal.
 - (2) A permanently reserved planting bed with defined, durable edges. Such beds must be a minimum of 12 square feet in area and should be raised or protected from the surrounding paved areas by a durable curb, edge or other design feature. Planting beds must be properly maintained and planted with hardy plants and general areas within planting beds must be planted with groundcover.
 - (3) Waste receptacle constructed of decorative metal.
 - (4) A permanently mounted bicycle rack constructed of decorative metal or other materials as may be approved by the Planning Commission.
 - ii. Parking areas which front on a right-of-way shall be screened from the public right-of-way in Zones CC-C, CC-E and CC-S when the measurement of the parking area adjacent to the right-of-way is greater than 40 contiguous feet in any section. The height of landscaping, fences, and walls shall be between 30 and 36 inches in height measured from the grade of the adjacent sidewalk. Screening shall consist of the following:
 - (1) A brick wall with stone or precast cap shall be placed along the right-of-way line of off-street parking areas except in the location of access drives or walks; or

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- (2) Dense landscaping installed and maintained between 30” and 36” in height, providing sufficient year-long screening, while not infringing onto the public sidewalk, and adhering to the requirements of the Road Commission of Kalamazoo County and as approved by the Planning Commission; or
 - (3) A combination of landscaping and brick knee wall as approved by the Planning Commission; or
 - (4) The use of wrought iron or aesthetically equivalent fencing between stone or brick columns; or
 - (5) If the width of the area between the public sidewalk or right-of-way and the off-street parking area is greater than 4 feet and the parking area has a concrete curb, then no screening is required; however a grass or landscaped greenbelt shall be maintained.
- c. **Kalamazoo River frontage.** When properties in Zone CC-C and Zone CC-S abut the Kalamazoo River, the site shall be designed to allow for a future pedestrian path along the Kalamazoo River. To that end, all site improvements such as parking, dumpsters and buildings shall be setback from the property line abutting the river’s edge at least 25 feet.
 - d. **Planning Commission modification.** Any of the landscape and/or streetscape provisions noted above may be waived or modified through site plan approval, provided the Planning Commission first makes a finding:
 - i. That a physical site feature or characteristic create conditions that the strict application of the provisions of this section will result in less effective screening and landscaping than alternative designs.
 - ii. That the public benefit intended to be secured by the provisions will exist with less than the required landscaping or screening.

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5. Design standards

In addition to standards set forth in this section, all proposed development in the CC shall comply with the standards set forth herein.

- a. **Building design and materials.**
 - i. **Overall design.** It is the intent of this section to improve the appearance of and add visual interest to the CC. Emphasis shall be placed upon methods that focus attention on attractive buildings that front on the adjacent right-of-way.
 - ii. **Materials.** Durable building materials, simple configurations and solid craftsmanship are required. Fifty percent of walls visible from public streets, exclusive of wall areas devoted to meeting transparency and ground story activation requirements, shall be constructed of brick, glass, fiber cement siding, metal (beams, lintels, trim elements, and ornamentation only), wood lap, stucco, split-faced block, or stone. Exterior insulation finishing systems (E.I.F.S.) and vinyl or aluminum siding may not constitute more than ten percent of the surface area of any façade's overall surface area.
- b. **Modulation required.** Modulation is required to ensure that the building is not monotonous in appearance. Modulation is defined as a change in the vertical plane of the building façade. Building façades shall be modulated at least every 30 feet horizontally and at least every 20 feet vertically. Modulations shall measure at least three inches perpendicular to the building face.
- c. **Ground story activation.**
 - i. **Transparency.**
 - (1) The first floors of all buildings shall be designed to encourage and complement pedestrian-scale activity. It is intended that this be accomplished principally by the use of windows and doors arranged so that active uses within the building are visible from or accessible to the street. The first floor of any front façade facing a right-of-way shall be no less than 50 percent windows and doors, and the minimum transparency for facades facing a side street, side yard, or parking area shall be no less than 30 percent of the façade.
 - (2) Transparency requirements shall not apply to sides which abut an alley.
 - (3) Windows for building sides shall be concentrated toward the front edge of the building, in locations most visible from a public open space or right-of-way.
 - ii. **Transparency alternatives.** The following alternatives may be used singularly or in combination. They may count toward no more than 80 percent of the transparency requirement.
 - (1) **Wall design.** Wall designs that provide visual interest and pedestrian scale may count as a transparency alternative if they provide a minimum of three of the following elements, occurring at intervals no greater than 25 feet horizontally and 10 feet vertically:
 - (a) Expression of structural system and infill panels through change in plane not less than three inches.
 - (b) System of horizontal and vertical scaling elements such as: belt course, string courses, cornice, pilasters.
 - (c) System of horizontal and vertical reveals not less than one inch in width/depth.

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- (d) Variations in material module, pattern and/or color.
- (e) System of integrated architectural ornamentation.
- (f) Green screen or planter walls.
- (g) Translucent, fritted, patterned, or colored glazing.

- (2) **Outdoor dining/seating.** Outdoor dining/seating located between the building and the primary street lot line may count toward the transparency requirement. Such spaces must be permanently created by a wall or other permanent improvement defining the outdoor dining area.
- (3) **Permanent art.** Non-commercial art or graphic design of sufficient scale and orientation to be perceived from the public right-of-way and rendered in materials or media appropriate to an exterior environment and permanently integrated into the building wall or immediately between the building wall and the right-of-way may count toward the transparency requirement. Public art alone shall not be an eligible feature to allow the relocation of the required building line identified in [Table 3.1.J\(6\)\(a\) Comstock Center Core \(CC-C\) Form Regulations](#), footnote 2, but may satisfy the ground story activation requirements of [subsection c](#) when located in an otherwise permitted setback area.

d. **Pedestrian access/entrance.**

- i. The primary entrance for a non-residential and/or mixed-use building shall be clearly identifiable and useable and located facing the right-of-way.
- ii. A pedestrian connection shall provide a clear, obvious, publicly accessible connection between the primary street upon which the building fronts and the building. The pedestrian connection shall comply with the following:
 - (1) Fully paved and maintained surface not less than five feet in width.
 - (2) Unit pavers or concrete distinct from the surrounding parking and drive lane surface.
 - (3) Located either within a raised median or between wheel stops to protect pedestrians from vehicle overhangs where parking is adjacent.
- iii. **Additional entrances.** If a parking area is located in the rear or side yard, it must also have a direct pedestrian entrance to the building that is of a level of materials quality and design emphasis at least equal to that of the primary entrance.



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6. Form regulations

Single-family residential dwellings are exempt from the below regulations. All existing and proposed single- and two-family residential uses must meet the area, height, width and setback regulations for the “R1-C”, single-family residential district, pursuant to [Section 3.1.E R1-C Cluster Housing](#) of this Ordinance.

- a. **Comstock Center Core Zone:** Comstock Center Core (CC-C) buildings and sites will be developed in a manner which contributes to the character of the area by maximizing the value of the property. CC-C sites must comply with the following regulations:

Table 3.1.J(6)(a) Comstock Center Core (CC-C) Form Regulations			
Type			Regulation
Height	Minimum	Stories	1 story residential 2 stories non-residential 2 stories residential and non-residential in same building
		Feet	12 feet
	Maximum	Stories	3 stories ¹
		Feet	45 feet ¹
	Ground floor minimum	Feet	12 feet
Placement	Front	Required building line ²	25 feet. 75% of the building façade must meet the required building line, while up to 25% of the façade can be setback to allow for architectural consideration
		Minimum setback	n/a
	Side	Minimum setback	0 feet; 10 feet if abut a single-family residence
	Rear	Minimum setback	0 feet; 10 feet if abut a single-family residence
Lot	Required open space		n/a
	Access and circulation		Driveways may access the site from any side; pedestrian pathways must be provided from the right-of-way to the building entrance.
	Parking location		Parking shall be located in a side or rear yard.

¹ Planning Commission may allow buildings to exceed three stories and/or 45 feet in height as a special land use.

² Planning Commission may adjust the required building setback to a maximum of 40 feet for projects incorporating a permanent space for an outdoor café, public space, or a cross access drive with an adjacent parcel. Outdoor cafes or public spaces must be developed as part of the primary building and incorporate a permanent wall or landscaping area along the required building setback line.

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- b. **Comstock Center East Zone:** Comstock Center East (CC-E) buildings and sites will be developed in a manner which contributes to the character of the core, as well as the adjacent residential areas. The CC-E area will provide a transition along Michigan Avenue and King Highway as people enter the downtown area with more intermediate use, dimensional and height regulations. CC-E sites, other than those occupied by a one- or two-family dwelling which shall satisfy the front and side yard setback requirements of lots zoned “R1-C”, Cluster Housing district (see [Section 3.1.E R1-C Cluster Housing](#)), must comply with the following regulations.

Table 3.1.J(6)(b) Comstock Center East (CC-E) Form Regulations

Type			Regulation
Height	Minimum	Stories	1 story
		Feet	12 feet
	Maximum	Stories	2 stories ¹
		Feet	25 feet ¹
Placement	Front	Maximum setback	50 feet
		Minimum setback	20 feet
	Side	Minimum setback	0 feet; 20 feet if abut a single-family residence
	Rear	Minimum setback	0 feet; 20 feet if abut a single-family residence
Lot	Required open space		20 percent
	Access and circulation		Driveways may access the site from any side provided a single-family residence does not abut that same side of the site; pedestrian pathways must be provided from the right-of-way to the building entrance.
	Parking location		Parking shall be located in a side or rear yard. A single row of parking may be placed in front of the building with the row positioned so that vehicles are oriented to face the building or, if adjacent to the right-of-way, oriented parallel to the building provided pedestrian and non-motorized facilities are not impacted as determined by the Planning Commission.

¹ Planning Commission may allow buildings to exceed two stories and/or 25 feet in height as a special land use.



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- c. **Comstock Center South Zone:** Comstock Center South (CC-S) buildings and sites will be developed in a manner which contributes to the character of the downtown, as well as the adjacent residential area. The CC-S area will transition the residential areas south of downtown with more intermediate use, dimensional and height regulations. CC-S sites, must comply with the following regulations.

Table 3.1.J(6)(c) Comstock Center South (CC-S) Form Regulations			
Type			Regulation
Height	Minimum	Stories	1 story
		Feet	12 feet
	Maximum	Stories	2 stories ¹
		Feet	25 feet ¹
	Ground floor minimum	Feet	12 feet
Placement	Front	Required building line	25 feet ²
		Minimum setback	n/a
	Side	Minimum setback	n/a
	Rear	Minimum setback	n/a
Lot	Required open space		20 percent
	Access and circulation		Driveways may access the site from any side, pedestrian pathways must be provided from the right-of-way to the building entrance.
	Parking location		Parking shall be located in a side or rear yard. A single row of parking may be placed in front of the building with the row positioned so that vehicles are oriented to face the building or, if adjacent to the right-of-way, oriented parallel to the building provided pedestrian and non-motorized facilities are not impacted as determined by the Planning Commission.

¹ Planning Commission may allow buildings to exceed two stories and/or 25 feet in height as a special land use.

² Planning Commission may adjust the required building setback to a maximum of 40 feet for projects incorporating a permanent space for an outdoor café, public space, or a cross access drive with an adjacent parcel. Outdoor cafes or public spaces must be developed as part of the primary building and incorporate a permanent wall or landscaping area along the required building setback line.

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- d. **Comstock Center North Zone:** Comstock Center North (CC-N) buildings and sites will be developed in a manner which recognizes the location on the fringe of the downtown area and allows for the continued historic mix of public, residential and institutional land uses. CC-N sites must comply with the following regulations.

Table 3.1.J(6)(d) Comstock Center North (CC-N) Form Regulations

Type			Regulation
Height	Minimum	Stories	1 story
		Feet	12 feet
	Maximum	Stories	3 stories ¹
		Feet	35 feet ¹
	Ground floor minimum	Feet	12 feet
Placement	Front	Required building line	50 feet ²
		Minimum setback	10 feet
	Side	Minimum setback	Nonresidential: 20 feet Residential: One must be at least 10 feet, other must be at least 5 feet
	Rear	Minimum setback	30 feet
Lot	Required open space		20 percent
	Access and circulation		Driveways may access the site from any side, pedestrian pathways must be provided from the right-of-way.
	Parking location		Parking shall be located in a side or rear yard.

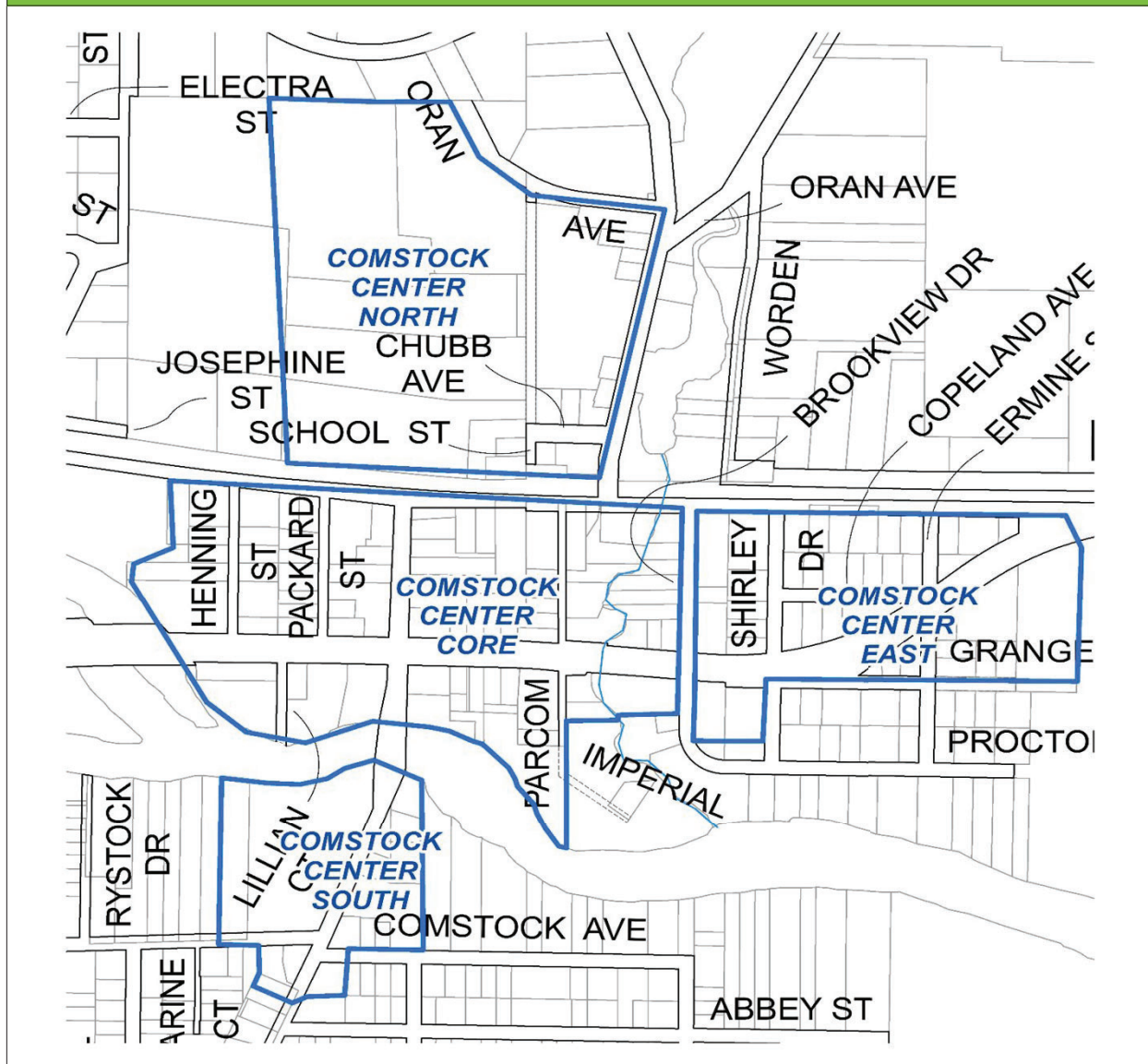
¹ Planning Commission may allow buildings to exceed three stories and/or 35 feet in height as a special land use.

² Planning Commission may allow a greater setback as a special land use.

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e. Map of Comstock Center Zones:

Table 3.1.J(6)(e) Map of Comstock Center Zones



(Amended by Ord. No. 554, Ord. No. 564)



MEMO

Charter Township of Comstock Planning Commission September 10, 2026

From: Kyle Mucha, Principal Planner

Re: Data Center Provisions

Preliminary discussion of sample ordinances related to data centers.

Attachments:

[City of Negaunee data_centers_4.0_pc_approved_draft.pdf](#)

[Draft Data Center Ord Montague Township.pdf](#)

[Eagle Township Data Centers Draft Ordinance 4-14-26.docx](#)

[Mason Ordinance - Ordinance 266.pdf](#)

First Reading:
Second Reading:
Publication:
Effective Date:

AMENDMENT TO ZONING ORDINANCE OF THE CITY OF NEGAUNEE

CHAPTER 156

The City of Negaunee ORDAINS:

That Chapter 156 of the Codified Ordinances of the City of Negaunee, Michigan, shall be, and the same hereby is, amended to read as follows:

REPEALER

Any portion of Chapter 156 of the Codified Ordinances of the City of Negaunee, Michigan, and any other ordinance, resolution, order or parts thereof in conflict with the provisions of these Amendments are, to the extent of such conflict, hereby repealed. The repeal date shall be the effective date of the following Amendments.

AMENDMENT

Chapter 156, Zoning of the Codified Ordinances of the City of Negaunee, Michigan, shall be and is hereby amended to add the following:

Add to 156.050 (C) Special Land Use: Data Center;

Add to 156.052 (C) Special Land Use: Data Center; and

Add Section 156.202 ---- DATA CENTERS

Add the following to DATA CENTERS:

156.203 DEFINITIONS.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEI) - The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7 PM to 10 PM and after the addition of 10 dB to sound levels occurring in the night between 10 PM and 7 AM.

DATA CENTER – A facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, systems, servers, appliances and other associated components related to

digital data operations. The facility may also include air handlers, power generators, water cooling and storage facilities, utility substations, and other associated utility infrastructure to support sustained operations at the Data Center.

DATA CENTER ACCESSORY USE – Ancillary uses or structures secondary and incidental to a Data Center use, including but not limited to: administrative, logistical, fiber optic, storage, and security buildings or structures; sources of electrical power such as generators used to provide temporary power when the main source of power is interrupted; electrical substations; utility lines, domestic and non-contact cooling water and wastewater treatment facilities; water holding facilities; pump stations; water towers; environmental controls (air conditioning or cooling towers; fire suppression, and related equipment), and security features, provided such Data Center Accessory Uses/structures are located on the same tract or assemblage of adjacent parcels developed as a unified development with a Data Center. The use shall not include energy generation systems used or intended to be used to supply power to the Data Center during normal operations.

DATA CENTER ELECTRICAL SUBSTATION – A facility used for the transformation or transmission and/or switching of voltages to distribution voltages which switches circuits and distributes usable/consumable electric power, specifically for Data Center users on the same or adjacent site, or on a site immediately across a road right-of-way.

DATA CENTER PRINCIPAL BUILDING – A building that contains the office and/or data storage functions of a Data Center.

FOOTCANDLE – Enough light to saturate a one-foot square with one lumen of light.

SENSITIVE RECEPTORS – Schools, preschools, day care centers, in-home daycares, health facilities such as hospitals, long term care facilities, retirement and nursing homes, community centers, places of worship, playgrounds, parks (excluding trails), campgrounds, prisons, dormitories, cemeteries, and any residence where such residence is not located on a parcel with an existing industrial, commercial, or unpermitted use as determined by the zoning officer.

156.204. SPECIFIC USE CRITERIA FOR DATA CENTERS.

The following requirements shall apply to all Data Centers and similar facilities. If any of the following regulations are found to conflict with regulations found elsewhere in the City of Negaunee Zoning Ordinance, the most restrictive regulations shall be applied, unless otherwise stated.

A. Building Placement and Orientation.

(1) All principal and accessory structures associated with a Data Center shall be arranged, designed, and constructed to be harmonious and compatible with the site and with the surrounding properties.

(2) Buildings shall be sited and oriented to:

a. Minimize visual impacts of the building when examined on a line-of-sight basis from adjacent public streets.

b. Provide safe and convenient vehicular access to the site, including sufficient on-site queuing areas at security gates.

c. Accommodate adequate parking as required by the Parking Ordinance.

d. Minimize impacts to natural resources.

e. Incorporate appropriate stormwater management practices.

(3) Data Center campuses containing more than one building are required to provide a variety in building size, massing, siting, and appearance by transitioning from smaller or lower buildings along street frontages to larger and taller structures on the interior of the site. Consideration of topography shall be given to avoid placement of larger, taller, or more massive buildings in a prominent location on the property or along a public street.

(4) Connection to public water and public sewer is required.

B. Maximum Height.

The maximum building height for Data Centers shall be 75 feet.

C. Setbacks.

(1) All principal buildings, accessory structures, and Data Center Electric Utility Substations must be set back at least 200 feet from all property lines.

(2) Parking lots for Data Centers shall be set back at least 20 feet from public road rights-of-way, and 20 feet from all property lines.

D. Parking Requirements.

A minimum of 1 parking space per employee on the largest shift is required, plus an additional 6 visitor spaces.

E. Off Street Loading.

(1) A minimum of 1 per 10,000sqft of principal building loading space(s) is required. Loading spaces/bays are only permitted on one façade of the Data Center Principal Building. No Loading spaces allowed on front façade of structures.

(2) Unless physically impossible, loading docks, truck entries, and truck drive aisles shall be oriented away from abutting Sensitive Receptors.

(3) To the greatest extent feasible, loading docks, truck entries, and truck drive aisles shall be located away from nearby Sensitive Receptors. Screening as described in Section K. herein shall be provided. When making feasibility decisions, the municipality must consider existing laws and regulations and balance public safety with the site development's potential impacts on nearby Sensitive Receptors.

F. Noise/Vibration.

Applicant is required to provide a 3rd party Noise/ Volume study to establish compliance to the following provisions

(1) CNEI.

a. The Community Noise Equivalent Level (CNEI) at the boundary of the property containing a Sensitive Receptor shall not exceed 45 dBA.

b. The CNEI at the boundary of any developed property not containing a Sensitive Receptor shall not exceed 50 dBA.

c. Sound that is produced for not more than a cumulative period of one (1) minute in any hour may exceed the standards above by up to ten (10) dBA.

d. The maximum sound levels listed above do not apply to emergency alerts, emergency work to provide electricity, water, or other public utilities when public health or safety is involved, snow removal, or road repair.

(2) A noise reduction barrier or device may be required at the discretion of the City of Negaunee Planning Commission when noise level tests do not conform to acceptable noise levels.

(3) The limitations herein shall not apply to any Sensitive Receptor that is established adjacent to the Data Center after the date of issuance of a certificate of completion or occupancy for the applicant's operation.

G. Negative Impacts.

Any use or activity producing air pollution, dust, smoke, glare, exhaust, noise, heat, vibration or humidity in any form shall be carried on in such a manner that it is not perceptible at or beyond the property line.

I. Power.

Prior to approval of the certificate of completion or occupancy, the applicant shall provide written verification from the applicable service provider stating the following:

- (1) Adequate capacity is available on the applicable supply lines and substation to ensure that the capacity available to serve the other needs of the service area is consistent with the normal projected load growth envisioned by the provider;
- (2) Utility supply equipment and related electrical infrastructure are sufficiently sized and can safely accommodate the proposed use;
- (3) Any system designed for cooling and operation of the facility (electricity, water, or other means) will be adequate and will not negatively impact the surrounding region;
- (4) The use will not cause electrical interference or fluctuations in line voltage on and off the operating premises;
- (5) Prior to approval of the certification of completion or occupancy, the applicant shall provide the municipality with written verification that the electrical work has passed a third-party final inspection;
- (6) Fuel fired energy generation is only allowed as an emergency backup system; and
- (7) A surcharge for electrical consumption, if greater than proposed once in operation, will be assigned *via* the fee schedule as set by City Council.

J. Lighting.

Lighting for parking areas and vehicular traffic ways shall be automatically extinguished nightly within ½ hour of the close of the facility. On/off control shall be by an astronomic programmable controller with battery or capacitor power-outage reset. When after-hours site safety/security lighting is proposed, such lighting shall not exceed 25% of the number of fixtures required or permitted for illumination during regular business hours. Where there is reduced out continued onsite activity throughout the night that requires site-wide even illumination, the use of dimming circuitry to lower illumination levels by at least 50% after 11 PM or after regular business hours, or the use of motion sensor control, shall be permitted.

K. Perimeter Fencing/Security.

Fences shall not exceed eight (8') feet in height above ground and shall be of high-quality design and materials. Any proposed fencing will be required to comply with the City of Negaunee Fence Ordinance.

L. Power Lines and Data Center Electric Utility Substations.

(1) Data Center Electric Utility Substations must include year-round opaque landscaping or a screen wall a minimum of 8 feet in height to minimize visual impact.

(2) Electric Utility Substations on the same property as the Data Center they serve must be located on the side or rear of a Data Center Principal Building so they are screened from public view and must not be in a required front yard. On-site substations do not require a buffer or screening between the Data Center Principal Building and the substation.

(3) Burying power lines serving the property is required.

(4) The Data Center Electric Utility Substation shall be subject to 200 ft setback requirements. Setbacks shall be measured from the edge of the compound containing the substation to the property boundary of the lot it occupies.

M. Emergency Contact Information.

Each Data Center operation shall provide 24-hour emergency contact signage visible at the access entrance. Signs shall include the company name (if applicable), the owner/representative's name, the telephone number, and the corresponding local power company's name and telephone number.

N. Buffer Yards and Screening.

All Data Center operations shall provide buffer yards and screening along all property boundary lines, except for areas of ingress and egress into the site.

(1) Service Areas - Loading bays, refuse collection areas, and service entrances shall be screened from view from existing or planned public roads, Sensitive Receptors, and residential zoning districts. Screening may include year-round landscaping or a screen wall of an appropriate height to mitigate visual impacts as determined by a line-of-sight study submitted by the applicant.

(2) Mechanical/Electrical Equipment Screening.

a. Ground-Mounted.

i. Ground-mounted equipment adjacent to and serving the Data Center Principal Building shall be completely screened behind an opaque wall or fence. When the equipment is located between buildings, a combination of walls and gates may be used at the openings between buildings.

ii. When in or adjacent to an industrial use or zoning district, ground-mounted equipment screening is only required from any existing or planned public road.

iii. Ground-mounted equipment is prohibited in any required setback.

b. Roof Top.

i. All rooftop-mounted equipment shall be screened by a parapet wall, equipment penthouse, or visually solid screen on all four sides that is constructed of materials complementary to those used in the exterior construction of the Data Center Principal Building. This shall be accomplished by setting the penthouse or screened area back from the façade of the building such that the top of the penthouse or screen is below a 45-degree line drawn from the top of the parapet. Roof-top equipment to be screened includes, but is not limited to, the following: cooling, ventilation, and power supply machinery.

ii. Roof top equipment that is visible above the parapet wall shall be set back from the exterior or parapet wall a distance no less than the height of said equipment.

iii. Roof-top equipment may exceed the applicable maximum district building height when completely screened pursuant to this ordinance.

