Special Land Use Permit Application to White River Township

Lakeside Solar, LLC
White River Township, Muskegon County, Michigan

8400 Normandale Lake Blvd., Suite 1200
Bloomington, MN 55437

September 2025

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Abbreviations and Acronyms

AC	alternating current
BESS	battery energy storage system
BMP	best management practices
Collector Substation	new collector substation for the Project
dB	decibels
dBA	A-weighted decibel scale
DC	direct current
DKeys	determination keys
DOI	U.S. Department of Interior
EGLE	Michigan Department of Environmental, Great Lakes, and Energy
EIL	Electronic Testing Laboratories
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
Geronimo Power	Geronimo Power, LLC
GIAs	Generator Interconnection Agreements
GIS	geographical information system
GPS	global positioning system
HDD	horizontal directional drilling
HVAC	heating, ventilation, and air conditioning
IEEE	Institute of Electrical and Electronics Engineers
IPAC	Information for Planning and Consultation
ITC	International Transmission Company
ITC Switching Station	New switching station that will be constructed, owned, and operated by International Transmission Company
kV	kilovolt
kV/m	kV per meter
Lakeside	Lakeside Solar, LLC
Land Control Area	Approximately 1,575 acres of land across 44 parcels in White River Township for which Lakeside Solar, LLC has easement agreements and purchase options to allow siting and construction of the Project
LMR	Land Mobile and Emergency Services
MCL	Michigan Compiled Laws
MDARD	Michigan Department of Agricultural and Rural Development
MDNR	Michigan Department of Natural Resources
MDOT	Michigan Department of Transportation
MISO	Mid-Independent System Operator
MNFI	Michigan Natural Features Inventory

MPT	main power transformer
MW	megawatt
MWh	megawatt hour
NAMBI	North American Bird Conservation Initiative
NEC	National Electrical Code
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NHD	National Hydrography Dataset
NIEHS	National Institute of Environmental Health Sciences
NLCD	National Land Cover Database
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NREL	National Renewable Energy Laboratory
NREPA	Natural Resources and Environmental Protection Act
NWI	National Wetlands Inventory
O&M	operations and maintenance
PA 233	Public Act 233 of 2023
PCB	polychlorinated biphenyl
Phase I ESA	Phase I Environmental Site Assessment
POI	Point of Interconnection
Preliminary Development Area	An approximate 982-acre area that falls entirely within the Land Control Area where Lakeside Solar, LLC proposes to build the Project facilities.
Project	Lakeside Solar Facility and Battery Energy Storage System
RUMA	Road Use and Maintenance Agreement
SCADA	Supervisory Control and Data Acquisition
SESC	Soil Erosion and Sedimentation Control Permit
SGCN	species of greatest conservation need
SHPO	State Historic Preservation Office
Solar Facility	Lakeside Solar Facility
SRCC	Solar Rating and Certification Corporation
SUP	Special Land Use Permit
SWAP	Michigan's State Wildlife Action Plan
SWPPP	Stormwater Pollution Prevention Plan
Tetra Tech	Tetra Tech, Inc.
THPO	Tribal Historic Preservation Offices
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1 INTRODUCTION

Lakeside Solar, LLC (Lakeside), a wholly owned subsidiary of Geronimo Power, LLC (Geronimo Power, formerly known as National Grid Renewables Development, LLC), respectfully submits this Application for a Special Land Use Permit (SUP) (Application) to the White River Township Planning Commission for the Lakeside Solar Project (Project), in White River Township, Muskegon County, Michigan.

The Project is proposed in the Agriculture and Recreational District in White River Township. In the White River Township Zoning Ordinance (January 15, 2019, as amended) Section 3.45.B, solar energy systems that exceed 2,000 square feet are permitted as a Special Land Use within the Agriculture and Recreational District. Further, solar energy facilities are to follow the requirements of Section 16.06MM of the White River Zoning Ordinance Regarding Solar Panels, Solar Energy Systems and Related Uses and Matters and Section 16.06NN regarding Utility-Scale Battery Energy Storage Systems (White River Township 2024a; 2024b), to the extent the Township's Zoning Ordinance and relevant sections related to Solar Energy Systems and Utility-Scale Battery Energy Systems are not more restrictive than provisions in Section 226(8) of Public Act 233 of 2023 (PA 233).[1]

Lakeside prepared this Application in accordance with the White River Township Zoning Ordinance and associated resolutions (White River Township Zoning Ordinance, January 15, 2019; Amendment 58-2023 Regarding Solar Panels, Solar Energy Systems, and Related Uses and Matters; Resolution 60-2024 to Amend the Zoning Ordinance and Zoning Map to Establish a Renewable Energy Overlay District; Resolution 60-2024 to Amend the Zoning Ordinance and Zoning Map to Establish a Renewable Energy Overlay District; Resolution 61-2024 to Amend the Zoning Ordinance to Regulate Utility Scale Solar Systems in Accordance with PA 233; and Resolution 63-2024 to Amend the Zoning Ordinance to Regulate Utility Scale Battery Energy Storage Systems). This Application was also prepared in accordance with the requirements of PA 233. This Application serves as the support narrative that acts as the statement of compliance with Section 16.03A of the White River Township Zoning Ordinance, January 15, 2019 and provides supplemental documentation to White River Township's Application for a Special Use Permit in Appendix A. Detailed legal descriptions are also included in Appendix A. The Civil Permitting Plans and Detailed Site Plan are provided in Appendix B.

The Project is proposed as a solar energy conversion facility with approximately150-megawatt (MW) alternating current (AC) nameplate capacity (Solar Facility) and a co-located battery energy storage system (BESS) with approximately 150 MW / 600-megawatt hour (MWh) nameplate capacity and ancillary support infrastructure. The Point of Interconnection (POI) for the Project will be a new switching station that will be constructed, owned, and operated by International Transmission Company (ITC) (ITC Switching Station) within the proposed Project Preliminary

[1] Section 223(3) of PA 233 requires Lakeside to submit a local application if White River Township asserts that it has a compatible renewable energy ordinance. As a result, Lakeside is complying with this requirement, but reserves all rights, arguments, and remedies afforded to it under the law to the extent the Township's purported compatible renewable energy ordinance is more restrictive than the provisions included in Section 226(8) of PA 233.

Development Area to interconnect the Project to the existing 138 kilovolt (kV) Du Pont – Cobb transmission line.

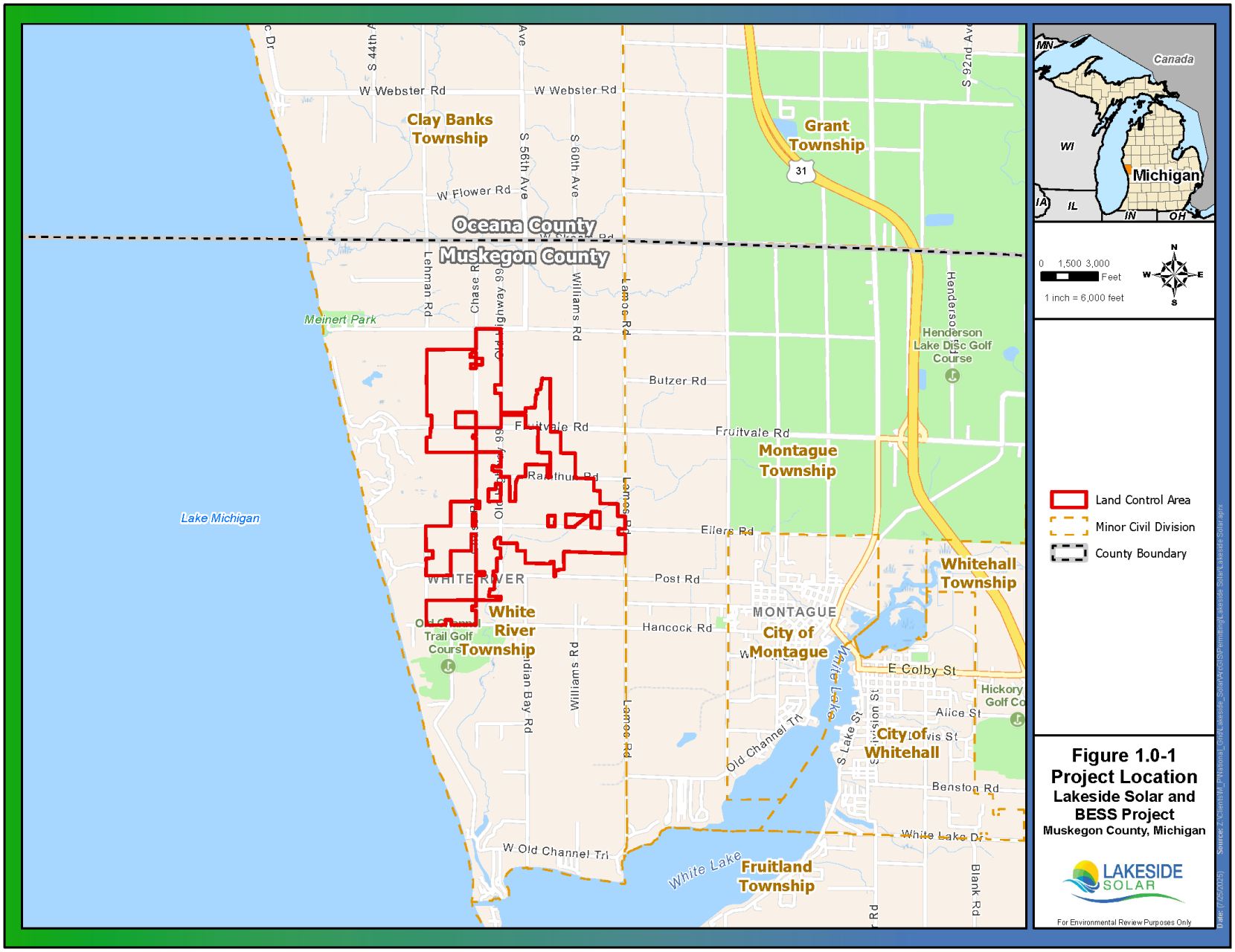
Lakeside also proposes to construct a collector substation for the Project (i.e., Collector Substation) that will collect energy generated by the Solar Facility and move that energy to the ITC Switching Station, via an approximately 102-foot-long 138 kV transmission line. From the new ITC Switching Station, power produced by the Solar Facility will be transferred to the 138 kV Du Pont – Cobb transmission line via a second approximately 784-foot 138 kV transmission line. The co-located BESS will dispatch independently from the Solar Facility but will share the Collector Substation and the two interconnecting transmission lines. The BESS will be capable of charging its batteries either from the Solar Facility or with power from the existing electrical grid via the ITC Switching Station and the two interconnecting transmission lines. When needed, the BESS will also send electricity back into the grid via the same methods.

The proposed Project area consists of approximately 1,575 acres of land across 44 parcels in White River Township (i.e., the Land Control Area). Lakeside has agreements with landowners to host Project facilities within these 44 parcels. Lakeside selected the Land Control Area based on several factors including transmission and interconnection suitability and an optimal solar resource. Within the Land Control Area, based on preliminary Project design approximately 982 acres would be needed to construct and operate Project facilities; this 982-acre area is herein referred to as the Preliminary Development Area.

Lakeside is working to secure a Power Purchase Agreement, Build Transfer Agreement, Development Transfer Agreement, or other enforceable offtake agreements to sell the electricity, Renewable Energy Certificates, and capacity generated or stored by the Project. The power generated or stored by the Project will be offered to wholesale customers, including Michigan utilities and cooperatives that have identified a need for additional low-cost renewable energy and capacity, and corporate and industrial customers that have set clean energy goals.

Lakeside has executed Generator Interconnection Agreements (GIAs) with Michigan Electric Transmission Company, LLC, through the Midcontinent Independent System Operator (MISO), for the Solar Facility. Public copies of both GIAs are provided in Appendix C. Lakeside also has two active MISO queue positions, 100 MW each for surplus storage, currently pending start of the surplus study.

Pending receipt of all required permits, Lakeside anticipates Project construction to commence in 2027 with commercial operation beginning in 2029. Figure 1.0-1 shows the Project Location.


Clay Banks Township
Grant Township
Oceana County
Muskegon County
Meinert Park
Lake Michigan
Montague Township
Whitehall Township
White River Township
City of Montague
City of Whitehall
Fruitland Township
Henderson Lake Disc Golf Course
Trail Golf Course
WHITE RIVER
MONTAGUE
W Webster Rd
W Flower Rd
Butzer Rd
Fruitvale Rd
Ramthun Rd
Eilers Rd
Post Rd
Hancock Rd
E Colby St
Alice St
Benston Rd
White Lake Dr
W Old Channel Trl
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S Lake St
Lehman Rd
Chase Rd
Williams Rd
Lamoe Rd
Indian Bay Rd
Blank Rd
S 44th Ave
S 56th Ave
S 60th Ave
S 92nd Ave
Henderson Rd
Canada
MN
WI
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IA
IL
IN
OH
0 1,500 3,000
Feet
1 inch = 6,000 feet
N
S
E
W
Land Control Area
Minor Civil Division
County Boundary
Figure 1.0-1
Project Location
Lakeside Solar and BESS Project
Muskegon County, Michigan
LAKESIDE SOLAR
For Environmental Review Purposes Only

Geronimo Power is a utility-scale renewable energy development company headquartered in Bloomington, Minnesota that has developed multiple operating solar, wind, and energy storage projects throughout the United States. Approximately 1.7 gigawatts of solar, wind, or energy storage projects developed by Geronimo Power are operational, with another 1 gigawatt in construction. Geronimo Power has a multi-gigawatt development pipeline of solar, wind, and energy storage projects in various stages throughout the United States with approximately 20 gigawatts of renewable energy projects in development. Geronimo Power provides custom renewable energy development solutions for utilities, independent power purchasers and corporations looking to harness renewable energy for business growth. Geronimo Power prides itself on developing solar, wind, and energy storage projects that are farmer-friendly, community-driven, and beneficial for rural communities.

1.1 Applicant Information

The permittee and contact person for the for the Application are indicated below and included on the White River Township's Application for Special Use Permit form in Appendix A.

The permittee/applicant for the Project is:

Lakeside Solar, LLC
8400 Normandale Lake Blvd., Suite 1200
Bloomington, MN 55437

The contact person(s) for the Application is:

Amber Miller
Geronimo Power, LLC
8400 Normandale Lake Blvd., Suite 1200
Bloomington, MN 55437
Direct: 331.215.3406
amiller@geronimopower.com

1.2 Statement of Ownership

The Project will be constructed, owned, and operated by Lakeside. Lakeside has solar easement agreements and a single purchase option in place for the entire Land Control Area. Landowner agreements were originally executed in 2019 and were renewed in 2025 due to permitting delays.

1.3 Schedule

The general Project schedule is described below and additional details regarding land acquisition, construction, testing and operation schedules will be provided as the Project development process advances.

- Land acquisition: Lakeside has solar easement agreements and a single purchase option in place for the entire Land Control Area. Landowner agreements were originally executed in 2019 and were renewed in 2025 due to permitting delays.
- SUP: Lakeside anticipates that the SUP, if approved by White River Township, will be issued in the fourth quarter of 2025.
- Other Permits: Lakeside will acquire all other permits necessary for construction of the Project prior to conducting the work for which the permit is required. Acquisition of all permits required for the Project is anticipated by the third quarter of 2027. If overweight or oversized loads are required, Lakeside will obtain right-of-way and driveway permits and permissions from the proper road authority. Lakeside will work with the Muskegon County Road Commission to identify a haul route and execute a Road Use and Maintenance Agreement (RUMA) prior to commencing equipment deliveries to the Project site. Refer to Table 1.4-1 Potential Permits and Approvals for additional details regarding permits.
- Equipment Procurement: Lakeside is in the process of evaluating and procuring solar and BESS equipment for the Project. The equipment will be allocated to the Project based on meteorological and economic analysis to achieve the best match of technology for the facility locations. Equipment procurement is anticipated to be completed in the fourth quarter of 2027.
- Site Preparation: Site preparation is anticipated to be initiated in the first quarter of 2028. Lakeside will complete One Calls (MISS DIG 811) for the site to identify existing onsite utilities prior to the start of ground disturbing activities. Lakeside shall clear the site only as necessary to ensure suitable access for construction, safe operation, and maintenance of the facility.
- Construction: All local, state, and federal permits, permissions, and standards will be in place prior to the commencement of construction. Project siting approval is a critical part of determining construction schedules and timelines, which can vary depending on when siting approvals are received. However, construction is anticipated to begin in the third quarter of 2027 and be completed in second quarter of 2029.
- Commercial Testing: Testing for the Solar Facility and BESS is expected to begin following the completion of construction. Commercial testing is anticipated in the fourth quarter of 2029.
- Commercial Operations: Commercial operation for the Project is scheduled to begin following the completion of construction and testing. Commercial operations are anticipated to begin in the fourth quarter of 2029.

1.4 Environmental Regulations

In addition to White River Township SUP approval, Lakeside will obtain all county, state, and federal permits, licenses and / or approvals that are required for the Project. The permits/licenses or approvals that Lakeside has identified as potentially being required for the construction and operation of the Project are shown in Table 1.4-1.

Furthermore, Lakeside is committed to adhering to all state and federal environmental laws and regulations, including the Natural Resources and Environmental Protection Act, 1994 PA 451, Michigan Compiled Laws (MCL) 324.101 to 324.90106. More specifically, Lakeside commits that it will not commence commercial operation of the Project until it complies with all applicable state and federal environmental laws. Lakeside's aforementioned commitment is supported by evidence, including this Application and supporting materials, environmental assessments conducted, and correspondence with governmental agencies that enforce environmental laws and regulations. See Sections 4.1 to 4.4 for a detailed discussion of potential impacts and Lakeside's anticipated efforts to mitigate such impacts.

TABLE 1.4-1
Potential Permits and Approvals

Responsible Agency	Permit/Approval	Applicability	Status/Timeline
FEDERAL			
U.S. Army Corps of Engineers (USACE), Detroit District	Section 404 Permit for wetland impacts	The State of Michigan has assumed Clean Water Act Section 404 regulatory authority for inland waterways and wetlands.	No coordination with the USACE is currently anticipated. Timeline: NA
U.S. Fish and Wildlife Service – Michigan Ecological Field Office	Information for Planning and Consultation (IPAC) Review for Threatened and Endangered Species (update if available)	Coordination, habitat assessment or species surveys required if threatened or endangered species are identified as potentially present in the vicinity of the Land Control Area.	To be completed prior to construction Timeline: Ongoing
Federal Aviation Administration	Federal Aviation Administration Notice Criteria Tool to determine the need to complete Form 7460-1, Notice of Proposed Construction	Notice and approval are required for structures over 200 feet above ground level, structures near airports, or siting within line of sight of radar of an air defense facility.	Further coordination with the Federal Aviation Administration is not required as the Project does not exceed the Notice Criteria. Timeline: Complete
STATE			
Michigan Department of Environmental, Great Lakes, and Energy (EGLE)	Part 301 Inland Lakes and Streams	An Inland Lakes and Streams Permit (Part 301) is required if the Project will place fill, remove soil, or otherwise alter regulated streams or inland lakes.	Should an EGLE 301 permit be required for development activities, Lakeside will apply for this permit once a land use permit is secured. Timeline: Allow approximately 60-90 days (Minor Permit / General Permit)

TABLE 1.4-1
Potential Permits and Approvals

Responsible Agency	Permit/Approval	Applicability	Status/Timeline
	Part 303 Wetlands	A Wetlands Protection Permit (Part 303) is required if the Project will place fill, remove soil, or otherwise alter regulated wetlands.	Lakeside will apply for this permit prior to the start of construction. Timeline: Allow approximately 60-90 days (Minor Permit / General Permit)
	National Pollutant Discharge Elimination System (NPDES) Permit	A Notice of Coverage for a NPDES Construction Stormwater Permit is required if the Project will disturb greater than five acres.	Lakeside will apply for this permit upon receipt of the Part 91 Soil Erosion and Sediment Control permit from the Muskegon County Department of Public Works (see below). Timeline: Allow approximately 30-45 days
	Part 22/31 Groundwater Discharge	A Notice of Coverage or Individual NPDES permit is required if the project will discharge waste or contaminated water to groundwater.	Lakeside anticipates this permit will not be required. Timeline: N/A but if needed 180 days
	Part 31 Floodplain	A Floodplain Permit (Part 31) is required if the Project will place fill, remove soil, or otherwise alter regulated floodplains.	Lakeside will apply for this permit prior to the start of construction. Timeline: Allow approximately 30-90 days
	Permit to Install - Air Quality Permit	A Permit to Install is required if the Project produces a potential source of air pollution.	Lakeside anticipates this permit will not be required. Timeline: N/A but if needed 60-90 days

TABLE 1.4-1
Potential Permits and Approvals

Responsible Agency	Permit/Approval	Applicability	Status/Timeline
Michigan Department of Transportation (MDOT)	Oversize/Overweight Transport Permit	An Oversize/Overweight Transport Permit will be required if the transportation of Project components exceeds MDOT's Maximum Legal Truck Loadings and Dimensions	Lakeside will apply for this permit prior to the start of construction. Timeline: Allow approximately 7-10 days
Michigan State Historic Preservation Office (SHPO)	Consultation to identify known cultural resource locations.	Provide approval of Phase 1 field inventory methods and findings as per the cultural resource reports.	Lakeside initiated consultation with SHPO on August 1, 2025 Timeline: Allow approximately 30 days
Michigan Natural Features Inventory (MNFI)	August 2022 and May 2025 (Information Request) September 2025 (Rare Species Review Request)	The Information Request provides information on known occurrences of species protected by Part 365 of the Natural Resources and Environment Protection Act, PA 451 of 1994. The Rare Species Review Request evaluates potential impacts to rare species that are known to be near the project	Continue coordination with MNFI regarding recommendations form Rare Species Review Request. Timeline: Rare Species Review response – allow 30 days. Complete prior to construction.
Michigan Department of Agriculture and Rural Development	Farmland Development Rights Program	Protect farmland and open space through agreements that restrict development	Lakeside will comply with *Policy for Allowing Commercial Solar Panel Development on PA 116 Lands.* Timeline: On-going

TABLE 1.4-1
Potential Permits and Approvals

Responsible Agency	Permit/Approval	Applicability	Status/Timeline
COUNTY/LOCAL			
Muskegon County Department of Public Works	Part 91 Soil Erosion and Sedimentation Control Permit (SESC)	A Part 91 SESC Permit is required if the Project will disturb greater than one acre.	Lakeside will apply for this permit prior to the start of construction. Lakeside has met with the Muskegon County Drain Commission and coordination is ongoing. Timeline: Allow approximately 10-30 days
Muskegon County Water Resources Commissioner's Office	Drain Use/Modification Permit	A Drain Use/Modification Permit is required if the Project will cross, encroach upon, or modify county regulated drains.	Lakeside will apply for this permit prior to the start of construction. Lakeside has met with the Muskegon County Water Commission and coordination is ongoing. Timeline: Allow approximately 30-90 days
Muskegon County Road Commission	Driveway Permit and Road Use Maintenance Agreement	A Right-of-Way Driveway/Access Permit and Road Use Maintenance Agreement (RUMA) are required if the Project will install new road access points.	Lakeside will apply for this permit prior to the start of construction. Lakeside has met with the Muskegon County Road Commission and is coordinating the review of the Preliminary Civil Plan and RUMA Timeline: Allow approximately 30-90 days

TABLE 1.4-1
Potential Permits and Approvals

Responsible Agency	Permit/Approval	Applicability	Status/Timeline
Muskegon County Road Commission	Transportation / Oversize/Overweight Permit	A Transportation - Oversize/Overweight Permit will be required if the transportation of Project components exceeds Muskegon County Road Commission weight and size limits for those times of the year outside of Seasonal Weight Restrictions.	Lakeside will apply for this permit prior to the start of construction and prior to equipment delivery. Timeline: Allow 2 weeks
White River Township	Special Use Permit (SUP) or Conditional Use Permit	A SUP is required for development of the Project.	The SUP is the subject of this application. Timeline: 120 days
	Site Plan Approval	A Site Plan Approval is required for development of the Project and is part of the SUP process.	Lakeside will apply for this approval as part of the SUP process.
	Building Permit	A Building Permit will be required for construction of the Project.	Lakeside will apply for this permit prior to the start of construction and upon SUP approval.

1.4.1 Federal Permits/Approvals

No federal permits are anticipated to be required for the construction or operation of the Project. The Project does not propose any discharges to jurisdictional waters of the United States or activities that would trigger federal permitting under the Clean Water Act (Section 404), the Endangered Species Act, or other applicable federal statutes. All consultations with federal agencies, including the U.S. Fish and Wildlife Service (USFWS), Michigan State Historic Preservation Office (SHPO), and Federal Aviation Administration have been conducted through state or agency coordination mechanisms. The presence of suitable habitat for federal and state threatened and endangered species exists within the project area. Consultation with USFWS and Michigan Department of Natural Resources (MDNR) will be conducted as part of next steps in on-going coordination efforts to identify species-specific surveys or assessments that will drive appropriate avoidance and minimization measures. Lakeside used the Federal Aviation Administration's on-line Notice Criteria Tool to determine that the Project does not exceed the Notice Criteria. As such, Project facilities will not exceed obstruction standards and will not be a hazard to air navigation and therefore, further consultation with the Federal Aviation Administration is not required.

1.4.2 State Permits/Approvals

1.4.2.1 Michigan Department of Environment, Great Lakes, and Energy

The Project will require several environmental permits administered by the EGLE, in accordance with the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, MCL 324.101 to 324.90106. Wetlands are expected to be avoided by the Project. However, a Wetlands Protection Permit (Part 303) will be required if the Project will place fill, remove soil, or otherwise alter regulated wetlands. A permit under Part 301, Inland Lakes and Streams, is required due to culvert installations and low-water crossings. A Pre-Application Meeting between Lakeside, EGLE, and Tetra Tech, Inc. (Tetra Tech) occurred on July 23, 2025. The Pre-Application Meeting with EGLE was conducted to review proposed projects that may impact water resources and determine the need for permits. Following the meeting, a summary letter was provided by EGLE to Lakeside on August 7, 2025, detailing the discussed items, recommended actions, and guidance on regulatory requirements, necessary permits, and potential environmental concerns (see Appendix D). This letter, valid for two years from issuance, serves as a reference for the applicant before submitting a formal permit application to the EGLE Water Resources Division.

Since the Project will disturb one or more acres of land, a National Pollutant Discharge Elimination System (NPDES) Permit for Construction Stormwater Discharges, authorized under Part 31 of NREPA and required by federal law under the Clean Water Act, will be obtained. This permit ensures stormwater from construction sites is properly managed to prevent sediment and pollutant discharge into surface waters. If site dewatering or other construction activities generate more than 6,000 gallons per day of groundwater discharge, a Part 22 Groundwater Discharge Permit may also be required, but these activities are not anticipated. Additionally, due to potential encroachment within the Federal Emergency Management Agency (FEMA) 100-year floodplain,

a Floodplain Permit under Part 31 is required to ensure that construction does not increase flood risk or alter floodplain function.

Coordination regarding the Project has been ongoing with the Michigan SHPO since 2023 to assist in Project planning and design and to ensure protection of cultural resources. A federal nexus associated with federal permitting or a state agency requirement by the MPSC would require consultation with the SHPO.

Although solar facilities typically do not emit pollutants during operation, an Air Quality Permit (Part 55) may be required if the project includes auxiliary equipment such as backup diesel generators or combustion-based operations, which will be determined once the equipment is specified. These permits collectively safeguard Michigan's water and air quality during construction and operation phases of energy development.

1.4.2.2 Michigan Department of Natural Resources

The Michigan Natural Features Inventory (MNFI), maintained by MDNR and Michigan State University Extension, is the most comprehensive source of data on Michigan's threatened and endangered species, ecologically significant areas, native plant communities, and other rare natural features.

Lakeside contracted Tetra Tech to review both the MNFI database to ensure compliance with state regulations regarding protected species (refer to Appendix D). Although these reviews do not represent a comprehensive survey, they provide information on the potential presence of rare and unique species and habitats. With the database information, Tetra Tech conducted a biological resources review in August 2022 and June 2025. The biological resources review included an assessment for potential biological and natural resources within and in the vicinity of the Land Control Area that may harbor threatened and endangered species and/or rare and unique natural resources and habitats. As a next step in the consultation process, Tetra Tech recommended completing a Rare Species Review through MNFI to determine known occurrences of state-listed species within 1.5 miles of the Land Control Area. The Rare Species Review would provide site specific management recommendations to avoid impacts to state-listed species that may be present. If unavoidable impacts to state-listed species are anticipated, Lakeside will pursue an Incidental Take Permit issued by the MDNR under Part 365 of NREPA.

1.4.2.3 Michigan Department of Transportation

The Project does not require access from a state highway or associated right-of-way. However, use of state highways is anticipated to transport Project equipment and components. Lakeside anticipates the delivery of large components during the construction phase, including the Main Power Transformer (MPT) and other electrical equipment. If transportation routes include any state highways under MDOT jurisdiction, an Oversize/Overweight Permit will be obtained prior to delivery to ensure compliance with MDOT regulations and safety standards.

Preliminary route analysis has identified potential use of US-31 to West Fruitvale Road for delivery access. Final route determination and vehicle specifications will be confirmed following equipment procurement and delivery scheduling.

Lakeside will coordinate with MDOT's Permit Gateway System to submit the required Oversize/Overweight Permit application, including load dimensions, axle weights, travel timing, and escort requirements, if applicable, for use of state roads. All deliveries will comply with MDOT restrictions related to pavement preservation, bridge load limits, seasonal weight restrictions, and traffic safety.

1.4.3 County and Local Permits

1.4.3.1 Muskegon County Department of Public Works

The Project will require multiple permits and approvals at the county level to ensure proper land disturbance management and protection of public infrastructure. A SESC Permit is required under Part 91 of the NREPA, 1994 PA 451, for any earth change disturbing one or more acres or located within 500 feet of a waterbody. In Muskegon County, the Department of Public Works administers the SESC program and reviews stormwater and soil stabilization plans to prevent off-site sedimentation during construction.

1.4.3.2 Muskegon County Water Resources Commission

If a project involves crossing, modifying, or discharging into a county drain or working within a county drainage district, coordination and possibly additional permits or agreements are required under the Muskegon County Water Resources Commission. The Project will avoid easements associated with the county drain, if possible.

1.4.3.3 Muskegon County Road Commission

The Muskegon County Road Commission must approve driveway permits for site access points along public roads and haul route or road use permits if heavy or oversized equipment will use county roads during construction. These permits and reviews are essential to safeguard drainage infrastructure, maintain safe traffic conditions, and ensure compliance with local erosion control standards.

The Project will coordinate with the Muskegon County Road Commission to execute a RUMA, which will define permitted haul routes, maintenance responsibilities, and road restoration requirements. Additionally, Lakeside will work with the Muskegon County Road Commission to determine the need for financial surety to White River Township to cover estimated costs related to road damage or repair. The Project anticipates applying for Right-of-Way and Driveway/Access Permits for temporary and permanent access needs. Coordination may also include oversize/overweight load permitting on county roads, drainage review for roadside ditches, and traffic control planning during key construction phases.