(3) Buffering.

a. Data Center sites abutting collector/arterial roads must include an enhanced buffer yard width required.

b. Where the combined footprint of the principal structure or structures is less than 100,000 square feet:

i. A minimum 100-foot buffer yard shall be provided along the entire length of any public street frontage of any property upon which the Data Center is located and along any property line which abuts or is within 500 feet of an existing residential property line or zone, school, daycare center, hospital, place of worship, designated park, or public open space.

ii. A minimum 50-foot buffer yard shall be provided along any property line adjacent to a non-residential use or zone.

c. Where the combined footprint of the principal structure or structures is between 100,000 square feet and 250,000 square feet:

i. A minimum 150-foot buffer yard shall be provided along the entire length of any public street frontage of any property upon which the Data Center is located and along any property line which abuts or is within 500 feet of an existing residential property line or zone, school, daycare center, hospital, place of worship, designated park, or public open space.

ii. A minimum 50-foot buffer yard shall be provided along all other property lines.

d. Where the combined footprint of the principal structure or structures exceeds 250,000 square feet:

i. A minimum 300-foot buffer yard shall be provided along the entire length of any public street frontage of any property upon which the Data Center is located and along any property line which abuts or is within 500 feet of an existing residential property line or zone, school, daycare center, hospital, place of worship, designated park, or public open space.

ii. A minimum 50-foot buffer yard shall be provided along all other property lines.

e. Utilities should be located outside of buffer yards to the maximum extent feasible to maintain a cohesive buffer yard, protect landscaping, and preserve open space. Utilities should be co-located when feasible to minimize the number of utility crossings through the required buffer yard, particularly when such crossings cannot be avoided.

f. Use of existing vegetation for landscaping and screening is required and may be substituted for new berms and plantings if approved by the City of Negaunee Planning Commission

g. Buffer yards along roadways shall be measured from the street right-of-way line.

h. Where a lot line drainage or utility easement is required, the buffer yard shall be measured from the inside edge of the easement.

i. The landscape buffer shall be located along the outer edge of the buffer yard.

j. The buffer yard may be located within the required building setback lines. No impervious surface is permitted within the buffer yard aside from access drives, sidewalks, and associated improvements.

O. Environmental and Community Impact Analysis.

Prior to the commencement of the Planning Commission hearing, the applicant shall provide an environmental and community impact analysis. The environmental and community impact analysis shall include:

(1) A narrative description of the nature of the on-site activities and operations, including the market area served by the facility, the hours of operation of the facility, the

total number of employees on each shift, the times, frequencies, and types of vehicle trips generated, the types of materials stored and the duration period of storage of materials.

(2) A site plan of the property indicating the location of proposed improvements, flood plains, wetlands, and cultural and historic resources on the property and within 500 feet of the boundaries of the property.

(3) Evidence that the disposal of materials will be accomplished in a manner that complies with state and federal regulations.

(4) An evaluation of the potential impacts of the proposed use, both positive and negative, upon:

- a. Emergency services and fire protection,
- b. Water supply,
- c. Sewage disposal,
- d. Solid waste disposal,
- e. School facilities and school district budget,
- f. Municipal revenues and expenses, and
- g. Electrical supply.

(5) Any environmental or human impacts that are likely to be generated (e.g., odor, noise, smoke, dust, litter, glare, heat islands, vibration, electrical disturbance, wastewater, stormwater, solid waste, etc.) and specific measures employed to mitigate or eliminate any negative impacts. The applicant shall further furnish evidence the impacts generated by the proposed use fall within acceptable levels, as regulated by applicable laws and ordinances.

P. Emergency Responders.

The applicant shall coordinate with the City of Negaunee Police Department and the Fire department to ensure there is adequate radio coverage for emergency responders within the building based upon the existing coverage levels of the City of Negaunee.

Public Safety Radio Communications System at the exterior of the building, and shall install enhancement systems as needed to meet compliance.

Q. Environmental Impact Assessment.

An Environmental Impact Assessment shall be performed. The assessment shall be prepared by a professional engineer, ecologist, environmental planner, or other

qualified individual. An assessment shall include a description of the proposed use, including location, relationship to other projects or proposals, with adequate data and detail for the City of Negaunee to assess the environmental impact. The assessment shall also include a comprehensive description of the existing environment and probable future effects of the proposal. The description shall focus on the elements of the environment most likely to be affected as well as potential regional effects and ecological interrelationships. At a minimum, the assessment shall include an analysis of the items listed below regarding the impact of the proposed use and the mitigation of any such impacts. The assessment shall also include a detailed examination of public resources most likely impacted by the development plan and include the following focus areas:

(1) Air pollution impacts emissions from vehicle operations, including from truck engines during idle time. The applicant shall identify all stationary and mobile sources of fine particulate matter (PM_{2.5}), volatile organic compounds, and nitrogen oxides at the site. The applicant shall specify best management practices for preventing and reducing the concentration of air-polluting emissions at the site. The owner or operator of the facility shall have anti-idling signs prominently posted in areas where 15 or more trucks may park or congregate.

(2) The potential for public nuisance to residents resulting from operations and truck traffic, including noise, glare, light, and visual obstacles, exists.

(3) A stormwater management plan will be required.

(4) The applicant shall submit an assessment report of the impact of the proposed use on the goals of the City of Negaunee Master plan and the Marquette County Master plan. Where the proposed use conflicts with the Master plans, the assessment report shall identify mitigation measures that may be undertaken to offset any degradation, diminution, or depletion of public natural resources.

(5) Additional considerations. The following shall also be addressed:

- a. Alternative analysis. A description of alternatives to the impacts.
- b. Adverse impacts. A statement of any adverse impacts that cannot be avoided.
- c. Impact minimization. Environmental protection measures, procedures, and schedules to minimize damage to critical impact areas during and after construction, including design considerations.
- d. Mitigation steps. A listing of steps/structural controls proposed to minimize damage to the site before and after construction.

(6) Critical impact areas. In addition to the above, plans should include any area, condition, or feature that is environmentally sensitive or that, if disturbed during construction, would have an adverse impact on the environment.

a. Critical impact areas include, but are not limited to, floodplains, riparian buffers, streams, wetlands, slopes greater than 15%, highly acid or highly erodible soils, hydric soils, hydrologic soil groups, areas of high-water table, and mature stands of native vegetation and aquifer recharge and discharge areas.

b. A statement of impact upon critical areas and of adverse impacts that cannot be avoided.

c. Environmental protection measures, procedures, and schedules to minimize damage to critical impact areas during and after construction.

Upon roll call, City of Negaunee Council Members:

Voting aye:

Voting nay:

Whereupon, this Ordinance was declared passed and adopted this _____ day of _____, 2026.

This Amendment shall be published as required by law, and shall be effective on the _____ day of _____, 2026.

CITY OF NEGAUNEE

Attest:

By: Craig Illmonen, Its Mayor

By: Judy Iwanski, Its Clerk

TOWNSHIP OF MONTAGUE (rev IIa)

ORDINANCE NO. 4.34

**AN ORDINANCE TO REGULATE CRYPTOCURRENCY DATA MINING FACILITIES
AND DATA CENTERS**

4.34 To regulate the Location and Operation of Artificial Intelligence/Data Centers within the renewable energy overlay district.

Article 4. Use: Location and Operation of AI/Data Centers

Section 1. Title

This Ordinance shall be known and cited as the “AI Data Center Regulation Ordinance of Montague Township.”

Section 2. Purpose and Intent

The purpose of this Ordinance is to preserve the health, safety, welfare, and environmental integrity of Montague Township by regulating the establishment and operation of Artificial Intelligence (AI) data centers. The Township recognizes the unique demands these facilities place on local infrastructure, energy resources, and land use, and seeks to ensure responsible development aligned with community values.

Section 3. Definitions

- **AI / Data Centers:** A facility primarily used for the storage, processing, and management of data related to artificial intelligence applications, including but not limited to machine learning, neural networks, and large language models.
- **High-Density Computing Facility:** Any facility with computing equipment exceeding 500 kW of continuous power draw.
- **Sensitive Use Area:** Any area within 2,500 feet of schools, hospitals, residential zones, parks, or conservation lands.

Section 4. Allowable Zones

AI / Data Centers shall only be permitted within the RO energy district. :

1. General Provisions.

All AI / Data Centers are subject to the following requirements:

A. All AI / Data Centers must conform to the provisions of this Section and all county, state, and federal regulations and any safety requirements, including but not limited to all applicable building codes, applicable industry standards, and National Fire Protection Association

855 “Standard for the Installation of Stationary Energy Storage Systems”, or any applicable successor standard.

B. The Township may enforce the provisions of this ordinance, which includes but is not limited to the removal of any AI/ Data center. The Township may also seek enforcement through any procedure or as otherwise authorized by law if the AI/Data Center does not comply with this Ordinance.

C. AI / Data Centers and any accessory buildings, therefore, are permitted in the Township only as a conditional use, and only in the RO – Renewable Energy Overlay District, as outlined in this Section.

2. Application Requirements.

The owner and applicant for AI / Data Centers must provide the Township with all of the following:

- A. Application fee in an amount set by resolution of the Township Board.
- B. A list of all parcel numbers that will be used by the AI / Data Centers; documentation establishing ownership of each parcel; and any lease agreements, easements, or purchase agreements for the subject parcels.
- C. An operations agreement setting forth the operations parameters, the name and contact information of the operator, the applicant’s and/or operator’s inspection protocol, emergency procedures, and general safety documentation.
- D. Current photographs of the subject property.
- E. A site plan that includes all current and proposed structures and the location of all equipment, as well as all setbacks, the location of property lines, signage, fences, greenbelts and screening, drain tiles, easements, floodplains, bodies of water, proposed access routes, and road right of ways. The site plan must be drawn to scale and must indicate how the AI / Data Centers will be connected to the power grid. The site plan shall also include a proposed landscaping plan.
- F. A copy of the applicant’s power purchase agreement or other written agreement with an electric utility showing approval of an interconnection with the proposed AI / Data Centers
- G. A written plan for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management, which is subject to the Drain Commission and Township engineering approval.
- H. A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the AI / Data Centers, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the AI / Data Centers and restore the subject parcels to it’s original condition.

I. Financial security that meets the requirements of this Section, including any bonds required by the township.

J. A plan for resolving any complaints from the public or other property owners concerning the construction and operation of the AI / Data Centers,

K. A plan for managing any hazardous waste,

L. A fire protection plan, which identifies the fire risks associated with the AI / Data Centers; describes the fire suppression system that will be implemented; describes what measures will be used to reduce the risk of fires re-igniting (i.e., implementing a “fire watch”); identifies the water sources that will be available for the local fire department to protect adjacent properties; identifies a system for continuous monitoring, early detection sensors, and appropriate venting; and explains all other measures that will be implemented to prevent, detect, control, and suppress fires and explosions.

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

N. An attestation that the applicant and/or owner will indemnify and hold the Township harmless from any costs or liability, including the Township’s actual attorney fees, arising from the approval, installation, construction, maintenance, use, repair, or removal of an AI / Data Center,

O. Proof of environmental compliance, including but not limited to, compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, as amended; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control, as amended (MCL 324.9101 et. seq.) and or corresponding County ordinance, as amended; Part 301, Inland Lakes and Streams, as amended (MCL 324.30101 et. seq.); Part 303, Wetlands, as amended (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection, as amended (MCL 324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township.

P. AI / Data Centers shall provide the Township with yearly reporting of the following, including but not limited to, water usage, power electricity usage, and noise dB generation. The Township will have access to on-site metering as required with 24-hour notice.

Q. Violation of this Ordinance shall be subject to fines not exceeding \$10,000 per day of noncompliance. The Township may seek among all remedies allowed by law, injunctive relief and revoke operational permits.

R. Any additional information or documentation requested by the Planning Commission, Township Board or other Township representative. The aforementioned requirement may require additional entity approvals through local law and ordinance, the State of Michigan, the County of Muskegon, and federal approval. The Township may hire subject matter experts to determine if such approvals have been met. All requirements, inspections, and reviews shall be paid for by the applicant; said review cost may include Township attorney fees.

3. System and Location Requirements.

The site development requirements shall meet or exceed all of the requirements in the underlying district and all of the following:

A. *Lighting.* Lighting of the AI / Data Centers is limited to the minimum light necessary for safe operation. Illumination from any lighting must not extend beyond the perimeter of the lot(s) used for AI / Data Center. The AI / Data Centers must not produce any glare that is a nuisance to neighboring lots or to persons traveling on public or private roads.

B. *Security Fencing.* Security fencing must be installed around all electrical equipment related to the AI / Data Centers. Appropriate warning signs must be posted at safe intervals at the entrance and around the perimeter of the AI / Data Centers. The noise generated by an AI / Data Centers must not exceed 45 dBA Lmax, as measured at the property line of any adjacent parcel.

C. *Underground Transmission.* All power transmission or other lines, wires, or conduits from an AI / Data Centers to any building or other structure must be located underground at a depth that complies with current National Electrical Code standards, or the current electrical regulations then in place, except for power switchyards or the area within a substation.

D. *Drain Tile Inspections.* The AI / Data Centers must be maintained in working condition at all times while in operation. The applicant or operator must inspect all drain tile at least once every three (3) years by means of a robotic camera, with the first inspection occurring before the AI / Data Centers are in operation. The applicant or operator must submit proof of the inspection to the Township. The owner or operator must repair any damage or failure of the drain tile within sixty (60) days after discovery and submit proof of the repair to the Township. Failure to do so may result in the revocation of the permit. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection at the applicant/operator's expense and therefore, a fourteen (14) day advance notice of the time of such inspection is required to be sent to the Township.

E. *Fire Protection.*

- i. Before any construction of the AI / Data Centers begins, the Township's fire department (or fire department with which the Township contracts for fire service) will review the fire protection plan submitted with the application. The fire chief or the fire chief's designated agent will determine whether the fire protection plan adequately protects the Township's residents and property and whether there is sufficient water supply to comply with the fire

protection plan and to respond to emergency incidents. If the fire chief or the designated agent determines that the plan is adequate, then the fire chief or designated agent will notify the Township Supervisor or his or her designee of that determination. If the fire chief or the designated agent determines that the plan is inadequate, then the fire chief or the designated agent may propose modifications to the plan, which the applicant or operator of the AI / Data center must implement. The applicant or operator may amend the fire protection plan from time to time in light of changing technology or other factors. Any proposed amendment must be submitted to the fire department for review and approval under subsection 4(f)(i).

- ii. The AI / Data Centers must comply with the fire protection plan as approved by the fire chief or the designated agent (or as approved by the Township Board in the event of an appeal).

F. *Insurance.* The applicant or operator will maintain property/casualty insurance and general commercial liability insurance in an amount of at least \$5 million per occurrence. Montague Township shall be listed as an additional insured on the policy at all times. Proof of said policy shall be provided to the Township on an annual basis.

G. *Permits.* All required local, county, state, and federal permits must be obtained before the AI / Data Centers begin operating. A building permit is required for the construction of a AI / Data center regardless of whether the applicant or operator is otherwise exempt under state law. Proof of all permits shall be provided to the Township.

H. *Decommissioning.* If an AI / Data Center is abandoned or otherwise nonoperational for a period of one (6) months, the property owner or the operator must notify the Township and must remove the system within six (6) months after the date of abandonment. Removal requires receipt of a demolition permit from the Building Official and full restoration of the site to the satisfaction of the Township Board. The site must be filled and covered with top soil and restored to a state compatible with the surrounding vegetation. The requirements of this subsection also apply to an AI / Data Center that is never fully completed or operational if construction has been halted for a period of (6) months. A decommissioning plan shall be provided and approved by the Township.

I. *Financial Security.* To ensure proper decommissioning of a Commercial AI /Data Centers abandonment, the applicant must post financial security in the form of a security bond or escrow payment in an amount equal to 125% of the total estimated cost of decommissioning, code enforcement, and reclamation, which cost estimate must be approved by the Township. The operator and the Township will review the amount of the financial security every two (2) years to ensure that the amount remains adequate. In the event the amount is found to be inadequate, the applicant shall update their plan and provide the Township with the amount necessary to make the financial security adequate within thirty (30) days of notice from the Township of the inadequacy. Provided further, the initial financial security must be posted within fifteen (15) business days after approval of the conditional use application. The project shall not commence until such financial security is provided.

J. *Extraordinary Events.* If the AI / Data Centers experience a failure, fire, leakage of hazardous materials, personal injury, or other extraordinary or catastrophic event, the applicant or operator must immediately notify the Township within 24 hours after said incident.

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

- i. Current proof of insurance and insured.
- ii. Verification of financial security.
- iii. A summary of all complaints, complaint resolutions, and extraordinary events, with additional information to be provided upon the Township's request.

L. *Inspections.* The Township may inspect an AI / Data Center at any time by providing twenty-four (24) hours' advance notice to the applicant or operator. Provided further, in an emergency, a twenty-four (24) hour advance notice shall not be required.

M. *Transferability.* A conditional use permit for an AI / Data Center is transferable to a new owner. The new owner must register its name and business address with the Township and must comply with this Ordinance and all approvals and conditions issued by the Township.

N. *Remedies.* If an applicant or operator fails to comply with the Zoning Ordinance and/or the requirements of the Conditional Use Permit, the Township may pursue any remedy or enforcement, including but not limited to the removal of any AI / Data Centers pursuant to the Zoning Ordinance or as otherwise authorized by law. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover all costs, including, but not limited to, the Township's actual attorney fees and costs and/or removal costs.

A. *Setbacks.* AI / Data Centers must comply with the following minimum setback requirement and a minimum lot size of 10 acres, with setback distances measured from the nearest edge of the perimeter fencing of the facility:

Setback Description	Setback Distance
Occupied community buildings and dwellings on nonparticipating properties	500 feet from the nearest point on the outer wall
Public road right-of-way	50 feet measured from the nearest edge of a public road right-of-way
Nonparticipating parties	300 feet measured from the nearest shared property line

B. *Host community agreement.* The applicant and/or owner shall enter into a host community agreement with the Township. The host community agreement shall require that, upon commencement of any operation, the AI / Data Centers owner must pay the Township \$2,000.00 per megawatt usage of nameplate capacity each year during the operation of the AI / Data Center. The payment shall be used as determined by the Township for police, fire, public safety, or other infrastructure, or for other projects as agreed to by the local unit and the applicant and/or owner.

7. Validity and Severability.

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

8. Repealer.

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

9. Effective Date.

The amendments to this Section takes effect seven (7) days after publication as provided by law.

(Amended MTh / Year)

TOWNSHIP OF EAGLE
COUNTY OF CLINTON, MICHIGAN

ORDINANCE NO. ____

**AN ORDINANCE TO AMEND THE ZONING ORDINANCE OF
THE TOWNSHIP OF EAGLE**

[Data Centers and Digital Mining]

THE TOWNSHIP OF EAGLE ORDAINS:

Section 1. **Data Centers and Data Mining.** Article 5 of the Eagle Township Zoning Ordinance (the “Zoning Ordinance”) is amended by the following amendment to Section 5.14 regarding data centers, which shall read in its entirety as follows:

Section 5.14 Data Centers and Digital Mining.

- (a) **Purpose.** The purpose of this section is to provide regulations for data centers within the Township in a manner that protects the rural residential character of the community by creating opportunities for data centers while limiting the impacts on nearby residents and the property values of adjacent and nearby properties and the health, safety and general welfare of the Township and its residents.
- (b) **Definitions.**
- (c) **Accessory Data Center.** A data center that is ancillary to the principal use of a lot of parcel, which is typically used solely to store or otherwise support an individual business’s data and information technology needs. A data center is not considered an accessory data center if it requires more than five megawatts (5 MW) of power to operate.
- (d) **Closed-Loop Cooling System.** A sealed system where coolant circulates continuously, absorbing heat from a source, and then transfers that heat to a heat exchanger for removal, without the coolant ever being exposed to the environment.
- (e) **Colocation Data Center.** A data center that is rented out by the owner to provide space to other businesses for their servers and other computing hardware. In addition to providing physical space,

colocation facilities may offer additional services including maintenance, backup power systems, and multiple network connections. A colocation data center may be a small-scale, medium-scale or hyperscale data center.

- (f) **Data Center.** A use involving a building or other structure that is primarily occupied by computers and/or telecommunications equipment and related equipment, including supporting equipment, where information is processed, transferred, or stored. A data center use shall not include a digital mining use. A data center use shall not include on-site solar or wind energy generation facilities used or intended to be used to supply power to the data center.
- (g) **Digital Currency.** Currency in a digital format that involves the use of encryption techniques to regulate the generation of units of the digital currency and verify the transfer of funds, operating independently from a central bank.
- (h) **Digital Mining.** The process whereby computers (also referred to as “nodes” or “mining rigs”) validate blockchain transactions for a specific item of digital currency (commonly known as “bitcoin” or “cryptocurrency”) for a financial benefit.
- (i) **Digital Mining Use.** A use involving a building or structure that is primarily occupied by computers used for digital currency mining purposes. Typical physical characteristics of a digital mining use include, but are not limited to, specialized computer hardware or data centers with a non-diverse electrical use for mining operations as well as equipment to cool the hardware and operating space.
- (j) **Hyperscale Data Center.** A data center that requires one hundred megawatts (100 MW) or more of power to operate.
- (k) **Medium-Scale Data Center.** A data center that requires between six megawatts (6 MW) and ninety-nine megawatts (99 MW) of power to operate.
- (l) **Megawatts (MW).** A unit of power that is used for the measurement of bulk electricity, and is equal to one million watts.
- (m) **Small-Scale Data Center.** A data center that requires less than five megawatts (5 MW) of power to operate.
- (n) **Application.** A site plan shall be submitted and reviewed prior to the approval of a data center or digital mining use under the provisions of Section 14.03, except where special land use approval is required, in which case special land use approval under Section 14.04 shall be required. All documentation and correspondence pertaining to the application and review

of a data center or digital mining use shall be considered public information and shall be made available upon request. An application for a proposed data center or digital mining use shall include all of the information required for site plan review under Section 14.03, and the following additional information:

- (1) The site plan for the proposed use shall include the location of proposed buildings, structures and other improvements, floodplains, wetlands, any bodies of water, and the zoning districts for all adjacent properties and any existing dwellings within ____ feet of the proposed use.
 - (2) Evidence of preliminary contact with the proposed electrical service provider regarding whether there is capacity for the proposed use and whether the existing infrastructure and facilities can accommodate the proposed use.
 - (3) A noise mitigation plan shall be submitted, including, at a minimum, a detailed acoustic study showing the amount of noise that would be produced by normal operations of the data center and strategies to minimize noise and achieve a neutral impact on adjacent and nearby properties.
 - (4) A detailed narrative of the arrangements to be made for stormwater discharge, water supply and sewage disposal service, including approximate capacity, source of water supply, discharge points for sewage disposal, and description of storm water management facilities.
 - (5) A project development timeline, including information regarding how the applicant will inform adjacent property owners and members of the community regarding the status of the project.
 - (6) A decommissioning plan, which shall include details regarding the planned method of safe removal and recycling or disposal of server infrastructure, any hazardous materials, batteries, electronic waste and related products.
- (o) **Environmental Impact Assessment.** The Applicant shall also provide an environmental impact assessment with the application materials. This assessment shall describe the effect and impact that the proposed data center or digital mining use will or may have upon or with respect to the following matters:
- (1) The lands involved and the adjacent and nearby lands; streams, rivers, wetlands, and the quality and volume of surface and groundwater; wildlife and trees, and other

significant vegetation; the effect, if any, on surrounding property values.

- (2) A traffic impact study.
 - (3) Additional costs to governmental units; police and fire protection; storm water drainage; water supply and sewage disposal.
 - (4) Evidence that the disposal of wastewater and other materials will be accomplished in a manner that complies with local, state and federal regulations.
 - (5) Noise, vibration, dust and dirt, litter, smoke, odor, light, and glare.
 - (6) A community impact analysis.
 - (7) A written plan for maintaining the subject property, including a plan for maintaining and inspecting drain tile and addressing stormwater management, which is subject to the Township's review and approval.
 - (8) An analysis of the nature and effect of any private utility systems, including septic tanks and drain fields, storm water control and retention facilities, and water supply and distribution systems. This analysis shall include any impact on private utility systems located on adjacent or nearby properties up to ____ feet away from the proposed data center.
 - (9) Such other matters as the Planning Commission may request to be included. If requested by the Planning Commission, the environmental impact assessment shall include statements or comments from the following public agencies or officials concerning those aspects of the proposed data center within their respective responsibilities and jurisdictions: Clinton County Health Department; Clinton County Road Commission, Clinton County Drain Commissioner, Michigan Department of Environment, Great Lakes, and Energy, local school district(s); local board(s) of education, Clinton County Sheriff's Department, the Looking Glass Regional Fire Authority and other appropriate agencies.
- (p) **Reports.** The Township shall have the right to require supplemental or amended reports related to matters including but not limited to impacts of the proposed development, prior to any zoning approval.

- (q) **Staff Review.** The Town Clerk shall ensure that a report on the proposed site plan is prepared for the Planning Commission. The Township Planner, Township Attorney, Township Engineer, and other Township staff and consultants may also prepare reports. The Township may also contract with other consultants to provide reports necessary to evaluate the proposed data center and its potential impacts.
- (r) **Fees.** The applicant shall pay all fees and charges required by Section 14.07, including the required escrow deposit set by the Township Board for site plan review and special land use approval, if applicable. In addition, the Township reserves the right to require the applicant to deposit an increased or additional escrow deposit if necessary for the Township to review the application and related materials.
- (s) **General Regulations.** The following general requirements apply to all data centers and digital mining uses within the Township.
- (1) **Noise.** The sound pressure level of the construction, use, operation, or decommissioning of a data center or a digital mining use shall not exceed the decibel levels in the designated octave bands stated below at any point on a lot line of the property on which the data center is located:
- (i) For monitoring purposes for steady daytime noise, the A scale levels (slow response) of 62 dB (A) shall be used. Any noise levels in excess of that level constitutes a violation of this subsection of the Ordinance.
- (ii) Where noise levels below the above mentioned 62 dB (A) are measured, the octave band test is to be applied in order to determine compliance with this subsection.

Octave Band Center Frequency (Hz)	Maximum Sound Pressure Levels (Daytime, Steady Noise)
31.5	79
63	78
125	72
250	64

500	58
1000	52
2000	46
4000	41
8000	39

- (iii) Maximum nighttime sound pressure levels (10 p.m. to 7 a.m.) are to be seven (dB) lower than the values shown for daytime steady noise for each octave band center frequency.
 - (iv) Maximum repetitive impulse noise sound pressure levels are ten (dB) lower than the values shown for steady noise as indicated in subsections (a) and (b) above.
 - (v) The maximum noise levels provided above shall not apply to emergency alerts or emergency alarms.
 - (vi) In the event that there is an audible noise due to the operation of a data center or digital mining use at adjacent property line(s), which contains a steady pure tone such as a whine, screech or hum, the maximum noise levels permitted for that data center or digital mining use shall be reduced by five (5) dB from the maximum noise levels contained above.
- (2) **Mechanical Equipment.** To reduce the impact of additional noise on surrounding properties, any equipment necessary for cooling, ventilating, or otherwise related to operations of the data center or digital mining use, including power generators or other power supply equipment, shall be located within an enclosed building or structure.
- (i) The Planning Commission may waive this requirement for specified equipment if it finds that it is not mechanically feasible to fully enclose such equipment. If it does so, the specified equipment that has been approved to be located outside of an enclosed building or structure shall be screened by a wall or similar barrier.