1.4.3.4 White River Township

The Project is subject to local land use approvals under PA 223, given White River Township's assertion that it has a compatible renewable energy ordinance.[2] Such approvals include a SUP

[2] See above footnote in the Application's "Introduction" Section.

under the White River Township Zoning Ordinance (December 26, 2018, Ver. 8), as amended by Solar Ordinance 58-2023 and Resolution 61-2024 (Solar Energy Overlay), available via the Township Zoning page, specifically Sections 3.45 and 16.06MM for Utility-Scale Solar Energy Systems and 10.06NN for Utility-Scale Battery Storage Systems. A SUP is required for all ground-mounted solar facilities exceeding 2,000 square feet in the Agricultural and Recreational District. The Township Planning Commission reviews the SUP application alongside a detailed Site Plan, which must demonstrate compliance with local standards for setbacks, noise, visual screening, fencing, decommissioning, and traffic impacts. Once site plan approval is granted, the Project must obtain a Building Permit from the Township's contracted building authority to initiate physical construction. Additionally, a Building Permit is needed for the decommissioning of the Project. If any project components cross or access Township-controlled public rights-of-way, a Right-of-Way Permit may also be required to ensure safe access and protection of public infrastructure. These local approvals ensure compatibility with the Township's master plan, protect nearby land uses, and uphold safety and design standards at the community level.

1.5 Community Outreach and Education

Lakeside began reaching out to stakeholders in the Project area during the early development phase in 2019. Outreach efforts during the early development phase focused on soliciting landowner interest in negotiating solar easement agreements or purchase options for the land needed to host Project facilities. After sufficient landowner interest in Project participation was identified, Lakeside began reaching out to local government agencies and other stakeholders to introduce the Project proposal and gather information about regulatory requirements for developing the Project.

Community outreach and education efforts include two public information and open house meetings. The public information and open house meetings occurred on December 8, 2022, and July 17, 2025.

Approximately 134 landowners (which included landowners within 300 feet of the Project) were invited to the first public information and open house meeting. As part of the meeting, Lakeside provided a presentation describing the proposed Project that included:

- an introduction of the Project team;
- a description of the development and siting process;
- descriptions of typical solar components such as modules, racking, inverters, and access roads;
- an overview of the construction process; and
- a description of planned studies, community benefits, and the anticipated schedule for Project permitting and development.

In the years following the first public information meeting and open house, Lakeside remained engaged with landowners/tenants through in-person meetings, phone calls, and text messaging regarding easement arrangements, Project status, and responses to comments of support and opposition.

Lakeside hosted the second public information meeting and open house on July 17, 2025. Invitations to the public information meeting and open house, were sent to 11 landowners, 60 adjacent landowners, 40 additional stakeholders, and 219 neighbors within approximately 0.25mile of the Land Control Area. Lakeside has engaged, and will continue to engage, with adjacent landowners to solicit feedback on Project site design and to provide updates on project status, permit procedures, and approval timelines.

Starting in 2019, Lakeside engaged local officials in White River Township to discuss the proposed Project and gather information about regulatory requirements for developing the Project. Additionally, Lakeside has been in contact with the Muskegon County Board of Commissioners since 2024 to introduce the Project and provide updates. The City of Montague has also been contacted with recent Project updates.

Lakeside also met with various community organizations and other interested stakeholders to introduce the Project and solicit community input. Community organizations in communication with Lakeside include the following:

- Sierra Club
- White Lake Area Climate Action
- Michigan Farmers Union
- Montague Fire District Authority
- Muskegon County Water Resources / Muskegon County Drain Commission
- Muskegon County Road Commission
- White Lake Area Chamber of Commerce
- Muskegon Chamber of Commerce
- Muskegon County Conservation District
- Muskegon County Parks and Recreation
- Montague Area Public Schools
- Greater Muskegon Economic Development
- Montague Future Farmers of America and Muskegon Area Career Tech Center and Future Farmers of America Chapter
- Michigan State University Extension
- Chemours Environmental Impact Committee

For more detailed information regarding Lakeside's community outreach and education efforts, refer to Appendix D Outreach and Consultations, which includes elected official and community outreach and education efforts and agency coordination.

1.6 Agency Coordination

Lakeside completed desktop reviews using agency on-line consultation tools and publicly available resource information during the early development phase in 2022. Federal, state, and local agency consultations have been conducted to assist in the Project development. Federal consultations include the USFWS and Federal Aviation Administration. State agency consultation planned, completed, or on-going includes Michigan Public Service Commission, EGLE, EGLE's MNFI, Michigan SHPO, MDOT, Michigan Department of Agriculture and Rural Development (MDARD), Muskegon County Water Commissioner, and Muskegon County Road Commission. Additionally, Lakeside will contact the 12 federally recognized tribes through the appropriate Tribal Historic Preservation Offices (THPOs) within Michigan to determine their interest in the Project. Local coordination with White River Township, Muskegon County, and the City of Montague is ongoing.

For more detailed information regarding Lakeside's coordination efforts with federal, state, and local agencies as well as the THPOs, refer to Appendix D Outreach and Consultations, which includes elected official and community outreach and education efforts and agency coordination.

2 PROJECT INFORMATION

Lakeside is proposing to develop the Solar Facility, as allowed under PA 233, as a solar energy conversion facility with approximately 150 MW AC nameplate capacity. The co-located BESS will have approximately 150 MW / 600-MWh nameplate capacity and ancillary support infrastructure. The Project is in the central-western portion of Muskegon County, Michigan. The Project will interconnect to the proposed ITC Switching Station (i.e., the POI for the Project), which is within the Project Land Control Area, and from there power will be dispatched to the into the ITC Du Pont – Cobb 138 kV line. The Civil Permitting Plans and Detailed Site Plan are provided in Appendix B. In addition, maps are provided in Appendix E depicting resources in the Project area that are discussed throughout this SUP Application; collectively the information provided in Appendices B and E address the requirements of the White River Township ordinances. Details about the engineering and operational design of the Project facilities are presented in Section 3.0 of this Application.

2.1 Project Location, Land Control, and Preliminary Development Areas

The proposed Project is in Township 12N, Range 18W, Sections 11, 12, 13, 14, 23, and 24 of White River Township, Muskegon County, Michigan (refer to Map 1 – Land Control and Preliminary Development Areas in Appendix E); components of the Solar Facility will be present in each of the sections listed. The Project is approximately one mile west of the northwestern boundary of the City of Montague, Michigan. The Collector Substation will be in the northern half of Section 24, on the south side of Eilers Road. ITC will construct, own, and operate a new switching station directly adjacent to the Collector Substation (i.e., the ITC Switching Station) to interconnect the Project to the existing 138 kV Du Pont – Cobb transmission line, the POI for the Solar Facility and the BESS. The BESS will be constructed adjacent to and south of the Collector Substation and ITC Switching Station in Section 24.

The Project lies within an Agriculture and Recreational District designated by White River Township. In the White River Township Zoning Ordinance, Section 3.45.B Solar Energy Systems that exceed 2,000 square feet are permitted as a Special Land Use within the Agriculture and Recreational District. However, Ordinance No. 60-2024 amends the Zoning Ordinance and Zoning Map to establish a Renewable Energy Overlay District for utility scale solar energy systems and utility scale battery energy storage systems (subject to Subsections 16.06MM and 16.06NN of the White River Zoning Ordinance, respectively) to be located within a single designated brownfield area.

Lakeside selected the Land Control Area based on several factors including transmission and interconnection suitability and an optimal solar resource. Although the Project is not located within the Renewable Energy Overlay District, the Project will be designed, constructed, operated and maintained in a manner that is harmonious with the character of the surrounding area, as an agrivoltaic solar energy system. An agrivoltaics solar energy system, also called dual-use solar energy system, is defined as agricultural production, such as crop or livestock production or pollinator habitats, underneath solar panels or adjacent to solar panels. Based on preliminary design, the area needed to construct and operate the Project (i.e., the Preliminary Development Area) will cover approximately 982 acres of the Land Control Area. There are approximately 594

acres of the Land Control Area for which Lakeside has site control but are not currently contemplated for occupation by the Solar Facility, BESS, Collector Substation, or ITC Switching Station. Map 1 in Appendix E shows an overview of the Land Control and Preliminary Development Areas.

Lakeside has entered into easement agreements with landowners for all of the parcels within the Land Control Area except one landowner for which Lakeside holds a purchase option.

Lakeside has executed GIAs with Michigan Electric Transmission Company, LLC, through MISO, for the Solar Facility. Public copies of both GIAs are provided in Appendix C. Lakeside also has two active MISO queue positions, 100 MW each for surplus storage, currently pending start of the surplus study.

Pending receipt of all necessary approvals and permits, Lakeside anticipates Project construction to commence in 2027 with commercial operations beginning in 2029.

2.1.1 Alternatives Analysis

Lakeside conducted a review of vacant industrial property and brownfield sites within the Township to evaluate the potential for a utility-scale solar project. The Chemours Montague site, which is the location of a former chemical manufacturing facility, was identified as the only vacant industrial property or brownfield site located within White River Township of a size and with the proximity to transmission facilities suitable to host a utility-scale solar/battery storage project. The Chemours Montague site is also located within the White River Township's Renewable Energy Overlay District. A copy of the full Lakeside Solar Alternative Site Analysis document is contained in Appendix F.

The Chemours Montague site is currently undergoing a corrective action plan through Michigan's Department of Environment, Great Lakes, and Energy (EGLE) dated July 8, 2024. Based upon review of environmental conditions, financial aspects, and logistical/siting consideration, the site was not suitable for Lakeside to be a viable Project. Soil boring logs indicate unfavorable soil conditions due to contamination, surface elevation, and groundwater depth measurements/risk of seepage. Ecological risk assessments found that the water table is too shallow for beams to be driven for solar and racking would need to be above ground.

The avoidance areas at the site, which would be avoided through site design, would make development of complete array blocks difficult, culminating in a fragmented, inefficient project. Over 200 acres of trees would need to be removed to clear enough land to construct a utility scale solar development.

Soil disturbance is currently prohibited due to the current on-going corrective measures and geotechnical studies to evaluate soil conditions for the solar project would not be permitted.

Financial considerations include the restrictive covenants currently in place on the property that would pose a constraint to development. Additionally, the site's history results in an inability to secure insurance for a solar development project in the location. Quotes to sufficiently insure the site are prohibitively high, and a solar project would not be feasible in a competitive market.

Based on logistic constraints and site information, Lakeside determined the land available for development of a solar energy generation facility at the Chemours Montague site would be enough to generate about 20 MW or less of power, which is far below the target MW necessary to make the Project viable. The limitation regarding available space also affects the marketability of the solar resource, as there is a limited market for the amount of power that would be produced by a 20 MW project at the Chemours Montague site. Considering the factors above, Lakeside determined that the Chemours Montague site was not suitable for the Project. Alternatively, as described below, the Land Control Area contained the necessary requirements for construction of the Project.

2.2 Project Overview

In this Application, Lakeside provides a Project layout (refer to the Civil Permitting Plans and Detailed Site Plan in Appendix B) that includes the Solar Facility components, the BESS, the new ITC Switching Station, and the interconnecting transmission lines. The preliminary Project layout is subject to final micro-siting and may be adjusted based on landowner or regulatory agency input. However, all Project components will remain within the Land Control Area, as described herein.

An overview of the preliminary layout of the Project is illustrated on Map 2 in Appendix E. The Civil Permitting Plans and Detailed Site Plan in Appendix B provide the detailed Project layout. All components of the Project shall be approved by the Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electronic Testing Laboratories (EIL), or a similar certification organization.

The Solar Facility will be located within the approximately 982-acre Preliminary Development Area and will include solar panels and racking, inverters, security fencing, a Collector Substation, on-site below-ground or hybrid below-ground and above-ground electrical collection and communication lines, and up to nine weather stations. The preliminary Project design contemplates both a below-ground electrical collection system and a hybrid below-ground and aboveground electrical collection system. In the hybrid collection system, aboveground electrical lines would only be used to connect solar panels within each solar array and would be strung under the solar panels from the solar panel piles, while electrical lines between the arrays and the Collector Substation would be installed below-ground. If a hybrid electrical collection system is used, the Solar Facility layout would be the same as the below-ground electrical collection system layout.

The Collector Substation, BESS, interconnecting transmission lines, and ITC Switching Station will be constructed within the southeastern portion of the Preliminary Development Area, south of and adjacent to Eilers Road and west of Lamos Road. An approximately 102-foot-long aboveground segment of 138 kV transmission line will interconnect the Collector Substation to the new ITC Switching Station. From the ITC Switching Station, a second 784-foot-long 138 kV transmission line will interconnect the new ITC Switching Station to the 138 kV Du Pont – Cobb transmission line.

The BESS will also be located within the Preliminary Development Area, adjacent to and south of the Collector Substation and ITC Switching Station. The preliminary BESS design includes sufficient space to allow for battery augmentation over the life of the Project. Additional

information about BESS battery augmentation is presented in Section 3.2. Within the BESS, underground collection and communication lines will be installed to connect the BESS units to the Collector Substation. From the Collector Substation, the BESS will interconnect to the ITC Switching Station and the 138 kV Du Pont – Cobb transmission line via the same transmission line that will interconnect the Solar Facility.

Additional facilities contemplated in the Project design include an operations and maintenance (O&M) building that will be constructed east of the Collector Substation and new ITC Switching Station and north of the BESS. The O&M building will be shared by the Collector Substation and BESS. Finally, 17 temporary laydown areas are proposed within the Preliminary Development Area to support Project construction.

Security fencing will encompass all Solar Facility, Collector Substation, ITC Switching Station, and BESS components, and warning signs will be installed on the security fencing in accordance with the National Electrical Safety Code (NESC). The solar arrays will be fenced separately from the Collector Substation, ITC Switching Station, and BESS. The Collector Substation, ITC Substation, and BESS will each be fenced separately. Gates will be installed at the entrance to each facility and signs will be installed on the entrance gates providing a 24-hour emergency response number.

The areas within the fence line of the Solar Facility that surround the solar arrays and racking, including any stormwater ponds installed throughout the Preliminary Development Area, will be revegetated in accordance with the Vegetation Management Plan prepared for the Project (refer to Appendix G Other Studies and Plans), with the exception of access roads which will be graveled. The areas within the fence lines of the Collector Substation, ITC Switching Station, and BESS will be graveled for operation of these facilities.

The preliminary Project layout presented herein reflects Lakeside's effort to maximize the energy production of the Solar Facility and follow applicable setbacks, while minimizing impacts from the Project to the land, environment, and surrounding community. The final Project layout may differ from the preliminary layout and the current boundaries of the Preliminary Development Area described in this Application but will not extend beyond the outer boundaries of the Land Control Area, except in locations where the electrical collection lines connect noncontiguous portions of the Solar Facility arrays. The final layout will remain similar to the preliminary layout presented in the Civil Permitting Plans and Detailed Site Plan in Appendix B, although changes may occur as a result of ongoing site evaluation, permitting process, landowner preferences, and other micro-siting activities. Map 3 in Appendix E illustrates the adjacent and neighboring property parcels and the locations of residences and other structures within the Land Control Area and 1,000-foot buffer on U.S. Geological Survey (USGS) base mapping to provide general topographic context; the participation status of each parcel and residence are also shown on Map 3. The Civil Permitting Plans in Appendix B also shows topographic contours within the Preliminary Development Area in relation to the Project design.

2.3 Project Benefits

Michigan's Clean Energy Standard, established under PA 235 of 2023, mandates that the state achieve 100 percent clean energy by 2040. The legislation defines clean energy as electricity generated from renewable resources like wind, solar, hydropower, biomass, geothermal, nuclear power, and fossil fuels if used with carbon capture and storage technology that captures and permanently stores at least 90 percent of carbon dioxide emissions. It sets interim targets of 50 percent renewable energy by 2030 and 60 percent by 2035. To support these goals, PA 235 requires utilities to implement enhanced energy efficiency programs and mandates the development of 2,500 megawatts of energy storage by 2030. Additionally, the cap on distributed generation, such as rooftop solar installations, has increased from 1 percent to 10 percent of peak electricity load. These measures aim to reduce greenhouse gas emissions, promote environmental justice, and stimulate economic growth through the creation of clean energy jobs.

The Project will provide cost-effective solar energy generation and storage. The Solar Facility and BESS operate in a complementary manner. The Project includes a co-located BESS configured for MISO surplus interconnection service. The BESS is dispatched independently of instantaneous solar output but is controlled by the Project's energy management system so that combined exports from the Solar Facility and the BESS at the POI never exceed the GIAs limits of 200 MW.

In routine operation, the BESS charges from the grid when market prices are low or negative (e.g., mid-day or due to POI constraints) and later discharges through the same POI during evening or peak-demand periods when solar is not generating. This configuration maximizes the interconnection headroom, reduces congestion, and does not increase the Project's maximum export capability.

Lakeside is working to secure a Power Purchase Agreement, Build Transfer Agreement, Development Transfer Agreement, or other enforceable offtake agreement to sell the electricity, Renewable Energy Certificates, and capacity generated or stored by the Project. The power generated or stored by the Project will be offered to wholesale customers, including Michigan utilities and cooperatives that have identified a need for additional low-cost renewable energy and capacity, and corporate and industrial customers that have set clean energy goals.

The Project will directly support Michigan's goal of achieving a 100 percent clean energy standard by 2040, contributing specifically to the state's interim renewable energy targets of 80 percent by 2035. It will meet growing consumer demand for renewable energy through utility-sponsored programs and serve utilities, independent power purchasers, and corporations seeking renewable energy to facilitate business growth, while significantly reducing greenhouse gas emissions.

The Solar Facility will provide approximately 150 MW AC of renewable power capacity. The Project is estimated to avoid approximately 190,200 metric tons of carbon dioxide emissions annually during operation which is the equivalent of taking an estimated 44,300 cars off the road for a year or providing the equivalent electrical usage of an estimated 39,600 homes each year (U.S. Environmental Protection Agency [EPA], 2025a). The Project is being developed, designed, and permitted to meet or exceed applicable state and local requirements.

Additionally, the Project will provide substantial local economic benefits, including construction-related job creation, sustained operational employment, increased local spending, charitable fund contributions, property and business tax contributions, landowner payments, and overall community development enhancement (refer to the Project Fact Sheet in Appendix H). The Project is designed to be socioeconomically beneficial to the landowners, local governments, and communities. Landowner compensation is established by voluntary agreements between the landowners and Lakeside.

Construction of the Project will provide temporary increases to the revenue of the area through increased demand for lodging, food services, fuel, transportation, and general supplies. The Project will also create new local job opportunities for various trade professionals that live and work in the area and it is typical to advertise locally to fill required construction positions. Opportunity exists for sub-contracting to local contractors for gravel, fill, and civil work. Approximately 200 construction and related service jobs will be generated in association with the Project. Approximately three full-time jobs are estimated once the Project is operational. Additional personal income will also be generated by circulation and recirculation of dollars paid out by the Project as business expenditures and state and local taxes.

General skilled labor is expected to be available in Muskegon County or Michigan to serve the Project's basic infrastructure and site development needs. Specialized labor will be required for certain aspects of the Project. It may be necessary to import specialized labor from other areas of Michigan or neighboring states because the relatively short construction duration often precludes special training of local or regional labor. Much of the workforce needed to construct a solar facility and BESS must be comprised of Michigan licensed electricians because most of the assembly and wiring work for solar installations is considered electrical work under the Michigan Electrical Code.

Geronimo Power, Lakeside's parent company, has a strong track record of using local labor for construction. Most recently, Geronimo Power used local labor for construction of the Jackson County Solar, LLC Project located in Michigan. Lakeside will issue a Request for Proposals to find contractors to construct the Solar Facility and BESS. In the Request for Proposals, Lakeside will include a preference for contractor bids that propose to use local personnel to the greatest extent feasible while also aligning with the Project's budget, timeline, industry standards, and corporate safety policies. Lakeside will also include language clarifying that contractor bids must comply with Michigan's Prevailing Wages on State Projects, promulgated in Michigan Compiled Laws Section 408.1101 through 408.1126. The contractor selected for the Project will be required to work with appropriate entities (e.g., labor unions, local subcontractors, and other vendors) to develop and implement a construction staffing model that maximizes local hiring and the local economic benefits for the Project, while ensuring the Project is safely built on time and on budget.

Lakeside, as a demonstration of its commitment to being a good neighbor in White River Township, will create a charitable fund. The gifts donated through the charitable fund are above and beyond any tax revenue delivered by the Project. Gifts donated through the charitable fund will provide a direct benefit and value to the entire community. The charitable fund is estimated to provide $37,500 annually (refer to the Project Fact Sheet in Appendix H).

Assuming a $7,000 per MW Payment in Lieu of Tax agreement structure for Michigan solar facilities, it is estimated that Lakeside will have a direct economic impact of approximately $40.2 million over 20 years of operation (approximately $2 million annually) (refer to the Project Fact Sheet in Appendix H).

The presence of the Project is not anticipated to have a significant adverse impact on property values in White River Township. As outlined in American Clean Power's Property Values and Utility-Scale Solar Facilities fact sheet (American Clean Power, 2025), a study conducted by the University of Texas at Austin and Lawrence Berkeley National Laboratory in 2018, as well as several independent studies conducted throughout the United States all concluded that commercial scale solar energy generation facilities do not have a negative or adverse effect on property values in the surrounding area.

2.3.1 Host Community Agreement

Lakeside will enter into a host community agreement with White River Township upon approval of the SUP. The agreement will be in compliance with the White River Township Zoning Ordinance as amended. As per zoning ordinance requirements, the agreement will specify that upon commencement of operation of the Solar Facility, Lakeside will pay the Township a one-time payment of $2,000.00 per MW of nameplate capacity. The payment will 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 Lakeside.

3 ENGINEERING AND OPERATIONAL DESIGN

The following sections describe the preliminary Project engineering and operational designs, including equipment, components, associated facilities, interconnection facilities, access roads, and security measures. Lakeside is continuing to engineer the Project, taking into account stakeholder feedback, landowner agreements, and equipment availability.

White River Township Zoning Ordinance Subsection 16.06MM(15) specifies height requirements for utility-scale solar energy systems and states that no components of the solar energy system should exceed 35 feet in height. A portion of this subsection is superseded by subsection 16.06MM(29), which limits the height of solar panel components to a maximum height of 25 feet above grade when the arrays are at full tilt. The Project is designed to comply with the applicable height requirements of these subparts, to the extent they are compliant with the standards in PA 233.

Proposed Project facilities include the following:

- Solar Facility, including modules (panels), racking, inverters, and on-site above-ground and/or below-ground electrical collection lines;
- Collection and communication lines between blocks of solar arrays and the Collector Substation;
- Collector Substation and 102-foot 138 kV interconnecting transmission line;
- ITC Switching Station and 784-foot 138-kV interconnecting transmission line;
- BESS;
- O&M building and parking;
- Weather station(s);
- Stormwater ponds;
- Access roads; and
- Security and fencing, including lighting and a Supervisory Control and Data Acquisition (SCADA) System.

In this Application, Lakeside is providing a preliminary Project layout that shows both a below-ground electrical collection system and a hybrid below-ground and above-ground electrical collection system for the Solar Facility. If a hybrid electrical collection system is used, with a combination of below-ground and above-ground electrical lines, the Solar Facility layout would be the same as the below-ground electrical collection system. The preliminary Project layout is subject to final micro-siting. The preliminary Project layout is shown on the Civil Permitting Plans and Detailed Site Plan in Appendix B and an overview of the layout is shown on Map 2 in Appendix E.

3.1 Solar Facility

The process of converting solar energy and delivering it to the transmission grid begins with solar panels converting energy from the sun into direct current (DC) electrical power. Sets of panels will be electrically connected in series and will terminate at an inverter. The inverters will convert the DC power (approximately 1,500 volts) from the panels to AC power (650-950 volts, depending on the inverter specifications). Next, a transformer will step up the AC voltage of generated electricity from the inverter output voltage to 34.5 kV. From the transformers, electrical cables will be buried below ground and routed to the Collector Substation where the electricity will be stepped up from 34.5 kV to 138 kV to interconnect to the new ITC Switching Station. From the ITC Switching Station, power generated by the Solar Facility will be interconnected to the existing ITC 138 kV Du Pont – Cobb transmission line via the interconnecting transmission lines for the Project.

The Solar Facility will likely utilize thin film photovoltaic panels with tempered glass that may vary in size but are generally 4 to 7 feet long by 2 to 4 feet wide and 1 to 2 inches thick. The panels will be installed north to south on a tracking rack system that utilizes steel for the foundations and aluminum for the frame (refer to Figure 3.1.1-1). Motors allow the racking and attached photovoltaic panels to rotate from east to west throughout the day. Each tracking rack will contain multiple panels. On the tracking rack system, panels will be approximately 12 feet in height from the ground to the top of the panels when at a 60-degree angle (refer to Figure 3.1.1-2). Height may vary due to manufacturer, topography, and vegetation constraints but will not exceed a maximum height of 25 feet above ground when the arrays are at full tilt. The photovoltaic panels will have a silicon and weatherized plastic backing or a side-mount or under-mount aluminum frame, heat strengthened front glass, and laminate material encapsulation for weather protection. The main protection built into the module is from light wind, dust, sand and precipitation. Tracker technology helps prevent hail and wind damage to the modules by safely stowing the modules in a way that limits/reduces the risk of damage to the modules.

To limit reflection, solar photovoltaic panels are constructed of dark, light-absorbing materials. Today's panels reflect as little as two percent of the incoming sunlight depending on the angle of the sun and assuming use of anti-reflective coatings, which will be used. The solar arrays will occupy approximately 733 acres (75 percent) of the Preliminary Development Area.

3.1.1 Linear Axis Tracking Rack System

The panels will be installed on a galvanized steel linear axis tracking rack system with a DC motor that will allow the PV panels to track the sun throughout the day. The panels and tracking rack system will be generally aligned in rows north and south with the photovoltaic panels facing east toward the rising sun in the morning, parallel to the ground during mid-day, and then west toward the setting sun in the afternoon. The panels will be rotated by a small motor connected to the tracking rack system to slowly track with the sun throughout the day. The tracking rack system will allow the Project to optimize the angle of the panels in relation to the sun throughout the day, thereby maximizing production of electricity in the smallest possible footprint.

The tracker is engineered for resilience to extreme weather, and installation is optimized for minimal grading and efficient maintenance access. An example of a tracking rack system is shown on Figures 3.1.1-1.

Figure 3.1.1-1 Tracking Rack System

The tracking rack system will be mounted on top of steel piers that are typically driven into the ground, without the need for excavation or concrete to install the piers. The piers are driven into the ground with a hydraulically powered high-frequency hammer mounted on a tracked carrier. Piers are typically installed at 8 to 15 feet below the surface, pending site-specific conditions that will be determined through geotechnical borings prior to construction. Typical standard steel pier foundations are shown below on Figure 3.1.1-3.

Figure 3.1.1-3 Standard Steel Pier Foundations

3.1.2 Inverters and Transformers

Solar panels collect and release energy as DC power at approximately 1,500 volts. Inverters, placed at the end of solar arrays, convert the DC power generated by the solar panels to the AC power that is needed to transmit the energy through cabling into transformers, then the Collector Substation, and ultimately into the electrical grid via the ITC Switching Station. Transformers are used to step up or step down AC voltages. For the Solar Facility, a transformer will be used to step up the voltage from the solar panels to 34.5 kV before it is transmitted to the Collector Substation. Another transformer will be located within the Collector Substation that will further step up the AC voltage from 34.5 kV to 138 kV before it is transmitted to the ITC Switching Station via the interconnecting transmission lines. The voltage is required to be at 138 kV to interconnect with the ITC Switching Station and the existing electrical grid. From the ITC Switching Station, the power will be transmitted to the 138 kV Du Pont – Cobb transmission line.

Inverter skids will be located throughout the Solar Facility and will include a transformer to which the inverters will feed electricity. Each skid will be placed atop a concrete slab or pier foundations and will typically measure 20 feet wide by 8 feet long by approximately 10 feet high. Concrete foundations, if needed, will be poured onsite or precast and assembled off-site. One inverter will be required for every 2 to 3 MW of generation. The final number of inverters for the Project will depend on the inverter size, inverter availability, and final panel selection. A typical inverter and transformer station are shown below on Figure 3.1.2-1.

Figure 3.1.2-1 Typical Inverter and Transformer Station

3.1.3 Electrical Collection System

The electrical collection system for the Solar Facility will be made up of electrical cables that connect the solar arrays, inverters, transformers, and Collector Substation. The cables will be installed either below ground or in a hybrid arrangement with above-ground cabling connecting the solar arrays to one another and below-ground cables connecting the solar arrays to the Collector Substation. For both options, below-ground collection lines will be installed minimum of 4 feet below ground surface.

The electrical collection system will be site-specific depending on geotechnical analysis, constructability, costs, and availability of materials. Final engineering and procurement will help determine the construction method for the electrical collection system. The electrical cables that would be used for each type of electrical collection system are described below.

3.1.3.1 Below-ground Electrical Collection System

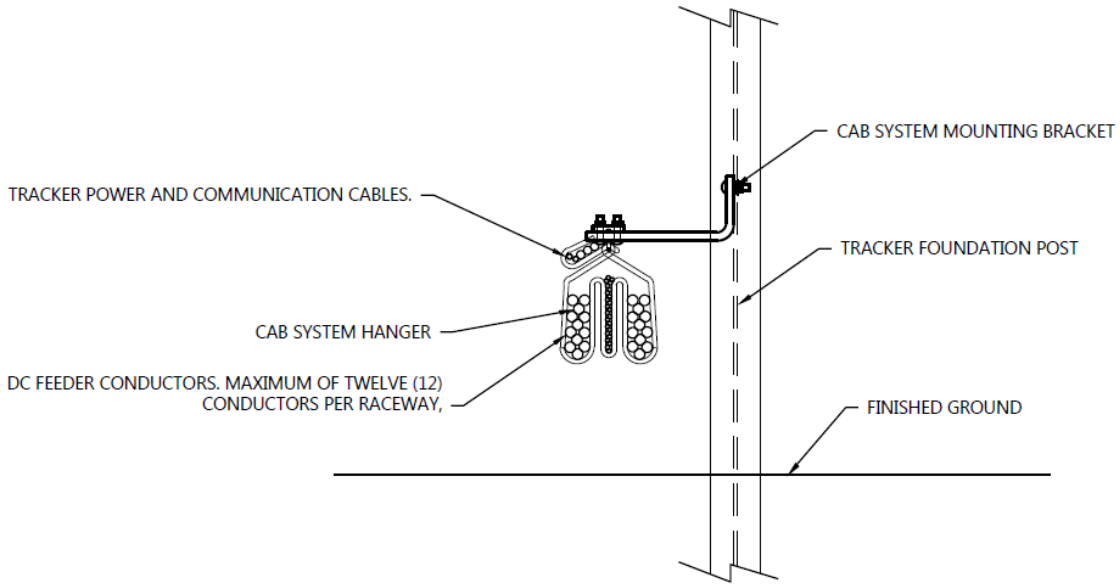
The solar panels deliver DC power to the inverters through cabling that will be located within a below-ground trench (approximately 4 feet deep). Below-ground AC collection systems from the inverter skids to the Collector Substation will be installed in trenches or ploughed into place at a depth of approximately 4 feet below grade. During all trench excavations, the topsoil and subsoil will be removed and stockpiled separately to support successful revegetation of the site following completion of construction. Once the cables are laid in the trench, the area will be backfilled with subsoil followed by topsoil.

3.1.3.2 Hybrid Below-ground and Above-ground Electrical Collection System

A hybrid below-ground and above-ground electrical system is being considered for the Solar Facility for several reasons including ease of access for O&M, reduced ground disturbance, and cost considerations. If above-ground cabling is utilized, it would only be utilized to connect solar panels together within each solar array.

In the hybrid electrical collection system, DC collection cables will be strung under each row of panels on steel arms and a steel cable attached to the piles. At the end of each row, hanging brackets will connect several racks/rows of cables to a common collection point near their assigned inverter/transformer skid where the cables will then be routed below-ground to the inverter/transformer skid where the current is converted to AC and voltage is stepped up to 34.5 kV. A typical drawing of the hanging brackets at the end of each row is provided below in Figure 3.1.3-1. From the inverter/transformer skid, the AC collection will be installed below ground to the Collector Substation. The 34.5 kV collection and communication lines between solar arrays and the Collector Substation will be routed below-ground at an approximate depth of 4 feet. Cables connecting each unit of solar arrays will be directionally bored under county roads.

Figure 3.1.3-1 Typical Above-Ground DC Collection Hanging Bracket



3.2 BESS

Lakeside is proposing to construct an AC-coupled BESS as part of the Project. This type of system allows for efficient access, monitoring, and maintenance; has more flexible energy and power capacity sizing; and has more flexible dispatch capabilities. The preliminary design for the BESS incorporates a modular layout based on currently available lithium-ion battery technology. The proposed BESS is located on Parcel 61-01-124-200-0001-00, owned by Guter Farms LLC, which has entered into a Solar and Storage Land Purchase Option Agreement with Lakeside Solar, LLC.

The BESS will support regulating power distribution by charging its batteries with power from the existing electrical grid when demand is low and sending electricity into the grid when demand is high. This will allow Lakeside to maximize energy output and efficiently utilize interconnection facilities and will, in part, reduce costs for interconnection customers and improve wholesale market competition by helping to reliably stabilize the electrical grid. Cost reduction is derived

from reduced system congestion, which allows for greater overall transmission capacity for all interconnected facilities.

. Rated power capacity is the maximum rate of discharge in MW that the BESS can achieve. Energy capacity is the maximum amount of stored energy in MWh. Storage duration is the amount of time storage can discharge at its power capacity before depleting its energy capacity (National Renewable Energy Laboratory [NREL], 2019). The rated power capacity of the proposed BESS is approximately150 MW and the energy capacity for a 150 MW facility would be approximately 600 MWh. The storage duration is 4 hours. When the BESS is operating at full capacity and discharging 150 MW, it is able to discharge for 4 hours

The BESS will be located on approximately 8.2 acres within the Preliminary Development Area, adjacent to the Collector Substation. The BESS will include individual battery storage modules that each contain multiple batteries installed in purpose-built enclosures. Within the BESS, underground collection and communication lines will be installed to connect the BESS units to the Collector Substation. Adequate spacing between the BESS units will allow access for operations personnel.

Battery storage technology is advancing at a rapid pace and, as such, the options that may be available for the BESS when Lakeside begins procuring infrastructure could be significantly more advanced or offered in a wider selection than those currently available. Lakeside will analyze current market offerings during final engineering to select the specific BESS model for the Project. A variety of lithium-ion battery technologies are under review for the Project and the preliminary design presented herein contemplates a typical BESS. A typical BESS is a model that is frequently used by similar projects. The actual footprint of the BESS may vary based on the model selected during final engineering.

The BESS will be a modular system comprised of lithium-ion batteries encased in stand-alone enclosures (refer to Figure 3.2-1). Standalone enclosures are necessary, as opposed to a large warehouse or storage building, to ensure people cannot enter into the battery enclosures for safety reasons as described in Section 4.1.2.1. The enclosure dimensions are anticipated to be 40 feet long by 10 feet wide by 9.5 feet high. Multiple enclosures will be utilized in tandem, and the enclosures will have a Battery Management System for automated monitoring and managing of the batteries to ensure design performance, provide control for the charging/discharging of the batteries, monitor temperature monitoring, and control temperature of the individual battery cells with an integrated cooling system.

Over the life of the BESS, the batteries will lose some of their capacity. Under current MISO market rules, a BESS is accredited capacity based, in part, on its ability to provide the energy equivalent of its claimed capacity for a minimum of at least 4 continuous hours each day. To maintain the facility's rated capacity, the BESS will undergo augmentation either through the addition of battery modules within the existing enclosures or the addition of supplemental battery enclosures. The augmentation schedule to maintain overall BESS functionality will be determined during the design process after final equipment selection and will be based on the projected degradation of the batteries. It is anticipated that the BESS shall be augmented over the duration of the project life cycle (typically, 2 blocks every 4 years) where additional battery enclosures are

added to replace degraded energy capacity. The preliminary BESS design presented herein includes sufficient space for augmentation batteries adjacent to each BESS unit; no additional land would be needed to accommodate battery augmentation.

Lakeside used the following specifications for this design:

- Container based battery storage system with on-board heating, ventilation, and air conditioning (HVAC) and fire suppression systems;
- Container dimensions: 40 feet long by 10 feet wide by 9.5 feet high;
- Operating temperature -20°C to 50°C; and
- Augmentation will occur at a rate of 2 blocks every 4 years to maintain full rated capacity.

Lakeside will finalize the BESS pad dimensions once a battery storage manufacturer is chosen and final engineering and design is completed. The battery enclosures are accompanied by a generator step-up transformer and a bi-directional inverter or Power Conversion System. A typical BESS module is shown below in Figure 3.2-1.

Figure 3.2-1 Typical BESS Module

3.2.1 BESS Safety

Lakeside is committed to safety in all aspects of construction and operation of the BESS and plans to construct and operate the BESS in accordance with relevant safety codes, regulations, and industry best management practices (BMPs).

Advances in technology, safety standards, and fire/building codes have and will continue to mitigate BESS fire safety risks. Strict adherence to National Fire Protection Association (NFPA)

standard NFPA-855 shall be followed as related to electrical safety. Hazard mitigation systems that will be used for the Project include the following:

- remote monitoring (down to the cell level);
- heating, ventilation, and air conditioning for temperature control;
- heat and smoke detection;
- automatic shutdown and personnel warnings;
- gas detection system;
- deflagration venting;
- system-specific training for local fire departments and emergency response teams; and
- a fire break between the BESS enclosures and vegetation surrounding the fenced facility.

Lakeside proposes using BESS modules for the Project from a BESS manufacturer that has incorporated all reasonable safety precautions into the design of the equipment. The lithium-ion batteries will be stored in weather-proof enclosures, and each enclosure will include a fully integrated HVAC system for temperature control, sensors and controls for remote monitoring, and built-in fire detection. No off-gassing or air emissions are produced in day-to-day operations.

3.2.2 BESS Testing and Certification

Lakeside is committed to partnering with equipment suppliers that manufacture to stringent quality standards, and all equipment that would be used for the Project will be tested and certified by third party professionals. Standards, certifications, and code requirements from multiple nationally recognized organizations will be required for the engineering, design, manufacture, and testing of the enclosures and equipment included in the BESS. All BESS equipment used for the Project will be tested for compliance with prominent safety standards, including International Electrotechnical Commission 62619, International Electrotechnical Commission 6244-1, Underwriters Laboratories 1973, and Underwriters Laboratories 9540A. BESS design shall comply with International Fire Code 2018, NFPA 855, and National Electrical Code (NEC) (NFPA 70).

3.2.3 BESS Facility Monitoring Systems

The BESS will have a Battery Management System that will allow automated monitoring in the Collector Substation control or SCADA room and managing of the batteries to ensure design performance. This system will also provide control for the charging/discharging of the batteries, access to temperature monitoring, and control of the individual battery cell temperature with an integrated cooling system.

Each lithium-ion battery is equipped with cell-level, module-level, rack-level, and system-level monitoring. Real-time data is collected and provided to an automatic control logic housed in the Battery Management System and site controller. The Battery Management System and site controller ensure the BESS is operating within the original equipment manufacturer's operating parameters and warranty requirements. If any operating limit is exceeded, the batteries will

automatically disconnect from the system. In addition, in the event of a fire safety warning, the control system will automatically contact a fire monitoring service who will contact the local fire department. Current battery technology has also advanced so that fire risk is less prevalent. The batteries are more thermally stable and less prone to thermal runaway than batteries comprised of older battery chemistry that will not be used for the BESS.

Lakeside is proposing BESS modules in separate stand-alone enclosures for the Project for safety and risk mitigation considerations. While stand-alone enclosures will require a larger footprint than a single combined structure, stand-alone enclosures minimize potential fire risk to the BESS as a whole. If one battery in a stand-alone structure were to catch fire, the fire would be contained within that enclosure and would not impact adjacent enclosures. In addition, stand-alone enclosures only allow external access, which avoids the risk of personnel getting trapped inside of a structure if a fire occurs.

Lakeside is committed to providing training resources for local emergency responders, as well as working with local emergency responders to develop a Project and site-specific Emergency Response Program. The Emergency Response Program will require bi-annual safety drills and annual safety training with local first responders. The Emergency Response Program will cover possible incidents that could occur at the BESS and include corresponding emergency procedures. Lakeside will coordinate with local emergency responders to develop the Emergency Response Program prior to the commercial operation date for the Project. See additional information about emergency personnel in Section 3.11.

3.3 Substations

The Collector Substation will be a 34.5 / 138 kV step-up / step-down substation with metering and switching gear required to connect to the transmission grid. The Collector Substation will be shared by the Solar Facility and BESS and will have separate transformers and metering for each facility. It will be designed according to regional utility practices, MISO Standards, Midwest Reliability Organization Standards, National Electrical Safety Code, and the Rural Utility Service Code. Transformers located within the Collector Substation will step up the collection system voltage to 138 kV.

The Collector Substation will be located in the southeast portion of the Preliminary Development Area, adjacent to ITC's Switching Station. The ITC Switching Station will interconnect the Project to the ITC 138 kV Du Pont – Cobb line.

The Collector Substation's footprint will be approximately 400 feet by 400 feet (3.5 acres). The area within the Collector Substation will be graveled to minimize vegetation growth and to reduce fire risk. The main power transformer will step the collection system voltage up to the transmission interconnection voltage. The Collector Substation is shown on the Civil Permitting Plans and Detailed Site Plan in Appendix B and on Map 2 in Appendix E. The Collector Substation will connect with a proposed ITC Switching Station that will be designed, constructed, and operated by ITC.

3.4 Access Roads

The Project will include approximately 10.1 miles of graveled access roads (20.6 acres of gravel), which includes approximately 0.3 mile of graveled access roads (0.7 acre of gravel) associated with the BESS and Collector Substation. Access roads will be used for O&M along with emergency access should any incidents occur. Access roads will be up to 16 feet wide where straight and may widen to approximately 45 feet along curves and at internal road intersections. The preliminary Project design includes 1 access point to the BESS and Collector Substation from Eilers Road and 23 access points to the Solar Facility from public roadways (refer to Appendix B). All entrances to the Solar Facility and BESS will be secured with locked gates.

Lakeside is designing access roads for effective and efficient access for O&M and for safe ingress and egress of employees, visitors, and emergency responders. Lakeside has minimized the amount of access roads to only the number necessary for the Project. For example, access roads reach all portions of the site and every central inverter, but not every block of panels has access roads along the entire perimeter (i.e., along the perimeter fence). This design will minimize the amount of ground disturbance and new impervious surfaces while still providing effective and efficient site access. Access roads will be located within the fenced boundary. The final location of the access roads will depend on the equipment selected and final engineering, and an advanced design will be presented with the building permit application.

Lakeside has identified locations that will utilize low water crossings (refer to Appendix B). As noted in the Civil Permitting Plans in Appendix B, the low water crossings will allow for the flow of water through the existing drainage unimpeded and without ponding, and the armored surface of the road will follow the natural contours of the channel bottom, side slopes, and top of the bank.

Upgrades or changes to public roads may be required for construction or operation of the Project. Lakeside will work with the Muskegon County Road Commission to facilitate upgrades that meet the required public standards. Upgrades or changes may include, but are not limited to, road improvements, additional aggregate, and driveway changes. Road use and improvements will be incorporated into a RUMA with Muskegon County Road Commission that will be completed in coordination with White River Township. Driveway changes, access, and encroachment within a road right-of-way will require a county entrance permit from Muskegon County, which Lakeside will obtain prior to construction.

3.5 Security and Fencing

Permanent security fencing will be installed along the perimeter of the solar arrays within the Solar Facility and around the Collector Substation and BESS. Fencing will be secured to posts which will be directly embedded in the soil or set in concrete foundations as required for structural integrity. The fencing surrounding the solar facility will be comprised of woven wire fencing or wildlife fencing with smooth wire place atop the fencing to extend 7 feet or 8 feet in height and will comply with NEC and NESC requirements. Fencing surrounding the BESS and Project Substation will be comprised of woven wire fabric fence mounted on driven, pressure-treated, wood posts and extend six feet above grade. One foot of three strands of barbed wire will be placed atop the woven wire fabric fence to extend 7 feet in order comply with NEC and NESC

requirements. Gates will be strategically installed at corners for deer egress and contact information for the site manager will be posted at the gates. Access to the Project area will occur through lockable gates. An electronic security system or Knox boxes with keys will be utilized at Project entrances for emergency services, and signage will meet NEC requirements. Security cameras will be located throughout the Project.

Security lighting will be installed at Project entrances, the O&M building, and inverters. Lighting will be downlit in accordance with the Dark Sky initiative. Details about the proposed lighting are covered in Section 4.8.1 and in the Civil Permitting Plans and Detailed Site Plan in Appendix B.

For additional security and safety, the Project will use a SCADA system, which will allow for remote control and monitoring of the status of the Project. The monitoring system will provide status views of electrical and mechanical data, operation and fault data, meteorological data, and grid station data.

3.6 Associated Facilities

3.6.1 Operation and Maintenance Building and Parking

An O&M building will provide access and storage for Project maintenance and operations and will be constructed east of the Collector Substation and ITC Switching Station and north of the BESS. This O&M building will be shared by the Collector Substation and BESS during Project operation. The O&M building will measure approximately 100 feet long by 50 feet wide by up to 20 feet in height and will be made of metal, similar to a pole barn. It will contain an office for the onsite Plant Manager, a technician room, a restroom, and a storage area for equipment to operate and maintain the Project. Equipment within the O&M building will include a SCADA cabinet, spare panels, spare parts for the Collector Substation and BESS, equipment to operate the Collector Substation, and safety equipment for working with live electricity.

A permanent emergency generator or generators will be installed to be used in the case of power outage to support Project SCADA equipment. The emergency generator(s) will be 50 kilowatts in size and may be powered by diesel or propane.

A parking lot will be located adjacent to the O&M building and will be up to 1,000 square feet. This will accommodate parking for full-time employees and will provide off-street areas for loading and unloading.

3.6.2 Weather Stations

The Project will include up to nine weather stations that will each measure a maximum of 15 feet in height. Weather stations will be located within the Preliminary Development Area. A typical weather station is shown below in Figure 3.6.2-1.

Figure 3.6.2-1 Typical Weather Station

3.6.3 Distribution, Transmission, and Interconnection

The Solar Facility and BESS will each be connected to the Collector Substation with separate transformers and metering. The Collector Substation will be a 34.5/138 kV step-up/step-down substation with metering and switching gear required to interconnect the Solar Facility and BESS into the grid. The Collector Substation will connect to the proposed ITC Switching Station via a 102-foot 138 kV transmission line. The proposed ITC Switching Station will connect to the existing ITC Du Pont – Cobb transmission line via a 784-foot 138 kV transmission line. The design standards and equipment needed for interconnection will be determined by MISO as the Project progresses. The Collector Substation, shown on the Civil Permitting Plan and Detailed Site Plan in Appendix B, will include all electrical infrastructure to distribute power from generators. The Switching Station design and interconnection are in coordination with the utility.

Lakeside developed a conceptual plan for the BESS on this Project based on feedback from potential off-takers. Lakeside submitted an interconnection request to MISO East DPP-2020 Cycle 1 to interconnect to the ITC 138 kV line Du Pont – Cobb within the Project Preliminary Development Area. ITC indicated that the line can accommodate the interconnection of the Project

without substantial upgrades. Additionally, Lakeside can pursue the interconnection of a BESS via the MISO surplus interconnection process. As procedurally required, the Project was evaluated by the MISO and received GIAs in 2022 and 2023. Public versions of the GIAs are provided in Appendix C.

3.6.4 Temporary Facilities

During construction, the Project will use temporary laydown areas scattered throughout the Preliminary Development Area that will serve as parking areas for construction personnel and staging areas for Project equipment. One laydown area adjacent to the Collector Substation and O&M building will become the parking lot. All other laydown areas will be temporary in nature and will be revegetated and stabilized prior to commencement of facility operations.

3.7 Layout and Setbacks

Lakeside selected the Land Control Area based on several factors including transmission and interconnection suitability and an optimal solar resource. The Project's final design will optimize electrical generation and efficiency of the solar resource and interconnection to the existing electrical grid while avoiding or minimizing potential environmental, cultural, and socioeconomic impacts to the extent practicable.

The Civil Permitting Plans and Detailed Site Plan in Appendix B reflects the Preliminary Development Area of the Project including the locations of all facilities. Facility locations are subject to change following final design and engineering. A final site plan will be provided to White River Township as part of the application for a Building Permit. Similar to the Civil Permitting Plans, the final Project design will comply with Township setback requirements.

Per zoning requirements, the Project is sited on parcels in excess of 5 acres. No additional setbacks are anticipated to be necessary for the Project. The Township setback requirements and Lakeside's proposed setbacks for both the proposed Solar Facility and BESS are provided in Table 3.7-1. Lakeside's proposed setbacks also comply with the standards in Section 226(8) of PA 233.

Table 3.7-1: Setback Table

Utility-Scale Solar Energy System and Battery Energy Storage System Setback Requirement	White River Township Requirements (feet)	Project Proposal (feet)
Maximum Height: Solar Array, collection device, and energy system components (excluding substation and electrical transmission equipment)	25	12
Occupied Community Buildings and Dwellings on Nonparticipating Properties	300 [1]	300
Public Road Right of Way	50 [2]	50
Shared property line for nonparticipating parties	50	50

Table 3.7-1: Setback Table		
Utility-Scale Solar Energy System and Battery Energy Storage System Setback Requirement	**White River Township Requirements (feet)**	**Project Proposal (feet)**
[1] From the nearest edge of the perimeter fencing [2] Measured from nearest edge of public road right of way		

3.8 Construction Information

A variety of preparation and installation activities will be completed to construct the Project. Prior to the start of construction, typical preparation includes performing a geotechnical investigation, finalizing Project design, procuring all necessary permits, and implementing management techniques to ensure restoration is successful. Lakeside has completed the geotechnical investigation for the Project. All other activities are currently in progress.

Below is a preliminary list of pre-construction, construction, and post-construction activities necessary to develop the Project. During construction, Lakeside will limit hours of construction 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.

Pre-construction, construction, and post-construction activities for the Project include the following:

- Pre-construction
  - Perform geotechnical investigation and analysis
  - Design solar array, access roads, O&M building, BESS facility, Collector Substation, and electrical collection system
  - Identify and locate underground utilities
  - Procure all necessary facility components (including solar panels, tracking system, transformers, BESS inverters, storage devices/containers, emergency generators)
  - Procure all necessary facility and construction permits (including but not limited to road permits, oversized/overweight permits, environmental permits, and land use permits)
  - Implement management techniques to ensure permanent and temporary seeding will be successful
- Construction
  - Engage MISS DIG 811 System Locate (an underground utility safety notification system)
  - Stake the construction area
  - Perform site preparation, grubbing, and grading

  - Construct laydown areas and set up temporary job site trailers
  - Construct fencing
  - Establish temporary or permanent (seasonally dependent) vegetation in disturbed areas, as practical
  - Perform civil construction of access roads
  - Install photovoltaic mounting posts
  - Install below-ground or hybrid collection system
  - Install electrical enclosure/inverter including foundations
  - Install tracker and photovoltaic panel installation
  - Construct interconnecting transmission lines
  - Construct fencing
  - Install BESS foundation
  - Install BESS components and electrical connection to the Collector Substation
- Post-construction
  - Restore disturbed areas not intended for permanent above-ground facilities. Permanent above-ground facilities include the Collector Substation, O&M building, inverter skids and electrical cabinets, and access roads per the Vegetation Management Plan
  - Test facility
  - Begin commercial operation.

The following sections address methods that Lakeside will use to construct the Project. The information in these sections is presented to meet the requirements in White River Township's ordinances regarding land clearing and grading.

3.8.1 Preconstruction

Terracon Consultants, Inc performed geotechnical and pull testing studies to determine the topsoil and subsoil types and the mechanical properties of soils within the Land Control Area. Subsurface investigations revealed that site soils are generally suitable for supporting solar array foundations using driven steel piles, provided that pile embedment depths and capacities are adjusted to account for varying soil conditions. The report recommends a minimum pile embedment depth of 7 to 9 feet below grade depending on location-specific bearing capacities, with additional consideration for frost depth and potential for adfreeze forces.

In areas with shallow groundwater or cohesive soils, resistance to frost heave and lateral movement will be addressed through frost-depth embedment and pile tip reinforcement, as appropriate. The geotechnical analysis did not reveal significant limitations that would preclude standard pile installation methods, although pre-drilling may be necessary in select locations if refusal or dense materials are encountered.

The findings of the geotechnical study will inform final design engineering and pile specifications, ensuring structural stability and minimizing long-term settlement risks across variable subsurface conditions. The preliminary Project design is discussed in Section 3.1.

3.8.2 Construction

3.8.2.1 Site Preparation

Prior to site preparation or excavation activities and following receipt of necessary permits, Lakeside will complete One Calls for the site (MISS DIG 811) to identify existing onsite utilities.

Lakeside will clear the site only as necessary to ensure suitable access for construction, safe operation, and maintenance of the facility.

Depending on timing of the start of construction, Lakeside may need to clear residual row-crop debris from the previous seasons. Alternatively, and depending on construction timing, Lakeside may plant a cover crop that is compatible with the Project Vegetation Management Plan (refer to Appendix G). This cover crop will stabilize soils where row crops or other vegetation are not present.

As part of overall strategy for soil preservation, Lakeside will develop a Soil Erosion and Sediment Control (SESC) Plan prior to construction for review and approval by Muskegon County. The Project will adhere to the National Pollutant Discharge Elimination System (NPDES) administered by EGLE, by obtaining a Notice of Coverage. The Project is also actively working with the Muskegon County Water Commissioner's Office to design the site in compliance with local standards related to soil erosion and sedimentation control during construction and long-term drainage management. Additional information about soil preservation is included in Section 4.4.2.

3.8.2.2 Earthwork

BMPs will be utilized during construction and operation to protect topsoil and minimize soil erosion. Excavation for the Project will be limited and will primarily be associated with the installation of below-ground collection lines and inverter skid foundations. Grading will be limited to the extent practicable to minimize soil disturbance. Where excavation or grading are necessary, Lakeside will segregate topsoil from subsoil to maintain the productivity of the land following decommissioning. To minimize soil compaction, construction and maintenance traffic will be confined to access roads, as practicable. Disking of the soil or other decompaction techniques will be implemented in compacted areas following construction and maintenance activities as necessary.

Areas of the Project to be graded will have topsoil and organic matter stripped and segregated from the subsoil (depending on the depth of grading cut). Grading will be required to provide a more level workspace and maintain soil stability in areas with a slope greater than five percent. Topsoil shall have temporary and permanent erosion control and soil stabilization measures established in accordance with the Stormwater Pollution Prevention Plan. The earthwork activities will be completed using typical civil construction equipment such as scrapers, bulldozers, front-end loaders, back-hoes, or skid-steers.

3.8.2.3 Construction of Access Roads, Staging Areas, and Laydown Areas

As a component of earthwork, permanent access roads and permanent turnouts will be developed to facilitate the O&M of the facility. The access roads are present throughout the Preliminary Development Area and will lead to solar arrays and equipment pads, O&M building, Collector Substation, BESS facility, and laydown areas. The final location of the access roads will depend on the equipment selected and final engineering, and a final design will be presented with the building permit application. This work will start with the stripping and segregating of topsoil materials from the anticipated 16-foot-wide road width (road width may be larger along curves at internal road intersections to allow for passage of necessary machinery).

Topsoil removed from permanent access roads will be stripped and stockpiled in designated areas near the site of removal. Stockpiles will be located and tracked using global positioning system (GPS) data to record boundaries and depth, ensuring accurate mapping for final reclamation after decommissioning. Subgrade materials beneath the roads will be compacted to a minimum of 95 percent of the modified Proctor maximum dry density, as recommended in the geotechnical report (see Section 6.1.3), across the typical 16-foot-wide travel lane. Following verification of compaction, road construction may include the placement of geotextile fabric where soft or silty subgrade soils are encountered, particularly in areas mapped with lean clay or organic-rich soils. The finished surface will typically consist of 4 to 12 inches of compacted gravel, such as crushed limestone or recycled concrete aggregate, graded to match the adjacent terrain to facilitate drainage and reduce ponding. Site-specific thicknesses and material types may be adjusted based on final design and anticipated traffic loads.

After gravel is installed and compacted to the engineers' requirements, drainage ditches will be shaped as identified on the final grading plan. Finally, the previously stripped and windrowed topsoil material from permanent access roads will be re-spread throughout Solar Facility.

Lakeside has identified locations that will utilize low water crossings. As noted in construction drawings, the low water crossings will allow for the flow of water through the existing drainage unimpeded and without ponding, and the armored surface of the road will follow the natural contours of the channel bottom, side slopes, and top of the bank.

The Project will utilize temporary laydown areas that will serve as a parking area for construction personnel and staging area for Project components. The laydown areas will be temporary in nature. The laydown areas will be revegetated and stabilized prior to commencement of facility operations.

During construction, equipment and work vehicles will travel to and from the site. Typical construction equipment such as scrapers, dozers, dump trucks, watering trucks, motor graders, vibratory compactors, pile drivers, pickup trucks, and backhoes will be used during construction. Specialty construction equipment that may be used during construction will include cranes, forklifts, concrete trucks, bucket trucks, boom trucks, and a truck-mounted auger or drill rig. Upon completion of construction, heavy equipment will be removed from the site.

3.8.2.4 Solar Array Construction

Once grading activities are complete, the racking system supports will be constructed using steel piles driven into the ground. The solar facilities will be constructed in blocks, and multiple blocks could be constructed simultaneously. Construction of the blocks will include pre-positioning and driving piles, mounting the tracking rack system to the piles, pre-positioning of panel pallets, mounting panels to the tracking rack system, the completion of electrical connections, terminations and grounding, and installation of cable management systems. In some situations where soils are low strength or consist of loose, non-cohesive sand, helical screw or auger-type foundation posts may be used. Helical screw or auger-type foundation posts are not anticipated; however, final determinations will be made after the geotechnical work is reviewed. Foundations are typically steel and are used where high load bearing capacities are required. The pile is driven using a hydraulic ram that moves along tracks and is operated by two workers. Soil disturbance due to solar array foundation installation will be restricted to the hydraulic ram/screw machinery, about the size of a small tractor, temporarily disturbing soil at each pile insertion location and while driving between drilling locations.

The remainder of the tracking rack system will be installed by construction crews using hand tools and all-terrain tracked equipment to distribute materials. Array racking will be bolted on top of the foundation piling to create a rack to which the solar panels can be fastened.

During array and racking assembly, multiple crews and various types of vehicles will be working within the Project area. To the extent practicable, vehicular traffic will be limited to permanent and temporary access roads to minimize soil disturbance, mixing, and compaction; however, vehicular traffic will occur off of roads throughout the Project during construction. Off-road construction vehicles include flatbed trucks for transporting array components, small all-terrain vehicles, rough-terrain forklifts and skid-steers, as well as pick-up trucks for transporting equipment and workers throughout the Preliminary Development Area. Panels will be staged in advance throughout the Preliminary Development Area and brought to specific work areas for installation by wagon-type trailers pulled by small tractors or by all-terrain tracked equipment. The solar panels will be installed by multiple crews using hand tools. Installation crews will proceed in serpentine fashion along staked temporary access roads in a pre-established route to minimize off-road traffic.

3.8.2.5 Electrical Collection System

DC collection cables will connect the solar panels to inverters and transformers. Final design of the electrical collection system is pending (refer to Section 3.1.3). These cables may be located in a below-ground trench or may be above-ground strung under each row of panels on steel arms and a steel cable attached to the piles.

Directional boring will be used during construction where the electrical collection and communication lines will be located below features that may not be trenched or plowed through. Electrical cables connecting blocks of solar arrays will be directionally bored under public roadways and wetlands.

If a hybrid option is selected and above-ground DC collection cabling is utilized, the DC collection cables will be strung under each row of panels on steel arms and a steel cable attached to the piles (refer to Figure 3.1.3-1). At the end of each row, hanging brackets will connect several racks/rows of cables to a common collection point near their assigned inverter/transformer skid where the cables will be routed below-ground at a minimum depth of approximately 4 feet below grade (refer to Section 3.1.3 for more information) to the inverter/transformer skid where the current is converted to AC and voltage is stepped up to 34.5 kV. From the inverter/transformer skid, the AC collection would be installed below ground to the collector substation.

The electrical collection system will be site-specific depending on geotechnical analysis, constructability, and availability of materials. Final engineering and procurement will help determine the construction method for the electrical collection system.

Inverters and transformers will be located on skids throughout the Preliminary Development Area. Final design of the inverter skids is still underway. If concrete foundations are needed for the skids, the foundations may be poured on site or precast off-site.

3.8.2.6 Collector Substation, ITC Switching Station, and Interconnecting Transmission Line Construction

The Collector Substation footprint will be approximately 3.5 acres. The Collector Substation will include the main power transformer, which will step the collection system voltage up to the transmission interconnection voltage. The area within the substation will be graveled to minimize vegetation growth and reduce fire risk. The substation will be fenced with a 6-foot woven wire fabric fence, topped with 1 foot of three strands of barbed wire to extend 7 feet for security and safety purposes, as required by NEC and NESC.

Construction work within the substation site will include site preparation and installation of substructures and electrical equipment. Installation of concrete foundations and embedment for equipment will require the use of trenching machines, concrete trucks and pumpers, vibrators, forklifts, boom trucks, and large cranes. Above-ground and below-ground conduits from this equipment will run to a control enclosure that will house the protection, control, and automation relay panels. A station service transformer will be installed for primary AC power requirements. Batteries and battery chargers will be installed inside the enclosure for auxiliary power to the switchyard's control system. Crushed rock will cover the area of the substation and adequate lighting will be installed around the substation for worker safety during construction and operation.

One of two methods will be used to install substation foundations. Option 1 would be to use a small rubber tire backhoe to dig out major foundations prior to pouring concrete slabs. Option 2 would use an auger/drill type machine for minor foundations.