(3) **Setbacks.**

- (i) **Setbacks from Residential Properties.** Any building or structure that is used for a data center or digital mining use shall be located at least ____ feet from the lot line of any property located in a residential zoning district designated by the zoning classification of RE – Rural Estate, R – Residential District, or MH – Manufacture Housing Community.
- (ii) **Setbacks from Non-Residential Properties.** Any building or structure that is used for a data center or digital mining use shall be located at least ____ feet from the lot line of any property not located in a residential zoning district.
- (iii) **Setbacks for Equipment.** Any equipment necessary for cooling, ventilating, or otherwise related to operations of the data center or digital mining use, including power generators or other power supply equipment, shall be located at least ____ feet away from all property lines.
- (iv) **Setbacks for Accessory Data Center.** An accessory data center shall comply with the applicable setback requirements for the district in which the accessory data center is located.

(4) **Outdoor Storage.** Outdoor storage of materials, equipment, and supplies shall be prohibited. [Optional – The Township could permit outdoor storage and require outdoor storage to be setback from property lines or screened.]

(5) **Hazardous Materials.** Due to the nature of a data center or digital mining use, hazardous waste and storage of hazardous materials is anticipated. If the proposed data center or digital mining use includes storage or disposal of hazardous materials or waste, the following is required:

- (i) The applicant shall describe the nature of the storage and processing of hazardous materials and waste as part of the application for site plan review. This shall include proposed safety measures and protocols to prevent the spread of hazardous materials outside of designated containment areas and procedures in the event that hazardous materials or waste are released and have the potential to damage persons, property

or the environment. This information shall be provided to provide the Township with notice that hazardous materials or waste are present to coordinate in the event that hazardous materials or waste is released, and to inform public safety officials.

- (ii) All storage and/or processing of hazardous materials and waste shall comply in all respects with state and federal law and regulations and the requirements of the Michigan Department of Environment, Great Lakes and Energy and any other applicable agency. Storage and/or processing of hazardous materials and waste shall not commence until all necessary permits have been obtained and copies of such permits have been provided to the Township.
 - (iii) Storage and/or processing of hazardous materials and waste shall not occur within ____ feet of any lot line.
 - (iv) If storage and/or processing is proposed outside of a building or structure, those activities shall be screened from view of adjacent public or private rights-of-way and any property that is zoned in a residential district.
- (6) **Air Quality and Water Quality.** The equipment, including but not limited to any power generators, used in the operation of the data center or digital mining use shall minimize air pollutant emissions and water pollutant discharges and meet or exceed applicable state and federal laws regarding emissions and discharges.
- (7) **Storm Water Management.** A Township storm water permit is required for a proposed data center or digital mining use. Measures for control of storm water drainage shall be provided under the terms of the Township Storm Water Ordinance.
- (8) **Cooling Methods.** To reduce the potential impact on nearby potable water resources, any data center or digital mining use that proposes to use water cooling must use a closed-loop cooling system or recycled water system.

- (9) **Power.** Before the issuance of any building permits, the applicant shall provide written verification from the applicable energy service provider that states the following:
- (i) There is adequate capacity available on the applicable supply lines and substation for the data center or digital mining use and to ensure that there is sufficient capacity available to serve the needs of other customers within the service area, consistent with the normal projected load growth envisioned by the provider;
 - (ii) The utility supply equipment and related electrical infrastructure are sufficiently sized and can safely accommodate the proposed data center or digital mining use during the power provider's peak consumption hours;
 - (iii) Any system designed for cooling and operation of the facility (electricity, water, or other means) will be adequate and will not negatively impact the surrounding area; and
 - (iv) The use will not cause electrical interference or fluctuations in the line voltage on and off the operating premises.
- (10) **Electric Utilities.**
- (i) Integration of renewable energy to power data centers is preferred, if feasible. Data centers that are required to obtain power from renewable sources as part of eligibility for the sales and use tax exemptions under Public Act 181 of 2024, as amended, and Public Act 207 of 2024, as amended, shall comply with state laws and regulations.
 - (ii) To the extent feasible, electrical utilities shall be located underground.
 - (iii) Prior to the issuance of a certificate of occupancy, the applicant shall provide the Township with written verification that the electrical work has passed a third-party final inspection.
- (11) **Lighting.** Any proposed outdoor lighting for a data center or digital mining use shall comply with the requirements of Section 6.06.

- (12) **Fencing.** The Planning Commission may require fencing for a data center or digital mining use if necessary for safety or security purposes.
- (13) **Parking.** Data centers and digital mining uses shall provide a minimum of one (1) off-street parking space for each employee of the data center, and an additional three (3) visitor parking spaces.
- (14) **Safety.**
- (i) A detailed emergency response plan shall be submitted with the zoning application, showing at a minimum that the data center has a plan in effect to address emergencies resulting from flood, fire, explosion and catastrophic weather events. The emergency response plan is subject to review and comments by the Township, including the Looking Glass Regional Fire Authority Fire Chief, and may also be subject to review of the Clinton County Sheriff's Department or other applicable law enforcement agency.
 - (ii) The equipment used in any data center or digital mining use shall be housed in a metered, electrically grounded, and metal-encased structure with a fire rating designed to resist an internal electrical fire for at least thirty (30) minutes. The containment space for the equipment shall contain baffles that automatically close in the event of fire, independent of a possible electrical system failure.
 - (iii) Any data center or digital mining use that is proposed to include battery storage or any other device or group of devices capable of storing energy in order to supply electrical energy at a later time shall demonstrate compliance with the National Fire Protection Association (NFPA) Standard 855, Installation of Stationary Energy Storage Systems, or similar standards and must include fire suppression systems specifically designed for battery storage.
 - (iv) The proposed data center or digital mining use shall include a fire suppression system that complies with the Michigan Construction Code, as amended, and any other applicable local, state or federal laws, rules or regulations. Compliance with all requirements of

the Looking Glass Regional Fire Authority Fire Chief related to fire suppression shall be required.

- (15) **Emergency Contact Information.** Each data center or digital mining use shall provide 24-hour emergency contact signage visible at each access entrance. The signs shall include the company name (if applicable), the owner or representative's name, the telephone number for the emergency contact person, and the local power company's name and telephone number.
- (16) **Nuisance Prohibited.** The data center or digital mining use shall be designed, constructed and operated at all times in a manner that does not create a nuisance by reason of heat, glare, fumes, dust, noise, vibration or odor beyond the property on which the data center is located.
- (17) **Modular Data Centers Prohibited.** Pre-fabricated or "modular" data centers are prohibited. All data center uses shall be within site-built buildings.
- (18) **Compliance with Other Laws.** The design, construction, operation use and decommissioning of a data center or digital mining use shall comply with all other applicable local, state or federal laws or regulations, including but not limited to laws or regulations regarding the environment, pollution, and mitigation of potential impacts on threatened or endangered species.
- (t) **Decommissioning Requirements.** The application shall include a decommissioning plan that describes the anticipated life of the data center or digital mining facility and the manner in which the project will be decommissioned, actions that will be taken to restore the site, the removal of the equipment, the estimated cost of the decommissioning process, and the method for ensuring that the owner and/or operator will have sufficient funds available for decommissioning and restoration. If a data center or digital mining use is not operational for a continuous one-year period, or if substantial action on the project is discontinued for a period of one year, the project shall be deemed abandoned and must be decommissioned. The owner, operator, permit holder and/or their successor(s) in interest shall have one year to complete decommissioning of the facility. The decommissioning shall be in compliance with the approved decommissioning plan, and the owner, operator, permit holder and/or their successor(s) in interest shall notify the Township when the project has been decommissioned.

- (u) **Colocation Data Centers.** Colocation data centers shall be permitted. The owner(s) and/or operator(s) of colocation data centers shall be responsible for ensuring that lessees and users of the data center or digital mining use facilities comply with the terms of this section and other applicable provisions of the Zoning Ordinance and other applicable local, state and federal laws, rules and regulations. The owner(s) and/or operator(s) of colocation data centers shall provide information regarding their plan to ensure that all of the lessees and users of the proposed data center or digital mining use will remain in compliance.
- (v) **Accessory Data Centers.**
 - (1) An accessory data center is permitted only in those zoning districts where an accessory data center is a permitted accessory use.
 - (2) Accessory data centers must be located on the same lot or parcel as the principal use.
 - (3) All equipment necessary for the operation of the accessory data center, including any equipment necessary for cooling, ventilating, or otherwise related to operations of the data center or digital mining use, including power generators or other power supply equipment, shall be located within an enclosed building or structure.
- (w) **Digital Mining Uses.** Where a digital mining use is allowed as a permitted use or special land use in a zoning district, the following additional requirements apply:
 - (1) All activities related to the digital mining use must be conducted within an enclosed building.
 - (2) The applicant must provide evidence to the Township, certified by a professional engineer, that the proposed use will not have an adverse effect on electrical or digital internet services in neighboring properties or the Township.
 - (3) All digital mining operations shall be designed, erected, and installed in accordance with all applicable local, state or federal laws, codes, rules and regulations.
 - (4) Digital mining shall not occur in any accessory building or temporary structure. The use of ISO shipping containers or other similar containers for digital mining shall be prohibited.

- (5) Digital mining operations shall only be permitted between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday.

- (x) **Drain Tile Inspections.** The Cryptocurrency Data Mining Facility or Data Center must be maintained in working condition at all times while in operation. The applicant or operator must inspect all drain tiles at least once every three years using a robotic camera, with the first inspection occurring before the Cryptocurrency Data Mining Facility or Data Center is in operation. The applicant or operator must submit proof of the inspection to the Township. The owner or operator must repair any damage or failure of the drain tile within sixty (60) days after discovery and submit proof of the repair to the Township. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection.

Section 2. **Amendment of Section 3.01** Section 3.01 of the Zoning Ordinance is amended by to allow medium-scale and hyperscale data centers and/or digital mining businesses as a special land use in the I-2 – High Intensity Industrial District.

Section 3. **Data Centers and Data Mining as a Special Land Use.** Section 5.14 of the Zoning Ordinance is amended by the addition of a new Section 5.14 regarding special land use standards for data centers and data mining, which shall read in its entirety as follows:

Section 5.14 Data Centers and Digital Mining.

- (a) Data centers and/or digital mining businesses may be permitted by the Planning Commission as a special land use upon compliance with all of the terms and conditions of this section.
- (b) **Definitions.** The definitions provided for data centers in Section 5.14 shall apply.
- (c) **Compliance with Section 5.14.** Proposed data centers and/or digital mining businesses must comply with the requirements for all data centers under Section 5.14, except as provided in this section.
- (d) **Application.** In addition to the application materials and environmental impact study required for data centers under Section 5.14, applications for data centers and/or digital mining businesses shall include the following:

- (1) A separate noise impact study which includes information on the noise levels to be generated by the construction, use and operation of the data center, measured in dB(A).
- (2) A description of the proposed plan to obtain water required for the data center or digital mining use, including whether the water would be taken from groundwater or surface water, whether private or public utilities are proposed, and indicating the quantity of water required. The description shall specify if non-potable or recycled water is proposed to be used.
- (3) A separate analysis of the impact on the use of the required water for the data center or digital mining business on the capacity of water available from public utilities or from groundwater or surface water sources. If water is proposed to be from public sources, the applicant shall demonstrate that the public source has the capacity to provide water for the proposed data center or digital mining use or if infrastructure or facilities improvements would be required.
 - (i) Data centers may only be approved upon confirmation of the Director of the Village of Webberville's Department of Public Works or Director of the City of Williamston's Department of Water and Sewer, as applicable, that the water system has sufficient capacity for the proposed Data Center. Alternatively, the applicant may opt to pay the full costs of all required upgrades needed to ensure sufficient water capacity with no impact on existing water customers.
- (4) The applicant shall also provide a water feasibility study if the water is to rely upon nonpublic sources of water, which will estimate the impact of the use on existing wells within ____ feet. The water feasibility study shall include the following:
 - (i) Calculations of the projected water needs of the data center during normal operations and at peak operations.
 - (ii) A geologic map of the area with a radius of at least one mile from the property.

- (iii) The location of all existing and proposed wells within ____ feet of the site, with a notation of the capacity of all high-yield wells.
 - (iv) The location of all rivers, streams and lakes within ____ feet of the site.
 - (v) A determination of the long-term safe yield of groundwater based on the geologic formation(s) underlying the site.
 - (vi) A determination of the effects of the proposed water supply system and water discharge system on the quantity and quality of water in nearby wells and bodies of water.
 - (vii) A statement of the qualifications and the signature(s) of the person(s) preparing the study.
- (5) The applicant shall provide an analysis of the impact of stormwater discharged from the proposed data center and the impact on groundwater, surface water or other water sources.
 - (6) The applicant shall also provide information regarding any preliminary review of the Michigan Department of Environment, Great Lakes and Energy.
 - (7) The applicant shall provide information regarding discussions with the electric service provider indicating that capacity is available to serve the proposed data center or digital mining use.
- (e) **Location Requirements.** Data centers and/or digital mining businesses shall be permitted as special land uses in the I-2 – High Intensity Industrial District provided, however, that data centers and/or digital mining businesses shall not be permitted in areas of the Township that do not have sufficient infrastructure or facilities to support those uses.
- (1) Data centers and/or digital mining businesses shall be required to connect to public water and public sewer.
 - (2) In addition, data centers and/or digital mining businesses shall not be located in areas that do not have existing electrical infrastructure and facilities that are sufficient to support data centers and/or digital mining businesses without adversely impacting adjacent and surrounding properties.

(f) **Minimum Requirements for Data Centers and/or Digital Mining Businesses.**

(1) **Minimum Lot Area.** The minimum lot area shall be 817, 200 square feet, or 18.76 acres.

(2) [Optional – does the Township want to adopt specific lot frontage, width to depth ratio, or maximum parcel coverage requirements for data centers/digital mining businesses?]

(3) **Building Height.** The maximum building height shall be 100 feet.

(4) **Setbacks.**

(i) The minimum setback from adjoining property lines that are zoned in residential districts shall be ____ feet.

(ii) The minimum setback from adjoining property lines that are zoned in non-residential districts shall be ____ feet.

(5) **Landscaping and Buffering.**

(i) Landscaping shall be provided in accordance with the requirements of Article 9.

(ii) [Optional – Does the Township want to include detailed landscaping requirements?]

(iii) The owner(s) and/or operator(s) of the data center shall continuously maintain the required landscaping, including but not limited to replacement of any dead or diseased plantings.

Section 4. **Validity and Severability.** If any portion of this Ordinance is found invalid for any reason, such holding will not affect the validity of the remaining portions of this Ordinance.

Section 5. **Repealer.** Any ordinances or parts of ordinances that conflict with this Ordinance are repealed, but only to the extent necessary to give this Ordinance full force and effect.

Section 6. **Publication and Effective Date.** This Ordinance, or a summary of its provisions, shall be published in a local newspaper of general circulation within the Township. This Ordinance shall take effect seven days following such publication.

Introduced/First Reading: November 17, 2025, Amended December 1, 2025, Amended January 5, 2026
 Second Reading/ Adopted: February 2, 2026
 Publication: February 8, 2026
 Effective Date: February 22, 2026

CITY OF MASON ORDINANCE NO. 266

AN ORDINANCE TO AMEND THE CITY CODE OF THE CITY OF MASON BY
 ADDING SECTION 94-153 TO CHAPTER 94 ZONING CREATING A NEW
 TECHNOLOGY INNOVATION (M-3) ZONING DISTRICT, AND UPDATING
 VARIOUS SECTIONS WITHIN THE CODE TO ALLOW FOR THE NEW M-3
 ZONING DISTRICT

THE CITY OF MASON ORDAINS

1. Section 26-92 of Chapter 26, Fire Prevention and Protection, Article III. Outdoor Fires, Division 1, Generally, shall be amended to read as follows:

Sec. 26-92. Exceptions.

The prohibition of section 26-91 shall not be construed to prohibit burning in the M-1, M-2 and M-3 zoning districts when such burning is in compliance with the standards of section 94-151, section 94-152, and section 94-153, , respectively; nor to occasional wood fires in designated stoves and grills in city parks; nor to fires of charcoal or non-ash-producing fuel when used for the exclusive preparation of food for human consumption; nor to non-ash-burning fuels being used not less than 15 feet from combustible materials when used in adequate fire-resistant metal containers for the heating of building materials or for the warmth of workers.

2. Section 58-127 of Chapter 58, Signs, Article III. Requirements and Restrictions shall be amended to read as follows:

Section 58-127. On-premise signs.

- (d) Manufacturing (M-1, M-2, and M-3) zoning districts.

- (1) *Window signs.* Window signs shall be permitted up to a size equivalent to 20 percent of the total window pane area.

- (2) *Freestanding on-premise signs.*

- a. Number. One freestanding on-premise sign shall be permitted per parcel. A second on-premise freestanding sign will be permitted if the subject parcel has frontage on more than one public street, provided there shall not be more than one sign on any single street.
- b. Height. The overall height of any freestanding sign shall not exceed 20 feet above grade.
- c. Area. The maximum allowable sign area shall not exceed the following:
 1. For signs with an overall height of ten feet or less, 42 square feet in area.
 2. For signs with an overall height exceeding ten feet, 24 square feet in area.
- d. Multiple business signs. Two or more businesses located on the same parcel of land shall be permitted to share a single freestanding sign identifying those individual businesses, provided said sign does not exceed 52 square feet in sign area and ten feet in height above grade.

- (3) *Wall signs.*

- a. Number. One wall sign shall be permitted per ground level store. A second wall sign will be permitted if the subject tenant/owner is located in a ground level store front and has frontage

- a. Number. One wall sign shall be permitted per ground level store. A second wall sign will be permitted if the subject tenant/owner is located in a ground level store front and has frontage on more than one public street, provided there shall not be more than one sign on any single street.
 - b. Area. Wall signs shall be permitted up to an aggregate size equivalent to one and one-half square feet of sign area for each one lineal foot of wall width.
 - c. Multi-tenant buildings.
 1. For ground level store fronts, the allowable sign area for each individual tenant sign will be determined based on the length of the outside wall that tenant unit occupies in accordance with the requirements of subsection (3)b.
 2. For tenants without store fronts, including all tenants not located on the ground floor, one sign per tenant shall be permitted not exceeding three square feet in sign area and located within 18 inches of the outside building entry door.
3. Section 58-129 of Chapter 58, Signs, Article III. Requirements and Restrictions shall be amended to read as follows:

Sec. 58-129. Off-premise signs.

Off-premise signs, including billboards, shall be permitted only in the C-2 General Commercial, M-1 Light Manufacturing, M-2 General Manufacturing and M-3 Technology Innovation zoning districts, and shall comply with the requirements listed in this section.

- (1) Off-premise signs located within 900 feet of a limited access highway interchange shall comply with the following:
 - a. Number. Not more than one off-premise sign shall be permitted on a single parcel, provided each off-premise sign shall be spaced a distance of 600 feet from another off-premise sign on the same side of a street or 300 feet from another off-premise sign on the opposite side of a street. Sign spacing shall be measured along a line parallel to the right-of-way of said street.
 - b. Height and area. An off-premise sign and its structure shall not exceed an overall height of 25 feet. The sign area shall not exceed 300 square feet.
 - c. Placement. An off-premise sign shall be setback at least 35 feet from a public or private road right-of-way and shall not be closer than 500 feet from the property line of a residentially zoned or used property.
- (2) Off-premise signs located farther than 900 feet from a limited access highway interchange shall comply with the following:
 - a. Number. Not more than one off-premise sign shall be permitted on a single parcel.
 - b. Height and area. An off-premise sign and its structure shall not exceed an overall height of ten feet. The sign area shall not exceed 40 square feet.
 - c. Placement. Setback standards shall be consistent with section 58-128(4).
- (3) For the purposes of this section, distance to a highway interchange shall be measured by a straight line drawn from the nearest point of the interchange right-of-way of an on or off ramp to the farthest point of the sign.
- (4) Illumination. Off-premise signs may be directly or indirectly illuminated. All indirectly illuminated signs shall be constructed, designed, installed and maintained so as to concentrate the illumination upon the sign surface. The light source shall not be visible beyond the property line of the site or from any public or private road right-of-way.
- (5) Clear vision area. Off-premise signs shall comply with the clear vision area described in section [94-172\(d\)\(3\)](#) in chapter 94 of this code and figure [100-103](#) in chapter 100 of this code.
- (6) Nothing contained in this ordinance shall permit a sign or sign structure that is otherwise prohibited by the State Highway Advertising Act of 1972, 1972 PA 106, or shall require or cause the removal of lawfully erected signs or sign structures permitted under said act.

4. Chapter 94, Zoning, Table of Contents, shall be amended to read as follows:

Article IV. Zoning District Regulations

Sec. 94-121. General intent and purpose, permitted uses, and dimensional regulations.

Sec. 94-122. AG: Single-family agriculture district.

Sec. 94-123. RS-1, RS-2, RS-3: Single-family residential districts.

Sec. 94-124. R2F: Two-family residential district.

Sec. 94-125. RM: Multiple-family residential district.

Sec. 94-126. MH: Manufactured home park residential district.

Secs. 94-127—94-130. Reserved.

Sec. 94-131. O-1: General office district.

Sec. 94-132. O-2: Specialized office district.

Secs. 94-133—94-140. Reserved.

Sec. 94-141. C-1: Central business district.

Sec. 94-142. C-2: General commercial district.

Sec. 94-143. C-3: Local commercial district.

Secs. 94-144—94-150. Reserved.

Sec. 94-151. M-1: Light manufacturing district.

Sec. 94-152. M-2: General manufacturing district.

Secs. 94-153. M-3: Technology innovation district

Secs. 94-154—94-160. Reserved.

Sec. 94-161. PUD: Planned unit development district.

5. Section 94-61 of Chapter 94, Zoning, Article II. Zoning District Map and General Zoning Regulations, shall be amended to read as follows:

Sec. 94-61. Establishment of districts.

The following zoning districts are hereby established for the city:

AG district: Single-family agriculture district

RS-1 district: Low density single-family residential district

RS-2 district: Medium density single-family residential district

RS-3 district: High density single-family residential district

R2F district: Two-family residential district

RM district: Multiple-family residential district

MH district: Manufactured home park residential district

O-1 district: General office district

O-2 district: Specialized office district

C-1 district: Central business district

C-2 district: General commercial district

C-3 district: Local commercial district

M-1 district: Light manufacturing district

M-2 district: General manufacturing district

M-3 district: Technology innovation district

PUD district: Planned unit development district

6. Chapter 94, Zoning, Article IV Zoning District Regulations, shall be amended to add Section 94-153 M-3 Technology Innovation District as follows:

Sec. 94-153. M-3: Technology innovation district.

(a) *Intent and purpose.*

- (1) The purpose of this district is to provide an appropriate regulatory environment for large-scale, infrastructure-intensive technology uses, including engineering, design, research and development, and data processing and computer centers. These uses are characterized by continuous operations, significant utility demand, heightened security requirements, and limited visitation by the general public.
- (2) Advances in technology have created land uses that share certain characteristics with both office and industrial uses, but which, due to the number, scale, and operational requirements of associated structures and equipment, may not function adequately or compatibly within other zoning districts. While these uses are generally more intensive than traditional office uses, they are typically less intensive than conventional industrial uses in terms of employee density, traffic generation, and routine public interaction.
- (3) Development within this district shall be designed to ensure compatibility with surrounding land uses through appropriate site design, buffering, screening, and architectural standards, and is intended primarily for areas that are largely undeveloped and capable of accommodating such uses without adverse impacts to adjacent properties or community character.

(b) *Uses permitted by right.* Uses permitted by right in this district shall be limited to agricultural uses and to technology-focused uses whose primary function involves data processing, computational infrastructure, or technology research and development, and shall not include retail, goods distribution, or other high-traffic commercial uses.

- (1) Agriculture.
- (2) Laboratories, offices and other facilities for basic and applied research, experimentation, testing, product design, technology development, consulting and business development.
- (3) High technology service uses with the principal function of providing services including computer information transfer, communication, distribution, management, processing, administrative, laboratory, experimental, developmental, technical, or testing services.
- (4) Data processing and computer centers, commonly referred to as data centers, including service and maintenance of electronic data processing equipment.

(c) *Permitted accessory uses.*

- (1) Accessory uses and structures as defined in this chapter.
- (2) Solar panels that are ground-mounted, on structures or over paved parking areas.

(d) *Uses authorized by special use permit.* Any uses permitted in the M1 light manufacturing district and M2 general manufacturing district.

- (e) *Development standards.* Any use of land or structures in this district shall comply with the general development standards of section 94-121(c), however, when any of the general standards are in conflict with this section, the standards in this section shall supersede such general standards. In addition to the requirements of this chapter, an application for site plan review shall comply with the following.
- (1) Include expected water use amount and identification of any expected contents of wastewater that could impact the city wastewater treatment process.
 - (2) Include expected electricity use and documentation of the commitment from the electricity provider that sufficient electricity supply is available to the site and that such supply will not impact other electricity users consistent with state law.
 - (3) Include an environmental impact statement detailing potential impacts to air quality, wildlife, and water resources, including cooling water and wastewater, surface water and groundwater. The statement shall include proposed mitigating actions to address potential impacts identified.
 - (4) No site plan shall be approved, nor shall any development agreement or utility agreement be executed, unless the City has determined, based on completed studies and submitted documentation, that sufficient city utility capacity exists under conservative, long-term operating assumptions. For purposes of this section, conservative, long-term operating assumptions may include full build-out demand, peak usage conditions, reasonable contingency factors, and the expected operational lifespan of required infrastructure.
 - (5) The planning commission shall hold a public hearing prior to approval of a preliminary site plan. Notice of a public hearing shall be pursuant to section 94-101.
- (f) *Eligibility.* In order for property to be zoned M3, it must be included within a rezoning application pertaining to a minimum of fifty (50) contiguous acres. Alternatively, a property will be so eligible if its acreage plus the acreage of contiguous property that is already zoned M3 will equal at least fifty (50) acres. Properties separated by a public right-of-way shall be considered to be contiguous for purposes of this provision.
- (g) *Parcel dimensional requirements.*
- (1) *Parcel Frontage.* All parcels shall abut a public street except where one of the following applies.
 - a. An adjacent parcel or parcels under common ownership with the subject parcel has frontage on a public street.
 - b. A legally binding perpetual vehicular access easement over an adjacent parcel or parcels with frontage on a public street that are not under common ownership with the subject parcel is placed on record with the county and provided to the city prior to preliminary site plan approval.
 - (2) *Parcel width, depth.* All parcels shall have adequate width and depth to provide for setback distances as required by this chapter.
 - (3) *Maximum Parcel Coverage.* The maximum parcel coverage by all structures shall be 60%.
- (h) *Building height.* The maximum building height shall be seventy (70) feet with no exception for structural appurtenances.

- (i) *Leisure Trails.* In lieu of sidewalks required under the city code, public leisure trails shall be constructed along the periphery of the district along public streets. The cost of installation and on-going maintenance of the leisure trail shall be the responsibility of the property owner.
 - (1) *Leisure trail construction.* Leisure trails shall be asphalt, constructed to city standards, and have a minimum width of eight (8) feet unless otherwise specified in the approved site plan.
 - (2) *Leisure trail location, route.* All leisure trails shall be located on the development property outside of the street right-of-way, except when the appropriate governing body approves location within the right-of-way. The route followed by a leisure trail is not required to be a straight line and shall be shown on the submitted site plan.
 - (3) *Leisure trail easement.* A public use easement shall be granted by the property owner to the city for the area encompassing a leisure trail located outside the street right-of-way completely encompassing the leisure trail from the street right-of-way to a line parallel to the right-of-way located no closer than one (1) foot from the edge of any portion of the trail.
- (j) *Public street right-of-way, easements.* The property owner shall dedicate property for right-of-way for public street construction and improvement to the city or county, as applicable, in compliance with relevant regulations as required by the approved site plan. The property owner shall grant easements to the city or county, as applicable, which are adjacent to the aforementioned rights-of-way to the minimum extent necessary, or as required by this section, to provide for access to, and the installation and maintenance of, street improvements, leisure trails, and/or utilities.
- (k) *Residential zoning district defined.* For the purposes of this section, the term “residential zoning district” shall refer only to those districts zoned specifically for residential uses and shall not include districts zoned for agricultural use.
- (l) *Setback, buffering, and screening requirements.*
 - (1) *Screening generally.* Whenever possible, trees, locally native woodland shrubs and other naturally occurring features shall be incorporated into a site plan. Given the possibility of natural features being relocated or removed, a greenway edge network shall be established along the periphery of the district. This greenway shall be located within the required setback area.
 - (2) *Street and residential setback, buffering and screening.* The following minimum setback, buffering, and screening requirements shall apply to any structures and parking areas in a development that is adjacent to a public street right-of-way or adjacent to property outside of this district with a residential use or in a residential zoning district.
 - a. The minimum setback for buildings and structures shall be one hundred and fifty (150) feet from an adjacent public street right-of-way. A berm shall be placed in the setback area along the district boundary in compliance with this section.
 - b. The minimum setback for buildings and structures shall be two hundred (200) feet from a property boundary shared between this district and a property with a residential use or in a residential zoning district. A berm shall be placed in the setback area along the district boundary in compliance with this section.
 - c. The minimum setback for parking areas shall be one hundred (100) feet.

d. *Berm requirements.* A required berm shall be placed along the district boundary inside any required fence in compliance with the following.

1. *Berm height.* Berm height shall be a minimum of ten (10) feet and a maximum of twelve (12) feet from the adjoining street grade at the edge of the pavement.
2. *Berm landscaping.* Any required berm shall include a landscape buffer on the berm top and side facing a public street or adjacent property. The landscape buffer shall consist of a mixture of trees, including deciduous and evergreen trees as appropriate, shrubs, and natural grasses with no more than thirty percent (30%) of any single tree or shrub species. Trees and shrubs shall be placed in a manner to mix species of different types and heights along the berm scattered over the top and side of the berm. A written statement from a certified arborist or landscape architect shall be provided with site plan submittal to confirm an expectation that the planting mass achieves an opacity at full foliage of eighty percent (80%) and reaches a height of fifteen (15) feet above the berm grade on the date that is four (4) years after planting and that plant spacing is appropriate to support a healthy screen at plant maturity.
 - i) *Allowed berm trees.* No species other than those included in the list below may be planted on a berm without written permission of the tree commission.

Allowed Berm Tree Species		
Deciduous Trees		Evergreen Trees
Black Gum	Maple, Red	Fir
Ginko (non-fruiting varieties)	Maple, Sugar	Japanese Yew
Greenspire Linden	Oak, Pin	Juniper, Upright
Hackberry	Oak, Red	Leland Cypress
Hop Hornbeam	Oak, Shingle	Red Cedar
Japanese Pagoda Tree	Oak, White	Red Pine
Katsura Tree	Sweet Gum	Spruce, Black Hills
London Plane Tree	Thornless Cockspers Hawthorn	Spruce, Norway
Maple, Crimson King	Thornless Locust	White Pine
Maple, Hedge	Zelkova	

- ii) Minimum tree size at installation shall be no less than two and one half (2.5) inches in caliper for large deciduous trees, two (2) inches in caliper for ornamental deciduous trees, ten (10) feet in height for evergreen trees, and thirty (30) inches in height for shrubs. Caliper shall be measured six (6) inches above grade. Tree and shrub height at the time of installation and as expected four (4) years after planting shall be noted in the site plan submission.
- iii) A natural grass mix requiring minimal mowing is to be seeded on the entire surface of a berm.

- iv) The owner shall provide for appropriate maintenance of a berm and any required plantings and landscaping.
3. *Berm construction.* Berms are to be constructed as required by the berm standards in section 94-241(g) of this code, however, when any of said berm standards are in conflict with this section, the standards in this section shall supersede those berm standards.
- i) *Berm grading.* Berm grading may gradually undulate horizontally and vertically between the minimum and maximum heights required in this section.
 - ii) If minimum berm height requirements cannot be met around the entirety of the site, plantings that provide one hundred percent (100%) opacity at full foliage may be utilized to meet the screening requirements, however, this condition shall not exceed thirty percent (30%) of the required berm area.
 - iii) Breaks in, and/or tapering of, berms may occur at vehicular and pedestrian access points subject to the approved site plan.
4. *Access point screening.* Where a vehicular access point is located across the street from any portion of a parcel outside of this district with a residential use or in a residential zoning district, the combination of the access drive path design and a berm buffer in compliance with this section along the drive shall screen the view of structures and parking areas from the intersection of the drive and the street. This screening requirement shall be waived if either of the following conditions apply:
- i) The parcel with a residential use or in a residential zoning district is under common ownership of the subject property.
 - ii) The owner(s) of the parcel(s) with a residential use or in a residential zoning district sign an affidavit agreeing to waive the requirements of subsection (4) above and said affidavit is filed with the city.
- (3) *Non-street, non-residential setback and screening.* The required minimum setback from, and screening along, district boundary lines that are not adjacent to a public street right-of-way or to property outside of this district with a residential use or in a residential zoning district shall comply with the following subsections.
- a. *Setback.* A minimum setback of fifty (50) feet for buildings, structures, service areas, loading areas, and parking areas.
 - b. *Screening.* Multiple staggered rows of a mix of trees, locally native shrubs and natural grasses shall be planted along the boundary of the district within the setback area. The screen design shall satisfy the requirements of this section for berm landscaping for species selection and placement, opacity and height above grade, minimum tree size, site plan submittal requirements, maintenance, and professional confirmation that the design will meet requirements, except that no berm is required.
 - c. A natural grass mix requiring minimal mowing is to be seeded within the screen planting area.
 - d. The owner shall provide for appropriate maintenance of the screen planting area and any required plantings.

- (4) *Existing natural screening.* Where the overall height and opacity requirements noted above can be met by preserving and/or supplementing existing tree stands or forested areas, the berm and landscaping requirements of this section may be modified or waived by the approval authority.
- (5) *Interior Setbacks.* There shall be a zero minimum building and parking area setback requirement from interior parcel lines within this district when the parcels on each side of a parcel line are under common ownership. When adjoining parcels are not under common ownership, the minimum setback requirements shall be fifty (50) feet for structures and twenty (20) feet for parking areas.
- (6) *Phasing of buffering and screening.* Required berms and landscaping shall be installed prior to any above grade construction of a structure. This requirement shall not apply to temporary structures intended only for support of construction.
- (7) *Construction Site Setup.* During any phases of construction there shall be a minimum fifty (50) foot setback for parking areas, material laydown and storage tanks and a minimum one hundred (100) foot setback for trailers, structures, buildings, and related items necessary for the construction of improvements. All construction site setup areas shall be screened so that they are not visible from a public street or adjacent property outside of this district with a residential use or in a residential zoning district.

(m) *Fencing.*

- (1) *Exterior rail fence.* A four (4) rail fence shall be installed by the owner along the periphery of the district abutting a public street for the entire length of the frontage on the street, subject to required breaks for vehicular and pedestrian access. The fence shall be as straight as possible and located on the development property a minimum of two (2) feet from the easement for a leisure trail. The owner will be responsible for maintenance and repair of the fence. The fence shall be constructed as follows:
 - a. Fence shall be constructed of wood, vinyl or other suitable exterior grade material. All construction shall be in accordance with verifiable industry standards. A fence system around a district shall be of the same design and materials for the entirety of the district.
 - b. Fence height to the top of the top fence rail shall be fifty-four (54) inches from grade and uniform along the entire length of the fence within a tolerance of plus or minus one (1) inch. Variations in fence height shall be gradual.
 - c. The distance from the top of the top fence rail to the bottom of the bottom rail shall be forty-two (42) inches. Fence rails shall be evenly spaced.
 - d. All fasteners shall be of a material, and/or include a coating, specified for exterior use.
 - e. All visible elements of the fence shall be white in color and the color shall match substantially among all elements.
 - f. *Wood fence.*
 - 1. Fence rails shall be one (1) inch by six (6) inch nominal dimension by sixteen (16) foot long treated rough sawn poplar. Fence rails shall be located on the street facing side and aligned with the top of the post.

2. Fence posts shall be six (6) inch by six (6) inch nominal dimension southern yellow pine wood posts treated for below ground installation of sufficient length to allow post sinking below the frost line and result in the required fence height. The top of each post shall be flush with the top of the top fence rail.
3. Posts shall be installed vertically on sixteen (16) foot centers except where a shorter fence section is required to terminate the fence at the required location.
4. Fence rail joint covers shall be one (1) inch by six (6) inch nominal dimension treated rough sawn poplar. The covers shall be forty-two (42) inches long and centered on each post. The covers shall be vertical and aligned with the top of the top fence rail and bottom of the bottom fence rail.
5. All exposed wood shall be appropriately primed and painted with exterior grade paint.

g. *Vinyl fence.*

1. Fence rails shall be one and a half (1.5) inches by five and a half (5.5) inches and of appropriate length for post spacing. Rails shall be securely anchored into posts.
2. Fence posts shall be five (5) inch by five (5) inch vinyl of sufficient length to allow post sinking below the frost line and result in the required fence height.
3. Posts shall be installed vertically on eight (8) foot centers at minimum except where a shorter fence section is required to terminate the fence at the required location.
4. Fence vinyl posts shall terminate two (2) inches above the top of the top rail prior to cap installation. Post caps shall be glued in place.

h. *Alternate fence material.*

1. An alternate material other than wood or vinyl may be used at the discretion of the site plan approval authority.
2. The site plan applicant shall provide sufficient information to allow the approval authority to determine if the alternate fence material will be sufficiently durable and allow for a fence design consistent with the requirements for wood or vinyl fence.

(2) *Interior fencing.* Any security fencing or other fencing shall be located behind a required perimeter berm. No fencing shall be installed on a required perimeter berm.

(n) *Outdoor storage and hazardous materials.*

- (1) *Outdoor Storage.* Outdoor storage of materials, equipment, and supplies shall be permitted. Outdoor storage areas for these items are not required to be screened if located to not be visible from a public street right-of-way or from ground level at a distance of two hundred (200) feet from any perimeter boundary line of a parcel that is not under common ownership. Otherwise, such outdoor storage areas shall be fully screened to a height of eight (8) feet. Outdoor storage areas, whether screened or unscreened, shall comply with minimum setback requirements in this section.

(2) *Hazardous Materials.* Due to the nature of the permitted uses in this district, hazardous waste and materials storage and processing is anticipated. When such storage and/or processing are desired:

- a. The nature of the storage and processing shall be described in a detailed written statement that shall be submitted as part of an application for site plan review. This statement shall also provide details regarding the safety measures and protocols that are proposed to prevent the migration of any hazardous materials outside of designated containment areas and procedures that will be implemented upon the occurrence of an event that does, or has the potential to, damage the environment, persons, or property. This information shall be provided so that relevant city departments and public safety providers will have notice of the presence of these storage and processing operations.
- b. All such storage and/or processing shall comply in all respects with local, state and federal law and regulations, and shall not be undertaken until such time as all necessary permits are received and copies of the same are provided to the city.
- c. No such storage and/or processing shall occur within two hundred (200) feet of any perimeter boundary of a parcel that is not under common ownership,
- d. If such storage or processing is undertaken outside of a structure, all exterior areas where these activities are occurring shall be surrounded by a masonry wall that is at least ten (10) feet in height, but only if the activities are wholly or partially visible from an adjacent public street right-of-way or adjacent property outside this district with a residential use or in a residential zoning district. Building facades may be used to meet this requirement. Any gates or doors shall include enhanced security features to ensure that unauthorized individuals cannot gain access to the area.

(o) *Utilities.*

(1) *Electric utilities.* All new electrical utilities installed on the development site rated below sixty-nine (69) kV shall be underground. Electric utilities related directly to substation infrastructure, regardless of rating, are not required to be underground.

(2) *Standby generators.*

- a. Generators shall be operated only for the purpose of performing periodic testing and exercising as allowed under this section or for the purpose of supplying electricity during an emergency disruption in supply from the normal electricity supplier. Under no circumstances shall any generator be operated for the purpose of supplying electricity for ongoing operations except during an emergency disruption in supply.
- b. All diesel generators shall be factory-certified to meet, at minimum, the Tier 4 Final emissions regulations established by the Environmental Protection Agency (EPA) for non-road diesel engines. In the event regulations more stringent than Tier 4 Final are established by the EPA for non-road diesel engines, diesel generators shall be factory-certified to the more stringent regulations if commercially available at the time of purchase. At all times, diesel fuel used in diesel generators shall comply with EPA regulations for sulfur content required of the applicable emissions regulation.

(3) *Water and sewer utilities.*

- a. All structures in the district used or designed for human occupancy shall connect to the city water supply system. All structures in the district in which sanitary sewer originates shall be connected to the city sanitary sewer system.
- b. Each user of city water and sanitary sewer utilities in this district shall enter into a water and sanitary sewer utilities use agreement with the city. The use agreement shall address, at minimum, the topics described in the following subsections.
 - 1. The minimum required real taxable value.
 - 2. The methodology for establishing the cost of utility services.
 - 3. The requirements of the user to ensure there is no negative impact to the sustainable operation of the utilities.
 - 4. The maximum allowable water usage.
 - 5. The minimum monthly payment for water and sanitary sewer service.
 - 6. The penalties for non-compliance with the agreement.
 - 7. The minimum number of years the user commits to purchasing utility services.
 - 8. To the extent allowed by law, that the cost of any improvements to the city water and/or sanitary sewer systems necessary to serve the user shall be the responsibility of the property owner.
- c. All charges for water and wastewater services provided to uses within this district shall be established pursuant to a city council approved rate study and shall not be less than the charges applicable to residential users.
- d. Failure to comply with a water and sanitary sewer utilities use agreement shall constitute both a contractual breach and a violation of this section 94-153.

(p) General architectural standards.

- (1) *Building construction.* Traditional materials including wood, stone, brick, concrete, aluminum, metal, glass, stucco, or cementitious fiberboard shall be used for exterior construction of all buildings. The use of reflective or mirrored glass on a building facade, or advanced fabric structures or similar type structures, shall be prohibited. Mirrored glass may be used for windows and entrance door areas.
- (2) *Roof-Mounted Equipment.* Complete screening of all roof-mounted equipment shall be required on all four (4) sides with materials that are consistent and harmonious with the building's façade and character. Such screening shall be provided in order to screen the equipment from off-site view and to buffer sound generated by such equipment. Solar energy systems shall be excluded from the requirements of this section to the extent the requirements prevent or limit functionality and/or accessibility to direct sunlight.

- (3) *Loading docks.* Loading docks shall have the same degree of finish as a main entry unless the dock is not visible from a public right-of-way or adjacent property outside of this district with a residential use or in a residential zoning district.
- (4) Landscaping and/or the use of existing vegetation shall be utilized where appropriate to enhance the aesthetics of any building visible from a public right-of-way.

(q) *Environmental regulations.*

- (1) Any use of land or structures in this district shall comply with the environmental regulations of section 94-177 of this code however, when any of the environmental regulations are in conflict with this section, the standards in this section shall supersede such environmental regulations.
- (2) *Noise.* Subject to the requirements of this section, no noise shall be produced that is objectionable due to intermittence, beat frequency or shrillness.
 - a. Subject to allowances in this section, noise levels from routine operations shall not exceed an average noise level over any twenty-four (24) hour period of sixty-five (65) decibels (dBA) at an adjacent street right-of-way or the boundary of adjacent non-residentially used or zoned property outside of this district.
 - b. Subject to allowances in this section, noise levels from routine operations shall not exceed an average noise level over any twenty-four (24) hour period of fifty-five (55) decibels (dBA) at a property boundary shared between this district and a property outside of this district with a residential use or in a residential zoning district.
 - c. Average noise levels shall be calculated using A-weighted equivalent continuous sound level measurement methodology (LAeq) consistent with current accepted standards as approved by the city engineer.
 - d. *Periodic testing or exercising of equipment.* Noise levels up to eighty (80) decibels (dBA) at an adjacent street right-of-way or the boundary of adjacent property outside of this district are allowed only during periodic testing or exercising of equipment or during an emergency disruption in supply from the normal electricity supplier. Testing or exercising shall not occur more often than once monthly for up to a total of fifteen (15) minutes with the exception that such testing shall be allowed for a duration of up to a total of sixty (60) minutes twice per year. If approved in advance by the city manager for each occurrence, the sixty (60) minute events may be allowed up to two (2) additional times per year. Any testing or exercising shall be allowed only between the hours of 9:00 a.m. and 4:00 p.m. on a weekday.
 - e. *Pre-development and post-development noise studies.* The site plan review applicant will be responsible for the cost of pre-development and post-development noise studies along each adjacent street right-of-way and boundary of adjacent property outside of this district to establish a pre-development noise baseline and to verify the post-development noise level emitted during routine operations. The pre-development and post-development noise studies shall include evaluation of noise at various locations along each street right-of-way and property boundary and during daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) hours. Noise studies shall be performed and evaluated pursuant to current appropriate standards, metrics and methodologies as approved by the city engineer in advance. The city shall approve the noise study provider in advance. If pre-development noise levels along any right-of-way or property boundary exceed the maximum prescribed in subsections (a) or (b) above, the noise levels post-development along said right-of-way or boundary shall not exceed the levels measured in the pre-development noise study.

- f. Ground mounted mechanical equipment, including blowers or generators, shall be enclosed in sound absorbing walls to the extent possible and designed to attenuate noise heard on adjacent properties outside of this district.
- g. Ground mounted mechanical equipment, including blowers and generators, shall be located, as far as practical from an adjacent street right-of-way or the boundary of an adjacent property outside of this district and, to the extent possible, located within the interior of the building layout to minimize noise heard on surrounding properties.
- h. The use of external loudspeakers is prohibited.

(3) *Outdoor lighting.*

- a. No lighting fixture shall be placed more than twenty-four (24) feet above the ground.
- b. No lighting shall exceed twenty-five percent (25%) more than the light level recommended by the most recently published applicable ANSI/IES Lighting Standard at the time of installation.
- c. All luminaires emitting more than 1,000 lumens shall be fully shielded in such a manner that no light is emitted, either directly or indirectly, at or above a horizontal plane running through the lowest light-emitting part of the luminaire.
- d. No luminaires shall exceed a correlated color temperature of 3000 K.
- e. Luminaires activated by motion detection shall automatically turn off or return to the dimmed state no more than five (5) minutes after activity is no longer detected.
- f. Any of the lighting requirements of this section may be waived if compliance with the requirement would result in violation of applicable state or federal law or it is demonstrated that waiver of the requirement is necessary for security or public safety purposes. A waiver shall be issued at the discretion of the zoning official.

- (4) *Vibration.* Ground mounted mechanical equipment shall be mounted on a vibration dampening platform or other suitable device to decouple the equipment from transferring vibration to the ground. Pre-development and post-development studies of ground vibration along each adjacent street right-of-way and boundary of adjacent property outside of this district shall be conducted to establish a pre-development vibration baseline and to verify the post-development vibration level emitted during routine operations. Vibration studies shall be conducted by a provider selected by the city and the cost shall be the responsibility of the applicant. The pre-development and post-development vibration studies shall include evaluation of ground vibration at various locations along each street right-of-way and property boundary and during daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) hours. Vibration studies shall be performed and evaluated pursuant to current appropriate standards, metrics and methodologies as approved by the city engineer in advance. Post-development ground vibration levels shall not exceed pre-development levels.

- (r) *Development agreement.* The property owner shall enter into a development agreement with the city incorporating the requirements of the following subsections and record the same in the office of the county register of deeds. The development agreement shall be a binding covenant upon all future owners, operators, and tenants of the property and shall be executed and recorded prior to issuance of a building permit.

(1) The terms and conditions of final site plan approval.

(2) The terms and conditions of any water and sanitary sewer utilities use agreement.

(3) Nothing in this section shall preclude the city from requiring surety bonds or other financial assurances where legally permitted.

(s) *Signs.* Wall signs in this district shall be limited to a maximum size of eight hundred (800) square feet.

(t) *Violations.* Any violation of a provision of this section 94-153 shall be designated as a civil infraction.

7. Section 94-173 of Chapter 94, Zoning, Article V. Supplemental Regulations, shall be amended as follows:

Sec. 94-173. Supplemental use regulations.

(d) *Wireless telecommunications towers and antennas.....*

(13) *Uses permitted by special use permit.* No wireless communications facilities other than those permitted by administrative review by subsection [94-173\(d\)\(12\)](#) of this chapter shall be permitted except subject to the granting of a special use permit after review and approval by the planning commission pursuant to article VI of this chapter, subject to the general standards applicable to a special use permit as set forth at subsection [94-191\(f\)](#), the goals set forth at subsection [94-191\(a\)](#), and the following additional standards:

a. Location criteria.

1. Facilities shall be sited to minimize views to the extent reasonably possible from residential areas or the public right-of-way.
2. Support structures will be located in all geographic districts to minimize their view from neighboring properties and public rights-of-way.
3. Mounted wireless communication facilities are permitted in all districts except single-family and two-family districts, except that roof-mounted antennas are not permitted in any residential district.
4. Monopoles and similar support structures are permitted as a principle or accessory use only in the M-2 general manufacturing district, the M-3 technology innovation district, and those portions of the M-1 light manufacturing district, and those commercial districts lying south of a line created by Kipp Road extended and north and west of lines created by North Street and Buhl Street extended.
5. Monopoles not to exceed 150 feet in height are also permitted in the C-1 central business district by special use permit, provided the structure is located on publicly-owned property and is constructed and maintained for joint use by three or more users, at least one of which shall be a local or state governmental agency operating communication facilities for public safety services as defined under the Homeland Security Act.
6. Monopoles and similar support structures are prohibited in parks, school grounds or other areas heavily trafficked by children.
7. Lattice or guyed towers or antennas or similar structures are prohibited in all districts.

8. Section 94-222 of Chapter 94, Zoning, Article VII. Site Plan Review and Landscape Standards shall be amended as follows:

Sec. 94-222. Uses subject to site plan review.

The uses of land and structures listed in this section shall receive final site plan review and approval in accordance with this article prior to the granting of a building permit or a certificate of occupancy.

- (1) Uses in the O-1, O-2, C-1, C-2, C-3, M-1, M-2, and M-3 zoning districts.
- (2) Uses in the planned unit development district.
- (3) Multiple-family dwelling uses.
- (4) Uses permitted by special use permit.
- (5) Platted subdivisions (refer to chapter 74).
- (6) Site condominium developments.
- (7) Public and governmental facilities.
- (8) Off-premise signs.
- (9) Grading and filling in any district which alters the flow of surface water to or from the property.

9. Section 94-225 of Chapter 94, Zoning, Article VII. Site Plan Review and Landscape Standards shall be amended as follows:

Sec. 94-225. Preliminary site plan review and approval.

- (a) *Intent, purpose, consideration concurrent with final site plan.* All uses of land and structures which are subject to the requirements of this article shall receive preliminary site plan review and approval prior to the submission of a final site plan unless the zoning official determines that concurrent preliminary and final site plan review and approval will promote the general welfare of the city. The standards for both preliminary and final site plan review and approval in this article shall be applied when concurrent consideration is allowed. The planning commission may require separate preliminary and final site plan review and approval for any plan subject to consideration by the commission.
- (b) *Preliminary site plan application.* The owner or designated agent shall file an application requesting preliminary site plan review and approval with the zoning official. The application shall be accompanied by the information required in this section and be accompanied by the appropriate fees as established by resolution of the city.
- (c) *Preliminary site plan application requirements.* All applications for preliminary site plan review and approval shall comply with the basic required submittal standards of subsection [94-225\(d\)\(1\)](#) of this chapter. The additional required submittal standards of subsection [94-225\(d\)\(2\)](#) of this chapter shall be satisfied by any application for preliminary site plan review and approval involving the following uses of land or structures.
 - (1) Planned unit development.
 - (2) Planned residential development.
 - (3) Site condominium development.
 - (4) Public and government facility.
 - (5) Any use in the M-1, M-2, or M-3 zones.
 - (6) Hotel or motel.
 - (7) Multiple-family with 12 or more units.
 - (8) Community commercial center.
 - (9) Any use involving one or more structures that occupy, either individually or collectively, more than 15,000 square feet of gross floor area.
 - (10) Other uses as determined by the designated site plan approval body, except that for such other uses, at the sole discretion of the designated site plan approval body, specific requirements of subsection [94-225\(d\)\(2\)](#) of this chapter may be waived.

10. Section 94-292 of Chapter 94, Zoning, Article IX. Off-Street Parking and Loading Regulations shall be amended as follows:

Sec. 94-292. General off-street parking and loading requirements.

- (h) Location of parking areas. All off-street parking areas shall be located on the same lot, or on the adjacent premises in the same district as the use they are intended to serve, with the following exceptions:
- (1) Uses in the C-1 district. There shall be no off-street parking space requirements in the C-1 district for those uses which require 20 or less off-street parking spaces. Uses requiring more than 20 off-street parking spaces shall have their parking requirement determined by the planning commission. In making such a decision, the planning commission shall consider the availability of both public and private parking spaces.
 - (2) Uses in C-2 and C-3 districts. Parking on the premises or within 400 feet.
 - (3) Uses in M-1, M-2, and M-3 districts. Parking on the premises or within 800 feet.

11. Table 100-1. Lot Dimension Regulations of Chapter 100 Reference Tables and Figures shall be amended as follows:

TABLE 100-1. Lot Dimensional Regulations.

Refer to footnotes listed after table 100-2 of this chapter.

Zoning District and Ordinance Section	Minimum Lot Size (sq. feet)	Minimum Lot Width (feet)	Minimum Lot Area Per Principal Structure (sq. feet)	Minimum Front Yard Setback (feet)	Minimum Side Yard Setback (feet)	Minimum Rear Yard Setback (feet)	Maximum % of Lot Coverage by all Structures
AG Sec. 94-122	30,000	225	30,000	30	15	40	15
RS-1 Sec. 94-123	12,000	90	12,000	30	15	40	30
RS-2 Sec. 94-123	9,600	75	9,600	25	10	35	30
RS-3 Sec. 94-123	8,500	65	8,500	25	(1)	35	35
R2F Sec. 94-124	8,500	65	8,500	25	(1)	35	35
RM Sec. 94-125	8,500	65	8,500(2)	25	15	35	35
MH Sec. 94-126	20 acres	-	5,500(10)	15	10	15	35
O-1 Sec. 94-131	8,500	60	-	25	10(3)	35	35
O-2 Sec. 94-132	12,000	90	-	60(11)	15	40	30
C-1 Sec. 94-141	-	20	-	-	-	-	-
C-2 Sec. 94-142	20,000	100	-	50(11)	10(3)	10(3)	50
C-3 Sec. 94-143	20,000	100	-	50(11)	10(3)	10(3)	50
M—1 Sec. 94-151	60,000(13)	200(13)	-	50(11)	10(3)	20	50(12)
M—2 Sec. 94-152	60,000(13)	200(13)	-	60(11)	20	20	50(12)
M—3 Sec. 94-153	See Sec. 94-153	See Sec. 94-153	See Sec. 94-153	See Sec. 94-153	See Sec. 94-153	See Sec. 94-153	See Sec. 94-153
PUD Sec. 94-161	-	-	-	-	-	-	-

12. Table 100-2. Building Dimensional Regulations of Chapter 100 Reference Tables and Figures shall be amended as follows:

TABLE 100-2. Building Dimensional Regulations.