In both scenarios, the limit of disturbance will be within the footprint of the substation for both the foundation equipment and the concrete delivery trucks. All topsoil from the substation footprint will be removed to a pre-established suitable location for storage. The storage area will be near the site where the soil was removed, accurately located (GPS boundary, soil depth), and graded to facilitate revegetation. Subsoil will be removed, if necessary, to an acceptable pre-established and

approved area for storage. After decommissioning, subsoil will be returned to the area from which it was excavated (as needed), topsoil will be replaced, and the area will be brought back to pre-construction contours.

3.8.2.7 BESS Construction Activities

BESS installations are similar to installations of other substation equipment such as transformers and switchgear. Typical construction equipment such as excavators, bulldozers, and cranes will be used to install the BESS. The BESS containers include battery racks and HVAC equipment with significant static loads; therefore, the foundations will be constructed on steel reinforced concrete foundations or pads that can accommodate the heavy loads and will be designed based on regional soil conditions.

BESSs require similar safety awareness to other substations and solar PV equipment especially related to electrical safety associated with high voltage AC and DC hazards. Strict adherence to NFPA-70E shall be followed as related to electrical safety. All batteries shall be certified by the manufacturer to comply with Underwriters Laboratories standard UL9540A at the cell, module, and unit (rack) level. Adherence to NFPA-855 shall be followed including facilitation of a Hazard Mitigation Analysis workshop by all stakeholders including the battery manufacturer, the battery integrator, the installer, and the local fire department. A fire alarm system will be integrated into the BESS to help identify and communicate any alarms and give proper notification to the operations team

Construction of the BESS will begin with grading and site leveling, including clearing and grubbing of trees. Topsoil will be segregated and placed in a designated location. Construction of the BESS will require grading of approximately 8.2 acres.

Prior to BESS site grading, feeder cable runs from the Collector Substation and site grounding grid materials will be installed via excavated trenches. Groups of feeder cables may be installed inside cable tramways or other enclosed cable housing. The BESS needs to be installed on a relatively flat surface; therefore, site grading will be required followed by the placement of sub-base and final base aggregate material. The BESS container foundations and pads will likely be excavated and installed before the final base aggregate is placed.

The BESS containers will be brought to the site on flatbed semi-trailers. They will be placed on concrete pads, and the containers will be fastened to concrete pads with anchor bolts. Adequate lighting will be installed around the BESS site for worker safety during construction and operation. Lighting will be downlit and controlled via timers, sensors, and switches to limit light usage to the extent necessary to meet safety and security requirements. Though fires are unexpected and unlikely, hazard mitigation measures will be utilized to avoid BESS fire safety risks including storing lithium-ion batteries in weather-proof enclosures that include a fully integrated HVAC system for temperature control, sensors and controls for remote monitoring, and built-in fire detection and suppression.

3.8.3 Post-Construction

3.8.3.1 Commissioning

The Solar Facility, Collector Substation, and BESS will undergo equipment inspection and testing prior to beginning commercial operations and in compliance with SUP requirements. Individual and combined inspection and testing will occur for each component of the facilities. These components include, but are not limited to, the solar array; associated communication, meteorological, collection, SCADA systems; battery modules; and BESS on-board monitoring systems. Testing, inspections, and commissioning will occur periodically during construction and upon completion of the construction phase.

3.8.3.2 Restoration

Following construction, areas that will not contain permanent facilities will be stabilized with sediment stabilization and erosion control measures, such as silt fence and bio-logs, and re-vegetated. The method of vegetation maintenance is yet to be determined and may take the form of mowing (traditional or haying) or sheep, lamb, or goat grazers, depending on agreements with landowners and site feasibility.

Disturbed areas will be reseeded and re-vegetated with specific seed mixes suitable for site conditions and not comprised of invasive or noxious weeds in accordance with the Project Vegetation Management Plan and Project Stormwater Pollution Prevention Plan. Seed mixes will be designed to be used with the vegetation management practices of periodic mowing, grazing, and selective spot herbicide applications. All areas that will not contain permanent facilities will be stabilized with erosion control measures, such as silt fence, sediment control logs, temporary seeding, and mulching as needed until permanent vegetation has been established. Additionally, a temporary cover crop will be planted with the perennial seed mixes to stabilize the soil and prevent erosion during the time it takes for the seeds to establish.

Lakeside anticipates that the short-term establishment practices will occur from years 0 through 3 (the Establishment Phase), with long-term maintenance practices occurring from year 4 onward. Vegetation is expected to be fully established during the third growing season after the native seed mix is planted. The long-term goal is to vegetate 95 percent of the Project site with at least 90 percent of the cover comprised of native species. The Vegetation Management Plan provides a guide to site preparation, installation of prescribed seed mixes, management of invasive species and noxious weeds, and control of erosion/sedimentation. The required restoration management is designed to continue for five years. The Vegetation Management Plan outlines vegetation management tasks during the establishment and perpetual maintenance phases including monitoring for and treating invasive species, mowing, and re-seeding.

An adaptive management approach for vegetation management is a component of the Vegetation Management Plan. Monitoring vegetation during the active growing season (May to September) is a key aspect of adaptive management and will be useful in identifying issues, tracking progress, and reevaluating management needs.

The Vegetation Management Plan outlines several vegetation maintenance strategies that may be implemented at the Project including mowing, herbicide use, and grazing. Mowing may be used when vegetation reaches a height of approximately 18 to 24 inches initially to bring it back to a height of roughly 6 to 9 inches and will help control weed species until natives become established. Mowing is prescribed in the Vegetation Management Plan. Herbicides will be employed where it is determined that mowing alone will not accomplish perennial weed control. Alternatively, livestock (e.g. sheep or goats) may be used where grazing proves to be a more viable long-term management strategy.

3.9 Compliance, Maintenance, and Repair

Lakeside will be professionally maintained and operated. Primary tasks include scheduled monthly and quarterly inspection(s) of electrical equipment, ongoing vegetation management, general good housekeeping, snow removal on access corridors as needed, and daily monitoring. A list of O&M tasks and their frequency is provided in Table 3.9-1. The table represents the anticipated preliminary frequency of these tasks. The frequency of inspection may vary based on facility demands and experience with performance of certain components and systems.

Table 3.9-1 Operations and Maintenance Tasks and Frequency

Plant Device	Task	Preliminary Frequency
Photovoltaic Field	Photovoltaic Panels visual check	Once yearly
	Wirings and junction boxes visual check	Once yearly
	PV strings measurement of the insulation	Once yearly
	Advanced diagnostics	At owner's direction
	Overview aerial thermal scan	Once yearly
	PV strings and string boxes faults	Once yearly
	PV panels washing	No regular washing planned (only as site-specific conditions warrant)
	Vegetation Management (if necessary at site)	Up to three times a year depending on site conditions
BESS	System Visual Inspection	Quarterly
	Filter Inspection	Quarterly
	Fire Safety system Inspection and Maintenance	Once yearly
Electric Boards	Case visual check	Once yearly
	Fuses check	Once yearly
	Surge arresters check	Once yearly
	Torque check	Once yearly
	DC voltage and current check	Once yearly
	Grounding check	Once yearly
Inverter	Case visual inspection	Once yearly

Table 3.9-1 Operations and Maintenance Tasks and Frequency		
Plant Device	**Task**	**Preliminary Frequency**
	Air intake and filters inspections	Once yearly
	Conversion stop for lack of voltage	Once yearly
	AC voltage and current check	Once yearly
	Conversion efficiency inspection	Once yearly
	Datalogger memory download	Once yearly
	Fuses check	Once yearly
	Grounding check	Once yearly
	Torque check	Once yearly
Support Structures	Visual check	Once yearly
	PV panels toque check on random sample	Once yearly

It is expected that 2 to 3 employees will be onsite on a regular basis with business hours from approximately 7:00 a.m. to 5:00 p.m., five days a week. Depending on vegetation management needs or equipment servicing, additional staff may be on site from day to day. Personnel may be onsite outside of business hours due to special circumstances.

Performance monitoring will consist of a real-time and continuous collection of data acquired by the onsite meteorological station, energy meter, and SCADA. The SCADA system provides data on solar energy generation and production, availability, meteorology, and communications. The solar modules will communicate directly with the SCADA system for remote performance monitoring, energy reporting, and troubleshooting. Operators will be notified immediately of any abnormalities allowing for timely corrective action regardless of the time of day.

Damage to solar modules can occur during offload from delivery vehicles and during installation; damage to solar modules during operation is uncommon. During module deliveries, which may take place along an internal Project access road in any part of the solar arrays, if damaged modules are found, they will be segregated and documented for processing. The same process is followed if a module is damaged during the installation process.

A small number of modules are typically found to be broken after installation. Lakeside will look for these modules during row-by-row inspections prior to final inspections. When a damaged solar module is identified, it will be removed and replaced. The broken modules will be stored in a laydown yard until a sufficient number for shipping are collected, then they will be sent to a disposal facility or recycler, like SolarCycle.

The BESS will have a Battery Management System that will allow automated monitoring and managing of the batteries to ensure design performance, as well as provide control for the charging/discharging of the batteries along with temperature monitoring and control of the individual battery cell temperature with an integrated cooling system.

Performance monitoring of the Solar Facility and BESS will consist of a weekly or monthly download of the data acquired by the onsite meteorological stations and SCADA system (energy produced, alarms, faults, etc.) and the Battery Management System.

On-going maintenance of a BESS typically involves servicing the moving equipment (HVAC systems, fans, and filters) and monitoring battery performance and degradation. It is anticipated that the BESS will be augmented over the duration of the project life cycle (typically, every 4-6 years) where additional battery enclosures are added to replace degraded energy capacity, as discussed in Section 3.2. Proper site shut-down procedures will be followed during these battery augmentation periods.

Lakeside will correct or remedy any maintenance, repair, or safety hazard identified by the Zoning Administrator or Compliance Officer within 30 days, as applicable. Lakeside with provide access to the White River Township to inspect the Project at reasonable times as per the SUP. If the township inspector determines action is needed in the form of maintenance or repairs or to improve safety, Lakeside will remedy the situation in a prompt manner. For the safety of the inspector, facility employees, and the general public, the inspector must check in with facility management, be accompanied at all time on site and follow safety protocols.

3.10 Abandonment, Decommissioning, and Restoration

Decommissioning of the Project will begin after abandonment or the end of its useful life and will be completed within 30 weeks. The Project Decommissioning Plan is summarized in Section 5.6 and the Decommissioning Plan is provided in Appendix G.

3.11 Emergency Personnel

Lakeside has developed an Operations and Emergency Action Plan (refer to Appendix G) which includes a response plan in case of a fire. The applicable contents of these plans will be shared with the applicable agencies and services, including the local fire department. As discussed in Section 3.5, an electronic security system or Knox boxes with keys will be utilized at Project entrances for emergency services, and signage will meet requirements. The Operations and Emergency Action Plan outlines emergency contacts, fire prevention, inspection and maintenance plan, and emergency procedures for evacuation, fire response, extreme weather, injury, and criminal behavior.

If emergency personnel were needed for the Project, multiple agencies would likely respond, depending on the situation. These agencies include the Montague Fire Authority and Montague Police Department. The nearest emergency medical facility is the Mercy Health Urgent Care Whitehall.

BESSs require similar safety awareness to other substation and solar PV equipment, especially related to electrical safety associated with high voltage AC and DC hazards. Lakeside will strictly adhere to NFPA-70E as related to electrical safety. All batteries shall be certified by the manufacturer to comply with Underwriters Laboratories standard UL9540A at the cell, module, and unit (rack) level. Lakeside will adherence to NFPA-855, including facilitation of a Hazard

Mitigation Analysis workshop by all stakeholders including the battery manufacturer, the battery integrator, the installer, and the local fire department.

3.12 Inspection

Lakeside recognizes the right for the Township, or a representative of the Township, to perform inspections at reasonable times to the facility to ensure compliance with the applicable regulations, codes, and the SUP. If the Township inspector determines action is needed in the form of maintenance or repairs or to improve safety, Lakeside will remedy the situation in a prompt manner. For the safety of the inspector, facility employees, and the general public, the inspector must check in with facility management, be accompanied at all time on site and follow safety protocols.

3.13 Insurance

Lakeside will carry the required liability insurance in the amount of at least two million dollars, as required for the solar energy system. This insurance will be adjusted every 5 years pursuant to the federal Consumer Price Index. Lakeside will provide proof of this insurance within 30 days of receiving a written request from the Township.

Lakeside will carry property/casualty insurance and general commercial liability insurance in an amount of at least five million for the BESS. The Township shall be listed as an additional insured on each policy. Property insurance will be in place upon commencement of Project construction/mobilization. Lakeside will provide proof of insurance in an annual report to White River Township regarding the BESS.

4 IMPACTS AND MITIGATION

4.1 Screening, Landscaping, and Visual Impacts

The topography of the Land Control Area is generally level throughout with more hills in the west and northwest portions of the Land Control Area. Elevations in the Land Control Area range from 600 to 700 feet (183 to 213 meters) above mean sea level with the highest elevations in the northwestern portion of the Land Control Area. Land use is predominantly agricultural, with corn, soybean, and forage crops being the most common crops. There are narrow swaths of trees (i.e., windbreaks) or small woodlots surrounding or partially surrounding farmsteads that are adjacent to the Land Control Area, and most farmsteads also include agricultural buildings. Additionally, smaller forests and isolated woodlots are dispersed throughout the Land Control Area. The area within one mile of the Land Control Area on the west, north, and south sides is predominantly forested with scattered agricultural fields and rural residences. East of the Land Control Area is predominantly agricultural and rural with scattered farmsteads situated along public roads.

The proposed Collector Substation and ITC Switching Station (i.e., the POI for the Project) are in the southeastern portion of the Land Control Area, southwest of the intersection of Eilers Road and Lamos Road. The 138 kV Du Pont – Cobb transmission bisects the Land Control Area in Sections 13 and 24 and travels north/south in the southeastern corner of the Land Control Area (refer to Map 2 in Appendix E). No other known utility-scale energy generation facilities are located within the Land Control Area.

A total of 675 residences is present within 1 mile of the Land Control Area (refer to Map 4 in Appendix E). Table 4.1-1 shows the number of the 675 residences that are within 1 mile of the Land Control Area are within 1 mile of the Preliminary Development Area, the solar arrays, and the BESS facility.

Table 4.1-1 Residences within 1 Mile of the Land Control Area [1]

Distance	Preliminary Development Area	Solar Arrays	BESS Facility
≤ 50 feet	0	0	0
51 feet to 150 feet	2	0	0
151 feet to 300 feet	19	11	0
301 feet to 500 feet	41	49	0
501 feet to 1,000 feet	65	66	1
1,001 feet to 5,280 feet (1.0 mile)	540	538	185
PROJECT TOTAL	**667**	**664**	**186**

[1] Totals do not differentiate between participating and non-participating residences.

Some of the residences that are adjacent to or surrounded by the Land Control Area have trees and narrow windbreaks on two to three sides of the property that will provide some natural vegetative screening.

4.1.1 Impacts and Mitigation Measures

The Project will utilize approximately 982 acres of predominately agricultural land for a solar facility and BESS characterized by complex geometric forms, lines, and surfaces that will be divergent from the surrounding rural landscape. Most of the Preliminary Development Area will be filled with rows of low-profile solar photovoltaic panels and perennial vegetation.

In addition to the solar arrays, aboveground Project components within the Preliminary Development Area will be most visible to residences and passersby on public roads including the BESS facility, Collector Substation, inverters, O&M building, fence line, ITC Switching Station, and interconnecting transmission lines structures. Access roads throughout the Preliminary Development Area will also be visible. Most of these facilities will also be low-profile. If the hybrid electrical configuration is selected, cabling will be strung under each row of panels on steel arms and a steel cable attached to the piles. At the end of each row, hanging brackets would connect several racks/rows of cables to a common collection point near their assigned inverter/transformer skid where the cables will be routed below-ground. The above-ground cabling would not likely be visible outside the facility due to a combination of line of sight with other components (arrays, inverters), distance from observer, and existing vegetative screening around residences.

Structures for the interconnecting transmission lines would be less than 150 feet in height and will be limited to the area between the proposed Collector Substation, ITC Switching Station, and the existing transmission line. The Collector Substation and the transmission line are approximately 1,280 feet apart. The interconnecting transmission line structures will be visible from the local roadways but will be similar to the existing visual environment, which contains an existing electric transmission corridor.

Lakeside has designed the Project to avoid and minimize clearing trees within windbreaks surrounding existing residences to provide some natural vegetative screening. Where existing vegetation adequately shields, screening is not proposed. However, as required by White River Township's ordinance, a visual landscape buffer of evergreens and / or evergreens combined with deciduous trees and shrubs will be utilized to screen the Project from adjacent homes where necessary. The existing vegetation and proposed screening (when at mature height), minimizes any direct visual impacts to the surrounding area. Lakeside's plans for vegetative landscape screening are described in the Civil Permitting Plans and depicted on the Detailed Site Plan in Appendix B.

Lakeside has coordinated with Project participants and sent mailings to adjacent landowners to inform them of the Project. Lakeside is committed to working with adjacent landowners to provide vegetative screening where appropriate. The Project has proposed a landscape plan for the Planning Commission to consider through the SUP process. Screening and buffering are consistent with the applicable requirements of Section 16.06MM of the White Lake Township Ordinance (White River Township, 2024a). In areas where the Solar Facility abuts, or is across the road from, a residential use and the residential use is not screened by natural vegetation, the perimeter within 100 feet from the residence or property boundary is screened and buffered by landscaped earthen berm or installed evergreen or native vegetative planting in accordance with White Lake Township Ordinance. Screening is not proposed for the areas of the Project where natural vegetation already obscures the viewshed. The forested area south of the BESS is not proposed for clearing as part of

the Project; this vegetative buffer will remain in place and provide visual screening for the residences along Post Road.

Sample visual renderings and line of sight studies for the Solar Facility and BESS are provided as supporting documents to the Application in Appendix I. Visual renderings give a conceptual image of an existing viewshed of an area now and an image when screening is at full maturity. Sightline studies depict numerous viewsheds of the Project with profile diagrams. These diagrams demonstrate that vegetation and appropriate setbacks will substantially reduce Project visibility from adjacent homes and the public right-of-way.

4.2 Ground Cover

After the solar panels and other infrastructure are constructed, native seed mixes developed for the Project will be installed on site as directed by Lakeside in accordance with the Vegetation Management Plan (refer to Appendix G). A desktop review of the site revealed that the Project is located on a historical glacial lake plain and is comprised of over 25 percent hydric soils. As a result, three native seed mixes are recommended for planting and include a mesic mix under and around the arrays in upland areas of the site, a wet-mesic mix under and around the arrays and in low areas of the site and in any areas that are known or predicted to hold surface water for part of the growing season (seasonally inundated), and a wet mix around constructed stormwater basins, existing ponds, and irrigation ditches. The three seed mixes developed for the Project are listed in Appendix 1 of the Vegetation Management Plan contained in Appendix G of this Application.

The three mixes prepared for the site have been designed to be used whether Lakeside employs mowing or grazing with sheep for perpetual maintenance. Genetic source origin of all native seed will be local, and a reasonable effort will be made to source seeds within the ecoregion. The plant species will be native to Muskegon County (considerations of range shifts due to climate change may modify this guidance). Any species eliminations, substitutions, or source origin exceptions must be approved by Lakeside prior to installation. Tasks to ensure successful establishment and management are described in the Vegetation Management Plan (refer to Appendix G). Vegetation management will result in a diverse plant community dominated by native species.

Lakeside anticipates that the short-term establishment practices will occur from years 0 through 3 (the Establishment Phase), with long-term maintenance practices occurring from year 4 onward. Vegetation is expected to be fully established during the third growing season after the native seed mix is planted. The long-term goal is to vegetate 95 percent of the Project site with at least 90 percent of the species being native. The Vegetation Management Plan provides a guide to site preparation, installation of prescribed seed mixes, management of invasive species and noxious weeds, and control of erosion/sedimentation. The required restoration management is designed to continue for 5 years. The Vegetation Management Plan outlines vegetation management tasks during the establishment and perpetual maintenance phases including monitoring for and treating invasive species, mowing, and re-seeding.

An adaptive management approach for vegetation management is a component of the Vegetation Management Plan. Monitoring vegetation during the active growing season (May to September)

is a key aspect of adaptive management and would be useful in identifying issues, tracking progress, and reevaluating management needs.

The Vegetation Management Plan outlines several vegetation maintenance strategies that may be implemented at the Project including mowing, herbicide use, and grazing. Mowing may be used when vegetation reaches a height of approximately 18 to 24 inches initially to bring it back to a height of roughly 6 to 9 inches and will help control weed species until natives become established. Mowing is prescribed in the Vegetation Management Plan. Herbicides will be employed where it is determined that mowing alone will not accomplish perennial weed control. Alternatively, livestock (e.g. sheep or goats) may be used experimentally where grazing proves to be a more viable long-term management strategy.

Following construction, areas that will not contain permanent facilities (i.e. laydown yards that will not be converted into permanent parking for operations) will be stabilized with sediment stabilization and erosion control measures, such as silt fence and biologs, and re-vegetated. The method of vegetation maintenance is yet to be determined and may take the form of mowing (traditional or haying), or sheep and/or lamb grazers, depending on agreements with landowners and site feasibility.

Disturbed areas will be reseeded and re-vegetated with specific seed mixes suitable for site conditions and not comprised of invasive or noxious weeds as well as in accordance with the Project Stormwater Pollution Prevention Plan. Seed mixes will be designed to be used with the vegetation management practices of periodic mowing, grazing, and selective spot herbicide applications. All areas that will not contain permanent facilities (i.e., laydown yards, and stormwater basins) will be stabilized with erosion control measures, such as silt fence, sediment control logs, temporary seeding, and mulching as needed until permanent vegetation has been established. Additionally, a temporary cover crop will be planted with the perennial seed mixes to stabilize the soil and prevent erosion during the time it takes for the seeds to establish.

4.3 Agricultural Protection

4.3.1 Farmland Description within the Project

White River Township has approximately 4,000 acres of farmland (Langworthy Strader LeBlanc & Associates, 2005; White River Township, 2012). The Project is primarily located within agricultural land use. Current land uses within the Land Control Area and the 1,000-foot buffer were determined through review of land use/cover information from the USGS National Land Cover Database (NLCD). Land cover / land use within the Land Control Area and buffer is illustrated on Map 5 in Appendix E.

A total of approximately 3,459 acres of land exists within the combined Land Control Area and 1,000-foot buffer. Agricultural land represents 76 percent of the combined Land Control Area and 1,000-foot buffer (USGS, 2025a). A total of approximately 1,576 acres of land is within the Land Control Area and approximately 89 percent (1,399 acres) of the Land Control Area is comprised of agricultural land according to the NLCD.

4.3.2 Prime Farmland

According to the White River Township, Muskegon County, Michigan Zoning Ordinance (White River Township, 2024a) prime agricultural soils or areas are defined as the following.

- Any land or property in a contract or program pursuant to Michigan Public Act No. 116 of 1974, as amended, being MCL 324.36101 et seq. (commonly called "PA 116").
- Any land or property in or subject to a conservation easement, farmland preservation agreement or the equivalent.
- Any land or property shown as "prime farmland" on a current or future White River Township Master Plan Map (entitled Prime Farmland).
- Any land or property identified as prime farmland by the Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture (USDA).

4.3.2.1 Farmland and Open Space Preservation Program (PA 116)

The MDARD Farmland and Open Space Preservation Program (PA 116) is designed to protect farmland and open space through agreements that restrict development and provide tax incentives for program participation (MDARD, 2025a). By enrolling farmland in the program for a minimum of 10 years, the landowner may be entitled to certain income tax benefits, and the land will not be subject to special assessments for sanitary sewer, water, lights, or non-farm drain projects. The mission of the program is to preserve farmland and open space from being developed for non-agricultural uses.

A total of nine properties enrolled in the PA 116 program overlap with the Land Control Area. There are a total of approximately 307 acres associated with the nine properties; portions of some parcels extend beyond the Land Control Area. An overview of the PA 116 program lands is provided on Map 6 in Appendix E. A list of enrolled property parcel numbers is provided below in Table 4.3.2-1.

Table 4.3.2-1 PA 116 Lands within the Land Control Area

Parcel Number
61-01-123-200-0004-00
61-01-123-200-0001-00
61-01-114-400-0005-00
61-01-114-300-0004-00
61-01-113-300-0004-00
61-01-113-300-0003-00
61-01-113-100-0004-00
61-01-113-100-0008-00
61-01-114-400-0004-00

No additional properties within the Land Control Area and applied 1,000-foot buffer are enrolled in other conservation programs based upon review of National Conservation Easement Database (MDARD, 2025b). Properties enrolled in the Conservation Reserve Enhancement Program do not occur in the Land Control Area (National Conservation Easement Database, 2025) based upon current engagement with landowners. Prime Farmland Soils

Prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, and oilseed crops, and is also available for these uses (USDA NRCS, 2024). Current land use could be row crop agricultural production, pasture, woodland, or other land uses; not all prime farmland is currently used for agricultural production. Urbanized land and open water cannot be designated as prime farmland. Prime farmland typically contains few or no rocks, is permeable to water and air, is not excessively erodible or saturated with water for long periods and is not subject to frequent or prolonged flooding during the growing season. Soils that do not meet the above criteria may be considered prime farmland if the limiting factor is mitigated (e.g., by draining or irrigating).

Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables (USDA NRCS, 2024). In some areas that are not identified as having national or statewide importance, land is considered to be farmland of local importance for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance (USDA NRCS, 2025a).

Table 4.3.2-2 lists the soils considered prime farmland, farmland of unique importance, and farmland of local importance within the Land Control Area and applied 1,000-foot buffer. Map 7 in Appendix E depicts the distribution of prime farmland, prime farmland if drained, farmland of local importance and farmland of unique importance as well as areas not classified as prime farmland in the Land Control Area and 1,000-foot buffer.

Table 4.3.2-2 Summary of Farmland Classification within the Land Control Area and 1,000-foot Buffer

Map Unit Symbol	Map Unit Name	Land Control Area (acres / %)	Land Control Area with 1,000 foot buffer (acres / %)	Farmland Classification
BaB	Belding and Allendale soils, 0 to 6 percent slopes	175.2 / 11.1%	198.0/ 10.5%	Farmland of local importance
BbB	Belding-Ubly sandy loams, 2 to 6 percent slopes	108.6 / 6.9%	133.0 / 7.1%	Prime farmland if drained
BNL	Blownout land	--	2.2 / 0.15%	Not prime farmland

Table 4.3.2-2 Summary of Farmland Classification within the Land Control Area and 1,000-foot Buffer

Map Unit Symbol	Map Unit Name	Land Control Area (acres / %)	Land Control Area with 1,000 foot buffer (acres / %)	Farmland Classification
ClmaaB	Coloma-Brems-Fern complex, 0 to 6 percent slopes	81.6 / 5.2%	45.5 / 2.4%	Not prime farmland
ClmaaC	Coloma-Brems-Metea complex, 6 to 12 percent slopes	2.2 / 0.1%	15.9/ 0.8%	Not prime farmland
CovabB	Covert-Pipestone sands, 0 to 6 percent slopes	69.0 / 4.4%	223.2 / 11.9%	Not prime farmland
Ga	Granby loamy sand, 0 to 2 percent slopes	--	5.0 / 0.3%	Farmland of local importance
Hp	Hettinger and Pickford soils	51.3 / 3.3%	56.3 / 3%	Farmland of local importance
KaB	Kalkaska-Wallace sands	--	<1.0 / <0.05%	Not prime farmland
KkA	Kawkawlin loam, 0 to 2 percent slopes	72.5 / 4.6%	18.3 / 1%	Prime farmland if drained
KkB	Kawkawlin loam, 2 to 6 percent slopes	16.3 / 1%	20.7 / 1.1%	Prime farmland if drained
MeB	Menominee and Ubly soils, 2 to 6 percent slopes	36.9 / 2.3%	42.6 / 2.3%	Farmland of local importance
NeC	Onekama loam, 6 to 12 percent slopes	4.4 / 0.3%	13.3 / 0.7%	Farmland of local importance
NID	Nester soils,12 to 25 percent slopes	4.9 / 0.3%	5.3 / 0.3%	Farmland of unique importance
NrC	Nester sandy loam, 6 to 12 percent slopes	54.9 / 3.5%	86.5 / 4.6%	Farmland of local importance
NsE	Nester soils, 12 to 45 percent slopes	2.7 / 0.2%	5.6 / 0.3%	Not prime farmland
NtB	Nester-Kawkawlin loams, 2 to 6 percent slopes	84.0 / 5.3%	172.9 / 9.2%	All areas are prime farmland
NuB	Nester-Ubly sandy loams, 2 to 6 percent slopes	393.9 / 25%	213.9.0 / 11.4%	All areas are prime farmland
PlfabB	Plainfield sand 0 to 6 percent slopes	44.0 / 2.8%	194.2 / 10.3%	Not prime farmland
PlfabD	Plainfield sand, 6 to 18 percent slopes	0.07 / 0.004%	24.7 / 1.3%	Not prime farmland

Table 4.3.2-2 Summary of Farmland Classification within the Land Control Area and 1,000-foot Buffer

Map Unit Symbol	Map Unit Name	Land Control Area (acres / %)	Land Control Area with 1,000 foot buffer (acres / %)	Farmland Classification
PlfabE	Plainfield sand, 18 to 30 percent slopes0 to 6 percent slopes	0.7 / 0.04%	16.4 / 0.9%	Not prime farmland
PlfafF	Plainfield-Metea-Spinks complex	--	<1.0 / <0.05%	Not prime farmland
PpsaaA	Plainfield sand, 0 to 3 percent slopes	4.2 / 0.3%	14.0 / 0.7%	Not prime farmland
Ra	Roscommon and Au Gres sands	1.9 / 0.1%	54.2 / 2.9%	Not prime farmland
Sm	Sims loam	45.3 / 2.9%	41.0 / 2.2%	Prime farmland if drained
SnkaaB	Spinks loamy sand, 0 to 6 percent slopes	32.4/ 2.1%	115.5 / 6.1%	Not prime farmland
So	Sloan soils	--	2.9 / 0.2%	Prime farmland if drained either protected from flooding or not frequently flooded during the growing season
Tc	Tawas and Carlisle mucks	1.0 / 0.06%	30.0 / 1.6%	Farmland of local importance
Td	Tonkey and Deford soils	288.3 / 18.3%	127.2 / 6.8%	Prime farmland if drained
TknabD	Tekenink-Spinks loamy sands	--	2.1 / 0.1%	Not Prime farmland
w	Water	--	1.2 / 0.06%	NA
PROJECT TOTAL [1]		**1,576.3 / 100%**	**1,881.6 / 100%**	

Source: Soil Survey Staff, 2025
[1] The sum of addends may not total due to rounding.

Within Muskegon County, there are approximately 71,389.7 acres of soils listed as prime farmland, (including if mitigated), and farmland of local or unique importance. Approximately 2,504.1 acres (72.4 percent) of the Land Control Area and applied 1,000-foot buffer is classified as prime farmland, including prime farmland if mitigated, farmland of local importance, and farmland of unique importance. Approximately 1,736 acres (50.2 percent) of the Land Control Area and 1,000-foot buffer are comprised of prime farmland and prime farmland, if mitigated.

Table 4.3.2-3 Farmland Classifications within the Land Control Area		
Farmland Classification	**Muskegon County (acres/ %)**	**Land Control Area and 1,000 Buffer (acres / %)**
Prime Farmland	22,851.5 / 6.8%	864.6 / 25%
Prime Farmland if Drained	13,847.3 / 4.1%	871.1 / 25.2%
Prime Farmland if Drained and either Protected from Flooding or not Frequently Flooded During the Growing Season	5,057.0 / 1.5%	2.9 / 0.084%
Farmland of Local Importance	27,138.6 / 8.0%	755.3 / 21.8%
Farmland of Unique Importance	2,495.3 / 0.7%	10.2 / 0.29%
Not Prime Farmland	266,153.2 / 78.9%	954.5 / 27.6%
TOTAL	**337,542.9 / 100%**	**3,458.6 / 100%**

While primarily cultivated cropland and some hay/pastureland is present in the Land Control Area, no areas used for specialty crop production were identified based upon review of Google Earth and parcel information. However, specialty farms such as the Degen Sunflower Farm, Scholl Farms (pumpkin patch), and Jawor Brothers Blueberries are located within 1,000 feet of the Land Control Area. The specialty farms are illustrated in Appendix E on Map 7.

4.3.3 Impacts and Mitigation Measures

Within the 1,576-acre Land Control Area, approximately 982 acres of land may be needed to construct and operate the Project, based on the preliminary design described throughout this Application (i.e., the Preliminary Development Area). Approximately 966 acres (98 percent) of the land in the Preliminary Development Area is agricultural land (cultivated crop and hay/pasture land) according to the USGS NLCD (USGS, 2025a).

Agricultural land in the Preliminary Development Area will be utilized for solar energy generation and battery storage use for the life of the Project. The Project will be designed, constructed, operated, and maintained in a manner that is harmonious with the character of the surrounding area as an agrivoltaic Solar Energy System, which operates harmoniously with agricultural uses as this colocation practice can benefit the farmer, pollinators, and potentially livestock. While conversion of agricultural land is necessary to construct and operate the Project, land in the Preliminary Development Area will be returned to agricultural use after the Project is decommissioned. Implementation of BMPs prior to, during, and following construction will ensure a reasonable return to agricultural use. BMPs are discussed in greater detail within subsection 4.3.3.2.

4.3.3.1 Farmland and Open Space Preservation Program (PA 116)

Lakeside is proposing to utilize parcels that are enrolled in the PA 116 program with MDARD. Approximately nine parcels in the Land Control Area are enrolled in the PA 116 program (refer to Map 6 in Appendix E) and are within or partially within the Preliminary Development Area. A total of approximately 130.2 acres across these nine parcels fall within the Preliminary Development Area and will be affected by the Project (American Farmland Trust, 2025).

Development of the Project on lands within the PA 116 program will be completed in accordance with the MDARD's *Policy for Allowing Commercial Solar Panel Development on PA 116 Lands* (MDARD, 2025c). An administrative process will take place between the Project, landowner, and MDARD, prior to construction commencing on parcels actively enrolled in the PA 116 program. The policy also requires pollinator plantings, financial surety, maintenance of drainage features if applicable and return to agricultural use. Lakeside's coordination with landowners enrolled in the PA 116 lands and MDARD is on-going.

4.3.3.2 Prime Farmland Soils

A majority of the Preliminary Development Area is within areas of prime farmland. As shown in Table 4.3.3-2, soils within the Preliminary Development Area are classified as prime farmland, prime farmland if drained (mitigated), farmland of local or unique importance or not prime farmland. However, it is important to note that the prime farmland designation is independent of current land use (USDA NRCS, 2024). Approximately 851 acres (87.6 percent) of the Preliminary Development Area is classified as prime farmland, including prime farmland if drained, farmland of local importance, and farmland of unique importance. A majority of the impacts (approximately 662.5 acres) from the Project will occur to prime farmland and prime farmland (if mitigated through draining), approximately 34 percent and 33 percent, respectively. A total of approximately 188.4 acres (19.2 percent) within the Preliminary Development Area are represented by Farmland of Local or Unique Importance. The Project will not unreasonably diminish farmland as approximately 850.9 acres (1.2 percent) of prime farmland (including if mitigated) and farmland of local or unique importance within the county will be affected.

Table 4.3.3-2 Farmland Classifications within the Preliminary Development Area

Farmland Classification	Preliminary Development Area (acres / %)
Prime Farmland	336.6 / 34.3%
Prime Farmland if Drained	325.9 / 33.2%
Prime Farmland if Drained and either Protected from Flooding or not Frequently Flooded During the Growing Season	0.0 / 0%
Farmland of Local Importance	184.8 / 18.8%
Farmland of Unique Importance	3.6 / 0.4%
Not Prime Farmland	131.2 / 13.4%
PROJECT TOTAL	**982.1/ 100.0%**

Source: Soil Survey Staff, 2025.

Prime farmland within the Preliminary Development Area will be vegetated in accordance with the seeding and management specifications in the Vegetation Management Plan (see Appendix G), which will benefit the soil as well as wildlife over the operational life of the Project. Removing the land from agricultural production may be beneficial for limiting nitrogen infiltration into groundwater supply, thereby improving groundwater quality during the life expectancy of the Project. Lakeside anticipates that the Preliminary Development Area will be restored to agricultural use upon decommissioning of the Project.

Due to the amount of agricultural land in the Preliminary Development Area, Lakeside will incorporate protective measures to conserve soil and promote agricultural use following the decommissioning of the Project, including BMPs that will be used during construction to minimize long-term impacts to soil. Mitigative measures Lakeside and its contractors may implement are described below demonstrate the land will be reasonably capable of maintaining agricultural operations and/or a return to agricultural production upon decommissioning of the Project.

Mitigative measures may include the following activities:

- Minimize clearing, grubbing and grading and maintain topography on site as much as practicable to allow soils to remain intact.
- Stabilization of soils with a cover crop, if applicable with construction schedule, where vegetation is not present due to vegetation or row-crop debris removal and site clearing.
- Strip, segregate and conserve topsoil during construction activities such as permanent access road and inverter installations and place topsoil at preselected areas to receive excess topsoil, grade and prepare the seed bed as appropriate, and revegetate to maintain for suitable plant growth.
- Identify storage areas to receive topsoil from nearby areas and recorded (GPS boundary and depth) on site maps to facilitate final reclamation after decommissioning.
- Strip the topsoil (up to a maximum depth of 12 inches) using a small backhoe from the trenched area created to install the below-ground AC collection system and temporarily store the soil adjacent to the trench. Once cables are installed, backfill the trenches using a small, rubber tire or tracked backhoe and compaction equipment. Replace the topsoil to the restored trench line and re-establish the pre-construction contour using a small front-end loader.
- Remove all topsoil from the substation footprint and / or BESS location, if necessary, to a pre-established suitable location for storage near the site where the soil was removed, accurately locate (GPS boundary, soil depth) and grade to facilitate revegetation. Remove the subsoil, if necessary, to an acceptable pre-established and approved area for storage. After decommissioning, return the subsoil to the area from which it was excavated (as needed), replace the topsoil, and reestablish pre-construction contours.
- Install solar panels with a piling or screw system that does not require footing, concrete or other permanent mounting.
- Limit vehicular traffic to the extent practicable to permanent and temporary access roads to minimize soil disturbance, mixing and compaction during the array and racking assembly process.
- Design construction access and manage construction passes to minimize the number of trips occurring on a given soil.
- Utilize construction equipment consisting of smaller, low-ground-pressure tracked vehicles as applicable.

- Stage the solar panels in advance throughout the Preliminary Development Area and deliver to specific work areas for installation by wagon-type trailers pulled by small tractors or by all-terrain tracked equipment. Restrict the crews installing the Solar Facility along staked temporary access roads in a pre-established route to minimize off-road traffic.
- Vegetate stormwater basins with specified wet vegetation seed mix in accordance with the Vegetation Management Plan (refer to Appendix G) suitability and to facilitate soil stabilization following precipitation events.
- Backfill soil that is displaced by the auger during wooden fence post installation around the Solar Facility.
- Maintain drainage features, county drain systems and drain tiles to the extent practicable.
- Implement wet weather procedures any time that rutting is observed.
- After construction, and for the life of the Project, soils will be stabilized and soils given an opportunity to rest, as the site is revegetated in accordance with the Vegetation Management Plan.
- Manage seeding times when soil conditions are optimum for germination (and in consideration of the time of year of the construction schedule) and use mulch, specified cover crop and other BMPs as described in the Vegetation Management Plan (refer to Appendix G).
- Follow the Vegetation Management Plan (refer to Appendix G) for successful plant establishment and soil stabilization with respect to site preparation, seeding method, establishment monitoring, control of noxious weeds, reseeding bare ground as applicable and complying with maintenance tasks.

Agricultural production will continue in the surrounding areas during construction and operation of the Project. The revenue lost from removing land from agricultural production will be offset by the easement and purchase option agreements between Lakeside and the landowners. Areas disturbed during construction will also be repaired and restored to pre-construction contours and characteristics to an extent practicable. This restoration will allow the Project's land surfaces to drain properly, blend with the natural terrain, re-vegetate, and avoid soil erosion. Agricultural production could be allowed to continue in the area within the Land Control Area but outside the fence of the Preliminary Development Area during construction and operation of the Project. Any areas outside of the fence line that are not used for agricultural production will be seeded with the permanent seed mix. Similarly, if haying or grazing vegetation management strategies described in the Vegetation Management Plan are used, some agricultural activities would continue within the Preliminary Development Area.

4.4 Wildlife and Environmental Protection

4.4.1 Geology and Groundwater

Muskegon County lies within the Eastern Ridges and Lowlands of the Central Lowland Physiographic Province of the United States. Characteristic features of the Central Lowland province are flat lands with geomorphic remnants of glaciation (National Park Service, 2017). The

Land Control Area is located in the Chicago Lake Plain – North physiographic region, which is characterized by sandy, low relief topography and bounded by bluffs and sand dunes (Schaetzl et al., 2013). White River Township sits atop a landscape heavily shaped by glacial activity during the last Ice Age. The surface geology is defined by a mix of moraines and broad outwash plains created by meltwater streams depositing sand and gravel. These features give the area a rolling topography with flat expanses, punctuated by kettle lakes and depressional wetlands where ice blocks once melted (Farrand and Bell, 1982).

Beneath these glacial layers lies bedrock that dates back to the Devonian and Mississippian periods (Milstein, 1987). The primary rock types include shale, sandstone, and limestone, which are sedimentary rocks that accumulated in the ancient seas of what is now the Michigan Basin. This basin is a large geological bowl of layered sedimentary rocks, arranged in concentric circles around a central point in Michigan. The Project primarily sits atop the boundary between the Marshall Formation and Coldwater Shale bedrock geology. The Marshall Formation is a Mississippian-age sandstone known for its permeability and serves as an important regional aquifer in parts of Michigan. Beneath it lies the Coldwater Shale, a thick, fine-grained, gray to bluish shale that acts as a confining layer, limiting groundwater movement and marking the transition to deeper, less permeable bedrock units. The average depth to bedrock within White River Township is approximately 300 feet.

Muskegon County, including White River Township, features a groundwater system shaped by glacial deposits and sedimentary bedrock. The region's hydrology is characterized by a combination of surface water and groundwater interactions, supporting diverse ecosystems and water supply needs.

The White River watershed, encompassing parts of Muskegon, Newaygo, and Oceana counties, is a notable hydrologic system where local groundwater contributes to stream channels, maintaining cold temperatures vital for trout fisheries and sustaining regional lakes and wetlands. The watershed includes approximately 200,000 acres of forest, 43,000 acres of wetlands, and 6,300 acres of open water, with land use patterns influencing the hydrologic and ecological framework of the basin (Rediske et al, 2023).

In Muskegon County, about one-third of water users rely on groundwater from private or municipal wells (Muskegon County, 2025). Municipal systems in communities such as Ravenna, Whitehall, and Montague treat groundwater for public supply, serving thousands of households. The county's surface water resources, including numerous inland lakes and rivers, are interconnected with groundwater systems.

According to the EGLE Water Well Viewer there are 10 domestic/household wells and one irrigation well within the Land Control Area (EGLE, 2025a) (refer to Map 8 in Appendix E). Within 1,000 feet of the Land Control Area, there are 139 domestic/household wells, seven irrigation wells, two test wells, and one type III public use well for a total of 149. Well depths (for active wells) within and adjacent to the Land Control Area range from 20 feet below the ground surface to 182 feet below the ground surface.

The Land Control Area is not located within any known EGLE designated Wellhead Protection Areas (EGLE, 2025a). However, two Wellhead Protection Areas are located less than one mile east of the Land Control Area: one Traditional Wellhead Protection Area Delineation and one Low Vulnerability Wellhead Area (refer to Map 8 in Appendix E). EGLE Wellhead Protection Areas are designated surface and subsurface areas surrounding a municipal well or wellfield that supplies public drinking water. They represent the zone where groundwater is likely to travel to the well within a certain timeframe and where land use activities could directly impact water quality. The purpose of defining a Wellhead Protection Area is to protect public water supplies from potential contamination by managing land use, identifying risks, and implementing protective strategies. An EGLE Traditional Wellhead Protection Area is a mapped zone around a public water supply well where groundwater is likely to flow toward the well within a certain timeframe (typically 1, 5, or 10 years) based on detailed hydrogeologic modeling. This delineation helps communities manage land use and prevent contamination of drinking water sources. In contrast, a Low Vulnerability Wellhead Protection Area is designated for wells that are naturally protected, such as those in deep or confined aquifers with low contamination risk. These areas may use simplified methods like a fixed-radius approach and require less stringent land-use controls, while still maintaining protective oversight.

The EPA defines a sole source aquifers or principal source aquifer area as one that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer, where contamination of the aquifer could create a significant hazard to public health, and where there are no alternative water sources that could reasonably be expected to replace the water supplied by the aquifer. According to the EPA Sole Source Aquifers webmap, there are no EPA designated sole source aquifers within the Land Control Area (EPA, 2025b).

4.4.1.1 Impacts and Mitigation Measures

Impacts to geology and groundwater resources from construction and operation of the Project are not anticipated. The potential for the Project to impact these resources is limited. Due to the thickness of surficial materials (at least 100 feet), excavation or blasting of bedrock is not anticipated. Impacts on geologic resources are not anticipated and mitigation is not expected to be necessary.

Impacts on groundwater resources, including aquifers, are not anticipated as water supply needs will be limited. Project facilities are not likely to affect the use of existing water wells because there are no active wells within the Preliminary Development Area. In preliminary geotechnical testing, groundwater was encountered at depths of 5 to 10 feet below the ground surface (Terracon Consultants, Inc, 2021). Dewatering may be required during construction in periods of seasonally high groundwater. Any dewatering required during construction will be discharged to the surrounding upland surface areas, thereby allowing it to infiltrate back into the ground to minimize potential impacts. Dewatering filter bags, straw structures or similar BMPs may be used when dewatering. Any areas affected by dewatering or associated materials will be restored (refer to Section 4.4.5). If dewatering is necessary, the Project will obtain a Groundwater Discharge Permit (Part 22/Part 31) from EGLE; if groundwater discharge results in an associated surface water discharge, the Project will obtain the applicable NPDES Permit from EGLE as well.

O&M building and BESS water requirements will be satisfied with a single domestic-sized water well or via a tie in with rural water lines where available. Based on the minimal amount of impervious surface area that will be created by the Project components, estimated to be 6.7 acres for the Collector Substation and ITC Switching Station, 20.6 acres for access roads, and 8.2 acres for the BESS, the Project will likely have minimal impacts on regional groundwater recharge.

Concrete foundations may be required for some Project components and further geotechnical soil testing will determine final installation process. Similarly, the exterior security fencing may require concrete foundations in some locations. If concrete is needed, it will be locally sourced; an on-site concrete batch plant will not be required for the Project. Concrete foundations have the potential to impact aquifers or impede groundwater movement; however, given the limited depth and size of potential concrete foundations it is unlikely that they will have an impact on the groundwater in the area.

Most land within the Preliminary Development Area will be vegetated in accordance with the Vegetation Management Plan, minimizing the risk of impacts on nearby private wells. Vegetated ground cover will help prevent surface water sedimentation and support the filtration of contaminants before infiltration into the groundwater system. Construction of Project facilities is not expected to require subsurface blasting; therefore, disruption of groundwater flow due to newly fractured bedrock is not anticipated. Additionally, utilizing the land for solar development will reduce the potential for agrichemicals – such as fertilizers and pesticides – to leach into the groundwater.

Prior to the start of construction, Lakeside will obtain a Part 91 Soil Erosion and Sedimentation Control Permit from the Muskegon County Department of Public Works and a NPDES Notice of Coverage from EGLE to discharge stormwater from construction facilities. BMPs will be used during construction and operation of the Project to protect topsoil and adjacent resources and to minimize soil erosion, whether the erosion is caused by water or wind. Practices may include containment of excavated material, protection of exposed soil, stabilization of restored material, and treating stockpiles to control fugitive dust. Dust control during construction will consist of water applications at least three times per day unless it has rained in the preceding three hours of the planned application. BMPs may include, but not limited to, silt fence, erosion control blanket, straw bales, or temporary seeding. A Preliminary Stormwater Management Plan was completed for the Project in 2021 to meet local and state requirements and was provided in the previous application to White River Township. The plan provides details on stormwater management requirements, hydrology, drainage patterns, soils, water quality, runoff analyses, existing and proposed site conditions. The plan will continue to be updated as engineering design of the Project is refined and will be submitted to the Muskegon County Water Commissioner for review and approval prior to the commencement of construction.

4.4.2 Soils

Soil characteristics within the Land Control Area were assessed using the Soil Survey Geographic database (Soil Survey Staff, 2025). The Soil Survey Geographic database is a digital version of the original county soil surveys developed by the USDA –NRCS for use with GIS. It provides the most detailed level of soils information for natural resource planning and management. Soil maps

are linked in the Soil Survey Geographic database to information about the component soils and their properties (USDA, NRCS, 2025b). Table 4.4.2-1, below, and Map 9 in Appendix E show the soil types located within the Land Control Area. The Soils Report for Muskegon County is contained in Appendix J (Environmental Studies) of this Application.

Approximately 25 percent of the Land Control Area is underlain by hydric soils or soils containing hydric inclusions, indicating some wetlands are likely to be present as one of many wetland characteristics is hydric soil. The majority of soils (82.15 percent) within the Land Control Area have a moderate to high susceptibility to wind erosion; these soils are coarser textured and have a wind erodibility group less than four. Inversely, the majority of soils (85.41 percent) within the Land Control Area have a low susceptibility to water erosion. Due to the high presence of coarse-textured soils in the Land Control Area, no soils in the Land Control Area have a high susceptibility to compaction. Approximately 83 percent of soils in the Land Control Area have a medium susceptibility to compaction. The majority of soils (78.15 percent) in the Land Control Area have a high steel corrosion rating.

Slope is a land surface characteristic that affects constructability, water erosion, revegetation, compaction and rutting, among other properties. Nearly all of the soils (1,508.5 acres, 95.7 percent) within the Land Control Area are soils with representative slopes that are either moderately sloping or are gently sloping (less than eight percent). The remaining 67.6 acres (4.3percent) of soils within the Land Control Area have a representative slope range greater than eight percent. As such, slope is not anticipated to create issues during the construction or restoration of the Project (NRCS, 2015).

Agriculturally significant soils within the Land Control Area and the 1,000-foot buffer, including those designated as prime farmland and soils of statewide or local importance have previously been discussed in Section 4.3. Table 4.3.2-2 lists soil types classified as prime farmland, soils of statewide, and local importance. Map 7 in Appendix E shows the distribution of these farmland-designated soils across the Land Control Area.

Table 4.4.2-1: Summary of Soil Characteristics Within the Land Control Area										
Map Unit Symbol	Map Unit Name	Acres	Percent of Land Control Area	Farmland Class	K Factor[1]	Wind Erodibility Group[2]	Susceptibility to Compaction	Hydric Rating	Steel Corrosion Rating	Slope Class [3]
BaB	Belding and Allendale soils, 0 to 6 percent slopes	175.16	11.11%	Farmland of local importance	0.05	2	Medium	No	High	Moderately sloping (3-8%)
BbB	Belding-Ubly sandy loams, 2 to 6 percent slopes	108.60	6.89%	Prime farmland if drained	0.28	3	Medium	No	High	Moderately sloping (3-8%)
ClmaaB	Coloma-Brems-Fern complex, 0 to 6 percent slopes	81.64	5.18%	Not prime farmland	0.10	2	Low	No	Low	Moderately sloping (3-8%)
ClmaaC	Coloma-Brems-Metea complex, 6 to 12 percent slopes	2.22	0.14%	Not prime farmland	0.10	2	Low	No	Low	Moderately sloping (3-8%)
CovabB	Covert-Pipestone sands, 0 to 6 percent slopes	69.00	4.38%	Not prime farmland	0.02	1	Low	No	High	Gently sloping (1-3%)
Hp	Hettinger and Pickford soils	51.28	3.25%	Farmland of local importance	0.28	5	Medium	Yes	High	Gently sloping (1-3%)
KkA	Kawkawlin loam, 0 to 2 percent slopes	72.49	4.60%	Prime farmland if drained	0.37	5	Medium	No	High	Gently sloping (1-3%)
KkB	Kawkawlin loam, 2 to 6 percent slopes	16.30	1.03%	Prime farmland if drained	0.37	5	Medium	No	High	Moderately sloping (3-8%)

Table 4.4.2-1: Summary of Soil Characteristics Within the Land Control Area										
Map Unit Symbol	**Map Unit Name**	**Acres**	**Percent of Land Control Area**	**Farmland Class**	**K Factor[1]**	**Wind Erodibility Group[2]**	**Susceptibility to Compaction**	**Hydric Rating**	**Steel Corrosion Rating**	**Slope Class [3]**
MeB	Menominee and Ubly soils, 2 to 6 percent slopes	36.86	2.34%	Farmland of local importance	0.10	2	Low	No	Low	Moderately sloping (3-8%)
NeC	Onekama loam, Lake Michigan Lobe, 6 to 12 percent slopes	4.40	0.28%	Farmland of local importance	0.43	5	Medium	No	High	Strongly sloping (8-15%)
NlD	Nester soils, 12 to 25 percent slopes, lake moderated	4.88	0.31%	Farmland of unique importance	0.37	5	Medium	No	Moderate	Moderately steep (15-25%)
NrC	Nester sandy loam, 6 to 12 percent slopes	54.91	3.48%	Farmland of local importance	0.24	3	Medium	No	Moderate	Strongly sloping (8-15%)
NsE	Nester soils, 25 to 45 percent slopes	2.71	0.17%	Not prime farmland	0.37	5	Medium	No	Moderate	Steep (25-40%)
NtB	Nester-Kawkawlin loams, 2 to 6 percent slopes	83.97	5.33%	All areas are prime farmland	0.37	5	Medium	No	Moderate	Moderately sloping (3-8%)
NuB	Nester-Ubly sandy loams, 2 to 6 percent slopes	393.87	24.99%	All areas are prime farmland	0.24	3	Medium	No	Moderate	Moderately sloping (3-8%)
PlfabB	Plainfield sand, lake plain, 0 to 6 percent slopes	43.98	2.79%	Not prime farmland	0.02	1	Low	No	Moderate	Gently sloping (1-3%)

Table 4.4.2-1: Summary of Soil Characteristics Within the Land Control Area										
Map Unit Symbol	**Map Unit Name**	**Acres**	**Percent of Land Control Area**	**Farmland Class**	**K Factor[1]**	**Wind Erodibility Group[2]**	**Susceptibility to Compaction**	**Hydric Rating**	**Steel Corrosion Rating**	**Slope Class [3]**
PlfabD	Plainfield sand, lake plain, 6 to 18 percent slopes	0.07	<0.01%	Not prime farmland	0.02	1	Low	No	Moderate	Strongly sloping (8-15%)
PlfabE	Plainfield sand, high ecological site, 18 to 30 percent slopes	0.65	0.04%	Not prime farmland	0.02	1	Low	No	Low	Moderately steep (15-25%)
PpsaaA	Pipestone-Covert-Saugatuck sands, 0 to 3 percent slopes	4.24	0.27%	Not prime farmland	0.05	1	Low	No	High	Gently sloping (1-3%)
Ra	Roscommon and Au Gres sands	1.87	0.12%	Not prime farmland	0.05	2	Low	Yes	High	Gently sloping (1-3%)
Sm	Sims loam	45.25	2.87%	Prime farmland if drained	0.32	6	Medium	Yes	High	Gently sloping (1-3%)
SnkaaB	Spinks loamy sand, 0 to 6 percent slopes	32.39	2.05%	Not prime farmland	0.05	2	Low	No	Low	Gently sloping (1-3%)
Tc	Tawas and Carlisle mucks	1.04	0.07%	Farmland of local importance	No Rating	2	Low	Yes	High	Gently sloping (1-3%)
Td	Tonkey and Deford soils	288.29	18.29%	Prime farmland if drained	0.20	3	Medium	Yes	High	Gently sloping (1-3%)

Table 4.4.2-1: Summary of Soil Characteristics Within the Land Control Area

Map Unit Symbol	Map Unit Name	Acres	Percent of Land Control Area	Farmland Class	K Factor[1]	Wind Erodibility Group[2]	Susceptibility to Compaction	Hydric Rating	Steel Corrosion Rating	Slope Class [3]

[1] Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. The presented K Factor represents the erodibility of the whole soil and estimates are modified by the presence of rock fragments. Soils with a K Factor between 0.21 and 0.30 are considered at moderate risk for water erosion. Soils with a K Factor greater than 0.30 are at high risk for water erodibility, and soils with a K Factor less than 0.21 are at low risk of water erodibility.

[2] Wind erodibility group ranks soil susceptibility to wind erosion. Lower group numbers are associated with higher wind erosion risk and higher numbers are associated with lower wind erosion risk. The wind erodibility groups range from 1 to 8.

[3] The slope range provided in the map unit name (e.g., *0 to 6 percent slopes*) represents the overall range of slopes found within that soil map unit. The slope class listed is based on the representative slope value (the typical slope for a given soil component) and is used to categorize the soil into standard slope classes

Source: USDA NRCA, 2025b

4.4.2.1 Impacts and Mitigation Measures

The soils within the Land Control Area vary in erodibility, compaction susceptibility, and slope characteristics. Approximately 48.4 percent of the soils in the Land Control Area are classified as having a moderate to high erodibility potential based on their K Factor values (greater than or equal to 0.28). These soils are more susceptible to water erosion during construction activities if not properly managed. The remaining soils have a low to moderate erosion potential, with K Factors ranging from 0.02 to 0.24, indicating better inherent resistance to soil loss.

The majority of the Land Control Area is composed of gently to moderately sloping soils (1 to 8 percent slopes), which are generally favorable for solar development and consistent with the site's current use for agricultural production. Only a small portion of the area includes steep slopes (25 to 40 percent) and these locations will require particular attention to erosion control or have been avoided for placement of Project infrastructure.

Soil compaction potential across the Land Control Area is primarily rated as medium susceptibility to compaction. This is particularly relevant for construction activities where repeated equipment passes or work during wet conditions could increase the risk of soil compaction, potentially affecting long-term soil health and infiltration rates.

Soil impacts will occur during both the construction and decommissioning phases of the Project. Construction will involve limited grading to establish suitable surfaces for the solar arrays, inverter pads, BESS, O&M building, Collector Substation, and ITC Switching Station. Due to the existing level topography and the predominance of gently sloping soils, grading will be minimized to the extent practicable.

Direct soil disturbances will primarily result from the installation of direct-embedded piers and trenching for underground electrical collection lines. If a hybrid collection system is used, soil disturbances from trenching will be reduced compared to a fully below-ground system. In all cases, soils temporarily disturbed during trenching and construction will be restored following project installation.

Erosion and sediment control measures will be implemented as part of the project's Stormwater Pollution Prevention Plan. These measures will include silt fencing, check dams, straw wattles, and other BMPs to control stormwater flow and minimize soil loss from construction areas, especially on soils with higher K Factor values and steeper slopes.

Topsoil will be stripped, segregated, and preserved during grading and trenching operations. Upon completion of construction, topsoil will be replaced, and disturbed areas will be stabilized with temporary or permanent vegetative cover as outlined in the Vegetation Management Plan. Areas compacted by equipment will be decompacted using chisel plowing or similar methods prior to seeding with native vegetation.

The use of native seed mixes tailored to the site's soil and drainage characteristics will support long-term soil regeneration, improved infiltration, and enhanced stormwater management. These native plantings will help reduce stormwater runoff, improve soil organic matter, and promote the

recovery of soil microbial activity. Additionally, the perennial vegetation will provide long-term erosion control, stabilize soils, and reduce operational mowing requirements.

To minimize compaction during construction, Lakeside will manage vehicle and equipment movement across the site and implement wet-weather procedures when necessary. Taking agricultural land temporarily out of production during the life of the Project will allow soils to rest, regenerate, and recover structure and organic content lost through years of intensive row-crop farming. Over the up to 35-year life of the Project, the establishment of stable herbaceous cover will help improve long-term soil health and hydrologic function.

Through these proactive measures, the Project is expected to minimize impacts to soils and allow for successful soil restoration following decommissioning, with no significant, unmitigated soil loss anticipated.

4.4.3 Surface Waters

The Project is located in the Flower Creek (HUC12: 040601011007), Pierson Drain (HUC 12: 040601010903), and Bigsbie Lake-Frontal Lake Michigan (HUC12: 040601011004) watersheds, which are all a part of the larger Pere Marquette-White (HUC8: 04060101) watershed (refer to Map 10 in Appendix E). The Pere Marquette-White watershed is approximately 2,100 square miles and spans six counties. Agricultural and forestry uses are the most common land uses in this watershed (EPA, 2025c; USGS, 2025b).

4.4.3.1 Lakes, Ponds, Rivers, Streams, and Ditches

The USGS National Hydrography Dataset (NHD) identifies ten streams (three intermittent, seven perennial) within the Land Control Area. Some of the mapped NHD streams are unnamed and flow to large wetland systems off-site, and the remaining NHD streams are either tributaries to or portions of Little Flower Creek, Flower Creek, or the Pierson Drain. No lakes are within the Land Control Area. Surface water resources are depicted on Map 10 in Appendix E (USGS, 2025c).

An on-site wetland and stream delineation was conducted between October 16 and 26, 2024 to identify and characterize wetlands and streams per U.S. Army Corps of Engineers (USACE) methodology and pursuant to Part 301, Inland Lakes and Streams, and Part 303, Wetlands Protection, of the Michigan NREPA. The wetland and stream delineation identified eight streams that are generally consistent with the USGS NHD. Multiple streams identified in NHD were identified as wetlands on-site during the delineation. Conversely, three streams delineated on-site were not identified in NHD. The Wetland Delineation Report is included in Appendix J (Environmental Studies). Additional information on wetlands can be found in Section 4.4.3.4 of this Application.

4.4.3.2 Water Quality

Three impaired water features (Rivers/Streams) are identified in the Land Control Area and are listed on the 2024 Clean Water Act Section 303(d) EPA Final Action List. A Clean Water Act Section 303(d) listed impaired water is a water feature that is impaired or threatened and needs a total maximum daily load restoration plan. Once a feature is placed on the threatened and impaired

waters list, it becomes one of many in line for evaluation and development of a plan for solving the problems (EPA, 2025c).