Refer to footnotes listed after this table.

Zoning District and Ordinance Section	Maximum Height Principal Structure (feet)	Maximum Height Accessory Structure (feet)	Minimum Floor Area Per Dwelling Unit (sq. feet)	Minimum Width Principal Structure (feet)	Minimum Internal Height Principal Structure (feet)
AG Sec. 94-122	35(4)	25(5)	1,200(6)	24	7.5
RS-1 Sec. 94-123	35	25(5)	1,200(6)	24	7.5
RS-2 Sec. 94-123	35	25(5)	1,000(6)	24	7.5
RS-3 Sec. 94-123	35	25(5)	800(6)	24	7.5
R2F Sec. 94-124	35	25(5)	800(6), (7)	24	7.5
RM Sec. 94-125	35	15	(7)	-	-
MH Sec. 94-126	-	15	-	-	-
O-1 Sec. 94-131	45	15	-	-	-
O-2 Sec. 94-132	15	15	-	-	-
C-1 Sec. 94-141	45(14)	15	-	-	-
C-2 Sec. 94-142	45	15	-	-	-
C-3 Sec. 94-143	45	15	-	-	-
M-1 Sec. 94-151	40(8)	40	-	-	-
M-2 Sec. 94-152	45(8)	45	-	-	-
M-3 Sec. 94-153	See Sec. 94-153	45	-	-	-
PUD Sec. 94-161	35	(9)	(7)	-	-

13. Table 100-4. Landscape Buffer Classification Matrix of Chapter 100 Reference Tables and Figures shall be amended as follows:

Table 100-4. Landscape Buffer Classification Matrix.

Subject Property Zoning	AG	RS (all)	R2F	RM	MH	O-1	O-2	C-1	C-2	C-3	M-1	M-2	PUD
AG	na	na	na	na	na	na	na	na	na	na	na	na	na
RS (all)	na	na	na	na	na	na	na	na	na	na	na	na	na
R2F	na	na	na	na	na	na	na	na	na	na	na	na	na
RM	B	B	B	A	B	B	B	B	B	B	B	B	B
MH	C	C	C	C	A	C	C	C	C	C	C	C	C
O-1	B	B	B	B	B	A	A	A	A	A	A	A	B
O-2	B	B	B	B	B	A	A	A	A	A	A	A	B
C-1	na	na	na	na	na	na	na	na	na	na	na	na	na
C-2	B	B	B	B	B	A	A	A	A	A	A	A	B
C-3	B	B	B	B	B	A	A	A	A	A	A	A	B
M-1	D	D	D	D	D	C	C	C	C	C	B	B	C
M-2	D	D	D	D	D	C	C	C	C	C	B	B	C
M-3 (see sec. 94-153)	-	-	-	-	-	-	-	-	-	-	-	-	-
PUD	B	B	B	B	B	B	B	B	B	B	B	B	B

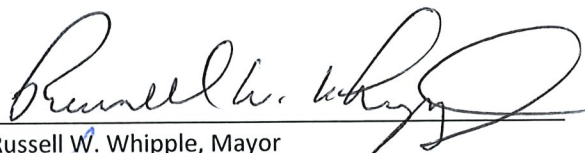
14. Table 100-5. Parking Space Requirements of Chapter 100 Reference Tables and Figures shall be amended as follows:

Table 100-5. Parking Space Requirements.

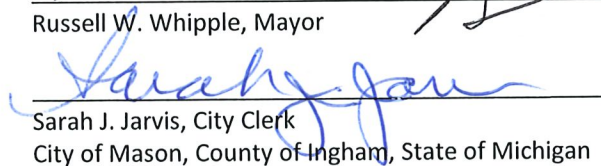
Land Use	Required Parking Spaces
Single Family Dwelling	2 per dwelling unit
Two-Family Dwelling	1.4 per dwelling unit for efficiency and one-bedroom units 2 per dwelling unit for two or more bedroom units
Multiple Family Dwelling	1.4 per dwelling unit for efficiency and one-bedroom units 2 per dwelling unit for two or more bedroom units
Rooming house	2 per dwelling unit, plus 1 per rooming unit
Hotel, Motel	1 per bedroom
Convalescent Home	0.33 per bed
Hospital	0.33 per bed
Medical Clinic	2 per treatment room
Auditorium, Church, Stadium	0.33 per seat based upon total seating capacity
Elementary and Middle Schools	0.33 per seat based upon total seating capacity of auditorium or gym, whichever is largest
High School and College	1 per 100 sq. ft. UFA
Library, Museum, Post Office	1 per 100 sq. ft. UFA
Golf course	4 per golf hole
Tennis club	4 per court
Dance Hall, Pool Hall, Video Arcade, Lodge, Private Club	1 per 100 sq. ft. UFA in main meeting room or club room
Bowling Alley	5 per bowling lane
Professional Offices, Banks	1 per 200 sq. ft. UFA
Doctor, Dentist, other medical office	1 per 100 sq. ft. of waiting area, plus 1 per exam room or dentist chair
General Offices	1 per 200 sq. ft. UFA
General Retail, General Services, Super Markets, Food Stores	1 per 150 sq. ft. UFA
Barber Shop, Hair Salon	2 per barber chair
Automobile Service Station	2 per service stall
Drive-in Restaurant	6 per 100 sq. ft. UFA
Restaurant, Tavern	1 per 50 sq. ft. UFA
Funeral Home, Mortuary	4 per 100 sq. ft. UFA
Industrial, Warehouse, Wholesale	0.33 per 100 sq. ft. UFA
Self-serve Laundry	1 per 2 washing machines
Auto Repair, Auto Collision Repair	1 per 200 sq. ft. UFA
Day Care Facilities	1 per 10 children
Foster Care Facilities	1 per 3 residents
Data Center	1 per employee (maximum employee shift)

Effective Date. This ordinance shall become effective 20 days after adoption and upon publication.

The foregoing Ordinance was moved for adoption by Council Member Vercher and supported by Council Member Ferris, with a vote thereon being: YES (5) NO (2), at a regular meeting of the City Council held pursuant to public notice in compliance with the Michigan Open Meetings Act, on the 2nd day of February 2026. Ordinance No. 266 declared adopted this 2nd day of February 2026.



Russell W. Whipple, Mayor



Sarah J. Jarvis, City Clerk
City of Mason, County of Ingham, State of Michigan



MEMO

Charter Township of Comstock Planning Commission September 10, 2026

From: Kyle Mucha, Principal Planner

Re: Utility Scale Solar Provisions

Analysis and review of community sample solar ordinance provisions.

Attachments:

[Solar Language.docx](#)

[Bengal Solar Language.docx](#)

[Eagle Solar Language.docx](#)

[Leroy Township Solar Language.docx](#)

[2023-PA-0233 Alternative Energy State Legislation.pdf](#)



SOLAR ENERGY SYSTEMS, UTILITY SCALE

- A. Utility-Scale Solar Energy Systems shall be permitted in the **BLANK** districts (except they are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program) provided the following standards are met:
- B. General Requirements. All Solar Energy Systems are subject to the following requirements:**
1. All Solar Energy Systems must conform to the provisions of this Ordinance and all county, state, and federal regulations and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI).
 2. The **Township** may revoke any approvals for, and require the removal of, any Solar Energy System that does not comply with this Ordinance.
 3. Solar Energy Systems must be located or placed so that concentrated solar glare is not directed toward or onto nearby properties or roadways at any time of the day.
- C. Utility-Scale Solar Energy Systems.** Utility-Scale Solar Energy Systems are allowed only in the **BLANK** districts (except they are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program) and require a special land use permit and site plan review. In addition to all requirements for a special use permit under **Article XX** and site plan review and approval under **Article XX**, Utility-Scale Solar Energy Systems are also subject to the following requirements:
1. **Application Requirements.** The applicant for a Utility-Scale Solar Energy System must provide the **Township** with all of the following:
 - a. Application fee in an amount set by resolution of the **Township** Board.
 - b. A list of all parcel numbers that will be used by the Utility-Scale Solar Energy System; documentation establishing ownership of each parcel; and any lease agreements, easements, or purchase agreements for the subject parcels.
 - c. An operations agreement setting forth the operations parameters, the name and contact information of the certified operator, the applicant's inspection protocol, emergency procedures, and general safety documentation.
 - d. Current photographs of the subject property.
 - e. A site plan that includes all proposed structures and the location of all equipment, transformers, and substations, as well as all setbacks, panel sizes, and the location of property lines, signage, fences, greenbelts and screening, drain tiles, easements, floodplains, bodies of water, proposed access routes, and road right of ways. The site plan must be drawn to scale and must indicate how the Utility-Scale Solar Energy System will be connected to the power grid.
 - f. A copy of the applicant's power purchase agreement or other written agreement with an electric utility showing approval of an interconnection with the proposed Utility-Scale Solar Energy System.
 - g. A written plan for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management, which is subject to the **Township's** review and approval.



- h. A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Utility-Scale Solar Energy System, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the Utility-Scale Solar Energy System and restore the subject parcels, which is subject to the **Township's** review and approval.
 - i. Financial security that meets the requirements of this Section, which is subject to the **Township's** review and approval.
 - j. A plan for resolving complaints from the public or other property owners concerning the construction and operation of the Utility-Scale Solar Energy System, which is subject to the **Township's** review and approval.
 - k. A plan for managing any hazardous waste, which is subject to the **Township's** review and approval.
 - l. A transportation plan for construction and operation phases, including any applicable agreements with the County Road Commission and Michigan Department of Transportation, which is subject to the **Township's** review and approval.
 - m. An attestation that the applicant will indemnify and hold the **Township** harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Solar Energy System, which is subject to the **Township's** review and approval.
 - n. Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection (MCL 324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the **Township**.
 - o. Any additional information or documentation requested by the Planning Commission, **Township** Board, or other **Township** representative.
2. System and Location Requirements.
- a. Utility-Scale Solar Energy Systems must be ground mounted.
 - b. Utility-Scale Solar Energy Systems must be located on parcels of land twenty (20) acres in size or larger.
 - c. Utility-Scale Solar Energy Systems are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program.
 - d. Utility-Scale Solar Energy Systems (including all solar panels, structures, and equipment) must be set back 500 feet from all lot lines and public road rights-of-way. If a single Commercial Solar Energy System is located on more than one lot, then the lot-line setbacks of this subsection do not apply to the lot lines shared by those lots.
 - e. The height of the Utility-Scale Solar Energy System and any mounts, buildings, accessory structures, and related equipment must not exceed fifteen (15) feet when oriented at maximum tilt. Lightning rods may exceed 15 feet in height, but they must be limited to the height necessary to protect the Utility-Scale Solar Energy System from lightning.



3. *Lot Area Coverage.* No more than 20% of the total lot area may be covered by a Utility-Scale Solar Energy System.
- a. *Permits.* All required county, state, and federal permits must be obtained before the Utility-Scale Solar Energy System begins operating.
 - b. *Screening.* Greenbelt screening is required around any Utility-Scale Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent properties. The greenbelt must consist of shrubbery, trees, or other non-invasive plant species that provide a visual screen. At least 50% of the plants must be evergreen trees that are at least six feet tall at the time of planting.
 - c. *Lighting.* Lighting of the Utility-Scale Solar Energy System is limited to the minimum light necessary for safe operation. Illumination from any lighting must not extend beyond the perimeter of the lot(s) used for the Utility-Scale Solar Energy System. The Utility-Scale Solar Energy System must not produce any glare that is visible to neighboring lots or to persons traveling on public or private roads.
 - d. *Security Fencing.* Security fencing must be installed around all electrical equipment related to the Utility-Scale Solar Energy System, including any transformers and transfer stations. Appropriate warning signs must be posted at safe intervals at the entrance and around the perimeter of the Utility-Scale Solar Energy System.
 - e. *Noise.* The noise generated by a Utility-Scale Solar Energy System must not exceed the following limits:
 - i. Forty (40) Dba Lmax, as measured at the property line of any adjacent R-1 (Residential) or B-1 (Business) zoned land in existence at the time the Utility-Scale Solar Energy System is granted special land use approval.
 - ii. Forty (40) Dba Lmax, as measured at any neighboring residence in existence at the time the Utility-Scale Solar Energy System is granted special land use approval, between the hours of 9:00 p.m. and 7:00 a.m.
 - iii. Forty (40) Dba Lmax, as measured at the lot lines of the project boundary.
 - iv. In addition to the above limitations, a sound barrier of a solid decorative masonry wall or evergreen tree berm, with trees spaced not less than 10 feet apart, must be constructed to reduce noise levels surrounding all inverters. The berm must be no more than ten (10) feet from all inverters, must be at least as tall as all inverters but not more than three (3) feet taller than the height of all inverters.
 - v. *Underground Transmission.* All power transmission or other lines, wires, or conduits from a Utility-Scale Solar Energy System to any building or other structure must be located underground at a depth that complies with current National Electrical Code standards, except for power switchyards or the area within a substation. If batteries are used as part of the Ground Mounted Solar Energy System, they must be placed in a secured container or enclosure.
 - f. *Drain Tile Inspections.* The Utility-Scale Solar Energy System must be maintained in working condition at all times while in operation. The applicant or operator must inspect all drain tile at least once every three years by means of robotic camera, with the first inspection occurring before the Utility-Scale Solar Energy System is in operation. The applicant or operator must



submit proof of the inspection to the Township. The owner or operator must repair any damage or failure of the drain tile within sixty (60) days after discovery and submit proof of the repair to the Township. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection.

- g. *Insurance.* The applicant or operator will maintain property/casualty insurance and general commercial liability insurance in an amount of at least \$10 million per occurrence.
- h. *Decommissioning.* If a Utility-Scale Solar Energy System is abandoned or otherwise nonoperational for a period of one year, the property owner or the operator must notify the Township and must remove the system within six (6) months after the date of abandonment. Removal requires receipt of a demolition permit from the Building Official and full restoration of the site to the satisfaction of the Zoning Administrator. The site must be filled and covered with topsoil and restored to a state compatible with the surrounding vegetation. The requirements of this subsection also apply to a Utility-Scale Solar Energy System that is never fully completed or operational if construction has been halted for a period of one (1) year.
- i. *Financial Security.* To ensure proper decommissioning of a Utility-Scale Solar Energy System upon abandonment, the applicant must post financial security in the form of a security bond, escrow payment, or irrevocable letter of credit in an amount equal to 125% of the total estimated cost of decommissioning, code enforcement, and reclamation, which cost estimate must be approved by the Township. The operator and the Township will review the amount of the financial security every two (2) years to ensure that the amount remains adequate. This financial security must be posted within fifteen (15) business days after approval of the special land use application.
- j. *Extraordinary Events.* If the Utility-Scale Solar Energy System experiences a failure, fire, leakage of hazardous materials, personal injury, or other extraordinary or catastrophic event, the applicant or operator must notify the Township within 24 hours.
- k. *Annual Report.* The applicant or operator must submit a report on or before January 1 of each year that includes all of the following:
 - i. Current proof of insurance;
 - ii. Verification of financial security; and
 - iii. A summary of all complaints, complaint resolutions, and extraordinary events.
- l. *Inspections.* The Township may inspect a Utility-Scale Solar Energy System at any time by providing 24-hour advance notice to the applicant or operator.
- m. *Transferability.* A special use permit for a Utility-Scale Solar Energy System is transferable to a new owner. The new owner must register its name and business address with the Township and must comply with this Ordinance and all approvals and conditions issued by the Township.
- n. *Remedies.* If an applicant or operator fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke the special land use permit and site plan approval after giving the applicant or operator notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.



D. Utility-Scale Solar Energy Systems under PA 233.

On or after November 29, 2024, if PA 233 of 2023 is in effect, then the following provisions apply to Utility-Scale Solar Energy Systems. To the extent these provisions conflict with the provisions in Section 434 above, these provisions control as to such Utility-Scale Solar Energy Systems.

1. *Setbacks.* Utility-Scale Solar Energy Systems must comply with the following minimum setback requirements, with setback distances measured from the nearest edge of the perimeter fencing of the facility:

Setback Description	Setback Distance
Occupied community buildings and dwellings on nonparticipating properties	400 feet from the nearest point on the outer wall
Public road right-of-way	100 feet measured from the nearest edge of a public road right-of-way
Nonparticipating parties	100 feet measured from the nearest shared property line

2. *Fencing.* Fencing for the Utility-Scale Solar Energy System must comply with the latest version of the National Electric Code as November 29, 2024, or as subsequently amended.
3. *Height.* Solar panel components must not exceed a maximum height of 25 feet above ground when the arrays are at full tilt.
4. *Noise.* The Utility-Scale Solar Energy System must not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.
5. *Lighting.* The Utility-Scale Solar Energy System must implement dark sky-friendly lighting solutions.
6. *Environmental Regulations.* The Utility-Scale Solar Energy System must comply with applicable state or federal environmental regulations.
7. *Host community agreement.* The applicant shall enter into a host community agreement with the **Township**. The host community agreement shall require that, upon commencement of any operation, the Utility-Scale Solar Energy System owner must pay the Township \$2,000.00 per megawatt of nameplate capacity. The payment shall be used as determined by the Township for police, fire, public safety, or other infrastructure, or for other projects as agreed to by the local unit and the applicant.

Solar Energy Facilities

Purpose and Intent

In order to preserve the natural, rural beauty of the Township, the viability of the Township's farmland, the precious ecosystems contained within the Township, and the health, safety, and welfare of the Township's residents, the regulations of this section shall govern the development of solar energy facilities within Bengal Township.

Renewable energy is important for the sustainability of ecosystems, food systems, economies, and communities. However, the large-scale positive impacts must be weighed against local negative impacts, including the health, safety, and welfare of the residents of Bengal Township.

Small solar energy systems provide ecological and economic benefits, at a scale that is desirable in a rural community and with fewer impacts on the immediate surroundings than utility-scale solar energy systems. However, the impacts they do have must be managed through zoning regulations.

Large solar energy systems should be developed with careful consideration of the impacts on local ecosystems, farmland, rural beauty, and the health, safety, and welfare of the Township's residents.

Rooftop Solar Panel Arrays

Solar Panel Arrays attached to the roof of a building must comply with the Clinton County Building Code and Sections 6.03.A-F of this Ordinance. Further, the addition of a rooftop solar panel array shall not cause any structure to exceed the maximum permitted height for that structure. Otherwise, rooftop solar panel arrays shall be exempt from the regulations of this Article.

General Regulations for Freestanding Solar Energy Facilities

All freestanding solar panel arrays and associated equipment shall be subject to the following:

Any and all solar equipment must comply with State of Michigan and Clinton County building codes, the National Electric Code, the National Electric Safety Code, and the regulations of the Clinton County Drain Commission.

Proper permits must be applied for and issued by Bengal Township and Clinton County prior to any construction.

Drawings, sketches or any additional material that indicates the entire scope of the solar equipment must be submitted to the Township Zoning Administrator and Clinton County for purposes of local plan review.

The plans of the solar equipment construction shall be certified by a registered Professional Engineer.

The useful life of the equipment shall be included in the application.

The Solar energy equipment shall not be altered in any way except for routine maintenance including repairs and replacement parts without approval from the Zoning Administrator. The Zoning Administrator may determine that the alteration requires Special Use Approval.

All equipment related to a solar energy system must adhere to the Noise Regulatory Standards in this Ordinance.

Freestanding solar panel arrays shall not count towards the maximum lot coverage for a given lot. Accessory structures containing solar energy equipment other than solar panel arrays shall count towards the maximum lot coverage for a given lot.

Freestanding solar panels shall not exceed fifteen (15) feet in height above the ground.

Small Freestanding Solar Panel Arrays

Freestanding Solar Panel Arrays that are smaller than the footprint of the principal building on the same lot shall be considered permitted accessory structures in all Zoning Districts.

All structures associated with a small freestanding solar panel array, as described in Section A above, shall be set back at least 20 feet from the nearest lot line.

Solar energy equipment must be located in the rear yard.

Community Solar Garden

A Community Solar Garden is a type of non-commercial solar energy system which produces a net energy output for a group of farms or residences located within the Township for purposes of offsetting those farms' or residences' energy consumption. The power output of the system shall not exceed a rating of 1,000kWh per month.

A Community Solar Garden shall be considered a permitted use in all Zoning Districts, regardless of whether or not the area of the panels is larger than the footprint of the principal building on the site (or whether or not there is a principal building at all). A Community Solar Garden shall require Site Plan Approval by the Planning Commission, but shall not require Special Use Approval.

All Community Solar Gardens shall meet the following requirements, in the opinion of the Planning Commission, in order to be approved:

All requirements of Section 6.03

All requirements applicable to Large Freestanding Solar Panel Arrays in Sections 6.06.B-Q.

Large Freestanding Solar Panel Arrays

Special Use Permit Required. Freestanding Solar Panel Arrays that are larger than the footprint of the principal building on the same lot, or which have no principal building on the same lot, shall be permitted by Special Use in the A-1 and I-1 districts. However, no Special Use permit shall be approved for a Solar Farm on land enrolled in the Michigan Farmland and Open Space Preservation Program (otherwise known as PA 116).

Definition of “Participating” and “Non-Participating”. As used in this Section, the following terms shall have the following meanings:

Participating Lot: A lot where the landowner has leased land to the solar applicant, OR a landowner that has any other written and signed agreement with the solar applicant with regard to the large freestanding solar array, including “good neighbor” agreements and other agreements that do not necessarily allow the placement of solar panels on the lot.

Non-Participating Lot: Any lot that does not meet the definition of “Participating Lot” in Subsection a).

Setbacks. All solar panels and other structures associated with the large freestanding solar array shall meet the following minimum setback requirements.

From a lot line abutting a lot that is not participating in the solar project: 500 feet

From a lot line abutting a lot that is participating in the solar project: 10 feet. The purpose of this setback is to ensure there are corridors through the large freestanding solar array for the passage of wildlife. The Planning Commission may permit alternate wildlife corridors, in lieu of the 10 foot setback.

From a public or private roadway: 500 feet

No solar panels associated with a large freestanding solar array shall be located within the boundaries of a wetland delineated by the State of Michigan.

Landscaping, Ground Cover, and Buffering: The following requirements must be met for all large freestanding solar arrays:

Buffering/Screening: Screening requirements must be met along all lot lines adjacent to non-participating parcels and along all public or private road frontages.

When landscape screening is required, it may be planted anywhere within the required setback, and shall meet the following requirements:

Evergreen trees, planted in a staggered double row designed to form a dense visual screen while still allowing for healthy development of the trees. The trees must be at least 6 feet in height at the time of planting in all areas where the solar panels will be visible from a residence (in the opinion of the Planning Commission), and at least 4 feet in height at the time of planting in all other areas.

The applicant must submit a description of the height and spread of each proposed evergreen species at maturity, as well as an estimated timeline for each species to reach maturity.

The Planning Commission shall determine at the time of approval whether the proposed plantings constitute a “dense visual screen” at the time of planting and whether the design also allows for the “healthy development of the trees.” The Planning Commission may require additional plantings, or other design changes to the landscape plan, as a condition of Special Land Use Approval. In making their determination, the Planning Commission may request the opinion of a landscape architect, arborist, or other expert, with costs to be paid by the applicant.

Existing Trees and Woodlands:

Existing trees shall be preserved unless the Planning Commission determines that preserving them would have a negative impact on surrounding properties by increasing the overall size of the Large Freestanding Solar Array.

The Planning Commission may waive or alter Subsection E.1.a above upon determining that existing foliage on a participating lot provides a continuous screen from neighboring non-participating lots (foliage on non-participating lots shall not count for screening requirements). If existing foliage is permitted to count for screening requirements, the large freestanding solar array owners shall be responsible for the maintenance of the existing foliage, including compliance with Subsection E.3, and the planting of new landscaping to replace any areas that no longer form a sufficient screen due to death, disease, or destruction of plants.

Ground Cover: Between the solar panels, the ground must be covered by “no mow” grass and other natural vegetation which may include, but is not limited to:

Native Grasses.

Grazing Grasses.

Pollinator Habitat.

Maintenance: All plantings shall be installed in a design that supports their long- term health and vitality. All plantings shall be maintained, in a sound health and vigorous growing condition, as a continuous screen, in the opinion of the Zoning Enforcement Officer. Dead, diseased, damaged, or destroyed species within the required setback area to be replaced with new plantings. The new plantings must comply with this Ordinance and must result in an overall landscape screen that complies with this Ordinance. Determinations of the Zoning Enforcement Officer may be appealed to the Zoning Board of Appeals.

Noise. Noise emanating from solar panels or other structures associated with the large freestanding solar array shall not exceed 35 decibels (dB), as measured at any property line a non-participating lot. Noise shall be measured as described in Section 5.03.L.

Drainage.

Prior to approval of an application, all drains, culverts, and other stormwater drainage infrastructure on participating parcels and non-participating parcels that are immediately adjacent to a participating parcel must be inspected to determine if there is any existing damage or other impediments to the efficient operations of the stormwater system. Prior to the construction of any approved Large Freestanding Solar Array, all damage identified by the inspection must be repaired by the solar farm owner/operator. Following completion of construction of the solar energy facility, the stormwater infrastructure must be inspected again to ensure that no damage has been incurred during construction.

All drains, culverts, and other stormwater drainage infrastructure on participating parcels and non-participating parcels that are immediately adjacent to a participating parcel must either be County-owned or must be subject to an easement clearly designating permanent maintenance responsibility over the stormwater infrastructure to the owner of the large freestanding solar array.

Prior to approval of the Special Use permit by the Planning Commission, the large freestanding solar array applicant must obtain written confirmation from the County Drain Commissioner that stormwater drainage will not be impacted, or that any impacts will be mitigated without negative impacts on any nearby lots (participating or non-participating).

Any damage to underground drainage tiles, or other stormwater infrastructure or County Drains caused during the installation and ongoing operation of the large freestanding solar array shall be repaired by the large freestanding solar array owner within 30 days of discovery of the damage. The Planning Commission may extend this deadline upon determination that the large freestanding solar array owner has made good faith progress towards the repair.

Road Repair Costs. Any damage to a public road within Bengal Township resulting from the construction, maintenance or operation of a Large Freestanding Solar Array shall be repaired at the applicant/owner/operator's expense. For each solar energy system:

The Clinton County Road Commission shall review and approve the following before construction begins.

Construction traffic routes.

Haul routes for solar panels and other large equipment to be transported to the site.

Access routes for ongoing maintenance vehicles once the solar farm is operational.

Haul routes for solar panels and other large equipment in the event of decommissioning and/or abandonment.

If Township-maintained roads are included in the approved routes described in Subsection 1, the applicant must seek approval for the routes from a third party engineer to be chosen by the Township. Costs for the engineering review shall be borne by the applicant.

The applicant/owner/operator shall provide security in an amount to be determined by Bengal Township with guidance from applicable experts, including the Clinton County Road Commission, to be used by the Township and/or the Clinton County Road Commission to pay for the repair of damage to public roads.

Failure of the applicant/owner/operator to provide these funds shall result in termination of the Permit.

Glare. No large freestanding solar array shall produce glare that causes negative impacts on any adjacent lot (participating or non-participating), or causes a danger to motorists on any roadway.

Lighting. No light on the same lot as a Large Freestanding Solar Panel array shall cast more than 0.5 footcandles onto an adjacent parcel or right-of-way.

Fencing. The outer boundaries of the large freestanding solar array shall be surrounded by fence at least six-feet-high with a self-locking gate. The fence shall not be subject to setback requirements, except where necessary to preserve wildlife corridors. The design of the fence must be approved by the Planning Commission, and no design other than the approved design shall be installed.

The large freestanding solar array must be designed and operated to allow sufficient access for public safety vehicles in the event of an emergency, in the opinion of the fire department with jurisdiction. The large freestanding solar array owner/operator shall be responsible for providing training to the public safety offices with jurisdiction in how to respond to emergencies at the large freestanding solar array site. The large freestanding solar array owner/operator may also, as a condition of the Special Use permit, be required to purchase equipment determined, by a third party, to be necessary for emergency response to the large freestanding solar array.

All power transmission lines and other utility wires within participating parcels shall be located underground.

If the land on which the large freestanding solar array is proposed is to be leased, rather than owned, by the large freestanding solar array operator, all lots within the large freestanding solar array project boundary shall be included in a recorded easement, lease, or consent agreement specifying the applicable uses for the duration of the project. All necessary leases, easements, or other agreements between the large freestanding solar array operator and the affected parties shall be in place prior to commencing construction.

No large freestanding solar array shall be installed until evidence has been given to the Township that the electric utility company has agreed to an interconnection with the electrical grid and a power purchase agreement. The owner of the solar energy system shall submit, as part of the Special Use application, written documentation that the proposed project has a valid interconnection agreement with the regional or local transmission provider, and a power purchase agreement with an electric utility company. The Special Use application shall not be approved without the required documentation. A copy of the approved interconnection agreement and power purchase agreement must be submitted to the Township prior to the start of construction. If the solar farm owner/operator fails to have a power purchase agreement for more than 180 days, the decommissioning process described in Subsection N shall begin. If the interconnection agreement is voided, the decommissioning process described in Subsection N shall begin immediately.

Abandonment. Any large freestanding solar array that ceases to generate energy for more than 180 days, or which fails to have a power purchase agreement in place for more than 180 days, or which has does not have an in-force interconnection agreement, shall be deemed “abandoned” under this Ordinance, and the Special Use permit shall be considered void. This section shall also apply to an approved large freestanding solar array that begins construction, but never completes construction or begins operations. In the event of abandonment, the following process shall be required:

All equipment and structures must be removed from the site, including all foundations, wiring, and other below-grade aspects of the solar arrays. The removal shall be at the expense of the owner of the equipment or structure. The Planning Commission may approve specific fences or accessory structures to remain in place. However, in the absence of such approval, fences and accessory structures must be removed.

The removal process must begin within 90 days of the Township's determination that the large freestanding solar array has been abandoned, and must be completed within 365 days of the start date, unless a time extension is approved by the Planning Commission.

The Planning Commission shall require a performance bond to guarantee all required equipment and structures are removed. At the time of the Special Use application, the applicant shall submit two third-party contractor bids for removal of all panels and related equipment, and the bond shall be the higher of the two bids. The Township shall review the bond every two years, including submission of two updated third-party contractor removal bids by the owner of the large freestanding solar array, and shall require an additional deposit if the amount is no longer sufficient to cover removal costs.

In the event that any equipment or structures are not removed within 365 days after the start date of the removal process, the panels and facilities shall be removed by the Township and the costs of removal assessed against performance bond.

Decommissioned material must be removed from the Township and disposed of in a State-approved landfill or other facility.

The site must be returned to a state where crop production is viable. The applicant must submit, with the original application for approval, a remediation plan that allows for the resumption of crop production following decommissioning of the solar array. The remediation plan may include ground cover that preserves the topsoil, may include storage of removed topsoil on site for eventual replacement, or may include another method of remediation deemed sufficient by the Planning Commission.

Maintenance Guarantee and Insurance. To ensure adjacent property and township protection the following insurance and damage requirements will be in effect for large freestanding solar arrays:

Damage. Should any physical property damage occur from the installation of solar panel equipment, the solar array owner shall reimburse any and all costs associated with said damage, including damage that occurs outside the boundaries of the owner's property.

Insurance. There shall be maintained a current general liability policy covering bodily injury and property damage (including damage to public roadways and non-participating properties) with limits of at least \$1 million per occurrence and \$1 million in the aggregate. The insurance policies shall be reviewed by the Township every five years, and the Planning Commission may require increases to the policy limits.

General Maintenance Bond.

The Planning Commission shall require an irrevocable and non-cancellable General Maintenance Bond to guarantee all aspects of this Ordinance are met at all times during the construction and operation of the large freestanding solar array. At the time of the Special Use application, the applicant shall submit two third-party contractor bids for construction of all fencing, landscaping,

and drainage improvements associated with the large freestanding solar array, and the bond shall be the higher of the two bids.

Every five years, the owner/operator of the solar farm shall again submit two third-party contractor bids for construction of all fencing, landscaping, and drainage improvements associated with the large freestanding solar array, and the bond shall be increased to the higher of the two bids.

The Township may use the bond to repair any landscaping, fencing, drainage infrastructure (including drainage tiles), and/or to correct any ongoing violation of this Ordinance, in the event that the large freestanding solar array owner fails to adequately maintain the required site improvements, or fails to make operational changes to correct an operational violation.

The Planning Commission shall not utilize the General Maintenance Bond unless the Civil Infractions process described in Section 19.02 has been completed and the Planning Commission determines that the large freestanding solar array owner is unlikely to make required repairs, upgrades, or operational changes.

Semi-Annual Performance Report. Every year, prior to the first regularly scheduled Planning Commission meeting after January 1, and the first regularly scheduled Planning Commission meeting after July 1, the large freestanding solar array owner/operator shall submit a report to the Planning Commission detailing the energy generation, maintenance condition, and ongoing performance of large freestanding solar array. Missing two Semi-Annual Reports in a row shall result in actions to revoke the Special Use Permit and invoke the decommissioning requirements in Subsection P.

Complaint Resolution Plan. The applicant shall submit to Bengal Township the procedures it will use to receive and respond to complaints about its solar energy system(s) and facilities. Procedures shall include provisions for immediate response to complaints regarding unsafe solar energy system(s) and serious violations of this ordinance as defined in this ordinance.

In determining whether to grant a special use permit for a large solar panel array, the Planning Commission shall consider the following, in addition to the Special Use standards in Article 17.

Proximity to existing electric transmission lines, and feasibility of connecting to the existing transmission network.

Existing physical features of the site that would be impacted by the new solar arrays, including wildlife impacts.

Aesthetic impact of the solar panel arrays.

Loss of farmland due to the solar arrays.

Solar Energy System (Small or Large)

General Requirements. All Solar Energy Systems are subject to the following general requirements:

All Solar Energy Systems must conform to the provisions of this Ordinance and all County, State, and Federal regulations and safety requirements as well as applicable industry standards.

Solar Energy Systems shall be located or placed so that concentrated solar glare shall not be directed toward or onto nearby properties or roadways at any time of the day.

Small Solar Energy Systems.

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

Standards.

Roof or Building Mounted Small Solar Energy System. Roof or building mounted Small Solar Energy Systems shall be considered an accessory use in all zoning districts, subject to the following requirements:

No part of a Solar Energy System mounted on a roof shall be installed closer than three (3) feet from the edges of the roof, the peak, or eave or valley in order to maintain pathways of accessibility.

In the event that a roof or building mounted Small Solar Energy System has been abandoned (meaning not having been in operation for a period of one (1) year), it shall be removed by the property owner within six (6) months from the date of abandonment.

A building permit shall be required for installation of roof or building mounted Small Solar Energy System. A permit to operate such system shall be issued, and that permit shall be renewed every five years.

Ground Mounted Small Solar Energy Systems. Ground mounted Small Solar Energy Systems shall be considered an accessory use in all zoning districts, subject to the following requirements:

Prior to the installation of a ground mounted Solar Energy System, the property owner shall submit a site plan to the Zoning Administrator. The site plan shall include setback, panel size, and the location of line property lines, building, fences, greenbelt, and road right of ways.

A ground mounted Solar Energy System shall not exceed the maximum building height for adjacent accessory building, but in no case shall the maximum height of any ground mounted Solar Energy System exceed fifteen (15) feet above the ground when oriented at maximum tilt.

A ground mounted Small Solar Energy System shall be located in the rear yard and shall meet the rear yard setback requirements applicable in the zoning district in which the Solar Energy System will be located.

All power transmission or other lines, wires or conduits from a ground mounted Small Solar Energy System to any building or other structure shall be located underground. If batteries are used as part of the ground mounted Solar Energy System, they must be placed in a secured container or enclosure.

A ground mounted Small Solar Energy System shall be considered a structure and shall be included in lot coverage calculations.

In the event that a ground mounted Small Solar Energy System has been abandoned (meaning not having been in operation for a period of one (1) year), the property owner shall notify the Township and shall remove the system within six (6) months from the date of abandonment.

A building permit shall be required for installation of a ground mounted Small Solar Energy System. A permit to operate such system shall be issued, and that permit shall be renewed every five years.

Large Solar Energy Systems.

Definition: A Solar Energy System where the principal design, purpose or use of such system is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.

Standards. In addition to any other requirements for special use approval, Large Solar Energy Systems shall be ground mounted and are subject to the following requirements:

Large Solar Energy Systems shall only be permitted as a special land use within the following parcels, which shall be designated as the O-WSB Wind Solar Battery Overlay:

070-036-200-025-00
070-036-200-005-50
070-036-200-005-00
070-036-100-010-00
070-036-100-020-00
070-036-100-025-00

The property owner or applicant for a Large Solar Energy System shall provide the Planning Commission with proof of ownership of the subject property, a copy of any lease agreement for a Large Solar Energy System, together with an operations agreement, which shall set forth the operations parameters, the name and contact information of the certified operator, inspection protocol, emergency procedures and general safety documentation.

Application Requirements: addition to the requirements of Article 14, applicants shall provide the Township with all of the following:

Application fee in an amount set by resolution of the Township Board.

- A deposit for an escrow account in an amount set by resolution or fee schedule approved by the Township Board. The escrow account is used to cover all costs and expenses associated with the special land use review and/or approval process, which costs can include, but are not limited to, review fees of the Township Attorney, Township Planner, and Township Engineer, as well as any reports or studies which the Township anticipates will be required during the review and/or approval process for the application. At any point during the review process, the Township may require that the applicant place additional monies into escrow with the Township if the existing escrowed funds on account with the Township will be insufficient, in the determination of the Township, to cover any remaining costs or expenses with the review and/or approval process. If additional funds are required by the Township to be placed in escrow and the applicant refuses to do so within 14 days after receiving notice, the Township will cease the zoning review and/or approval process until and unless the applicant makes the required escrow deposit. Any escrow amounts in excess of actual cost will be returned to the applicant. An itemized billing of all expenses will be provided to the applicant upon request.
- A list of all parcel numbers that will be used by the Large Solar Energy System; documentation establishing ownership of each parcel; and any lease agreements, easements, or purchase agreements for the subject parcels.
- An operations agreement setting forth the operations parameters, the name and contact information of the operator, the applicant's inspection protocol, emergency procedures, and general safety documentation.
- Current photographs, videos, and topography maps of the subject property.
- A conceptual plan that consists of a graphical computer-generated depiction of how the Large Solar Energy System will appear from all directions.
- A site plan that includes all proposed structures and the location of all equipment, as well as all setbacks, the location of property lines, signage, fences, greenbelts and screening, drain tiles, easements, floodplains, bodies of water, proposed access routes, and road right of ways. The site plan must be drawn to scale and must indicate how the Large Solar Energy System will be connected to the power grid.
- A copy of the applicant's power purchase agreement or other written agreement with an electric utility showing approval of an interconnection with the proposed Large Solar Energy System.
- A written plan for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management, which is subject to the Township's review and approval.
- A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Large Solar Energy System, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the UBESS and restore the subject parcels, which is subject to the Township's review and approval.

Financial security that meets the requirements of this Section, which is subject to the Township's review and approval.

A plan for resolving complaints from the public or other property owners concerning the construction and operation of the Large Solar Energy System, which is subject to the Township's review and approval.

A plan for managing any hazardous waste, which is subject to the Township's review and approval.

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

A fire protection plan, which identifies the fire risks associated with the Large Solar Energy System; describes the fire suppression system that will be implemented, including the manufacturer of the fire suppression system, its operations, and its capacity to extinguish fires; describes what measures will be used to reduce the risk of fires re-igniting (i.e., implementing a "fire watch"); identifies the water sources that will be available for the local fire department to protect adjacent properties; identifies a system for continuous monitoring, early detection sensors, and appropriate venting; and explains all other measures that will be implemented to prevent, detect, control, and suppress fires and explosions.

A written description of specialized training and/or equipment necessary for handling fires and/or other emergencies at the Large Solar Energy System site. The training plan must include, at a minimum, annual emergency response training for local firefighters and other local emergency personnel at the site of the UBESS.

A transportation plan for construction and operation phases, including any applicable agreements with the County Road Commission and Michigan Department of Transportation, which is subject to the Township's review and approval.

An attestation that the applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the UBESS, which is subject to the Township's review and approval.

Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection (MCL 324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township.

A ground cover vegetation establishment and management plan.

Proof of the owner/operator's required insurance.

Compliance with the Michigan Uniform Building Code and National Electric Safety Code. Construction of Large Solar Energy Systems shall comply with the most current version of the Michigan Uniform Building Code and National Electrical Code adopted by the enforcing agencies as a condition of any special land use permit under this Section.

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

Site Plan Requirements: In addition to the requirements of Article 14, applicants site plans shall include all of the following:

Location of all proposed structures and buildings, including equipment, transformers, and substations, on the subject parcel.

Location of all existing structures or buildings on the subject parcel and location of all existing structures or buildings on adjacent parcels within 1,000 feet of the property lines of the subject parcel.

Depiction of all setbacks, property lines, fences, signs, greenbelts, screening, drain tiles, easements, flood plains, bodies of water, proposed access routes, and road rights of way.

Indication of how and where the system will be connected to the power grid.

Plan for any land clearing and grading required for the installation and operation of the system.

Plan for any ground cover establishment and management.

Anticipated construction schedule and completion date. As a condition of any special land use or site plan approval, hours of construction shall be limited to Monday through Friday from 7:00 a.m. to 5:00 p.m. with no construction on Saturday, Sunday, or any federally recognized holiday.

Sound modeling study including sound isolines extending from the sound sources to the property lines.

Any additional studies requested by the Planning Commission, including but not limited to the following:

Visual Impact Assessment. A technical analysis by a third-party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscaping and other screening measures), a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project.

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

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

Glare Study. If the UBESS includes solar panels, then an analysis by a third-party qualified professional to determine if glare from the solar panels will be visible from nearby airports, air strips, residences, and roadways may be required. The analysis will consider the changing position of the sun throughout the day and year and its influences on the solar panels.

Applicants shall submit a conceptual layout plan for review prior to submission of a formal site plan. The conceptual site plan shall consist of a map and summary of the proposed development or land use, indicating the lands to be included, a brief description of the proposed project, a timeline for the proposed project, and any other information applicant deems necessary to provide the Planning Commission with a general overview and layout of the proposed project. The conceptual layout plan shall be reviewed by the Planning Commission to allow for discussion and feedback to the applicant.

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

The site plan must show the existing topographical grades in two-foot intervals and conditions of all property included in the Large Solar Energy System at the time of application.

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

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

All structures associated with the Large Solar Energy System shall be set back at least 100 feet from all public roads, and all property lines adjacent to a lot that does not contain any structures associated with the Large Solar Energy System. If the Large Solar Energy System extends over multiple parcels, then the required setback from lot lines adjacent to a lot that is part of the Large Solar Energy System shall be ten feet.

The height of the Large Solar Energy System and any mounts shall not exceed fifteen (15) feet when oriented at maximum tilt.

Prior to installation, the applicant shall submit a descriptive site plan to the Planning Commission which includes where and how the Large Solar Energy System will connect to the power grid.

No Large Solar Energy System shall be installed until evidence has been given to the Planning Commission that the electric utility company has agreed to an interconnection with the electrical grid or a power purchase agreement. Any such agreement shall be furnished to the Planning Commission.

Environmental Regulations.

Site Clearing. Clearing of natural vegetation shall be limited to what is necessary for construction, operation, and maintenance of the Large Solar Energy System. No more than two (2) inches of topsoil shall be moved from the original landscape. Other items, such as lumber, stones, etc., may be removed upon written consent of the Planning Commission.

Herbicides and Pesticides Prohibited. The use of herbicides pesticides is prohibited.

Baseline Soil Testing. Prior to commencing any construction or installation of a Large Solar Energy System, the owner of the facility or the property must submit a baseline soil test to the Township.

Wetland and Water Body Setback: The Large Solar Energy System must be set back at least 50 feet from the edge of any regulated wetland or naturally occurring body of water.

Greenbelt Buffer. A Large Solar Energy System must be screened by a greenbelt buffer between the use and all adjacent rights-of-way and adjacent properties. Greenbelt buffers must all of the following criteria:

Greenbelts must have a minimum width of ten (10) feet and may be interrupted only to provide for pedestrian or vehicular access.

Greenbelts shall be planted with appropriate ground covers.

A mixture of deciduous shade trees, ornamental trees, evergreen trees, and shrubs shall be planted along the greenbelt buffer at a minimum concentration of one (1) tree and three (3) shrubs per 15 linear feet of greenbelt length along a property line or street frontage.

Drainage.

Prior to approval of an application, all drains, culverts, and other stormwater drainage infrastructure within the boundaries of the Large Solar Energy System and parcels that are immediately adjacent to the Large Solar Energy System must be inspected to determine if there is any existing damage or other impediments to the efficient operations of the stormwater system. Prior to the construction of any approved Large Solar Energy System all damage identified by the inspection must be repaired by the solar farm owner/operator. Following completion of construction of the solar energy facility, the stormwater infrastructure must be inspected again to ensure that no damage has been incurred during construction.

All drains, culverts, and other stormwater drainage infrastructure within the Large Solar Energy System, and parcels that are immediately adjacent to the Large Solar Energy System, must either be County-owned or must be subject to an easement clearly designating permanent maintenance responsibility over the stormwater infrastructure to the owner of the large freestanding solar array.

Prior to approval of the Special Use permit by the Planning Commission, the large freestanding solar array applicant must obtain written confirmation from the County Drain Commissioner that stormwater drainage will not be impacted, or that any impacts will be mitigated without negative impacts on any nearby lots.

Any damage to underground drainage tiles, or other stormwater infrastructure or County Drains caused during the installation and ongoing operation of the large freestanding solar array shall be repaired by the large freestanding solar array owner within 30 days of discovery of the damage. The Planning Commission may extend this deadline upon determination that the large freestanding solar array owner has made good faith progress towards the repair.

Decommissioning. To ensure proper decommissioning of a UBESS upon abandonment, the applicant must post financial security in the form of a security bond, escrow payment, or irrevocable letter of credit in an amount equal to 125% of the total estimated cost of decommissioning, code enforcement, and reclamation, which cost estimate must be approved by the Township. The operator and the Township will review the amount of the financial security every two (2) years to ensure that the amount remains adequate. This financial security must be posted within fifteen (15) business days after approval of the special use application.

The amount of each UBESS security guarantee, shall be the average of at least two independent (applicant) demolition (removal) quotes obtained by the Planning Commission and approved by the Township Board. If the quantity of quotes obtained is two (2), the formula should be (quote 1 + quote 2) divided by two.

Quotes shall be based on individual UBESS removal and shall not group multiple UBESS simultaneous removals together. Quotes shall be ordered and obtained by the Township from established demolitions companies. Quotes shall not include salvage values. The cash deposit shall be updated every two (2) years at the rate of 1.5 times CPI (consumer price index) for each year. b) Such financial guarantee shall be deposited with the Township Treasurer after a special use has been approved but before construction operations begin on the UBESS project. Failure to keep such financial security in full force and effect at all times while the structure exists shall constitute a material and significant violation of a special use approval and this ordinance and shall subject the Applicant to all available remedies to the Township, including enforcement action, fines, revocation of the special use approval and UBESS removal. The Applicant shall be responsible for the payment of all attorney fees and other costs incurred by the Township in the event that the structure is not voluntarily removed, and the Township has to enforce removal.

The Applicant/Owner and Operator shall execute any and all document (as provided or approved by the Township), sufficient to provide the Township with a perfected security interest in monies deposited with the Township for the purpose of decommissioning any UBESS.

Large Solar Energy Systems Under PA 233: On or after November 29, 2024, once PA 233 of 2023 is in effect, then the following provisions apply to Large Solar Energy Systems.

To the extent the following provisions conflict with the provisions in Sections 5.39(A)-(C), these provisions control as to Large Solar Energy Systems with a nameplate capacity of 50 megawatts or more. All provisions in Sections 5.39(A)-(C) that do not conflict with this subsection D remain in full force and effect and shall be applicable to all Large Solar Energy Systems regardless of nameplate capacity. The following provisions do not apply if PA 233 of 2023 is repealed, enjoined, or otherwise not in effect, and do not apply to Large Solar Energy Systems with a nameplate capacity of less than 50 megawatts.

- (1) **Setbacks.** Large Solar Energy Systems must comply with the following minimum setback requirements, with setback distances measured from the nearest edge of the perimeter fencing of the facility:

Setback Description	Setback Distance
Occupied community buildings and dwellings on nonparticipating properties	300 feet from the nearest point on the outer wall
Public road right-of-way	50 feet measured from the nearest edge of a public road right-of-way
Nonparticipating parties	50 feet measured from the nearest shared property line

- (2) **Fencing.** Fencing for Large Solar Energy Systems must comply with the latest version of the National Electric Code as November 29, 2024, or as subsequently amended.
- (3) **Height.** Solar panel components must not exceed a maximum height of 25 feet above ground when the arrays are at full tilt.

- (4) **Noise.** The Large Solar Energy System must not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.
- (5) **Lighting.** The Large Solar Energy System must implement dark sky-friendly lighting solutions.
- (6) **Environmental Regulations.** The Large Solar Energy System must comply with applicable state or federal environmental regulations.
- (7) **Host Community Agreement.** The applicant for a special land use permit for a Large Solar Energy System shall enter into a host community agreement with the Township. The host community agreement shall require that, upon commencement of any operation, the Solar Energy System owner must pay the Township \$2,000.00 per megawatt of nameplate capacity. The payment shall be used as determined by the Township for police, fire, public safety, or other infrastructure, or for other projects as agreed to by the local unit and the applicant.

SOLAR ENERGY CONVERSION SYSTEMS:

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

1. All Solar Energy Systems must conform to the provisions of this Ordinance and all county, state, and federal regulations and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI).
2. The Township may revoke any approvals for, and require the removal of, any Solar Energy System that does not comply with this Ordinance.
3. Solar Energy Systems must be located or placed so that concentrated solar glare is not directed toward or onto nearby properties or roadways at any time of the day.
4. Solar Energy Systems are permitted in the Township as follows, subject to this Section XX and other applicable provisions of the Zoning Ordinance:

Type of System	Sub-Type of System	Zoning District	Special Use Permit
Private Solar Energy System	Private BIVPs	All zoning districts	Not required
	Roof or Building Mounted Private Solar Energy System	All zoning districts as accessory use	Not required
	Ground Mounted Private Solar Energy Systems	AG	Required
Commercial Solar Energy System	All Commercial Solar Energy Systems (Ground Mounted only)	AG*	Required

* Commercial Solar Energy Systems are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program.

B. Private Solar Energy Systems.

1. Private Solar Energy System BIVPs. Private Solar Energy System BIVPs are permitted in all zoning districts. A building permit is required for the installation of BIVPs.
2. Roof or Building Mounted Private Solar Energy Systems. Roof or Building Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to the following requirements:
 - a. No part of the Solar Energy System erected on a roof is permitted to extend beyond the peak of the roof. If the Solar Energy System is mounted on a building in an area other than the roof, no part of the Solar Energy System is permitted to extend beyond the wall on which it is mounted.

- b. No part of a Solar Energy System mounted on a roof is to be installed closer than three (3) feet from the edges of the roof, the peak, or eave or valley to maintain pathways of accessibility.
- c. No part of a Solar Energy System mounted on a roof is permitted to extend more than two (2) feet above the surface of the roof.
- d. If a Roof or Building Mounted Private Solar Energy System has been abandoned, the property owner must remove it within three (3) months after the date of abandonment.
- e. A building permit is required for the installation of Roof or Building Mounted Private Solar Energy Systems.

3. Ground Mounted Private Solar Energy Systems. Ground Mounted Private Solar Energy Systems are allowed only in the AG, Agricultural Enterprise zoning district and require a special land use permit and site plan review. In addition to all requirements for a special land use permit under Article 9 and site plan review and approval under Article 8, Ground Mounted Private Solar Energy Systems are also subject to the following requirements:

- a. *Site Plan.* Before installation of a Ground Mounted Private Solar Energy System, the property owner must submit a site plan to the Zoning Administrator. The site plan must include setbacks, panel size, and the location of property lines, buildings, fences, greenbelts, and road right of ways. The site plan must be drawn to scale.
- b. *Maximum Height.* A Ground Mounted Private Solar Energy System must not exceed the maximum building height for adjacent accessory buildings and must not exceed fifteen (15) feet above the ground when oriented at maximum tilt.
- c. *Location.* A Ground Mounted Private Solar Energy System must be located in the rear yard and meet the rear yard setback requirements applicable in the AG zoning district.
- d. *Underground Transmission.* All power transmission or other lines, wires, or conduits from a Ground Mounted Private Solar Energy System to any building or other structure must be located underground. If batteries are used as part of the Ground Mounted Private Solar Energy System, they must be placed in a secured container or enclosure.
- e. *Screening.* Greenbelt screening is required around any Ground Mounted Private Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences. The greenbelt must consist of shrubbery, trees, or other non-invasive plant species that provide a visual screen. In lieu of a planting greenbelt, a decorative fence that is at least 50% opaque (meeting the requirements of this Ordinance applicable to fences) may be used if approved by the Planning Commission.

- f. *Lot Area Coverage.* No more than 20% of the total lot area may be covered by a Ground Mounted Private Solar Energy System.
- g. *Appearance.* The exterior surfaces of a Ground Mounted Private Solar Energy System must be generally neutral in color and substantially non-reflective of light.
- h. *Abandonment.* If a Ground Mounted Private Solar Energy System has been abandoned, the property owner must notify the Township and remove the system within three (3) months after the date of abandonment.
- i. *Building Permit.* A building permit is required for installation of a Ground Mounted Private Solar Energy System.
- j. *Transferability.* A special use permit for a Ground Mounted Private Solar Energy System is transferable to a new owner. The new owner must register its name and business address with the Township and must comply with this Ordinance and all approvals and conditions issued by the Township.
- k. *Remedies.* If an applicant or operator of a Ground Mounted Solar Energy System fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke the special land use permit and site plan approval after giving the applicant notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

C. Commercial Solar Energy Systems. Commercial Solar Energy Systems are allowed only in the AG, Agricultural Enterprise zoning district (except they are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program) and require a special land use permit and site plan review. In addition to all requirements for a special land use permit under Article 9 and site plan review and approval under Article 8, Commercial Solar Energy Systems are also subject to the following requirements:

- 1. *Application Requirements.* The applicant for a Commercial Solar Energy System must provide the Township with all of the following:
 - a. Application fee in an amount set by resolution of the Township Board.
 - b. A list of all parcel numbers that will be used by the Commercial Social Energy System; documentation establishing ownership of each parcel; and any lease agreements, easements, or purchase agreements for the subject parcels.
 - c. An operations agreement setting forth the operations parameters, the name and contact information of the certified operator, the applicant's inspection protocol, emergency procedures, and general safety documentation.
 - d. Current photographs of the subject property.