Two water features (ID MI040601011007-01 and MI040601011004-09) are listed as being limited (impaired) for both total and partial body contact recreation due to *Escherichia coli (E. coli)*. Both waters are tributaries to either Flower Creek or Little Flower Creek, which both directly flow into Lake Michigan less than 2 miles west of the Land Control Area. One water feature (ID MI040601010903-01) is listed as being limited (impaired) for fish consumption due to the presence of polychlorinated biphenyls (PCBs). This feature is associated with the Pierson Drain, which flows into White Lake, and subsequently Lake Michigan, less than 3 miles south of the Land Control Area (refer to Map 10 in Appendix E) (EPA, 2025c).

Lakeside's proposed construction of the Solar Facility, Collector Substation, and BESS is not anticipated to contribute to the presence of PCBs or *E. coli* into nearby streams, as the proposed infrastructure does not involve the production or storage of industrial chemicals or sanitary/agricultural waste. Unlike agricultural or industrial operations, solar and battery storage installations produce minimal runoff and are not associated with pollutants such as PCBs or bacterial contamination (EPA, 2025d). If the current agricultural fields within the Land Control Area utilize manure spreading for nutrient sources, revegetating and maintaining the proposed Solar Facility with native vegetation may assist in reducing potential sources of solid waste in nearby streams affected by *E. coli* impairment (EPA, 2016).

4.4.3.3 Floodplains

The FEMA Flood Insurance Rate Map classifies most of the Land Control Area as Zone X, which is an "Area of Minimal Flood Hazard" (FEMA Flood Insurance Rate Map Panels 26121C0020D and 26121C0010D) (FEMA, 2025). A small portion of the southern central Land Control Area is designated as Zone A, which is an "Area with a 1% annual chance of flooding (100-year floodplain)." It should be noted that Zone A does not have a base flood elevation established. This 100-year floodplain is associated with the Pierson Drain (refer to Maps 11 and 12 in Appendix E) and also represents White River Township's Flood Overlay District, according to Chapter 14 (FOD Flood Overlay District) of the White River Township (in Muskegon County) Zoning Ordinance, January 15, 2019.

4.4.3.4 Wetlands

There are 12 wetlands mapped on the EGLE Wetlands Map Viewer within the Land Control Area (two scrub shrub, six forested, and four emergent) (refer to Map 12 in Appendix E). The EGLE Wetlands Map Viewer was drafted pursuant to Part 303 of NREPA to show potential and approximate locations of wetlands on a county-by-county basis. Most wetlands identified in the EGLE Wetlands Map Viewer are in an agricultural setting and are farmed wetlands, agricultural ditches, or adjacent to row-crops (EGLE, 2025b).

The National Wetlands Inventory (NWI) is a program by the USFWS that provides comprehensive digital maps and data on the location, extent, and classification of wetlands across the United States. Similarly, a review of the USFWS NWI identified 20 mapped wetlands in the Land Control

Area. The NWI identifies 4 freshwater emergent wetlands (1 PEM1F, 3 PEM1C), 4 freshwater forested/shrub wetlands (3 PFO1C, 1 PSS1C), 2 freshwater ponds (1 PUBGx, 1 PUBG), and 10 riverine features (7 R5UBH, 3 R4SBC). The wetlands are primarily on the western side of the Land Control Area, with an isolated forested wetland and freshwater pond in the northeast corner, and a forested wetland along Pierson Swamp Drain in the south (refer to Map 12 in Appendix E). The NWI is consistent with the EGLE Wetlands Map Viewer and USGS NHD.

On-site delineations were conducted within the Land Control Area in 2019 by Atwell, LLC. Tetra Tech updated and verified all delineated features in 2022, with a more recent delineation update and verification being conducted in October 2024. An on-site wetland and waterway delineation was conducted between October 16 and 26, 2024 to identify and characterize wetlands and streams per USACE methodology and pursuant to Part 301 and Part 303 of NREPA. The delineation covered the entirety of the Land Control Area during the time of the investigation. The NWI and EGLE mapped wetlands and streams identified through desktop review were investigated during the delineation. In addition, aerial imagery was used to preliminarily identify farmed wetlands for subsequent field investigation.

The delineation identified 116 wetlands totaling approximately 50.27 acres within the Land Control Area (refer to Table 4.4.3-1). The delineated wetlands are illustrated on Map 13 in Appendix E. The wetlands are primarily classified as palustrine emergent wetland communities, with 92 of the 116 wetlands being palustrine emergent wetlands. Five of the 116 wetlands on-site are palustrine forested wetlands. The remaining wetlands on-site either consist of an open water component or contain a mix of either emergent and forested or emergent and scrub-shrub vegetation. Most of the wetlands are located in an agricultural setting and are farmed, excavated, or seasonal in nature.

Table 4.4.3-1 Wetlands Within Land Control Area (October 2024)

Wetland Classification [1]	Surveyed Area (acres)
PEM	25.53
PEM/Open Water	2.72
PEM/PSS	6.58
PEM/PFO	15.02
PFO	0.42
PROJECT TOTAL	50.27

[1] PEM is palustrine emergent; PSS is palustrine scrub-shrub; PFO is palustrine forested; PUB is palustrine unconsolidated bottom.

An EGLE Pre-Application Meeting between Lakeside, EGLE, and Tetra Tech occurred on July 23, 2025. The Pre-Application Meeting with EGLE was conducted to review proposed projects that may impact water resources and determine the need for permits. Following the meeting, a summary letter was provided by EGLE to Lakeside on August 7, 2025, detailing the discussed items, recommended actions, and guidance on regulatory requirements, necessary permits, and potential environmental concerns (refer to Appendix D). This letter, valid for two years from

issuance, serves as a reference for the applicant before submitting a formal permit application to the EGLE Water Resources Division (EGLE, 2025c).

Review of EGLE's MiEnviro Portal Mapper shows that the Land Control Area is directly east of (not within) the USACE Section 10 (Rivers and Harbors Act of 1899) Jurisdictional Area (EGLE, 2025d). Therefore, no permits from USACE will be necessary.

4.4.3.5 Impacts and Mitigation Measures

Lakeside has designed the Project to avoid impacts to water resources to the maximum extent practicable. Potential stream impacts are either temporary or indirect, associated with the installation of underground electrical collection lines or permanent due to the placement of two stream culverts (refer to Table 4.4.3-2). Current road crossings of streams will be evaluated to minimize potential stream impacts. Horizontal directional drilling (HDD) will be used to avoid surface disturbance during installation of the electrical collection lines. Based upon the Preliminary Civil Design, a total of 14 collection line crossings are proposed across delineated streams in the Preliminary Development Area. Of these, three crossings will be installed in parallel locations, which will help minimize the number and size of required bore pits in upland areas. In accordance with EGLE requirements, a frac-out contingency plan will be developed to address the unlikely event of drilling fluid escape during HDD, ensuring appropriate response measures are in place to protect water resources.

Table 4.4.3-2 Wetlands Impacts Within Land Control Area (Acres)

Wetland Classification [1]	Collection Line (Temporary)	Access Road (Permanent)	Racking (Permanent)	Vegetation Clearing (Permanent)
PEM	0.01	0.03	<0.01	-
PSS	-	-	-	-
PFO	0.01	-	-	-
PEM/PFO	-	0.01	-	-
PROJECT TOTAL	0.02	0.04	<0.01	0.08

[1] PEM is palustrine emergent; PSS is palustrine scrub-shrub; PFO is palustrine forested.

Impacts to open water (palustrine unconsolidated bottom) wetlands are not anticipated. Temporary impacts to wetlands will occur only where electrical collection lines must be installed, totaling approximately 0.02 acre. Where feasible, HDD will be used to install these lines beneath wetlands, avoiding surface disturbance entirely and will be in compliance with permit exemption thresholds. In areas where HDD is not feasible, open trench installations will be utilized. The trench disturbance will be limited to a maximum width of two feet throughout the length of the wetland; soils will be restored in the order excavated. Following installation, all trenched wetlands will be restored to pre-construction contours and stabilized using a native wetland seed mix in accordance with the Vegetation Management Plan. As with stream crossings, a frac-out contingency plan will be in place to address any inadvertent returns during HDD beneath wetland areas.

Permanent wetland impacts will be avoided and minimized to the extent practicable. The solar layout will be modified slightly to avoid permanent impacts upon two forested wetlands that required tree cutting alleviate shading upon the system. The modification was discussed as an avoidance measure during the July 23, 2025, Pre-Application Meeting with EGLE. As a result, permanent wetland impacts are limited to approximately 0.08 acre, resulting from the installation of access roads, solar racking infrastructure, and vegetation clearing. Of this, less than 0.01 acre is associated with solar racking, where only the narrow support posts will be driven into the soil, resulting in minimal ground disturbance. These areas will be restored with a native emergent wetland seed mix as noted in the Vegetation Management Plan. Access roads will account for the remaining 0.04 acre of permanent impact. To maintain hydrologic connectivity between wetland systems bisected by access roads, appropriately sized equalization culverts will be installed where feasible, reducing fragmentation and supporting continued wetland function. Lakeside has incorporated recommendations received from EGLE during the Pre-application Meeting regarding the location of wetland equalization culverts to minimize impacts to higher quality wetlands.

Where wetland impacts cannot be avoided, Lakeside will obtain the required permits from EGLE to comply with Parts 31, 301, and 303 of NREPA by submitting a Joint Permit Application uploaded through MiEnviro Portal site. Lakeside will coordinate with EGLE and the Part 91 enforcement agency prior to, during, and after construction regarding wetland impacts and to avoid water resource erosion impacts. Affected wetlands within the Preliminary Development Area will be revegetated with a wet-mesic seed mix in accordance with the Vegetation Management Plan (refer to Appendix G). Temporary impacts to wetlands are not expected to affect surface water drainage or off-site wetlands.

Table 4.4.3-3 summarizes the footprint of infrastructure within the Preliminary Development Area that is proposed within the floodplain (refer to Map 11 in Appendix E).

Table 4.4.3-3 Project Infrastructure Within Floodplain

Project Infrastructure	Acres
Fenced Area	20.67
Collection and Communication Lines	0.28
Inverter	0.01
Substation	0.01
Laydown Yard	0.38
Access Road	0.88
Solar Racking	28.18
PROJECT TOTAL	**50.41**

The proposed Solar Facility infrastructure within the floodplain includes elements such as solar racking, fencing, and utility equipment (refer to Table 4.4.3-4). During the final design, encroachments within the floodplain can be avoided or minimized. However, the only component that introduces measurable fill to the floodplain as part of the preliminary design are the proposed access roads, which require grading and compacted material to support vehicle traffic. Other infrastructure components, such as solar racking, involve minimal fill quantities – limited to

small-diameter support posts driven or embedded into the ground. The fenced area, although covering a large acreage, does not require any fill beyond what is already needed for the access roads. Per EGLE Water Resources Division Policy and Procedure WRD-033, chain link or similar open fencing is not considered occupation of the floodplain and does not interfere harmfully with the discharge or stage characteristics of a stream. Structures like inverters have a negligible footprint in terms of fill, as they are either mounted on small pads or posts, which results in less than 0.01 acre of total impact. Collection lines will require a change in grade and will be installed via directional drilling or temporary excavation and re-filling for trenching installation. The proposed laydown yard represents a temporary impact, and the final grade will remain unchanged, and no grade changes or permanent fill will result from the laydown yard. The Collector Substation footprint occupies approximately 0.01 acre within the floodplain. Overall, the Project's design minimizes floodplain impact by concentrating fill only where necessary for vehicle access. For unavoidable floodplain impacts, Lakeside is prepared to complete the necessary Part 31 permitting as identified by EGLE during the July 23, 2025, Pre-Application Meeting to ensure compensatory flood storage volumes are created for the proposed fills within the floodplain. Additionally, Lakeside intends to comply with White River Township's Floodplain Overlay District provisions and standards, which will be reviewed via the Township Planning Commission review process. Unavoidable encroachment or fill within the floodplain as a result of the Project will not unduly affect the capacity of the floodway or unduly increase flood heights.

During construction, stormwater is not expected to impact adjacent properties. A Stormwater Pollution Prevention Plan (SWPPP) will be developed for the Project prior to construction that will include BMPs such as silt fencing (or other erosion control devices), revegetation plans, and management of exposed soils to prevent sediment from entering into adjacent surface waters The Project's SWPPP will be submitted to Muskegon County Department of Public Works for review and approval prior to construction. This will be a part of the larger soil erosion and sedimentation control permit application that will be submitted to Muskegon County for approval under Part 91 of NREPA. Once the Part 91 SESC Permit is approved, Lakeside will request a Notice of Coverage from EGLE to comply with Rule 2190, promulgated under Part 31 of NREPA. As required under the Notice of Coverage, Lakeside will have a Certified Construction Stormwater Operator on-site for ongoing inspections to ensure compliance with the SWPPP, Part 91 SESC Permit, and Rule 2190.

A permanent stormwater management system will be used throughout the life of the Project to protect and enhance the quality of surrounding surface and sub-surface waters by removing water volume, excess nutrients, sediment, and pollutants from stormwater runoff before leaving the project site. The permanent stormwater management system will utilize natural infiltration resulting from permanent stormwater basins and vegetation beneath the solar panels to prevent and minimize the negative effects of stormwater runoff. Stormwater basins will be vegetated with wet seed mix in accordance with the Vegetation Management Plan (refer to Appendix G) and maintained in an herbaceous state for the life of the Project.

4.4.4 Vegetation

The Project is in the Michigan Lake Plain (56d; Level IV), Southern Michigan/Northern Indiana Drift Plains (56; Level III) EPA Ecoregions (EPA, 2010). The Michigan Lake Plain is a narrow, sandy region along the eastern shore of Lake Michigan, extending through much of Michigan's Lower Peninsula and into a small portion of northwest Indiana. Characterized by well-drained sandy soils and a humid continental climate moderated by Lake Michigan, the area experiences milder winters, cooler summers, and increased precipitation, particularly snowfall. Historically, the region supported diverse ecosystems, including oak-hickory forests, oak savannas, prairies, dune and fen communities, and various wetland types ranging from treeless marshes to forested swamps with species like black ash and silver maple. The lake's influence allows certain species, such as eastern white pine (*Pinus strobus*) and eastern hemlock (*Tsuga canadensis*), to extend farther south than usual, and enables beech and sugar maple to thrive on sandier soils due to reduced moisture stress. Today, while parts of the region have undergone urbanization and industrial development, much of the land is utilized for agriculture, notably vegetable and fruit farming, orchards, and vineyards. Despite these changes, significant protected areas remain, including Indiana Dunes National Park and various state parks and preserves in Michigan (Lee et al, 2007; EPA, 2007).

Based on the NLCD land use/cover data as presented on Map 5 of Appendix E, the land cover in the Land Control Area is predominately agricultural land (1,396.6 acres; 88.6 percent). Developed lands make up approximately 120.1 acres/7.6 percent of the Land Control Area. Forested land within the Land Control Area consists of small woodlots serving as a shelter belt or wind break around farmsteads and wind rows in agricultural fields and make up approximately 0.4 acre (<0.1 percent) of the Land Control Area (refer to Map 6 in Appendix E) per the NLCD; however, a review of aerial imagery accounted for approximately 10.3 acres of impacts to forested areas resulting from the construction of the BESS. In addition, based on the wetland delineation discussed in Section 4.4.3.5, there are 34 wetlands located within the Land Control Area. A discussion of wetland impacts is provided in Section 4.4.3.6.

4.4.4.1 Impacts and Mitigation Measures

The majority of the Preliminary Development Area consists of active agricultural fields, 982 acres of which are proposed for solar energy and battery storage use for the life of the Project. Most agricultural land within the Preliminary Development Area will be comprised of open, herbaceous cover (i.e., within the racking area) with the exception of the Collector Substation and O&M building, BESS, inverter skids, and access roads which will be maintained as impervious surfaces during the life of the Project. The solar layout will be modified slightly to avoid permanent impacts upon two forested wetlands that required tree cutting alleviate shading upon the system following a Pre-Application Meeting with EGLE.

To minimize potential Project impacts to vegetation, Lakeside anticipates site restoration, seeding, establishing, maintaining, and monitoring disturbed areas and areas below the solar modules in accordance with the Vegetation Management Plan (refer to Appendix G). Control of invasive and noxious weeds will be ongoing during the construction and operation of the Project by mowing and selectively applying herbicides when applicable.

Lakeside will implement a vegetation plan that utilizes three native seed mixes developed specifically for the site's ecological and operational needs. A mesic mix will be applied under and around the solar arrays in upland areas, a wet-mesic mix will be used in seasonally inundated low-lying areas, and a wet mix will be installed around constructed stormwater basins, existing ponds, and drainage features. These seed mixes will incorporate native species sourced from within the local ecoregion to ensure compatibility with the site's glacial lake plain soils and hydrologic conditions. The vegetation design supports the continued operation of the solar facility by promoting stable ground cover, reducing erosion and runoff, improving infiltration, and providing habitat for pollinators. Detailed specifications, including seed composition and recommended distribution, are included in the Vegetation Management Plan in Appendix G.

4.4.5 Wildlife and Their Habitats

4.4.5.1 Avian Species

The Land Control Area is located within the Mississippi Flyway, a migration route for millions of birds that migrate annually between nesting habitat and wintering habitat in North, Central and South America. The USFWS recognizes the Mississippi Flyway as one of four major migratory bird routes in North America. This flyway extends from central Canada through the central United States to the Gulf of Mexico, facilitating the annual migration of millions of birds between their breeding and wintering habitats across North, Central, and South America. The Mississippi Flyway is particularly significant due to its lack of mountain barriers and abundant resources, providing an efficient and resource-rich corridor for migratory birds (U.S. Department of Interior [DOI], 2025; USFWS, 2025a).

Migratory birds are protected under the Migratory Bird Treaty Act, which prohibits the intentional taking of any migratory bird, or a part, nest, eggs, or products. On April 11, 2025, the Acting Solicitor for the DOI issued M-Opinion (M-37085) repealing M-opinion M-37065 issued in 2021 entitled, "Permanent Withdrawal of Solicitor Opinion M-37050 'The Migratory Bird Treaty Act Does Not Prohibit Incidental Take'". M-37085 restores M-Opinion M-37050 issued in 2017 and directs all bureaus and agencies to, "consider M-Opinion M-37050 as authoritative and binding" with regard to incidental take under the Migratory Bird Treaty Act. M-37050 specifies that only intentional take of migratory birds is prohibited under the Act (DOI, 2025).

Additionally, bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S. Code 668-668d) which prohibits take of an individual bird, chick, egg, or nest, including alternate and inactive nests, and prohibits disturbance that may lead to biologically significant impacts such as interference with feeding, sheltering, roosting, and breeding or abandonment of a nest.

In addition to the protections provided by the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act for all migratory birds, the USFWS has also developed a list of Birds of Conservation Concern, which includes both Migratory Bird Treaty Act – and non-Migratory Bird Treaty Act protected species, to foster proactive conservation actions by federal and state agencies and private parties by focusing first on species of concern (USFWS, 2021). In addition, the North American Bird Conservation Initiative (NAMBI) has developed Bird Conservation Regions to, "facilitate domestic

and international cooperation in bird conservation;" each Bird Conservation Region has a list of birds present or possibly present- within the region that are considered Birds of Conservation Concern (NAMBI, 2025).

The Land Control Area is also located within the Prairie Hardwood Transition Conservation Region (Bird Conservation Region 23). The Prairie Hardwood Transition Conservation Region bridges the northern hardwood forests and the tallgrass prairies of the north central and northeastern United States. This region is characterized by a mosaic of oak savannas, mesic prairies, and numerous wetland types that support a diverse avian community including species of conservation concern such as the Golden-winged Warbler and Henslow's Sparrow. The USFWS identified 30 species considered Birds of Conservation Concern within Bird Conservation Region 23. Table 4.4.5-1 provides a list of each Birds of Conservation Concern species within Bird Conservation Region 23 (NAMBI, 2025.

TABLE 4.4.5-1 Birds of Conservation Concern that Potentially Occur in the Land Control Area

Bird Conservation Region	Listed Birds	
	Common Name	Scientific Name
23 (Prairie Hardwood Transition)	Western grebe	*Aechmophorus occidentalis*
	Black-billed cuckoo	*Coccyzus erythropthalmus*
	Eastern whip-poor-will	*Antrostomus vociferus*
	Chimney swift	*Chaetura pelagica*
	King rail	*Rallus elegans*
	Yellow rail	*Coturnicops noveboracensis*
	American golden-plover [1]	*Pluvialis dominica*
	Upland sandpiper	*Bartramia longicauda*
	Marbled godwit	*Limosa fedoa*
	Ruddy turnstone [1]	*Arenaria interpres*
	Dunlin [1]	*Calidris alpina*
	Buff-breasted sandpiper [1]	*Tryngites subruficollis*
	Pectoral sandpiper [1]	*Calidris melanotos*
	Semipalmated sandpiper [1]	*Calidris pusilla*
	Short-billed dowitcher [1]	*Limnodromus griseus*
	Lesser yellowlegs [1]	*Tringa flavipes*
	Black tern	*Chlidonias niger*
	Long-eared owl	*Asio otus*
	Short-eared owl [1]	*Asio flammeus*
	Red-headed woodpecker	*Melanerpes erythrocephalus*
	Wood thrush	*Hylocichla mustelina*
	Grasshopper sparrow	*Ammodramus savannarum*
	LeConte's sparrow	*Ammodramus lecontei*
	Henslow's sparrow	*Centronyx henslowii*

TABLE 4.4.5-1 Birds of Conservation Concern that Potentially Occur in the Land Control Area		
Bird Conservation Region	**Listed Birds**	
	Common Name	**Scientific Name**
	Bobolink	*Dolichonyx oryzivorus*
	Rusty blackbird [1]	*Euphagus carolinus*
	Golden-winged warbler	*Vermivora chrysoptera*
	Kirtland's warbler	*Setophaga kirtlandii*
	Cerulean warbler	*Setophaga cerulea*
	Canada warbler	*Cardellina canadensis*
[1] (nb) non-breeding in this Bird Conservation Region.		

Tetra Tech conducted a biological resources review in August 2022 and again in June 2025 which included an assessment for potential biological and natural resources within and in the vicinity of the Land Control Area (refer to Appendix J). The 2025 Biological Resource Report completed by Tetra Tech is provided in Appendix J of this Application; the 2022 report is not provided in Appendix J because the information in it is superseded by the 2025 report. The Land Control Area is located within the expected breeding range of the bald eagle but is not within the expected breeding range of the golden eagle. The expected breeding season for the bald eagle in the vicinity is September 1 through July 31. Per USFWS guidelines, project development within 660 feet of an active bald eagle during the nesting period may cause adult eagles to abandon a nest and could result in unauthorized take of eggs or chicks. Active nests are defined as those with two adults rearing eggs and/or chicks. If work is conducted within 660 feet of an active nest during the nesting season, an Eagle Disturbance Take Permit may be required. The Michigan Natural Features Inventory (MNFI) review completed by Tetra Tech identified four bald eagle nests within five miles of the Land Control Area. These four records occurred between 2018 and 2019. The nearest observation record was approximately three miles south of the southernmost portion of the Land Control Area in 2018. There is a moderate potential for bald eagle to use or nest within the Land Control Area.

The USFWS has established Waterfowl Production Areas to protect habitat determined essential to the breeding, resting, and nesting habitat for countless avian and other wildlife species (USFWS, 2025b). No Waterfowl Production Areas are within the Land Control Area. The nearest Waterfowl Production Area to the Land Control Area is the Edger Waterfowl Production Area located in Hastings, Michigan, which is approximately 75 miles to the southeast (MDNR, 2008).

The National Audubon Society has established Important Bird Areas. Important Bird Areas are discrete sites that provide essential habitat for one or more bird species and include habitat for breeding, wintering, and/or migrating birds. The Land Control Area is not located within or near any Important Bird Areas (National Audubon Society, 2025). The Project is located adjacent to the Lake Michigan Long-tailed Duck Important Bird Area. This Important Bird Area encompasses the nearshore waters of Lake Michigan from Benzie to Allegan Counties. The National Audubon Society notes that the Lake Michigan Long-tailed Duck Important Bird Area is concerned with potential wind turbine development specifically in open water areas of Lake Michigan.

Additionally, invasive fish and mollusks and botulism are noted to be concerns within this Important Bird Area (National Audubon Society, 2025).

Other Important Bird Areas within 20 miles of the Land Control Area include the White River (Manistee National Forest) Important Bird area; the Muskegon State Game Area Important Bird Area; and the Muskegon Wastewater Management System Important Bird Area (National Audubon Society, 2025).

4.4.5.2 Terrestrial Species

The Land Control Area is dominated by cultivated agriculture characterized by row and forage crop production, with the greater surrounding area consisting of agricultural buffer strips and forested areas, creating edge habitats. This mosaic of agricultural areas with adjacent edge habitats are likely to be utilized by the following species: white-tailed deer (*Odocoileus virginianus*), common raccoon (*Procyon lotor*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), gray fox (*Urocyon cinereoargenteus*), fox squirrel (*Sciurus niger*), striped skunk (*Mephitis mephitis*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), ring-necked pheasant (*Phasianus colchicus*), wild turkey (*Meleagris gallopavo*), American toad (*Anaxyrus americanus*), and common garter snake (*Thamnophis sirtalis*). Additionally, some pollinator species may be present within the Land Control Area including various species of bees, butterflies, and moths due to presence of open grasslands and roadside habitat (refer to Appendix J).

4.4.5.3 Aquatic Species

As detailed in Section 4.4.3.4, the Land Control Area encompasses 116 wetlands and 8 streams, including tributaries to Flower Creek, and the Pierson Drain. Flower Creek and Pierson Drain provide diverse aquatic habitats supporting a variety of wildlife. Flower Creek, part of the White River watershed, features riparian zones and wetlands conducive to species such as creek chub (*Semotilus atromaculatus*) and white sucker (*Catostomus commersonii*), as documented in EGLE's biosurvey of the area (EGLE, 2021).

Information on aquatic species associated with Pierson Drain is highly limited. Primary studies within Pierson Drain are related to environmental quality issues related to high contaminants in suspended sediment and other bacterial contaminants in the stream (EGLE, 2025e; Ogdahl and Steinman, 2015). Therefore, it is likely that current aquatic species diversity within Pierson Drain is low or is highly impacted.

These waterways likely also attract various waterfowl species. MDNR notes that common summer residents and nesting species in the region include mallards (*Anas platyrhynchos*), wood ducks (*Aix sponsa*), blue-winged teal (*Anas discors*), and Canada geese (*Branta canadensis*). The presence of wetlands and associated upland habitats along Flower Creek and Pierson Drain provides essential resources for these waterfowl, supporting their breeding and feeding activities (MDNR, 1999)

The combination of aquatic and wetland habitats in White River Township underscores the ecological significance of Flower Creek and Pierson Drain, contributing to the biodiversity and environmental health of the region.

4.4.5.4 Impacts and Mitigation

Impacts to wildlife species from construction activities, including Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act species are expected to be minor due to the dominance of agricultural land cover types in the Preliminary Development Area. Land uses in the Preliminary Development Area are primarily agricultural (982.1 acres/98.3 percent), and small amounts of developed areas (8.60 acres/0.88 percent), and woody wetlands (1.37 acres/0.14 percent). Forested lands in the Preliminary Development Area are primarily windbreaks and shelterbelts around farmsteads and a woodlot at the proposed BESS location. Per the NLCD, forested lands make up approximately 0.44 acre/0.04 percent of the Preliminary Development Area; however, a review of aerial imagery accounted for approximately 10.3 acres of impacts to forested areas resulting from the construction of the BESS. As a result, wildlife species that use trees or forested areas as habitat will be present and impacts to forest dependent species may occur related to tree clearing needed for construction of the BESS. Elsewhere within the Preliminary Development Area, impacts to forested areas will be limited to forest edges, typically inhabited by generalist species such as white-tailed deer, common raccoon, fox squirrel, mourning dove, wild turkey, and common garter snake, among others. Impacts on forest dependent species will be influenced by construction timing. Tree clearing is anticipated to occur during winter months to avoid direct impacts to forest dwelling bird and bat species.

Due to the timing associated with tree clearing, surveys to identify active eagle nests within 660 feet of the Land Control Area are recommended to confirm absence of active eagle nests and avoid potential impacts to this protected species. The Preliminary Development Area has very little open water or wetlands (refer to Section 4.4.3). Thus, few wetland- or water-dependent wildlife species would use the Preliminary Development Area for breeding or nesting. Wildlife species associated with grasslands would also be limited or largely absent.

The small number of wildlife species that may utilize habitat within the Preliminary Development Area are likely habituated to human development activities. Many of these species are also highly mobile and may avoid the area during construction. Less mobile species and ground-nesting birds, including eggs and chicks, may be more prone to impacts; however, impacts resulting from the construction of the Project are not expected to differ from current impacts of annual farming activities.

The restoration of the area following construction may provide more wildlife habitat than what is currently available under the current land use regime. Lakeside will restore the area within the fence line of the Solar Facility with a seed mix that will provide more suitable habitat for wildlife, including grassland birds, rodents, reptiles, and insects. While approximately 44.79 acres within the Preliminary Development Area would be maintained as impervious surfaces (i.e., access roads, Collector Substation, and O&M building, BESS, and inverters) during the life of the Project and would not serve as wildlife habitat during operations, approximately 937.3 acres would be restored as herbaceous cover, including a seed mix with some native plants, thereby potentially benefitting and increasing the overall populations of wildlife species in the area, including birds, small mammals, reptiles, and pollinator insects.

Permanent security fencing will be installed along the perimeter of the solar arrays within the Solar Facility and around the Collector Substation and BESS. Fencing will be secured to posts which will be directly embedded in the soil or set in concrete foundations as required for structural integrity. The fencing surrounding the solar facility will be comprised of woven wire fencing or wildlife fencing with smooth wire place atop the fencing to extend 7 feet or 8 feet in height and will comply with NEC and NESC requirements. However, the fencing surrounding the BESS and Project Substation will be comprised of woven wire fabric fence mounted on driven, pressure-treated, wood posts and extend six feet above grade. One foot of three strands of barbed wire will be placed atop the woven wire fabric fence to extend 7 feet in order comply with NEC and NESC requirements. Gates will be strategically installed at corners for deer egress and contact information for the site manager will be posted at the gates. Access to the Project area will occur through lockable gates. An electronic security system or Knox boxes with keys will be utilized at Project entrances for emergency services, and signage will meet NEC requirements. Security cameras will be located throughout the Project.

Operation and maintenance activities associated with the Project are not expected to have any impacts beyond those associated with construction as described above. As noted above, the wildlife and avian species in this area are habituated to human activities associated with agricultural practices, and impacts associated with routine operations and maintenance are not expected to differ from those related to routine farming activities.

The Project has been designed to avoid adverse impacts to the greatest extent possible to higher quality habitat that exists in forested remnants that exist in portions of Southern Michigan. Lakeside will utilize BMPs to stabilize, protect, and mitigate potential impacts to species' habitat. These BMPs will be implemented during construction, post-construction, and operational phases of the Project. With the BMPs being implemented by the Project (during construction, after construction, and during operation of the Project) the fact the Project is designed to avoid adverse impacts to natural resources, and no significant impacts to wildlife are expected, species-specific mitigation is not proposed.