- e. A site plan that includes all proposed structures and the location of all equipment, transformers, and substations, as well as all setbacks, panel sizes, and the location of property lines, signage, fences, greenbelts and screening, drain tiles, easements, floodplains, bodies of water, proposed access routes, and road right of ways. The site plan must be drawn to scale and must indicate how the Commercial Solar Energy System will be connected to the power grid.
- f. A copy of the applicant's power purchase agreement or other written agreement with an electric utility showing approval of an interconnection with the proposed Commercial Solar Energy System.
- g. A written plan for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management, which is subject to the Township's review and approval.
- h. A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Commercial Solar Energy System, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the Commercial Solar Energy System and restore the subject parcels, which is subject to the Township's review and approval.
- i. Financial security that meets the requirements of this Section, which is subject to the Township's review and approval.
- j. A plan for resolving complaints from the public or other property owners concerning the construction and operation of the Commercial Solar Energy System, which is subject to the Township's review and approval.
- k. A plan for managing any hazardous waste, which is subject to the Township's review and approval.
- l. A transportation plan for construction and operation phases, including any applicable agreements with the County Road Commission and Michigan Department of Transportation, which is subject to the Township's review and approval.
- m. An attestation that the applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Solar Energy System, which is subject to the Township's review and approval.
- n. Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301

et. seq.); Part 365, Endangered Species Protection (MCL324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township

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

2. *System and Location Requirements.*

- a. Commercial Solar Energy Systems must be ground mounted.
- b. Commercial Solar Energy Systems must be located on parcels of land twenty (20) acres in size or larger.
- c. Commercial Solar Energy Systems are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program.
- d. Commercial Solar Energy Systems (including all solar panels, structures, and equipment) must be set back 500 feet from all lot lines and public road rights-of-way. If a single Commercial Solar Energy System is located on more than one lot, then the lot-line setbacks of this subsection do not apply to the lot lines shared by those lots.
- e. The height of the Commercial Solar Energy System and any mounts, buildings, accessory structures, and related equipment must not exceed fifteen (15) feet when oriented at maximum tilt. Lightning rods may exceed 15 feet in height, but they must be limited to the height necessary to protect the Commercial Solar Energy System from lightning.

3. *Lot Area Coverage.* No more than 20% of the total lot area may be covered by a Commercial Solar Energy System.

4. *Permits.* All required county, state, and federal permits must be obtained before the Commercial Solar Energy System begins operating.

5. *Screening.* Greenbelt screening is required around any Commercial Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences. The greenbelt must consist of shrubbery, trees, or other non-invasive plant species that provide a visual screen. At least 50% of the plants must be evergreen trees that are at least six feet tall at the time of planting. In lieu of a planting greenbelt, a decorative fence that is at least 50% opaque and that meets the requirements of this Ordinance applicable to fences may be used if approved by the Planning Commission.

6. *Lighting.* Lighting of the Commercial Solar Energy System is limited to the minimum light necessary for safe operation. Illumination from any lighting must not extend beyond the perimeter of the lot(s) used for the

Commercial Solar Energy System. The Commercial Solar Energy System must not produce any glare that is visible to neighboring lots or to persons traveling on public or private roads.

7. *Security Fencing.* Security fencing must be installed around all electrical equipment related to the Commercial Solar Energy System, including any transformers and transfer stations. Appropriate warning signs must be posted at safe intervals at the entrance and around the perimeter of the Commercial Solar Energy System.

8. *Noise.* The noise generated by a Commercial Solar Energy System must not exceed the following limits:

- a. Forty (40) Dba Lmax, as measured at the property line of any adjacent R-1 (Residential) or B-1 (Business) zoned land in existence at the time the Commercial Solar Energy System is granted special land use approval.
- b. Forty (40) Dba Lmax, as measured at any neighboring residence in existence at the time the Commercial Solar Energy System is granted special land use approval, between the hours of 9:00 p.m. and 7:00 a.m.
- c. Forty (40) Dba Lmax, as measured at the lot lines of the project boundary.
- d. In addition to the above limitations, a sound barrier of a solid decorative masonry wall or evergreen tree berm, with trees spaced not less than 10 feet apart, must be constructed to reduce noise levels surrounding all inverters. The berm must be no more than ten (10) feet from all inverters, must be at least as tall as all inverters but not more than three (3) feet taller than the height of all inverters.

9. *Underground Transmission.* All power transmission or other lines, wires, or conduits from a Commercial Solar Energy System to any building or other structure must be located underground at a depth that complies with current National Electrical Code standards, except for power switchyards or the area within a substation. If batteries are used as part of the Ground Mounted Solar Energy System, they must be placed in a secured container or enclosure.

10. *Drain Tile Inspections.* The Commercial Solar Energy System must be maintained in working condition at all times while in operation. The applicant or operator must inspect all drain tile at least once every three years by means of robotic camera, with the first inspection occurring before the Commercial Solar Energy System is in operation. The applicant or operator must submit proof of the inspection to the Township. The owner or operator must repair any damage or failure of the drain tile within sixty (60) days after discovery and submit proof of the repair to the Township. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection.

11. *Insurance.* The applicant or operator will maintain property/casualty insurance and general commercial liability insurance in an amount of at least \$10 million per occurrence. Every two years, the owner of the Commercial Solar Energy System shall update the amount of insurance at the rate of inflation (CPI), and shall provide proof of such update to the Township.

12. *Decommissioning.* If a Commercial Solar Energy System is abandoned or otherwise nonoperational for a period of one year, the property owner or the operator must notify the Township and must remove the system within six (6) months after the date of abandonment. Removal requires receipt of a demolition permit from the Building Official and full restoration of the site to the satisfaction of the Township, including remediation of any contamination of the soil or groundwater. The site must be filled and covered with top soil and restored to a state compatible with the surrounding vegetation. The requirements of this subsection also apply to a Commercial Solar Energy System that is never fully completed or operational if construction has been halted for a period of one (1) year.

13. *Financial Security.* To ensure proper decommissioning of a Commercial Solar Energy System upon abandonment, the applicant must post financial security in the form of a security bond, escrow payment, or irrevocable letter of credit in an amount equal to 125% of the total estimated cost of decommissioning, code enforcement, and reclamation, which cost estimate must be approved by the Township. The operator and the Township will review the amount of the financial security every two (2) years to ensure that the amount remains adequate. This financial security must be posted within fifteen (15) business days after approval of the special land use application.

14. *Extraordinary Events.* If the Commercial Solar Energy System experiences a failure, fire, leakage of hazardous materials, personal injury, or other extraordinary or catastrophic event, the applicant or operator must notify the Township within 24 hours, and must repair all damage, and remediate all contamination of soil, water, groundwater, or any other environmental contamination, with 365 days after the event. In the event the deadline is not met, the Township shall use the Financial Security described in Subsection 12 to complete the required repairs and remediation, and shall invoice the Commercial Solar Energy System owner for any cost overages. The Township Board may authorize extensions of the deadline upon determination that the applicant has made good faith progress towards completion.

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

- a. Current proof of insurance;
- b. Verification of financial security; and
- c. A summary of all complaints, complaint resolutions, and extraordinary events.

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

17. *Transferability.* A special use permit for a Commercial Solar Energy System is transferable to a new owner. The new owner must register its name and business address with the Township and must comply with this Ordinance and all approvals and conditions issued by the Township.

18. *Remedies.* If an applicant or operator fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke the special land use permit and site plan approval after giving the applicant or operator notice and an opportunity to be heard. Additionally, the Township may pursue any

legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

19. Complaint Resolution. Subject to the Township's review and approval during the special land use approval process, the applicant or operator must comply with a complaint resolution process. At a minimum, the complaint resolution process must include the following:

- a. The applicant or operator will, at its expense, use a website, telephone line, or third-party service to receive complaints about the Commercial Solar Energy System.
- b. The applicant or operator will use its best efforts to respond to and resolve any complaints.
- c. The applicant or operator will establish an escrow account with the Township with a minimum of \$25,000 balance at all times to pay the cost of investigating complaints.
- d. The applicant or operator will forward each complaint, along with the applicant's or operator's response to each complaint, to the Township within 15 days after each complaint is received.
- e. The Township will investigate each complaint, with all expenses (including professional fees) drawn from the escrow account.
- f. At the Township's request, the applicant or operator must provide the Township with data from any solar panel or other equipment related to the complaint, which must include meteorological and performance data such as temperature, humidity, power output, wind velocities, and nacelle vector.
- g. Following its investigation, if the Township has reason to believe that that the applicant or owner has violated this Ordinance, the Township may take any actions permitted by law, including revoking the special land use permit following notice and an opportunity to be heard.

B. Commercial Solar Energy Systems under PA 233.

On or after November 29, 2024, if PA 233 of 2023 is in effect, then the following provisions apply to Commercial Solar Energy Systems with a nameplate capacity of 50 megawatts or more. To the extent these provisions conflict with the provisions in Section 434 above, these provisions control as to such Commercial Solar Energy Systems. This subsection does not apply if PA 233 of 2023 does not take effect and does not apply to Commercial Solar Energy Systems with a nameplate capacity of less than 50 megawatts.

1. Setbacks. Commercial Solar Energy Systems must comply with the following minimum setback requirements, with setback distances measured from the nearest edge of the perimeter fencing of the facility:

Setback Description	Setback Distance
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Occupied community buildings and dwellings on nonparticipating properties	300 feet from the nearest point on the outer wall
Public road right-of-way	50 feet measured from the nearest edge of a public road right-of-way
Nonparticipating parties	50 feet measured from the nearest shared property line

2. *Fencing.* Fencing for the Commercial Solar Energy System must comply with the latest version of the National Electric Code as November 29, 2024, or as subsequently amended.

3. *Height.* Solar panel components must not exceed a maximum height of 25 feet above ground when the arrays are at full tilt.

4. *Noise.* The Commercial Solar Energy System must not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.

5. *Lighting.* The Commercial Solar Energy System must implement dark sky-friendly lighting solutions.

6. *Lot Area Coverage.* There shall be no maximum lot coverage provided that the setbacks in Subsection B.1 are met.

7. *Environmental Regulations.* The Commercial Solar Energy System must comply with applicable state or federal environmental regulations.

8. *Host community agreement.* The applicant shall enter into a host community agreement with the Township. The host community agreement shall require that, upon commencement of any operation, the Commercial Solar Energy System owner must pay the Township \$2,000.00 per megawatt of nameplate capacity. The payment shall be used as determined by the Township for police, fire, public safety, or other infrastructure, or for other projects as agreed to by the local unit and the applicant.

Act No. 233
Public Acts of 2023
Approved by the Governor
November 28, 2023
Filed with the Secretary of State
November 29, 2023
EFFECTIVE DATE: November 29, 2024

**STATE OF MICHIGAN
102ND LEGISLATURE
REGULAR SESSION OF 2023**

Introduced by Reps. Aiyash, Puri, Brenda Carter, Pohutsky, Rheingans, Hope, O'Neal, Byrnes, Stone, MacDonell, Tsernoglou, Morse, Breen, Martus, Andrews, Steckloff and Wilson

ENROLLED HOUSE BILL No. 5120

AN ACT to amend 2008 PA 295, entitled “An act to require certain providers of electric service to establish and recover costs for renewable energy programs; to require certain providers of electric or natural gas service to establish energy waste reduction programs; to authorize the use of certain energy systems to meet the requirements of those programs; to provide for the approval of energy waste reduction service companies; to reduce energy waste by state agencies and the public; to create a wind energy resource zone board and provide for its power and duties; to authorize the creation and implementation of wind energy resource zones; to provide for expedited transmission line siting certificates; to provide for customer generation and net metering programs and the responsibilities of certain providers of electric service and customers with respect to customer generation and net metering; to provide for fees; to prescribe the powers and duties of certain state agencies and officials; to require the promulgation of rules and the issuance of orders; to authorize the establishment of residential energy improvement programs by providers of electric or natural gas service; and to provide for civil sanctions, remedies, and penalties,” by amending the title and section 13 (MCL 460.1013), as amended by 2016 PA 342, and by adding part 8.

The People of the State of Michigan enact:

TITLE

An act to require certain providers of electric service to establish and recover costs for renewable energy and clean energy programs; to require certain providers of electric or natural gas service to establish, and recover costs for, energy waste reduction programs; to ensure that costs and savings from renewable energy, clean energy, and energy waste reduction programs are included in the determination of rates; to authorize the use of certain energy systems to meet the requirements of those programs; to provide for the approval of energy waste reduction service companies; to reduce energy waste by state agencies and the public; to create a wind energy resource zone board and provide for its power and duties; to authorize the creation and implementation of wind energy resource zones; to provide for expedited transmission line siting certificates; to provide for customer generation and net metering programs and the responsibilities of certain providers of electric service and customers with respect to customer generation and net metering; to provide for fees; to prescribe the powers and duties of certain state agencies and officials; to require the promulgation of rules and the issuance of orders; to authorize the establishment of residential energy improvement programs by providers of electric or natural gas service; to authorize certification by this state before the construction of certain wind and solar energy facilities and energy storage facilities; to regulate certain local ordinances; to protect personal property rights; and to provide for civil sanctions, remedies, and penalties.

Sec. 13. As used in this act:

(a) “Site”, except as used in part 8, means a contiguous site, regardless of the number of meters at that site. A site that would be contiguous but for the presence of a street, road, or highway is considered to be contiguous for the purposes of this subdivision.

(b) “Transmission line” means all structures, equipment, and real property necessary to transfer electricity at system bulk supply voltage of 100 kilovolts or more.

(c) “Utility system resource cost test” means a standard that is met for an investment in energy waste reduction if, on a life cycle basis, using a real societal discount rate based on actual long-term United States Treasury bond yields, the total avoided supply-side costs to the provider, including representative values for electricity or natural gas supply, transmission, distribution, and other associated costs, are greater than the total costs to the provider of administering and delivering the energy waste reduction program, including net costs for any provider incentives paid by customers and capitalized costs recovered under section 89.

(d) “Wind energy conversion system” means a system that uses 1 or more wind turbines to generate electricity and has a nameplate capacity of 100 kilowatts or more.

(e) “Wind energy resource zone” or “wind zone” means an area designated by the commission under section 147.

PART 8.

WIND, SOLAR, AND STORAGE CERTIFICATION

Sec. 221. As used in this part:

(a) “Affected local unit” means a unit of local government in which all or part of a proposed energy facility will be located.

(b) “Aircraft detection lighting system” means a sensor-based system designed to detect aircraft as they approach a wind energy facility and that automatically activates obstruction lights until they are no longer needed.

(c) “Applicant” means an applicant for a certificate.

(d) “Certificate” means a certificate issued for an energy facility under section 226(5).

(e) “Community-based organization” means a workforce development and training organization, labor union, local governmental entity, Michigan federally recognized tribe, environmental advocacy organization, or an organization that represents the interests of underserved communities.

(f) “Compatible renewable energy ordinance” means an ordinance that provides for the development of energy facilities within the local unit of government, the requirements of which are no more restrictive than the provisions included in section 226(8). A local unit of government is considered not to have a compatible renewable energy ordinance if it has a moratorium on the development of energy facilities in effect within its jurisdiction.

(g) “Construction” means any substantial action taken constituting the placement, erection, expansion, or repowering of an energy facility.

(h) “Dark sky-friendly lighting technology” means a light fixture that is designed to minimize the amount of light that escapes upward into the sky.

(i) “Energy facility” means an energy storage facility, solar energy facility, or wind energy facility. An energy facility may be located on more than 1 parcel of property, including noncontiguous parcels, but shares a single point of interconnection to the grid.

(j) “Energy storage facility” means a system that absorbs, stores, and discharges electricity. Energy storage facility does not include either of the following:

(i) Fossil fuel storage.

(ii) Power-to-gas storage that directly uses fossil fuel inputs.

(k) “Independent power producer”, or “IPP”, means a person that is not an electric provider but owns or operates facilities to generate electric power for sale to electric providers, this state, or local units of government.

(l) “Light intensity dimming solution technology” means obstruction lighting that provides a means of tailoring the intensity level of lights according to surrounding visibility.

(m) “Light-mitigating technology system” means an aircraft detection lighting system, a light intensity dimming solution technology, or a comparable solution that reduces the impact of nighttime lighting while maintaining night conspicuity sufficient to assist aircraft in identifying and avoiding collision with the wind energy facilities.

- (n) “Local unit of government” or “local unit” means a county, township, city, or village.
- (o) “Maximum blade tip height” means the nominal hub height plus the nominal blade length of a wind turbine, as listed in the wind turbine specifications provided by the wind turbine manufacturer. If not listed in the wind turbine specifications, maximum blade tip height means the actual hub height plus the actual blade length.
- (p) “Nameplate capacity” means the designed full-load sustained generating output of an energy facility. Nameplate capacity shall be determined by reference to the sustained output of an energy facility even if components of the energy facility are located on different parcels, whether contiguous or noncontiguous.
- (q) “Nonparticipating property” means a property that is adjacent to an energy facility and that is not a participating property.
- (r) “Occupied community building” means a school, place of worship, day-care facility, public library, community center, or other similar building that the applicant knows or reasonably should know is used on a regular basis as a gathering place for community members.
- (s) “Participating property” means real property that either is owned by an applicant or that is the subject of an agreement that provides for the payment by an applicant to a landowner of monetary compensation related to an energy facility regardless of whether any part of that energy facility is constructed on the property.
- (t) “Person” means an individual, governmental entity authorized by this state, political subdivision of this state, business, proprietorship, firm, partnership, limited partnership, limited liability partnership, co-partnership, joint venture, syndicate, business trust, labor organization, company, corporation, association, subchapter S corporation, limited liability company, committee, receiver, estate, trust, or any other legal entity or combination or group of persons acting jointly as a unit.
- (u) “Project labor agreement” means a prehire collective bargaining agreement with 1 or more labor organizations that establishes the terms and conditions of employment for a specific construction project and does all of the following:
- (i) Binds all contractors and subcontractors on the construction project through the inclusion of appropriate specifications in all relevant solicitation provisions and contract documents.
 - (ii) Allows all contractors and subcontractors on the construction project to compete for contracts and subcontracts without regard to whether they are otherwise parties to collective bargaining agreements.
 - (iii) Contains guarantees against strikes, lockouts, and similar job disruptions.
 - (iv) Sets forth the effective, prompt, and mutually binding procedures for resolving labor disputes arising during the term of the project labor agreement.
 - (v) Provides other mechanisms for labor-management cooperation on matters of mutual interest and concern, including productivity, quality of work, safety, and health.
 - (vi) Complies with all state and federal laws, rules, and regulations.
- (v) “Repowering”, with respect to an energy facility, means replacement of all or substantially all of the energy facility for the purpose of extending its life. Repowering does not include repairs related to the ongoing operations that do not increase the capacity or energy output of the energy facility.
- (w) “Solar energy facility” means a system that captures and converts solar energy into electricity, for the purpose of sale or for use in locations other than solely the solar energy facility property. Solar energy facility includes, but is not limited to, the following equipment and facilities to be constructed by an electric provider or independent power producer: photovoltaic solar panels; solar inverters; access roads; distribution, collection, and feeder lines; wires and cables; conduit; footings; foundations; towers; poles; crossarms; guy lines and anchors; substations; interconnection or switching facilities; circuit breakers and transformers; energy storage facilities; overhead and underground control; communications and radio relay systems and telecommunications equipment; utility lines and installations; generation tie lines; solar monitoring stations; and accessory equipment and structures.
- (x) “Wind energy facility” means a system that captures and converts wind into electricity, for the purpose of sale or for use in locations other than solely the wind energy facility property. Wind energy facility includes, but is not limited to, the following equipment and facilities to be constructed by an electric provider or independent power producer: wind towers; wind turbines; access roads; distribution, collection, and feeder lines; wires and cables; conduit; footings; foundations; towers; poles; crossarms; guy lines and anchors; substations; interconnection or switching facilities; circuit breakers and transformers; energy storage facilities; overhead and underground control; communications and radio relay systems and telecommunications equipment; monitoring and recording equipment and facilities; erosion control facilities; utility lines and installations; generation tie lines; ancillary buildings; wind monitoring stations; and accessory equipment and structures.

Sec. 222. (1) This part applies to all of the following:

- (a) Any solar energy facility with a nameplate capacity of 50 megawatts or more.
 - (b) Any wind energy facility with a nameplate capacity of 100 megawatts or more.
 - (c) Any energy storage facility with a nameplate capacity of 50 megawatts or more and an energy discharge capability of 200 megawatt hours or more.
- (2) Before beginning construction of an energy facility, an electric provider or independent power producer may, pursuant to this part, obtain a certificate for that energy facility from the commission. A local unit of government exercising zoning jurisdiction may request the commission to require an electric provider or independent power producer that proposes to construct an energy facility in that local unit to obtain a certificate for that energy facility from the commission. To obtain a certificate for an energy facility, an electric provider or IPP must comply with the requirements of sections 223 and 224, and then submit to the commission an application as described in section 225.
- (3) If the commission has issued a certificate for an energy facility, the electric provider or IPP may make minor changes, as defined by the commission, to the site plan if the changes are within the footprint of the previously approved site plan.
- (4) If an energy facility that would otherwise be subject to subsection (2) is located entirely within a city or village, the city or village is exempt from this part as it relates to the energy facility if the city or village is the owner of participating property, is a developer of the facility, or owns an electric utility that will take service from the energy facility.

Sec. 223. (1) An electric provider or independent power producer that, at its option or as required by the commission, proposes to obtain a certificate for and construct an energy facility shall hold a public meeting in each affected local unit. At least 30 days before a meeting, the electric provider or IPP shall notify the clerk of the affected local unit in which a public meeting will be held of the time, date, location, and purpose of the meeting and provide a copy of the site plan as described in section 224 or the address of an internet site where a site plan for the energy facility is available for review. At least 14 days before the meeting, the electric provider or IPP shall publish notice of the meeting in a newspaper of general circulation in the affected local unit or in a comparable digital alternative. The notice shall include a copy of the site plan or the address of an internet site where the site plan is available for review. The commission shall further prescribe the format and content of the notice. For the purposes of this subsection, a public meeting held in a township is considered to be held in each village located within the township.

(2) At least 60 days before a public meeting held under subsection (1), the electric provider or IPP planning to construct an energy facility shall offer in writing to meet with the chief elected official of each affected local unit, or the chief elected official's designee, to discuss the site plan.

(3) If, within 30 days following a meeting described in subsection (2), the chief elected official of each affected local unit notifies the electric provider or IPP planning to construct the energy facility that the affected local unit has a compatible renewable energy ordinance, then the electric provider or IPP shall file for approval with each affected local unit, subject to all of the following:

(a) An application submitted under this subsection shall comply with the requirements of section 225(1), except for section 225(1)(j) and (s). An affected local unit may require other information necessary to determine compliance with the compatible renewable energy ordinance.

(b) A local unit of government with which an application is filed under this subsection shall approve or deny the application within 120 days after receiving the application. The applicant and local unit of government may jointly agree to extend this deadline by up to 120 days.

(c) The electric provider or IPP may submit its application to the commission if any of the following apply:

- (i) An affected local unit fails to timely approve or deny an application.
- (ii) The application complies with the requirements of section 226(8), but an affected local unit denies the application.
- (iii) An affected local unit amends its zoning ordinance after the chief elected official notifies the electric provider or IPP that it has a compatible renewable energy ordinance, and the amendment imposes additional requirements on the development of energy facilities that are more restrictive than those in section 226(8).

(d) An electric provider or IPP that submits an application to the commission pursuant to this subsection is not required to comply with subsection (1) or section 226(1), or the requirement to submit a summary of community outreach and education efforts pursuant to section 225(1)(j).

(4) If a local unit of government approves an application pursuant to subsection (3), construction of the proposed energy facility must begin within 5 years after the date the permit is granted and any challenges to the grant of the permit are concluded. The local unit of government may extend this timeline at the request of the electric provider or IPP without requiring a new application. The local unit shall not revoke a permit issued under subsection (3) except for material noncompliance with the permit by the electric provider or IPP.

(5) If the commission approves an applicant for a certificate submitted under subsection (3)(c), the local unit of government is considered to no longer have a compatible renewable energy ordinance, unless the commission finds that the local unit of government's denial of the application was reasonably related to the applicant's failure to provide information required by subsection (3)(a).

(6) Nothing in this section shall be construed to limit remedies available to an applicant to appeal a denial by a local unit of government under any other law of this State.

Sec. 224. (1) A site plan required under section 223 or 225 shall meet application filing requirements established by commission rule or order to maintain consistency between applications. The site plan shall include the following:

(a) The location and a description of the energy facility.

(b) A description of the anticipated effects of the energy facility on the environment, natural resources, and solid waste disposal capacity, which may include records of consultation with relevant state, tribal, and federal agencies.

(c) Additional information required by commission rule or order that directly relates to the site plan.

(2) When it submits a site plan required under section 223 or 225 to the commission, an electric provider or independent power producer shall, for informational purposes, submit a copy to the clerk of each affected local unit.

Sec. 225. (1) An application for a certificate submitted to the commission under section 222(2) shall contain all of the following:

(a) The complete name, address, and telephone number of the applicant.

(b) The planned date for the start of construction and the expected duration of construction.

(c) A description of the energy facility, including a site plan as described in section 224.

(d) A description of the expected use of the energy facility.

(e) Expected public benefits of the proposed energy facility.

(f) The expected direct impacts of the proposed energy facility on the environment and natural resources and how the applicant intends to address and mitigate these impacts.

(g) Information on the effects of the proposed energy facility on public health and safety.

(h) A description of the portion of the community where the energy facility will be located.

(i) A statement and reasonable evidence that the proposed energy facility will not commence commercial operation until it complies with applicable state and federal environmental laws, including, but not limited to, the natural resources and environmental protection act, 1994 PA 451, MCL 324.101 to 324.90106.

(j) A summary of the community outreach and education efforts undertaken by the electric provider or independent power producer, including a description of the public meetings and meetings with elected officials under section 223.

(k) Evidence of consultation, before submission of the application, with the department of environment, Great Lakes, and energy and other relevant state and federal agencies before submitting the application, including, but not limited to, the department of natural resources and the department of agriculture and rural development.

(l) The soil and economic survey report under section 60303 of the natural resources and environmental protection act, 1994 PA 451, MCL 324.60303, for the county where the proposed energy facility will be located.

(m) Interconnection queue information for the applicable regional transmission organization.

(n) If the proposed site of the energy facility is undeveloped land, a description of feasible alternative developed locations, including, but not limited to, vacant industrial property and brownfields, and an explanation of why they were not chosen.

(o) If the energy facility is reasonably expected to have an impact on television signals, microwave signals, agricultural global position systems, military defense radar, radio reception, or weather and doppler radio, a plan to minimize and mitigate that impact. Information in the plan concerning military defense radar is exempt from disclosure under the freedom of information act, 1976 PA 442, MCL 15.231 to 15.246, and shall not be disclosed by the commission or the electric provider or independent power producer except pursuant to court order.

(p) A stormwater assessment and a plan to minimize, mitigate, and repair any drainage impacts at the expense of the electric provider or IPP. The applicant shall make reasonable efforts to consult with the county drain commissioner before submitting the application and shall include evidence of those efforts in its application.

(q) A fire response plan and an emergency response plan.

(r) A decommissioning plan that is consistent with agreements reached between the applicant and other landowners of participating properties and that ensures the return of all participating properties to a useful condition similar to that which existed before construction, including removal of above-surface facilities and infrastructure that have no ongoing purpose. The decommissioning plan shall include, but is not limited to, financial assurance in the form of a bond, a parent company guarantee, or an irrevocable letter of credit, but excluding cash. The amount of the financial assurance shall not be less than the estimated cost of decommissioning the energy facility, after deducting salvage value, as calculated by a third party with expertise in decommissioning, hired by the applicant. However, the financial assurance may be posted in increments as follows:

(i) At least 25% by the start of full commercial operation.

(ii) At least 50% by the start of the fifth year of commercial operation.

(iii) 100% by the start of the tenth year of commercial operation.

(s) Other information reasonably required by the commission.

(2) Within 60 days after receipt of an application, the commission shall determine whether the application is complete. If the commission determines that the application is incomplete, the commission shall advise the applicant in writing of the information necessary to make the application complete. If the commission fails to timely notify the applicant that an application is incomplete, the application is considered to be complete.

Sec. 226. (1) Upon filing an application with the commission, the applicant shall make a 1-time grant to each affected local unit for an amount determined by the commission but not more than \$75,000.00 per affected local unit and not more than \$150,000.00 in total. Each affected local unit shall deposit the grant in a local intervenor compensation fund to be used to cover costs associated with participation in the contested case proceeding on the application for a certificate.

(2) Upon filing an application with the commission, the applicant shall provide notice of the opportunity to comment on the application in a form and manner prescribed by the commission. The notice shall be published in a newspaper of general circulation in each affected local unit or a comparable digital alternative. The notice shall be written in plain, nontechnical, and easily understood terms and shall contain a title that includes the name of the applicant and the words "NOTICE OF INTENT TO CONSTRUCT _____ FACILITY", with the words "WIND ENERGY", "SOLAR ENERGY", or "ENERGY STORAGE", as applicable, entered in the blank space. The commission shall further prescribe the format and contents of the notice.

(3) The commission shall conduct a proceeding on the application for a certificate as a contested case under the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328. An affected local unit, participating property owner, or nonparticipating property owner may intervene by right.

(4) The commission may assess reasonable application fees to the applicant to cover the commission's administrative costs in processing the application, including costs for consultants to assist the commission in evaluating issues raised by the application. The commission may retain consultants to assist the commission in evaluating issues raised by the application and may require the applicant to pay the cost of the services.

(5) The commission shall grant the application and issue a certificate or deny the application not later than 1 year after a complete application is filed.

(6) In evaluating the application, the commission shall consider the feasible alternative developed locations described under section 225(1)(n), if applicable, and the impact of the proposed facility on local land use, including the percentage of land within the local unit of government dedicated to energy generation. The commission may condition its grant of the application on the applicant taking additional reasonable action related to the impacts of the proposed energy facility, including, but not limited to, the following:

(a) Establishing and maintaining for the life of the facility vegetative ground cover. This subdivision does not apply to an application for an energy facility that is proposed to be located entirely on brownfield land.

(b) Meeting or exceeding pollinator standards throughout the lifetime of the facility, as established by the "Michigan Pollinator Habitat Planning Scorecard for Solar Sites" developed by the Michigan State University Department of Entomology in effect on the effective date of the amendatory act that added this section or any applicable successor standards approved by the commission as reasonable and consistent with the purposes of this subdivision. Seed mix used to establish pollinator plantings shall not include invasive species as identified by the Midwest Invasive Species Information Network, led by researchers at the Michigan State University Department of Entomology and supporting regional partners. This subdivision does not apply to an application for an energy facility that is proposed to be located entirely on brownfield land.

- (c) Providing for community improvements in the affected local unit.
- (d) Making a good-faith effort to maintain and provide proper care of the property where the energy facility is proposed to be located during construction and operation of the facility.

(7) The commission shall grant the application and issue a certificate if it determines all of the following:

(a) The public benefits of the proposed energy facility justify its construction. For the purposes of this subdivision, public benefits include, but are not limited to, expected tax revenue paid by the energy facility to local taxing districts, payments to owners of participating property, community benefits agreements, local job creation, and any contributions to meeting identified energy, capacity, reliability, or resource adequacy needs of this state. In determining any contributions to meeting identified energy, capacity, reliability, or resource adequacy needs of this state, the commission may consider approved integrated resource plans under section 6t of 1939 PA 3, MCL 460.6t, renewable energy plans, annual electric provider capacity demonstrations under section 6w of 1939 PA 3, MCL 460.6w, or other proceedings before the commission, at the applicable regional transmission organization, or before the Federal Energy Regulatory Commission, as determined relevant by the commission.

(b) The energy facility complies with the standard in section 1705(2) of the natural resources and environmental protection act, 1994 PA 451, MCL 324.1705.

(c) The applicant has considered and addressed impacts to the environment and natural resources, including, but not limited to, sensitive habitats and waterways, wetlands and floodplains, wildlife corridors, parks, historic and cultural sites, and threatened or endangered species.

(d) The applicant has met the conditions established in section 227.

(e) All of the following apply:

(i) The installation, construction, or construction maintenance of the energy facility will use apprenticeship programs registered and in good standing with the United States Department of Labor under the national apprenticeship act, 29 USC 50 to 50c.

(ii) The workers employed for the construction or construction maintenance of the energy facility will be paid a minimum wage standard not less than the wage and fringe benefit rates prevailing in the locality in which the work is to be performed as determined under 2023 PA 10, MCL 408.1101 to 408.1126, or 40 USC 3141 to 3148, whichever provides the higher wage and fringe benefit rates.

(iii) To the extent permitted by law, the entities performing the construction or construction maintenance work will enter into a project labor agreement or operate under a collective bargaining agreement for the work to be performed.

(f) The proposed energy facility will not unreasonably diminish farmland, including, but not limited to, prime farmland and, to the extent that evidence of such farmland is available in the evidentiary record, farmland dedicated to the cultivation of specialty crops.

(g) The proposed energy facility does not present an unreasonable threat to public health or safety.

(8) An energy facility meets the requirements of subsection (7)(g) if it will comply with the following standards, as applicable:

(a) For a solar energy facility, all of the following:

(i) The following minimum setback requirements, with setback distances measured from the nearest edge of the perimeter fencing of the facility:

<u>Setback Description</u>	<u>Setback Distance</u>
Occupied community buildings and dwellings on nonparticipating properties	300 feet from the nearest point on the outer wall
Public road right-of-way	50 feet measured from the nearest edge of a public road right-of-way
Nonparticipating parties	50 feet measured from the nearest shared property line

(ii) Fencing for the solar energy facility complies with the latest version of the National Electric Code as of the effective date of the amendatory act that added this section or any applicable successor standard approved by the commission as reasonable and consistent with the purposes of this subsection.

(iii) Solar panel components do not exceed a maximum height of 25 feet above ground when the arrays are at full tilt.

(iv) The solar energy facility does not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.

(v) The solar energy facility will implement dark sky-friendly lighting solutions.

(vi) The solar energy facility will comply with any more stringent requirements adopted by the commission. Before adopting such requirements, the commission must determine that the requirements are necessary for compliance with state or federal environmental regulations.

(b) For a wind energy facility, all of the following:

(i) The following minimum setback distances, measured from the center of the base of the wind tower:

<u>Setback Description</u>	<u>Setback Distance</u>
Occupied community buildings and residences on nonparticipating properties	2.1 times the maximum blade tip height to the nearest point on the outside wall of the structure
Residences and other structures on participating properties	1.1 times the maximum blade tip height to the nearest point on the outside wall of the structure
Nonparticipating property lines	1.1 times the maximum blade tip height
Public road right-of-way	1.1 times the maximum blade tip height to the center line of the public road right-of-way
Overhead communication and electric transmission, not including utility service lines to individual houses or outbuildings	1.1 times the maximum blade tip height to the center line of the easement containing the overhead line

(ii) Each wind tower is sited such that any occupied community building or nonparticipating residence will not experience more than 30 hours per year of shadow flicker under planned operating conditions as indicated by industry standard computer modeling.

(iii) Each wind tower blade tip does not exceed the height allowed under a Determination of No Hazard to Air Navigation by the Federal Aviation Administration under 14 CFR part 77.

(iv) The wind energy facility does not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.

(v) The wind energy facility is equipped with a functioning light-mitigating technology. To allow proper conspicuity of a wind turbine at night during construction, a turbine may be lighted with temporary lighting until the permanent lighting configuration, including the light-mitigating technology, is implemented. The commission may grant a temporary exemption from the requirements of this subparagraph if installation of appropriate light-mitigating technology is not feasible. A request for a temporary exemption must be in writing and state all of the following:

(A) The purpose of the exemption.

(B) The proposed length of the exemption.

(C) A description of the light-mitigating technologies submitted to the Federal Aviation Administration.

(D) The technical or economic reason a light-mitigating technology is not feasible.

(E) Any other relevant information requested by the commission.

(vi) The wind energy facility meets any standards concerning radar interference, lighting, subject to subparagraph (v), or other relevant issues as determined by the commission.

(vii) The wind energy facility will comply with any more stringent requirements adopted by the commission. Before adopting such requirements, the commission must determine that the requirements are necessary for compliance with state or federal environmental regulations.

(c) For an energy storage facility, all of the following:

(i) The following minimum setback requirements, with setback distances measured from the nearest edge of the perimeter fencing of the facility:

<u>Setback Description</u>	<u>Setback Distance</u>
Occupied community buildings and dwellings on nonparticipating properties	300 feet from the nearest point on the outer wall
Public road right-of-way	50 feet measured from the nearest edge of a public road right-of-way
Nonparticipating parties	50 feet measured from the nearest shared property line

(ii) The energy storage facility complies with the version of NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems" in effect on the effective date of the amendatory act that added this section or any applicable successor standard adopted by the commission as reasonable and consistent with the purposes of this subdivision.

(iii) The energy storage facility does not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.

(iv) The energy storage facility will implement dark sky-friendly lighting solutions.

(v) The energy storage facility will comply with any more stringent requirements adopted by the commission. Before adopting such requirements, the commission must determine that the requirements are necessary for compliance with state or federal environmental regulations.

(9) The certificate shall identify the location of the energy facility and its nameplate capacity.

(10) If construction of an energy facility is not commenced within 5 years after the date that a certificate is issued, the certificate is invalid, but the electric provider or IPP may seek a new certificate for the proposed energy facility. If the certificate is appealed in proceedings before the commission or to a court of competent jurisdiction, the running of the 5-year period is tolled from the date of filing the appeal until 60 days after issuance of a final nonappealable decision. The commission may extend the 5-year period at the request of the applicant and upon a showing of good cause without requiring a new contested case proceeding.

Sec. 227. (1) The applicant for a certificate shall enter into a host community agreement with each affected local unit. The host community agreement shall require that, upon commencement of any operation, the energy facility owner must pay the affected local unit \$2,000.00 per megawatt of nameplate capacity located within the affected local unit. The payment shall be used as determined by the affected local unit for police, fire, public safety, or other infrastructure, or for other projects as agreed to by the local unit and the applicant.

(2) If an affected local unit refuses to enter into a host community agreement after good-faith negotiations with the applicant, the applicant may enter into a community benefits agreement with 1 or more community-based organizations within, or that serve residents of, the affected local unit. The amount paid by the applicant under this subsection must be equal to, or greater than, what the applicant would pay to the affected local unit under subsection (1). Community benefits agreements shall prioritize benefits to the community in which the energy facility is to be located. The topics and specific terms of the agreements may vary and may include, but are not limited to, any of the following:

(a) Workforce development, job quality, and job access provisions that include, but are not limited to, any of the following:

(i) Terms of employment, such as wages and benefits, employment status, workplace health and safety, scheduling, and career advancement opportunities.

(ii) Worker recruitment, screening, and hiring strategies and practices, targeted hiring planning and execution, investment in workforce training and education, and worker input and representation in decision making affecting employment and training.

(b) Funding for or providing specific environmental benefits.

(c) Funding for or providing specific community improvements or amenities, such as park and playground equipment, urban greening, enhanced safety crossings, paving roads, and bike paths.

(d) Annual contributions to a nonprofit or community-based organization that awards grants.

(3) A host community agreement or community benefits agreement is legally binding and inures to the benefit of the parties and their successors and assigns. The commission shall enforce this requirement, but not the actual agreements, which are enforceable in a court of competent jurisdiction.

Sec. 227a. Before commencing commercial operations, an applicant shall file a completion report certifying compliance with the requirements of this act and any conditions contained in the commission's certificate.

Sec. 228. (1) Except as otherwise provided in this part, information obtained by the commission under this part is a public record under the freedom of information act, 1976 PA 442, MCL 15.231 to 15.246.

(2) The commission shall issue orders necessary to protect the information in an application for a certificate, or in other documents required by the commission for the purposes of certification, if the commission reasonably finds the information to be confidential. Information that is confidential under a protective order is exempted from disclosure under the freedom of information act, 1976 PA 442, MCL 15.231 to 15.246.

Sec. 229. A commission order relating to a certificate or other matter provided for under this part is subject to review in the same manner as provided in section 26 of 1909 PA 300, MCL 462.26.

Sec. 230. (1) In administering this part, the commission has only those powers and duties granted to the commission under this part.

(2) The commission may consolidate proceedings under this part with contract approval or other certificate of need cases relating to the same energy facility.

(3) This part shall control in any conflict between this part and any other law of this state. However, the electric transmission line certification act, 1995 PA 30, MCL 460.561 to 460.575, controls in any conflict with this part.

(4) Commission approval of a certificate does not confer the power of eminent domain and is not a determination of public convenience and necessity for the purposes of the power of eminent domain or a condemnation action filed pursuant to the uniform condemnation procedures act, 1980 PA 87, MCL 213.51 to 213.75.

Sec. 231. (1) A local ordinance shall not prohibit or regulate testing activities undertaken by an electric provider or independent power producer for purposes of determining the suitability of a site for the placement of an energy facility.

(2) If a certificate is issued for an energy facility under this part, a zoning ordinance or limitation imposed after the electric provider or IPP submitted the application for the certificate to the commission shall not be construed to limit or impair the construction, operation, or maintenance of the energy facility.

(3) If a certificate is issued, the certificate and this part preempt a local policy, practice, regulation, rule, or other ordinance that prohibits, regulates, or imposes additional or more restrictive requirements than those specified in the commission's certificate.

(4) If a certificate is not issued, all local policies, practices, regulations, rules, or ordinances relating to the siting of energy facilities, including, but not limited to, the local zoning authority's power to grant variances, remain in full force and effect.

(5) Except as provided in this section, this part does not exempt an electric provider or IPP to whom a certificate is issued from obtaining any other permit, license, or permission to engage in the construction or operation of an energy facility that is required by federal law, any other law of this state, including, but not limited to, the natural resources and environmental protection act, 1994 PA 451, MCL 324.101 to 324.90106, any rule promulgated under a law of this state, or a local ordinance.

Sec. 232. Section 5 of 1846 RS 1, MCL 8.5, applies to the amendatory act that added this section.

Enacting section 1. This amendatory act takes effect 1 year after the date it is enacted into law.

Enacting section 2. This amendatory act does not take effect unless Senate Bill No. 588 or House Bill No. 5121 of the 102nd Legislature is enacted into law.


Clerk of the House of Representatives


Secretary of the Senate

Approved _____

Governor



MEMO

Charter Township of Comstock Planning Commission September 10, 2026

From: Kyle Mucha, Principal Planner

Re: Building Permits - Informational

Attachments:

[Comstock Township August 2026 Residential Permit List.pdf](#)

[Comstock Township August 2026 Commercial Permit List.pdf](#)

[August 2026 & YTD Permits & Revenue by Jurisdiction.pdf](#)

Res Building

Permit #	Job Address	Parcel Number	Owner	Contractor	Issue Date	Fee Total	Const. Value
PB26-07-324	428 MORROW ST	07-21-136-380	SUTTON JAMES A & CAI	ST Exteriors LLC	08/14/2026	\$783.00	\$200,844
Work Description:	Demolish existing 1200 s.f. home to foundation and reconstruct new home to same dimensions and floor plan (2 bed, 2 bath single family dwelling, existing attached garage to remain)						
PB26-07-361	193 JONES ST	07-21-106-310	TISCH MATTHEW B	Roach Home Improv	08/04/2026	\$182.00	\$0
Work Description:	Re-roof w/ decking REQUIRED INSPECTIONS: 1. FRAMING (PRIOR TO OSB INSTALL) 2. FINAL						
PB26-07-378	9367 E N	07-35-380-021	BERANEK-ASHCRAFT K	William Hux Constru	08/05/2026	\$314.00	\$80,640
Work Description:	New 40' x 64' post frame detached accessory structure per FOOTINGS TO BE 18" DIAMETER MINIMUM.						
PB26-07-391	10452 E G AVE	07-01-130-070	HOWK JOSHUA J & STAC	Revamp Fence and D	08/17/2026	\$108.00	\$0
Work Description:	Install 33 LF of 8' fence and 42 LF of 6' fence per plans.						
PB26-07-395	6750 E MAIN ST	07-17-230-012	RAIFSNIDER TODD C &	Raifsnider Building ar	08/06/2026	\$2,473.00	\$634,228
Work Description:	New 3663 1 story 4 bed 3.5 bath single family dwelling, finished basement, 1035 s.f. attached garage, 220 s.f. screened porch, 714 s.f. deck per plans.						
PB26-07-397	6692 E MAIN ST	07-17-205-043	GOVE WILLIAM & LORI		08/06/2026	\$231.00	\$37,353
Work Description:	24' x 24' attached garage to existing dwelling per plans.						
PB26-07-400	9700 E ML AVE	07-26-405-019	ZINKE JASON	Clearview Roofing &	08/06/2026	\$182.00	\$0
Work Description:	Re-roof w/ decking as needed REQUIRED INSPECTIONS: 1. FRAMING (PRIOR TO OSB INSTALL) 2. FINAL						

PB26-07-405	6160 GRANGE AVE	07-20-110-500	PHILLIPS RAYMOND	Acculevel Inc.	08/05/2026	\$108.00	\$0
Work Description: Installation of carbon straps on basement wall per plans.							
PB26-07-408	4001 BROKEN RIDGE CIR	07-03-435-150	RANDALL AND NAOMI		08/07/2026	\$182.00	\$0
Work Description: Kitchen renovation, converting a half bath into a full bathroom, also to include shifting a window over and adding walls per plans.							
PB26-07-422	661 FERRIS ST	07-19-252-250	MCNULTY JAMES	St Joseph Building	08/20/2026	\$108.00	\$0
Work Description: 8 panel roof mounted solar array per plans.							
PB26-07-424	5010 E G AVE	07-06-105-010	FLAGSTAR BANK	Pitsch Wrecking	08/17/2026	\$161.00	\$0
Work Description: DEMOLISH AND REMOVE DWELLING. WELL DECOMMISSIONING REPORT TO BE SUBMITTED PRIOR TO FINAL INSPECTION.							
PB26-07-432	6145 WOODLEA DR	07-05-370-240	SCHMELTZ SAMANTHA		08/27/2026	\$182.00	\$0
Work Description: Construct full bathroom in existing basement							
PB26-07-451	822 N 33RD ST	07-14-255-080	CHAMPION CHRISTOPHER		08/28/2026	\$182.00	\$0
Work Description: New home: completion of PB25-07-502							

Total Permits For Type: 13

Total Fees For Type: \$5,196.00

Total Const. Value For Type: \$953,065

Report Summary

Population: All Records

Grand Total Fees: \$5,196.00

Grand Total Permits: 13

8/31/2026 11:59:59 PM AND
Permit.BasicUsage = Residential
AND
GovernmentUnitList.UnitCode =
7
AND
Permit.PermitType = Building OR
Permit.PermitType = Res Building
OR
Permit.PermitType = Com

Grand Total Const. Value:	\$953,065
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Com Building

Permit #	Job Address	Parcel Number	Owner	Contractor	Issue Date	Fee Total	Const. Value
PB26-07-437	1456 S 35TH	07-24-356-045	EQUITY PARTNERS 1, LI	Royalty Roofing	08/28/2026	\$182.00	\$0

Work Description: New insulation board an TPO roof over existing PEMB roof per plans.

Total Permits For Type: 1

Total Fees For Type: \$182.00

Total Const. Value For Type: \$0

Report Summary

Population: All Records
Permit.DateIssued Between
8/1/2026 12:00:00 AM AND
8/31/2026 11:59:59 PM AND
Permit.BasicUsage = Commercial
AND
GovernmentUnitList.UnitCode =
7
AND
Permit.PermitType = Building OR
Permit.PermitType = Res Building
OR
Permit.PermitType = Com

Grand Total Fees: \$182.00

Grand Total Permits: 1

Grand Total Const. Value: \$0

2026 MONTHLY PERMITS BY JURISDICTION

MONTH OF AUGUST 2026

JURISDICTION	PERMIT CATEGORY	# PERMITS	PERMIT REVENUE
COMSTOCK	BUILDING	14	5,378.00
COMSTOCK	ELECTRICAL	21	3,270.00
COMSTOCK	MECHANICAL	31	5,299.00
COMSTOCK	PLUMBING	12	1,884.00
COMSTOCK	SPECIAL - JURISDICTION	0	-
COMSTOCK	SPECIAL - HOMEOWNER	0	-
TOTAL COMSTOCK		78	\$ 15,831.00
KALAMAZOO	BUILDING	17	95,578.00
KALAMAZOO	ELECTRICAL	16	2,963.00
KALAMAZOO	MECHANICAL	27	3,835.00
KALAMAZOO	PLUMBING	12	1,793.00
KALAMAZOO	SPECIAL - JURISDICTION	8	500.00
KALAMAZOO	SPECIAL - HOMEOWNER	4	240.00
TOTAL KALAMAZOO		84	\$ 104,909.00
PARCHMENT	BUILDING	3	472.00
PARCHMENT	ELECTRICAL	0	-
PARCHMENT	MECHANICAL	1	140.00
PARCHMENT	PLUMBING	1	50.00
PARCHMENT	SPECIAL - JURISDICTION	0	-
PARCHMENT	SPECIAL - HOMEOWNER	0	-
TOTAL PARCHMENT		5	\$ 662.00
PINE GROVE	BUILDING	5	4,845.00
PINE GROVE	ELECTRICAL	5	1,159.00
PINE GROVE	MECHANICAL	9	1,525.00
PINE GROVE	PLUMBING	2	367.00
PINE GROVE	SPECIAL - JURISDICTION	0	-
PINE GROVE	SPECIAL - HOMEOWNER	0	-
TOTAL PINE GROVE		21	\$ 7,896.00
RICHLAND	BUILDING	10	1,989.00
RICHLAND	ELECTRICAL	20	3,851.00
RICHLAND	MECHANICAL	31	6,363.45
RICHLAND	PLUMBING	5	1,231.00
RICHLAND	SPECIAL - JURISDICTION	2	125.00
RICHLAND	SPECIAL - HOMEOWNER	0	-
TOTAL RICHLAND		68	\$ 13,559.45
RICHLAND VILLAGE	BUILDING	0	-
RICHLAND VILLAGE	ELECTRICAL	1	246.00
RICHLAND VILLAGE	MECHANICAL	3	367.00
RICHLAND VILLAGE	PLUMBING	2	305.00
RICHLAND VILLAGE	SPECIAL - JURISDICTION	0	-
RICHLAND VILLAGE	SPECIAL - HOMEOWNER	0	-
TOTAL RICHLAND VILLAGE		6	\$ 918.00
TOTAL		262	\$ 143,775.45

REVENUE	REVENUE
AUGUST 2025	% PREV YEAR MONTH
\$ 51,609.00	278.6%

PERMITS	PERMITS
AUGUST 2025	% PREV YEAR MONTH
267	98%

2026 MONTHLY PERMITS BY JURISDICTION

YEAR TO DATE AS OF: AUGUST 2026

JURISDICTION	PERMIT CATEGORY	# PERMITS	PERMIT REVENUE
COMSTOCK	BUILDING	105	28,629.00
COMSTOCK	ELECTRICAL	113	22,282.00
COMSTOCK	MECHANICAL	148	32,031.00
COMSTOCK	PLUMBING	59	9,169.00
COMSTOCK	SPECIAL - JURISDICTION	11	1,050.00
COMSTOCK	SPECIAL - HOMEOWNER	2	120.00
TOTAL COMSTOCK		438	\$ 93,281.00
KALAMAZOO	BUILDING	163	129,795.00
KALAMAZOO	ELECTRICAL	146	26,166.00
KALAMAZOO	MECHANICAL	229	37,112.65
KALAMAZOO	PLUMBING	110	16,093.00
KALAMAZOO	SPECIAL - JURISDICTION	79	7,450.00
KALAMAZOO	SPECIAL - HOMEOWNER	26	1,640.00
TOTAL KALAMAZOO		753	\$ 218,256.65
PARCHMENT	BUILDING	12	1,962.00
PARCHMENT	ELECTRICAL	7	1,035.00
PARCHMENT	MECHANICAL	18	2,790.00
PARCHMENT	PLUMBING	6	938.00
PARCHMENT	SPECIAL - JURISDICTION	4	500.00
PARCHMENT	SPECIAL - HOMEOWNER	0	-
TOTAL PARCHMENT		47	\$ 7,225.00
PINE GROVE	BUILDING	25	13,028.00
PINE GROVE	ELECTRICAL	33	5,906.00
PINE GROVE	MECHANICAL	44	7,706.65
PINE GROVE	PLUMBING	12	2,196.00
PINE GROVE	SPECIAL - JURISDICTION	0	-
PINE GROVE	SPECIAL - HOMEOWNER	2	120.00
TOTAL PINE GROVE		116	\$ 28,956.65
RICHLAND	BUILDING	86	39,906.00
RICHLAND	ELECTRICAL	115	24,959.00
RICHLAND	MECHANICAL	155	29,062.45
RICHLAND	PLUMBING	126	22,133.00
RICHLAND	SPECIAL - JURISDICTION	9	825.00
RICHLAND	SPECIAL - HOMEOWNER	0	-
TOTAL RICHLAND		491	\$ 116,885.45
RICHLAND VILLAGE	BUILDING	9	2,193.00
RICHLAND VILLAGE	ELECTRICAL	8	1,730.00
RICHLAND VILLAGE	MECHANICAL	17	2,579.00
RICHLAND VILLAGE	PLUMBING	4	685.00
RICHLAND VILLAGE	SPECIAL - JURISDICTION	0	-
RICHLAND VILLAGE	SPECIAL - HOMEOWNER	0	-
TOTAL RICHLAND VILLAGE		38	\$ 7,187.00
TOTAL KABA	YTD	1883	471,791.75

REVENUE	REVENUE
YTD - JULY 2025	% 2025 - YTD
\$ 670,988.80	70.3%

REVENUE
% 2026 YTD BUDGET
87%

PERMITS	PERMITS
YTD - JULY 2025	% 2025 - YTD
2098	89.8%

2026 MONTHLY CUMULATIVE TOTALS			
# PERMITS	REVENUE		
187	\$	37,595.00	JAN
197	\$	37,690.00	FEB
178	\$	43,826.65	MAR
193	\$	49,746.00	APR
273	\$	55,313.00	MAY
355	\$	61,061.00	JUN
238	\$	42,784.65	JUL
262	\$	143,775.45	AUG
-	\$	-	SEP
-	\$	-	OCT
-	\$	-	NOV
-	\$	-	DEC
1,883	\$	471,791.75	TOTAL