Rare and Unique Natural Resources

The USFWS maintains the Information for Planning and Consultation (IPaC) website to inform project proponents of the potential for federally endangered, threatened, proposed, and candidate species and designated critical habitat to be present in proposed project areas. Within IPaC, the USFWS has developed Determination Keys (DKeys) as a tool to streamline the effects analysis process, finalize consultation under certain circumstances, and provide necessary information to the USFWS in the event that technical assistance is needed and/or consultation with the agency is required.

Similarly, the MNFI, maintained by MDNR and Michigan State University Extension, is the most comprehensive source of data on Michigan's threatened and endangered species, ecologically significant areas, native plant communities, and other rare natural features.

Lakeside contracted Tetra Tech to review both the IPaC website and the MNFI database to ensure compliance with federal and state regulations regarding protected species (refer to Appendix D).

Although these reviews do not represent a comprehensive survey, they provide information on the potential presence of rare and unique species and habitats. With the database information, Tetra Tech conducted a biological resources review in June 2025. The biological resources review included an assessment for potential biological and natural resources within and in the vicinity of the Land Control Area that may harbor threatened and endangered species and/or rare and unique natural resources and habitats. Tetra Tech's biological resources review includes an assessment of the likelihood of the occurrence for endangered or threatened species known to be present in the Land Control Area or suspected to be present based on observed natural resource areas. This review is available in Appendix J.

4.4.5.5 Federally Listed Species

According to the IPaC review (June 24, 2025), the following species listed as endangered, threatened, or proposed under the Endangered Species Act have been identified as potentially present in the Land Control Area (see Table 4.4.6-1) (refer to Appendix J which contains the Biological Resource Report). Designated critical habitat is not present in the Land Control Area. Descriptions of species and their habitat is provided below.

Table 4.4.6-1 Federally Listed and Proposed Species Potentially Present in the Land Control Area

Scientific Name	Common Name	Federal Status
Myotis sodalis	Indiana Bat	Endangered
Charadrius melodus	Piping Plover	Endangered
Calidris canutus rufa	Red Knot	Threatened
Sistrurus catenatus	Eastern Massasauga	Threatened
Lycaeides melissa samuelis	Karner Blue Butterfly	Endangered
Danaus plexippus	Monarch Butterfly	Proposed Threatened
Cirsium pitcher	Pitcher's Thistle	Threatened
Note: The northern long-eared bat and the tricolored bat no longer appear in current IPaC reviews; and therefore, these bat species do not have to be considered in the effects analysis.		

Indiana Bat

The Indiana bat (*Myotis sodalis*) is a temperate, insectivorous, migratory bat that hibernates in caves and mines in the winter and spends summers in wooded areas. Preferred hibernacula include long, high-ceilinged caves with multiple large entrances and consistent air flow. They tend to prefer hibernacula in forested areas away from open areas such as farmland.

In spring, reproductive females migrate from hibernacula and form maternity colonies in wooded areas. Females return to the same colony every summer. Males and nonreproductive females often do not roost in colonies. They may stay close to their hibernaculum or migrate shorter distances to summer habitat. Summer roosts are typically behind exfoliating bark of living or dead trees with a diameter at breast height greater than 5 inches, or in cracks and crevices of trees. Summer foraging habitat ranges from densely forested to highly fragmented forest ranging from uplands to bottomlands. Individual trees may be considered suitable habitat when they exhibit the

characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Indiana bats have also been observed roosting in human-made structures, such as bridges and bat houses (artificial roost structures); therefore, these structures should also be considered potential summer habitat.

Piping Plover

The piping plover (*Charadrius melodus*) is a migratory bird native to North America. The Great Lakes piping plover inhabits beaches on the Great Lakes during the breeding season of April through September, and winters on Atlantic and Gulf of Mexico coast beaches. Nesting occurs on wide, sand and cobble beaches with little vegetation and disturbance. In its wintering range, the Great Lakes piping plover roosts and forages along beaches, dunes, sandy and muddy flats of the Atlantic and gulf coasts. Destruction of habitat, disturbance, and increased predation rates due to elevated predator densities in its habitat are described as the main reasons for this species' endangered status and continue to be the primary threats to its recovery.

Red Knot

The red knot (*Calidris canutus rufa*) is a large sandpiper known for its long-distance migration between breeding grounds in the Canadian Arctic and several wintering areas in the Southern Hemisphere. Large numbers of red knots migrate along the Atlantic coast of North America and winter in South America. Red knots may also winter in the Southeastern U.S. in Florida, South Carolina, Georgia, and Texas; some red knots wintering in the northwestern Gulf of Mexico migrate through the interior of North America during both spring and fall migration (May 15 – June 15 and July 15 – September 30) and utilize stopover sites in the Northern Great Plains.

Red knots are an uncommon migrant in Michigan. Never abundant, they may rarely be spotted along Great Lakes shorelines heading north in late May or again in late July through September on their southern migration (Michigan Nature Association, 2025). The occurrence of red knots in Michigan is unpredictable and the number of migrating shorebirds documented in the interior can vary dramatically due to high inter-annual availability in water levels and habitat quality at mid-continental wetlands.

Eastern Massasauga

The eastern massasauga (*Sistrurus catenatus*) is a rattlesnake native to Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, New York, Ohio, Pennsylvania, and Wisconsin. Suitable habitat for eastern massasauga includes wet prairies, marshes, fens, peatlands, sedge meadows, wet meadows, marshes, moist grasslands, floodplain forests, and low-lying areas near lakes and rivers adjacent to open uplands including shrubland, prairie, and savannas. They require dense herbaceous vegetative cover and downed coarse woody debris. Woody encroachment is a primary driver of habitat loss for eastern massasaugas. They will shift the habitats they use depending on the season. Generally, they use wetlands in the spring, fall, and winter. In summer, they migrate to drier upland sites, ranging from forest openings to old fields, agricultural lands, and prairies. Eastern massasaugas require these various habitat components in close proximity. Suitable

hibernation habitat includes crayfish burrows and small mammal burrows, and spaces under logs and tree roots (Lee and Legge, 2000).

Karner Blue Butterfly

The Karner blue butterfly (*Lycaeides melissa samuelis*) is a small butterfly native to the states near the Great Lakes, in the northern range of wild lupine (*Lupinus perennis*). Karner blue butterfly caterpillars feed only on the leaves of wild lupine, whose populations have declined in the absence of wildfire. Adults feed on nectar from a variety of flowering plants. Suitable habitat for the Karner blue butterfly is a patchwork of pine and scrub oak scattered among open grassy areas with wild lupine and other nectar-producing flowering plants (Rabe, 2001).

Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is a migratory insect native to North America. There are two distinct populations of monarch butterflies. The eastern North American population overwinters primarily in oyamel firs (*Abies religiosa*) in mountainous regions of central Mexico. The population that lives west of the Rocky Mountains overwinters primarily in eucalyptus trees (*Eucalyptus* spp.), Monterey pines (*Pinus radiata*), and Monterey cypress (*Hesperocyparis macrocarpa*) in California along the Pacific Coast.

The monarch butterfly is a large butterfly with an approximate 3- to 4-inch wingspan and is characterized by bright orange coloring on the wings, with distinctive black borders and veining. Adults forage on a wide variety of nectar plants, while caterpillars feed exclusively on milkweed (*Asclepias* spp.). Milkweed is therefore also necessary for egg laying; areas devoid of milkweed may provide adult foraging opportunities, but not larval or reproductive habitat. Both adult foraging and reproductive/larval habitat may be found in a wide variety of land cover types including prairies, grasslands, urban gardens, road ditches, and agricultural fields.

On December 12, 2024, the USFWS published a proposed rule to the federal register to list the monarch as threatened with a 4(d) rule (USFWS, 2024). A final rule is expected to be published to the federal register in 12 months, and the listing made effective 30-60 days later (i.e., January or February 2026). Proposed species are not protected under the Endangered Species Act. However, if there is a federal nexus for the Project, federal agencies are required to confer with the USFWS on agency actions that may be likely to jeopardize a proposed species.

Pitcher's Thistle

Pitcher's thistle (*Cirsium pitcheri*) is a perennial herbaceous plant endemic to the unforested dune system of Lakes Michigan, Superior, and Huron. It is monocarpic and generally flowers and sets seed after a 5- to 8-year juvenile stage. It requires active sand dune processes to maintain its early successional sandy habitat. Suitable habitat for Pitcher's thistle includes all non-forested areas of the Great Lakes dune systems, though it is found most frequently in the near-shore plant communities. Pitcher's thistle colonizes open, windblown areas then gradually declines as vegetation and ground litter densities increase through plant succession (Higman and Penskar, 1999).

4.4.5.6 State Listed Species

Tetra Tech requested an Information Request from the Michigan Natural Features Inventory (MNFI, 2025). Descriptions of the identified threatened and endangered species are provided in Table 4.4.5.2-1 below. The results of the 2025 Information Request can be found in Appendix D of the Biological Resource Review report in Appendix J. Information Request data is masked to the section level. Lakeside reviewed the Information Request and identified state-protected species with records that fall in sections within 1 mile of the Project Land Control Area.

Table 4.4.5.2-1 State Listed Species Potentially Present Within One Mile of the Land Control Area

Scientific Name	Common Name	State Status
Cirsium pitcheri	Pitcher's Thistle	Threatened
Triphora trianthophora	Nodding Pogonia	Threatened
Terrapene carolina carolina	Eastern Box Turtle	Threatened

Pitcher's Thistle

Pitcher's thistle (*Cirsium pitcheri*) is a perennial herbaceous plant endemic to the unforested dune system of Lakes Michigan, Superior, and Huron. It is monocarpic and generally flowers and sets seed after a 5- to 8-year juvenile stage. It requires active sand dune processes to maintain its early successional sandy habitat. Suitable habitat for Pitcher's thistle includes all non-forested areas of the Great Lakes dune systems, though it is found most frequently in the near-shore plant communities. Pitcher's thistle colonizes open, windblown areas then gradually declines as vegetation and ground litter densities increase through plant succession.

Nodding Pogonia

Nodding pogonia (*Triphora trianthophora*) is a small orchid of rich woods native to much of central and northeastern North America. It has a purple stem, ovate leaves, and a few white to pale pink flowers with a lip having three bright green crests. This species is found in rich beech-maple forests and old wooded dunes forests with well-developed humus layers. The plants tend to congregate in small depressions on the forest floor that is lined with deep layers of decaying leaves. Plants are highly ephemeral with blooms lasting a single day. Entire populations synchronize blooming, which only lasts a few days (Ramstetter, 2001).

Eastern Box Turtle

The Eastern Box Turtle (*Terrapene carolina carolina*) is a small land turtle with a high-domed carapace native from northeast Massachusetts to Georgia, and west to Michigan, Illinois, and Tennessee. This is Michigan's only truly terrestrial turtle. It typically occurs in forested habitats with sandy soils near a source of water such as a stream, pond, lake, marsh, or swamp. They also may be found in adjacent thickets, old fields, pastures, vegetated dunes, marshes, and at bog edges. Access to unshaded nesting sites in sandy, open areas is critical for successful reproduction (Hyde, 1999).

4.4.5.7 Historic Land Use

The MNFI maintains a Vegetation Circa 1800 map database that is a digital reconstruction of Michigan's landscape before widespread European settlement. It is based on detailed notes from General Land Office surveys conducted between 1816 and 1856. Surveyors recorded tree species, sizes, and locations as well as observations about rivers, wetlands, soil quality, and timber along section lines.

The proposed Land Control Area, which spans Sections 10, 11, 12, 13, 14, 15, 22, 23, and 24 in Township 12N, Row 18W is mapped historically on MNFI's Circa 1800 map as four primary land cover types: Beech-Sugar Maple-Hemlock Forest, Hemlock-White Pine Forest, White Pine-White Oak Forest, and Black Ash Swamp (MNFI, 2025).

With very few, isolated exceptions, the Land Use Area has been converted entirely from forest and swamp to agricultural use. The areas that have not been converted and continue as standing forest are avoided by the current Land Use Area design. With conversion from historic use already a century in place, conversion from agricultural use to solar farm will not present another significant shift from current land use shifts.

4.4.5.8 Natural Resources and Ecological Communities

The MDNR and EGLE recommend that proposed energy projects identify and avoid impacts to high-value natural resources and ecological communities prior to site development. These resources may support rare species, offer critical ecosystem services, or contribute to statewide conservation priorities. Lakeside reviewed the MNFI**,** EGLE GIS datasets, and aerial imagery to identify sensitive habitats and features within and adjacent to the Land Control Area. The following high-value resource types were assessed:

State-Listed Natural Communities

Two state-listed natural communities are documented within 2 miles of the Land Control Area:

- Great Lakes Marsh
- Mesic Northern Forest

Field review and aerial analysis confirm that no mapped or observed examples of these communities occur within the Land Control Area itself. The Project will not impact these features, and general design strategies (e.g., vegetation buffers, native plant restoration) will promote ecological compatibility with surrounding landscapes.

Wetlands and Rare Wetland Types (e.g., Prairie Fens, Coastal Marshes)

Wetlands mapped in the NWI and EGLE's Wetlands Map Viewer occur within the project area. No calcareous fens**,** coastal plain marshes, or other rare wetland types are present within or adjacent to the site based on MNFI and EGLE data.

Wildlife Action Plan Priority Areas

Michigan's State Wildlife Action Plan (SWAP) is a strategic framework developed by conservation partners to cooperatively conserve wildlife and their habitats with a particular focus on wildlife populations already in decline. Conservation actions are focused on a subset of species of greatest conservation need (SGCN) and key habitats/issues. The SWAP is organized by "mini-plans"; each mini-plan is focused on a key habitat type, the focal SGCN, current threats and needed conservation actions, opportunities for partnerships, monitoring needs, and goals for the next 10 years. While no Wildlife Action Network spatial overlays exist, the project area contains habitat types (e.g., open forest edge, and wetland complex) that align with SWAP goals. Voluntary conservation measures to reduce impacts to sensitive resources and habitat types support these goals.

Public Lands and Conservation Easements

A review of easement datasets (National Conservation Easement Database, EGLE Conservation Easements, and United States Geological Survey's Protected Lands) revealed that no publicly protected lands or conservation easements overlap the Land Control Area (EGLE, 2025f; USGS, 2025d). Review of deed information and landowner discussions during the easement agreement process revealed there are no properties within the Land Control Area that are enrolled in the Conservation Reserve Enhancement Program.

Large Block Habitat

The Project Land Control Area lies within a largely rural, agricultural matrix. While small forested blocks are scattered throughout the site, no large contiguous habitat blocks (greater than 250 acres) were identified based on landscape fragmentation analysis or MDNR aerial assessment. Wildlife movement corridors will be preserved wherever feasible, and habitat buffers have been incorporated into the project design to minimize fragmentation.

4.4.5.9 Impacts and Mitigation Measures

Federally Listed Species

No caves, mines, or rock exposures are present within the Land Control Area; therefore, suitable overwintering habitat is not present within the Land Control Area for listed bat species.

Per a desktop review of aerial imagery and the results of the 2025 field-based habitat assessment, potentially suitable forested habitat for Indiana bats is present scattered throughout the Land Control Area. A roost tree inventory was not completed, but trees 5 inches diameter at breast height and larger are present in the Land Control Area. Suitable habitat for Indiana bats within the Land Control Area includes forests/woodlots, tree rows, isolated clusters of trees, and individual trees. Additionally, approximately 131.9 acres of the Land Control Area are included in the USFWS Indiana Bat Habitat Suitability Model. Based on the identified USFWS modeled Indiana bat habitat in the Land Control Area and the presence of suitable wooded habitat within the Land Control, the Indiana bat has a high likelihood of occurrence.

Per a desktop review of aerial imagery and the results of the 2025 field-based habitat assessment, open sand and gravel beaches or shoreline are not present within the Land Control Area and suitable habitat for piping plovers is not present in the Land Control Area. In addition, the Project is located over 0.5 mile from lakeshore areas that may provide potentially suitable nesting habitat, and construction and operation of the Project will not result in disturbance of nesting plovers.

Per a desktop review of aerial imagery and the results of the 2025 field-based habitat assessment and 2024 on-site wetland and waterway delineation, no saline lakes, or constructed freshwater habitats, such as impoundments were observed within the Land Control Area; therefore, no potential suitable habitat is present within the Land Control Area for the red knot.

Per a desktop review of aerial imagery and the results of the 2025 field-based habitat assessment and 2024 on-site wetland and waterway delineation, wetlands, wetland edges, and forested uplands are present within the Land Control Area; therefore, potential suitable habitat for eastern massasauga may be present within the Land Control Area.

Per the results of the 2025 field-based habitat assessment, potentially suitable foraging habitat for KBB adults may be present within the Land Control Area in oak-pine barren habitat, and old fields. These may also support patches of lupine large enough to provide reproductive and larval foraging habitat. While no lupine was observed in the Land Control Area during the field survey, wooded areas with adjacent unmanaged and buffer strip grassland habitat are present. Based on the suitable habitat and reported occurrences in the vicinity (nearest observation record was approximately 2 miles north of the northernmost part of the Land Control Area in 2013), the Karner blue butterfly may be present within the Land Control Area.

Per a desktop review of aerial imagery and the results of the 2025 field-based habitat assessment, suitable adult foraging habitat for adult monarch is present in a variety of land cover types throughout the Land Control Area. In addition, milkweed was observed in road rights-of-ways throughout the Landscape Area during the 2025 site visit and thus provides suitable reproductive and larval foraging habitat for the monarch butterfly. A monarch butterfly was incidentally observed during the site visit. Due to an observation of the species and its host plant (milkweed) during the site visit and the presence of grasslands and roadside habitat, the monarch butterfly has a high likelihood of occurrence within the Land Control Area.

Per a desktop review of aerial imagery and the results of the 2025 field-based habitat assessment, no open dunes or other dune habitat is present within the Land Control Area; therefore, potential suitable habitat for Pitcher's thistle is not present within the Land Control Area.

Lakeside understands that per the July 15, 2025, DOI memo titled, "Departmental Review Procedures for Decisions, Actions, Consultations, and other Undertakings Related to Wind and Solar Energy Facilities," solar and wind projects are currently not eligible to utilize the IPaC website for official Project review. Lakeside will maintain updated IPaC results throughout development and again prior to the start of construction to ensure the species list remains current. Currently, solar projects are outside the scope of the determination keys found in IPaC. As such, Lakeside will contact the USFWS Michigan Ecological Services Field Office for technical assistance as needed to fully analyze Project impacts and identify any necessary avoidance and

minimization measures to ensure Project activities will not result in adverse impacts to federally listed species. If additional information for certain species is needed to complete the effects analysis, surveys may be conducted to determine the presence and extent of suitable habitat, and/or the presence or absence of individuals. Lakeside will coordinate with the USFWS and EGLE as needed to ensure Project activities will not result in unauthorized take of federally listed species, and to develop conditions for threatened and endangered species for inclusion in permits.

State Listed Species

Lakeside requested a rare species review for the Land Control Area from MNFI on September 2, 2025, to determine a current list of known occurrences of state protected species in the immediate vicinity of the Project. Lakeside will analyze the potential for the Project to impact individuals and identify any necessary avoidance and minimization measures to ensure Project activities will not result in adverse impacts to state listed species. If additional information for certain species is needed, surveys may be conducted to determine the presence and extent of suitable habitat, and/or the presence or absence of individuals. Lakeside will coordinate with MDNR and EGLE as needed to ensure Project activities will not result in unauthorized take of state listed species.

4.5 Land Clearing

A detailed description of the methods used for land clearing during construction of the Project is provided in Section 3.8.

4.6 Glare

The Solar Facility has been designed and operated to avoid glare and reflection of sunlight and other artificial lighting that may affect navigation by air and roadway. The proposed solar photovoltaic arrays employ glass panels that are designed to maximize absorption and minimize reflection to increase electricity production efficiency. To limit reflection, solar photovoltaic panels are constructed of dark, light-absorbing materials and covered with an anti-reflective coating. Today's panels reflect as little as two percent of the incoming sunlight depending on the angle of the sun and assuming use of anti-reflective coatings.

Lakeside completed a glare analysis in 2021 and at the time determined the proposed Project is located outside the areas the Ottiger Field (Airport) has identified as having obstructions to navigation. Ottiger Airport is located to the northeast of the Land Control Area. The Lakeside Solar LLC Glare Analysis Memorandum is located in Appendix G of this Application.

Additionally, Lakeside used the Federal Aviation Administration Notice Criteria Tool to determine the need for filing 7460-1 Notice of Proposed Construction forms for the Project. The results indicated the Project does not exceed the Notice Criteria. As such, Project facilities will not exceed obstruction standards and would not be a hazard to air navigation. No mitigation measures are anticipated or proposed for air traffic.

4.7 Noise

Noise is measured in units of decibels (dB) on a logarithmic scale. Because human hearing is not equally sensitive to all frequencies of sound, certain frequencies are given more weight. The A-weighted decibel scale (dBA) is used to reflect the selective sensitivity of human hearing. This scale puts more weight on the range of frequencies that the average human ear perceives, and less weight on those that we do not hear as well, such as very high and very low frequencies.

The Project sits in an agricultural and rural residential area. Common sound sources within an agricultural and rural residential environment include, but are not limited to, sound from farm equipment such as tractors and combines, sounds from birds and insects, sound generated from traffic on roadways, and wind rustling through vegetation. According to American National Standards Institute / Acoustical Society of America S12.9-2013/Part 3, rural residential areas have a typical daytime noise level of 40 dBA and a typical nighttime noise level of 34 dBA.

Background noise in the area surrounding the Project is typically a result of farming equipment/operations, wind, and vehicles. Table 4.7-1 shows the sound levels of some common noise sources.

Table 4.7-1: Decibel Levels of Common Noise Sources

Sound Pressure Level (dBA)	Noise Source
130	Jet Taking Off (200 feet away)
120	Operating Heavy Equipment
110	Night Club (with Music)
100	Construction Site
90	Boiler Room
80	Freight Train (100 feet away)
70	Classroom Chatter
60	Conversation (3 feet away)
50	Urban Residence
40	Soft Whisper (5 feet away)
30	North Rim of Grand Canyon
20	Silent Study Room
0	Threshold of Hearing (1000 Hertz)

Source: OSHA. 2022. OSHA Technical Manual (OTM) Section III: Chapter 5. Available online at https://www.osha.gov/otm/section-3-health-hazards/chapter-5. Accessed July 2025.

White River Township Zoning Ordinance Section 16.06MM(29.d) requires that 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. The Detailed Site Plan in Appendix B and Appendix I of the Sound Study (provided in Appendix K) provide modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.

The Project, including the Solar Facility and BESS, will comply with the noise requirements listed in the White River Township Zoning Ordinance and in Section 226(8) of PA 233. The main source of noise from the Project during operation will come from the inverters and BESS units, which include air conditioners housed in each inverter, and, to a lesser extent, from the transformers and rotation of the tracking system. For the BESS units, the cooling fans will generate the main source of noise. The maximum Project-related sound level at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property is 54.7 dBA. The modeled sound isolines are depicted in Appendix I of the Sound Modeling Assessment provided as Appendix K of this Application.

4.8 Lighting

4.8.1 Dark Skies Plan

Lakeside will implement a dark sky-friendly lighting plan for the Solar Facility and has created a Dark Skies Plan to guide the selection, placement, installation, and operation of all new and replacement lights serving the Project; the full plan is provided below. The goal of the Dark Skies Plan is to regulate the use of artificial light at night in the Project boundaries in a way that prioritizes the safety of visitors and employees while minimizing impact on adjacent properties and wildlife. All lights added for the operation of the Project shall comply with White River Township Zoning Ordinance with consideration for The Five Lighting Principles for Responsible Outdoor Lighting published by DarkSky International. Light emitting diode lighting with a maximum nominal color temperature of 4000K is recommended to minimize impacts upon the behaviors and activities of local wildlife.

Figure 4.8.1-1 Five Lighting Principles for Responsible Outdoor Lighting (DarkSky.org, 2025)

4.8.2 Applicability and Exemptions

This Dark Skies Plan provides guidance and recommendations that shall not be used to circumvent or otherwise supersede any relevant local, regional, and national jurisdictional requirements. Other types of lighting that shall be permitted and not subject to the Dark Skies Plan include:

- Lighting required by local, regional, or national legal jurisdiction.
- Temporary lighting utilized for the safe operation of nighttime tasks or events such as construction, equipment replacement, and emergent public safety events. The site manager shall be notified of temporary lighting as soon as practical, and all temporary lighting shall be removed promptly following completion of the task or event.
- Unshielded, low-intensity holiday or special event lighting with use specific to event or time periods are permitted with site manager approval.

4.8.2.1 Permanent Fixture Location and Operation

Permanent lighting fixtures will be located in the Collector Substation, at each inverter skid, adjacent to the O&M building and around the BESS. Additional parking lot and security lighting is not expected for the Project. In accordance with the White River Township Zoning Ordinance 16.06MM and 16.06NN, all exterior lighting shall implemented with dark sky friendly solutions and be directed in a downward fashion away from adjacent properties. All lighting on the Project will be manually activated for maintenance and operations on an as needed basis. Lights shall be

switched off if no personnel are actively working on site and when nighttime activities are completed.

4.8.2.2 Substation and BESS

The Collector Substation and the BESS will be in operation 24 hours a day and will require several manually activated lighting fixtures. Lighting shall be directed at equipment that requires routine maintenance or may require emergency operations such as transformers, breakers, and BESS control panels. Lighting installed for routine maintenance activities should utilize shielding to avoid unnecessary light spillage to other areas of the substation. Flood lighting may be utilized to illuminate a path for personnel and maintenance vehicles to safely access equipment that may require maintenance or emergency operation. Flashing or intermittent lights will not be used in accordance with the White River Township Zoning Resolution No. 75-2024.

4.8.2.3 Inverter Skids

Each inverter skid will have manually activated lighting fixtures for the purpose of maintenance and emergency operations. Lighting shall be directed towards areas where personnel are likely to work on equipment such as inverter controls and transformer openings where switching operations may be required. Inverter skid lighting should be shielded in such a manner that prevents disturbance to adjacent residential properties and roadways. General methods may include positioning lights directly above equipment with downward lighting or positioning lights such that the directed light angle is facing away from adjacent properties and roadways.

4.8.2.4 Operations and Management Building

The site O&M building will have manually activated lighting fixtures for personnel access and equipment storage. Lighting shall be directed towards entryways and equipment storage locations that may require nighttime access. All lighting shall be directed downward and away from adjacent properties and shielded to prevent spillage.

4.8.2.5 Project Entrance Locations

There are 24 project entrance locations to access the solar equipment, the substation, and the BESS. Each of these entrances will have a single downward facing light emitting diode flood light to allow for maintenance personnel and emergency responders to see the security gate location. These lights will have dusk to dawn operation and shall be pointed towards the gate. The lights should be directed away from adjacent properties and avoid spillage onto public roadways to the extent possible.

4.8.3 Temporary Construction Lighting

Temporary construction lighting may be required during construction of the Project. All temporary lighting shall be limited to locations where construction is in progress during nighttime hours. Temporary light fixtures shall be switched off when no personnel are actively working and when night-time construction activities are completed. Construction lighting should be directed and

shielded, to the extent possible, to prevent disturbance to adjacent residential properties and roadways.

4.8.4 Lighting Specifications

Exterior lighting for the Project components (i.e. Collector Substation, BESS, Inverter Skid, O&M Building) and Project entrance are described below in Table 4.8.4-1 with respect to quantity, power, type, illuminance and color.

Table 4.8.4-1 Site Lighting Specifications Table

Application	Quantity	Power (W)	Type	Illuminance (fc)	Color (K)
Substation	20	25	LED Flood	1	4000
BESS	45	25	LED Flood	1	4000
Inverter Skid	44	25	LED Flood	2	4000
O&M Building	1	20	LED Flood	1	4000
Project Entrance	23	20	LED Flood	1	4000

4.9 Advertising

Lakeside will not install advertising or non-project graphics as part of the Solar Facility. Signage will be limited to include identifying information directly pertinent to ownership, safety, and manufacturer specifications.

4.10 Public Health and Safety

Potential public health and safety issues during construction of solar generation and storage projects include injuries due to falls, equipment use, and electrocution. Construction activities will comply with local, state, and federal safety codes and regulations regarding installation of the Project facilities and standard construction practices. Lakeside will follow established industry safety procedures during and after construction of the Project; these include clear signage during all construction activities and fencing of all Project facilities to prevent public access. Hazard mitigation measures will be utilized to avoid BESS fire safety risks including storing lithium-ion batteries in weather-proof enclosures that include fully integrated heating, ventilation, and air conditioning systems for temperature control; sensors and controls for remote monitoring; and built-in fire detection and suppression systems.

The Project will have minimal impact on the security and safety of the local populace in White River Township and the rest of Muskegon County. Lakeside has regularly communicated and coordinated with all emergency and non- emergency response teams for the Project, including law enforcement agencies, local fire departments, ambulance services, and 911 services. The type and number of responding agencies will depend on the incident requiring emergency services. As discussed in Section 3.11, multiple emergency response agencies could respond in the event an emergency occurred at the Project, including the Montague Fire Authority and Montague Police Department. The closest emergency medical facility is Mercy Health Urgent Care Whitehall.

Lakeside has developed an Operations and Emergency Action Plan (refer to Appendix G) that outlines local emergency contacts, fire prevention, inspection and maintenance plan, and emergency procedures for evacuation, fire response, extreme weather, injury, and criminal behavior. Moreover, because the Project (including the Solar Facility and BESS) meets, and will comply with, the requirements in Section 226(8) of PA 233 — as demonstrated in this Application and its supporting materials — the Project does not present an unreasonable threat to public health and safety. See Section 226(8) of PA 233.

4.10.1 Land Mobile and Emergency Services Towers

There are 201 towers that are a part of the Land Mobile and Emergency Services (LMR) systems in Muskegon County (refer to Appendix G). These LMR towers are part of a system which aims to improve communication for industrial users and emergency responders. The LMR radio system operates by line of sight, talking to other LMR towers. For the system to operate effectively, multiple towers are needed to produce a solid blanket of coverage. The system can be interrupted if tall objects are proposed within the line-of-sight, typically at or near the top of a tower over 150 feet tall.

Lakeside engaged Commsearch to conduct telecommunications interference studies for the proposed Project; the reports generated by Commsearch are provided in Appendix G. The studies concluded that the Project will not impact the LMR communication system as Project facilities are proposed below the typical height of a tower and line-of-sight near the top of these towers (i.e., greater than 150 feet above ground). Lakeside anticipates the structures for the interconnecting transmission lines and transmission line will be approximately 65 feet tall. As such, no mitigation is proposed.

4.10.2 Phase I Environmental Site Assessment

Tetra Tech conducted a Phase I Environmental Site Assessment (Phase I ESA) on December 13, 2022, that encompassed the Land Control Area at that time, covering approximately 1,766 acres. The Phase I ESA did not reveal any historical recognized environmental conditions, controlled recognized environmental conditions, or vapor encroachment conditions. However, the Phase I ESA revealed seven recognized environmental conditions and one business environmental risk, as summarized in Table 4.10.2-1.

Table 4.10.2-1 Summary of Phase I Environmental Site Assessment Findings

Area ID	Description	Conclusion
SWA02	Three 55-gallon drums in poor condition with garbage and trash visible inside and two empty paint cans in poor condition	Based on the potential for the former contents of these containers to have impacted soil, SWA02 is considered to represent a recognized environmental condition for the subject property.

Table 4.10.2-1 Summary of Phase I Environmental Site Assessment Findings		
Area ID	**Description**	**Conclusion**
SWA03	Lumber, concrete, and corrugated steel sheeting were observed at the former location of Structure S02, a demolished barn. Poor visibility due to dense vegetation limited Tetra Tech's ability to review the area of SWA03. Due to the age of the structure, there is a potential for lead-based paint and asbestos-containing building materials.	Based on the potential for LBP and ACBM in soil, SWA03 is considered to represent a recognized environmental condition for the subject property.
SWA05	One 55-gallon drum in poor condition with no content label	Based on the potential for the former contents of the drum to have impacted soil, SWA05 is considered to represent a recognized environmental condition for the subject property.
SWA07	One above ground storage tank laying on its side in poor condition with no content label	Based on the potential for the former contents of the AST to have impacted soil, SWA07 is considered to represent a recognized environmental condition for the subject property.
SWA12	One 55-gallon drum, pails, paint cans, and appliances in a small ravine with materials partially buried and not visible	Based on the potential for the former contents of the observed containers to have impacted soil, and potential for unknown buried materials to be present, SWA12 is considered to represent a recognized environmental condition for the subject property.
SWA17	Two above ground storage tanks in poor condition, empty, and with no content labels	Based on the potential for the former contents of the ASTs to have impacted soil, SWA17 is considered to represent a recognized environmental condition for the subject property.
SWA18	Lumber and metal were observed in a densely vegetated area in the location of two former silos and a standing silo. During the site reconnaissance, flaking paint was observed on the silo. Limited visibility due to dense vegetation. Due to the age of the former structures and the silo, there is a potential for lead-based paint and asbestos-containing building materials to have been present.	Based on the potential for LBP and ACBM to be present in soil and potential for unknown buried materials to be present, SWA18 is considered to represent a recognized environmental condition for the subject property.
W01 and W07	Two water wells (W01 and W07) were observed at the subject property during site reconnaissance	The presence of these water wells is considered to represent a business environmental risk for the subject property.

Table 4.10.2-1 Summary of Phase I Environmental Site Assessment Findings		
Area ID	**Description**	**Conclusion**
Note: SWA = solid waste area; LBP = lead-based paint; and ACBM = asbestos-containing building materials		
Source: Tetra Tech, 2022		

The Phase I ESA identified seven recognized environmental conditions and one business environmental risk. Soil sampling is recommended for potential contaminants of concern at the solid waste areas identified in Table 4.10.2-1. If additional investigation determines that the Project may encounter contaminated soil onsite, development of a Contaminated Sites Management Plan will be triggered. It is recommended that all construction activities avoid the two identified wells. If these wells cannot be avoided, Lakeside will ensure that proper abandonment of the wells occurs prior to beginning construction activities near the wells.

Lakeside completed the fieldwork necessary to update Phase I ESA for the current Land Control Area in summer 2025; no additional recognized environmental condition s were identified. The Phase I ESA report is part of ongoing updates that will continue throughout the development and construction phases of the Project and can be made available for township review upon request.

4.10.3 Electric and Magnetic Fields and Stray Voltage

Electric and magnetic fields are present around any electrical device. Electric fields arise from the voltage or electrical charges and magnetic fields arise from the flow of electricity or current that travels along transmission lines, power collection lines, substation transformers, house wiring, and electrical appliances. The intensity of the electric field is related to the voltage of the line and the intensity of the magnetic field is related to the current flow through the conductors. Electric and magnetic fields can occur indoors and outdoors.

Project facilities that would generate electric and magnetic fields include the electrical collection lines and transformers installed at each inverter associated with the Solar Facility, BESS, and the interconnecting transmission lines. Electric and magnetic fields from electrical collection lines, regardless of whether they are below-ground or above-ground, transmission lines, and transformers dissipate rapidly with distance from the source (National Institute of Environmental Health Sciences [NIEHS], 2002). Generally speaking, higher voltage electrical lines produce higher levels of electric and magnetic fields at the source before dissipating with distance.

Approximately 25,000 scientific papers have been published in the past 30 years regarding the health effects of exposure to electric and magnetic fields. The World Health Organization performed a review of the current scientific literature and concluded that there is no evidence of low-level electric and magnetic fields causing negative health effects (World Health Organization, 2016). Guidelines are set to ensure members of the public are not exposed to potentially harmful levels of electric and magnetic fields. The internationally accepted guideline for the general public exposed to electric fields is 4.2 kV per meter (kV/m) and 833 milliGauss for magnetic fields (NIEHS, 2002).

Levels of electric and magnetic fields from the Project will be considerably below acceptable guidelines for public exposure. Project-specific electric and magnetic field levels were not modeled for the 34.5 kV electrical collection lines, 138 kV interconnecting transmission lines, or inverters and transformers. However, several studies have documented electric and magnetic field exposure of various high voltage transmission lines. The NIEHS provides typical electric and magnetic field levels for power transmission lines (NIEHS, 2002). For 230 kV transmission lines, which is higher voltage than the Project interconnecting transmission lines, electric fields directly below the transmission line were reported at 2.0 kV/m before dissipating to 1.5 kV/m at 50 feet (the approximate edge of right-of-way). Similarly, average magnetic fields directly below the 230 kV transmission line were reported at 57.5 milliGauss before dissipating to 19.5 milliGauss at 50 feet (NIEHS, 2002). For 500 kV transmission lines, which is much higher than the voltage of the Project interconnecting transmission lines, electric fields directly below the transmission line were reported at 7.0 kV/m before dissipating to 3.0 kV/m at 65 feet (approximate edge of right-of-way). Similarly, average magnetic fields directly below the 500 kV transmission line were reported at 86.7 milliGauss before dissipating to 29.4 milliGauss at 65 feet (NIEHS, 2002).

A Canadian study of collection lines at a wind facility measured electric and magnetic fields of the project's 27.5 kV collection lines, which is slightly lower voltage than the electrical collection lines proposed for the Project. This study found magnetic fields associated with buried electrical collection lines to be within background levels at one meter above ground and up to 16.5 milliGauss directly beneath overhead 27.5 kV lines (McCallum et al., 2014). As demonstrated here, both electric and magnetic fields will be well below the international guidelines of 4.2 kV/m and 833 milliGauss, respectively. Additionally, since the transformers are enclosed in a grounded metal case (i.e., shielded), they typically do not emit much electric and magnetic fields.

Stray voltage from electrical facilities is often a concern in agricultural areas, particularly on dairy farms. Stray voltage is an unintended transfer of electricity between two grounded objects and is typically caused by improperly grounded electrical equipment in farm buildings or by a faulty utility connection. All electrical components in the Project, including inverters and transformers, will be grounded in accordance with NESC. Soil resistivity measurements will be taken on site as part of the Project's updated geotechnical analysis, and that data will be used to help design grounding systems. For these reasons, the potential for stray voltage as a result of the Project will be negligible. Should a fault occur during operation of the Project, it would be quickly identified by Project monitoring systems and corrected.

The nearest residence to the solar arrays is 192 feet away; the nearest residence to an inverter, electrical collection line, and transformer is approximately 137 feet away; and the nearest residence to the BESS is approximately 824 feet away (refer to Map 4 in Appendix E). At this distance, both electric and magnetic fields would have dissipated to background levels before reaching the residence. As such, impacts will be negligible and no mitigation measures are anticipated as necessary.

5 ADDITIONAL SUBMITTAL MATERIALS

The following items are additional submittal materials in accordance with the White River Township Zoning Ordinance Subsection 16.06MM.

5.1 Site Plan

The Civil Permitting Plans and Detailed Site Plan in Appendix B depict the existing conditions, topography, properties, and the proposed Project layout (including all devices, supporting structures and fencing) to comply with White River Township's requirements. Setbacks and landscape screening locations are illustrated on the Detailed Site Plan in Appendix B. The modeled sound isolines are depicted in Appendix I of the Sound Modeling Assessment provided in Appendix K of this Application and are also shown on the Detailed Site Plan. Wetlands, streams, and drains are illustrated on Maps 10 through 13 in Appendix E.

5.2 Topographical Map

Map 3 in Appendix E illustrates the adjacent and neighboring property parcels within 1,000 feet of the Project on USGS base mapping to provide general topographic context. The Civil Permitting Plans (refer to Appendix B) illustrates the Project layout with more detailed topography contours. Map 4 in Appendix E shows the locations of residences within the Land Control Area and within a one-mile buffer. Occupied and non-occupied structures within 1,000 feet of the Land Control Area are shown on the Detailed Site Plan in Appendix B.

5.3 Nearby Solar Farms

The following information was reviewed to determine the potential for existing or proposed utility-scale solar facility within 3 miles of the proposed Project.

- Michigan Public Service Commission's Status of Renewable Energy, Distributed Generation and Legacy Net Metering in Michigan (December 2024) (Michigan Public Services Commission, 2024).
- Consumers Energy Press Release – Consumers Energy, Muskegon County Partner to Launch Muskegon Solar Energy Center (March 2024) (Consumers Energy, 2024).

Based upon the review, the proposed Project is within 3 miles of the existing MacBeth Solar Farm, which is located approximately 2 miles to the east of the Project. No other existing or proposed solar facility was identified within 3 miles of the Project.

5.4 Construction Waste Management Plan

Lakeside has developed a Construction Waste Management Plan, which is contained in Appendix G of this Application. The goals of the plan are to recycle or salvage for reuse the waste generated on-site from the construction of the Project, when practical, and to identify procedures regarding disposal, handling (including site management) and transportation of various waste types.

5.5 Decommissioning Plan

Lakeside has developed a draft Decommissioning Plan for the proposed Project, and the Plan will be updated following site plan finalization, as needed. The Decommissioning Plan is provided to White River Township for review and approval as part of this Application and is contained in Appendix G. The Decommissioning Plan complies with White River Township's Zoning Ordinance Section 16.06MM and 16.06NN. As part of the Decommissioning Plan Lakeside will post a surety bond (or agreed upon form of financial security) to White River Township.

The Plan describes the process for decommissioning the Project and restoring the property to its previous condition prior to installation of the solar energy facility. All structures, concrete, piping, facilities and other project related materials above grade and any structures to a minimum of 3 feet below grade shall be removed and properly disposed of offsite. The Plan provides an estimated usable life of the energy system and conditions for decommissioning, the estimated costs and process and timeframe to remove all the components, including a scheduling contingency process. The Project will be kept free of refuse, waste, or hazardous or unsanitary conditions.

The final Decommissioning Plan will also include a process to dispose of lithium-ion batteries which at the end of their life cycle are often considered hazardous waste due to the potential for fire or explosion if not handled properly. All applicable requirements related to the packaging, labelling, transportation, and disposal or recycling of the lithium-ion batteries will be followed during the decommissioning process. Properly recycling these batteries is crucial for safety and to conserve critical minerals and valuable materials used in their production. The recycling process typically involves collecting, sorting, and shredding the batteries to recover materials like black mass, copper, aluminum foils, separators, and electrolytes. These recovered materials can then be processed through heat-based smelting or liquid-based leaching to extract metals like cobalt, nickel, and lithium for reuse in new batteries. The EPA is planning to propose new rules for recycling lithium batteries with the intent to improve the management of materials (EPA, 2023). These new rules for improving the recycling process of lithium-ion batteries are expected to be in place by the end of the useful life of the BESS.

In addition to recycling, there is a growing focus on battery reuse and repurpose as environmentally friendly alternatives to recycling or disposal. Used lithium-ion batteries can still provide useful energy storage for other applications even after their performance degrades. Reuse and repurpose options are being developed to give batteries a "second life," extending their usefulness before they are eventually recycled. These practices not only benefit the environment by reducing resource demands for new batteries but also contribute to a more sustainable approach to managing lithium-ion battery waste. Lakeside anticipates that by the end of the useful life of the BESS, there may be more opportunities for lithium battery reuse and repurposing options.

The Plan specifies that an independent engineering assessment must be completed to verify the cost to implement the Decommissioning Plan; every 5 years for the first 20 years of operation and every 3 years thereafter.

The Decommissioning Plan will be recorded with the Muskegon County Register of Deeds on all properties developed as part of the Project.

5.6 Fees, Escrow, and Bond

In addition to the SUP application review fee, a deposit for an escrow account will be created in an amount set by resolution or fee schedule approved by the Township Board. The escrow account will be 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.

Additionally, Lakeside will provide financial security throughout the life of the Project (up to 35 years) to ensure restoration of the land to its previous land use and condition during the decommissioning process. The Financial Security Agreement will be prepared in accordance with the White River Township Zoning Ordinance (White River Township, 2024a). White River Township will review and approve of the Financial Security Agreement, which will be included in the Decommissioning Plan prepared for the Project. The financial guarantee will be reasonably sufficient to restore the property to its previous condition prior to the initial construction and operation of the Project. The estimated cost will be reassessed every 5 years and the net salvage value calculation will be performed by a third-party professional engineer approved by the Township every 5 years during operations and 12 months prior to the expiration of the Project's power purchase agreements. Additionally, the performance bond will be re-evaluated to match the updated decommissioning costs every 2 years for the operational life of the BESS.

6 COMPLIANCE WITH WHITE RIVER TOWNSHIP ZONING ORDINANCE

Lakeside has reviewed the Utility-Scale Solar Energy System Requirements of White River Township. Tables 6.0-1, 6.0-22, and 6.0-3 identify how this application meets the requirements of the White River Township Zoning Ordinance, Amended Solar Ordinance, and Amended BESS Ordinance, respectively.

Table 6.0-1: Compliance with White River Township Zoning Ordinance Chapter 3, Section 3.45: Solar Energy Systems and Chapter 16, Special Land Uses			
Requirement Number	**Requirement**	**Lakeside's response in fulfilling requirement**	**Application Section**
Chapter 16: Special Land Use Permits Procedures			
16.02.1 Application Procedure	Applications for a Special Land Use shall be submitted to the Planning Commission through the Zoning Administrator. The Zoning Administrator will review the application for completeness, and then transmit it to the Planning Commission. Applications not meeting the requirements shall be returned to the applicant for completion.	Lakeside is providing 9 complete Special Land Use Permit Application copies to the Zoning Administer.	Special Land Use Permit Application Submittal Package
16.02.2 Application Requirements	An application for a Special Land Use approval shall consist of the following:		
16.02.2(a) Application Requirements	Nine (9) copies of a site plan meeting the requirements of Chapter 15.	Lakeside has submitted 9 copies of the Civil Permitting Plans and Detailed Site Plan to meet Chapter 15 requirements to the Zoning Administer.	Appendix B
16.02.2(b) Application Requirements	A completed application form, as provided by the Township.	Lakeside has submitted a complete application form.	Appendix A
16.02.2(c) Application Requirements	Payment of a fee or fees, in accordance with a fee schedule (2020), as determined by the Township Board from time to time; to be paid when the application is determined complete and accepted by the Zoning Administrator.	A Fee of $330.00 is provided to the Zoning Administrator, which includes the administrative review fee and the special land use permit fee.	Payment is a separate attachment to the Special Land Use Permit Application Submittal Package
16.02.2(d) Application Requirements	A legal description of the entire property that is the subject of the Special Land Use.	A legal description has been provided for all properties within the Land Control Area.	Appendix A

Table 6.0-1: Compliance with White River Township Zoning Ordinance Chapter 3, Section 3.45: Solar Energy Systems and Chapter 16, Special Land Uses			
Requirement Number	**Requirement**	**Lakeside's response in fulfilling requirement**	**Application Section**
16.02.2(e) Application Requirements	A statement with regard to compliance with the criteria required for approval in Section 16.03A.1-6, and other specific criteria imposed by this Ordinance affecting the Special Land Use under consideration.	The Special Land Use Permit Application will act as a statement on compliance.	Special Land Use Permit Application Submittal Package
16.03.A Basis of Determination	The Planning Commission shall review the particular circumstances of the application under consideration in terms of the following standards, and shall approve a Special Land Use only upon a finding of compliance with each of the following standards, as well as applicable standards established elsewhere in this Ordinance.	Refer to 16.03 A(1)-(6)	Special Land Use Permit Application Submittal Package
16.03.A(1) Basis of Determination	The Special Land Use shall be designed, constructed, operated and maintained in a manner harmonious with the character of adjacent property and the surrounding area.	The Project will be designed, constructed, operated and maintained in a manner that is harmonious with the character of the surrounding area, in a manner that is harmonious with the character of adjacent property and the surrounding area.	Special Land Use Permit Application Submittal Package
16.03.A(2) Basis of Determination	The Special Land Use shall not change the essential character of the surrounding area.	The Project will not change the essential character of the surrounding area.	Special Land Use Permit Application Submittal Package, including Appendix B, Appendix E, and Section 4.1
16.03.A(3) Basis of Determination	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 creation of hazardous or potentially hazardous situations or the excessive production of	The Project will 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 creation of	Refer to Sections 3.0 and 4.0

Table 6.0-1: Compliance with White River Township Zoning Ordinance Chapter 3, Section 3.45: Solar Energy Systems and Chapter 16, Special Land Uses			
Requirement Number	**Requirement**	**Lakeside's response in fulfilling requirement**	**Application Section**
	traffic, noise, odor, smoke, dust, fumes, glare or site drainage.	hazardous or potentially hazardous situations or the excessive production of traffic, noise, odor, smoke, dust, fumes, glare or site drainage.	
16.03.A(4) Basis of Determination	The Special Land Use shall not place demands on public services and facilities in excess of current capacity.	To operate the Project will not place demands on public services and facilities in excess of current capacity.	Refer to Sections 3.2.1 and 4.10.
16.03.A(5) Basis of Determination	The Special Land Use shall be in general agreement with the Township Master Plan.	The Project is in general agreement with the White River Township Master Plan.	Special Land Use Permit Application Submittal Package
16.03.A(6) Basis of Determination	The Special Land Use shall comply with all site plan review standards.	The Project has been designed to comply with Chapter 15, Section 15.06 - Review Standards	Special Land Use Permit Application Submittal Package, Appendix B

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
16.06MM. Utility-Scale Solar Energy Systems			
2. Special Land Use.	Special Land Use approval is required for all utility-scale solar energy systems and also for certain other solar energy systems as specified in Subsection 3.45 D hereof. The applicant shall also comply with all applicable federal, State of Michigan and county requirements, (including any requirements by the Muskegon County Water Resources Commissioner) in addition to other applicable Township ordinances and codes. All plans, drawings, or other material submitted for a utility-scale solar energy system special land use approval shall be produced by licensed professionals appropriate for the materials. In addition to the Special Land Use standards found in Section 16.03A of this Ordinance, the Planning Commission shall also consider the following:	The Project meets this requirement for the solar facility and will comply with federal state and local (county and township) regulatory requirements.	Refer to Section 1.4 and Appendix D
a.	The Special Land Use shall not significantly adversely impact the property values of buildings, structures and lands located within one mile of the solar facilities. A presumption arises that this standard will not be met if substantial evidence indicates that the proposed solar energy system or facilities will decrease the value of any parcels or lots (or the buildings, uses, land value or structures thereon) by 15% of fair market value or greater.	The Project meets this requirement. The Project will not significantly adversely impact the property values of buildings, structures and lands located within one mile of the solar facilities.	Refer to Section 2.3

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
b.	The Special Land Use will not visually, aesthetically, economically or otherwise dominate other area land uses, structures or activities.	The Project meets this requirement. The Project will not visually, aesthetically, economically or otherwise dominate other area land uses, structures or activities.	Refer to Sections 2.3, 4.1, and 4.3
c.	The Special Land Use shall be harmonious and consistent with the intent of the Township Zoning Ordinance.	The Project is harmonious and consistent with the intent of the Township Zoning Ordinance.	Special Land Use Permit Application Submittal Package
d.	The Special Land Use will not establish a precedent for developments or uses which could adversely affect the long-term goals of the Township Zoning Ordinance and Master Plan.	The Project meets this requirement. The Project will not establish a precedent for developments or uses which could adversely affect the long-term goals of the Township Zoning Ordinance and Master Plan.	Special Land Use Permit Application Submittal Package
e.	The Special Land Use shall be designed to preserve environmental features, such as lakes, streams, flood plains, agricultural areas and natural areas.	The Project has been designed to preserve environmental features, such as lakes, streams, flood plains, agricultural areas and natural areas to the maximum extent practicable	Refer to Section 4.0
f.	The Special Land Use shall be reasonable.	The Project is reasonable and will help the State of Michigan achieve the Clean Energy Standard and enhance grid resilience.	Section 2.3
3.	The applicant shall comply with State of Michigan Construction Code (as adopted by the county) and the National Electric Code (NEC). In the event of a conflict between the State Building Code and National Electrical Code, the NEC shall prevail.	The Project will comply with State of Michigan Construction Code (as adopted by the county) and the National Electric Code (NEC).	Refer to Sections 2.0, 3.0, and 4.10

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
4.	All components of a utility-scale solar energy system shall be approved by the Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electronic Testing Laboratories (EIL), or a similar certification organization.	The Project will comply with the IEEE, SRCC, EIL, or a similar certification organization.	Refer to Section 3.1
5. Setbacks:	Superseded by Subpart 29 a.		
6. Township Land Coverage	Utility-scale solar energy systems shall not occupy or cover more than five (5) percent of the total land area of White River Township. For determining land coverage, see the definition of Lot Coverage in Chapter 2 of this Ordinance.	Project design complies with this requirement. The preliminary development area consists of approximately 982 acres of which an estimated 733 acres will host solar panels and native vegetation planting. The preliminary Project layout shows the solar panel area occupies approximately 7% of land in White River Township which will be restored to previous agricultural use following Project decommissioning.	Refer to Sections 1.0, 2.0, and 5.6, Appendices B, and the Decommissioning Plan in Appendix G
7. Maximum Size	Utility-scale solar energy systems shall not exceed eighty (80) acres in size per parcel or lot. For determining such maximum size, see the definition of Size in Chapter 2 of this Ordinance. In addition, where two (2) or more utility-scale solar energy systems (or the lots or parcels involved) are located within one (1) mile of one another and are owned or operated by the same person or firm (or a related or affiliate firm), such systems shall be deemed to be one overall utility-scale solar energy system	Project design complies with this requirement. The Project has been designed so solar arrays will not exceed eighty (80) acres in size per parcel or lot.	Refer to Sections 1.0, 2.1, and 2.2 and Appendix B

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	for purposes of this Subsection 7 and the total size shall be attributable to each such lot or parcel. By way of explanation (but not of limitation), Parcel A has an existing utility-scale solar energy system that is 40 acres in size. Parcel B is located within one-half mile of Parcel A and the same property owner, firm or affiliate of the firm that owns or operates the utility-scale solar energy system on Parcel A is proposing a new 30 acre utility-scale solar energy system on Parcel B. The total of the land area for the existing and proposed utility-scale solar energy system would not exceed 80 acres, such that the maximum size limit would not be exceeded. Alternately, Parcel 1 has an existing utility-scale solar energy system that is 60 acres in size. Parcel 2 is located three-quarters of a mile from Parcel 1. The owner, firm or affiliated firm that owns or operates the utility-scale solar energy system on Parcel 1 is proposing a new 30 acre utility-scale solar energy system on Parcel 2. Accordingly, both Parcel 1 and Parcel 2 are deemed to have a utility-scale solar energy system with the size of 90 acres, such that the new utility-scale solar energy system cannot be built, installed or utilized on Parcel 2.		
8. Screening, Landscaping, and Visual Impact	Where a utility-scale solar energy system is located on a property that abuts a public or private road right-of-way or easement or property containing a non-participating	The Project complies with screening, landscaping and visual impact requirements and security and fencing	Refer to Section 4.1 and Appendix B

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	residential use and such right-of-way or easement or residential use is not sufficiently screened by existing vegetation, the perimeter within 100 feet of the utility-scale solar energy facility and required fencing shall be screened and buffered by landscaped earthen berm, installed native evergreen hedge or densely leaved deciduous trees and shrubs, or combination thereof. Any perimeter fencing installed shall be located inside any berm or vegetative screening (see Subsection 16.06MM.10 for Security and Fencing requirements).	requirements (Article 3 Section 16.06MM).	
a.	Berms shall be a minimum of five (5) feet in height from the surrounding grade and shall be sloped to no more than a ratio of one (1) foot vertical to four (4) feet horizontal.	Project design complies with this requirement.	Refer to Section 4.1 and Appendix B
b.	Evergreen trees shall be a minimum of four (4) feet in height when planted, deciduous trees shall be at least a 2-inch caliper when planted, and shrubs shall be at least two (2) feet in height at the time of planting.	Project design complies with this requirement.	Refer to Section 4.1 and Appendix B

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
c.	Evergreen trees shall be spaced no more than fifteen (15) apart on center, deciduous trees shall be placed no more than thirty (30) feet apart on center, and shrubs shall be placed no more than seven (7) feet apart on center. The Planning Commission may modify required planting separations if it is determined that the combination of proposed landscaping, berming, and screening will not be sufficient to screen the project.	Project design complies with this requirement.	Refer to Section 4.1 and Appendix B
d.	The type, location, and configuration of such screen shall be approved by the Planning Commission and shall be maintained for the life of the project and dead or dying vegetation shall be replaced within one (1) year, as necessary, to maintain the visual screen.	Project design complies with this requirement.	Refer to Section 4.1 and Appendix B
e.	Plantings or berms shall be sufficient to visually screen the project. The applicant shall demonstrate the visual impact and screening opacity using photos or renderings of the project or similar projects.	Project design complies with this requirement.	Refer to Section 4.1 and Appendix B
9. Ground Cover	Native pollenating plants shall be planted (and maintained) between solar panel rows as ground cover for bees, butterflies, birds, and other wildlife. A horticulturist or landscape architect shall be consulted and make recommendations for all plantings.	Project design complies with this requirement.	Refer to Section 4.2 and the Vegetation Management Plan in Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
10. Security and Fencing	Security for a utility-scale solar energy system requires a completely enclosed perimeter security fence to restrict unauthorized access. All fencing (including type, color, size, and location) shall be approved by the Planning Commission. Fencing shall not exceed eight (8) feet in height, unless approved by the Planning Commission. Use of barbed-wire on fencing is prohibited. Electric fencing is not permitted. Fencing more than eight (8) feet in height may be required to be set back further from the public or private road right-of-way or easement. Any substation or support structures and related electrical transmission equipment buildings shall be further secured with additional fencing and security measures, locks, and restricted access. Any public roadways or access points to the parcel shall have additional fencing and/or restricted access measures. The Planning Commission may require wildlife-friendly fencing with openings that allow wildlife to traverse over or through a fenced area.	Project design complies with this requirement.	Refer to Section 3.5 and Appendix B
11. Agricultural Protection			
a.	Utility-scale solar energy systems shall generally not be located on or within prime agricultural soils or areas.	The Project is compliant with the standards and requirements set forth in Public Act 233 of 2023. Specifically, the Project complies with the requirements of Section 226(8) of PA 233.The Project is located within prime	Refer to Sections 2.2.1, 4.3.3.2, and 5.6 and Maps 6 and 7 in Appendix E

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
		farmland soils and will not unreasonably diminish farmland as only about 851 acres (1.2 percent) of prime farmland (including if mitigated) and farmland of local or unique importance within the county will be affected.	
b.	For sites where agriculture uses or farms are a permitted use in the zoning district where the lot or parcel is located, a utility-scale solar energy system shall be sited so as to minimize impacts to agricultural production through site design and accommodations. The applicant shall follow the following protective methods, and provide reasonable evidence to the Planning Commission that the site will be reasonably capable of maintaining agricultural operations and/or a return to agricultural production upon decommissioning of the utility-scale solar energy system:	The Project complies with this requirement. Lakeside will minimize impacts to agricultural production through site design and accommodations.	Refer to Section 4.3.3, the Vegetation Management Plan and Decommissioning Plan in Appendix G
(1)	The ground mounting of panels by screw, piling, or similar system that does not require a footing, concrete, or other permanent mounting in order to minimize soil compaction;	The Project complies with this requirement. The Project will minimize soil compaction and construct panels using screw, piling or similar system.	Refer to Sections 3.1 and 3.8.2.4
(2)	Siting panels to avoid disturbance and compaction of farmland by siting panels along field edges and in nonproductive areas to the maximum extent practicable and financially feasible;	The Project complies with this requirement. The Project is designed to site panels to avoid disturbance and compaction of farmland by siting panels along field edges and in nonproductive areas to the maximum extent practicable and financially feasible.	Refer to Section 4.3.3

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
(3)	Maintaining all drainage infrastructure on site, including drain tiles and ditches, during the operation of the utility-scale solar energy system;	The Project complies with this requirement. The Project is designed to maintain drainage infrastructure on site, including drain tiles and ditches, during the operation of the utility-scale solar energy system.	Refer to Sections 4.3.3 and 4.4.3
(4)	Siting the utility-scale solar energy system to avoid isolating farm operations such that they are no longer viable or efficient for agricultural production, including, but not limited to, restricting the movement of agricultural vehicles/equipment for planting, cultivation, and harvesting of crops, and creating negative impacts on support infrastructure such as irrigation systems or drains; and	Project design complies with this requirement.	Refer to Section 4.3
(5)	Maintaining existing grading and topography on the site as much as practicable, including all soils except where needed to install footings or other infrastructure.	The Project complies with this requirement.	Refer to Sections 3.8.2, 4.3.3m and 4.4.2
(6)	Prime agricultural soils and areas shall be avoided and not have utility-scale solar energy systems or components thereon unless no other land is reasonably available and the facilities will not adversely affect other area uses.	The Project is compliant with the standards and requirements set forth in Public Act 233 of 2023. Specifically, the Project complies with the requirements of Section 226(8) of PA 233.The Project is located within prime farmland soils. As outlined in Lakeside's Alternative Site Analysis, no other land is reasonably available and the facilities will not adversely affect other area uses.	Refer to Section 2.1.1 and Appendix F

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
12. Wildlife and Environmental Protection	The applicant shall provide information to ensure that impacts on wildlife, surface waters, groundwater, and other environmental concerns are addressed and minimized. Such concerns include, but are not necessarily limited to, impacts to protected and endangered species, impacts of perimeter fencing on deer and animal movement, impacts to protected wetlands, impacts on soils, and stormwater runoff. The Planning Commission may require the applicant to submit reports from the United States Fish and Wildlife Service and other environmental reports in this regard. Further, equipment and materials used in the utility-scale solar energy facility shall be widely considered safe and non-hazardous by relevant industry standards, applicable guidelines, and/or a regulatory authority having jurisdiction.	The Project complies with this requirement. The Project has addressed impacts on wildlife, surface waters, groundwater, and other environmental concerns and impacts are minimized.	Refer to Section 4.4
13. Land Clearing	Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system and to ensure sufficient all-season access to the solar resource given the topography of the land. Topsoil distributed during site preparation (grading) on the property shall be retained on site.	The Project complies with this requirement.	Refer to Sections 3.8 and 3.10 and the Vegetation Management Plan in Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
14. Distribution, Transmission, and Interconnection	All collection lines and interconnections within the utility-scale solar energy system shall be located and maintained underground, unless above ground installation is approved by the Planning Commission. This requirement excludes transmission lines and equipment meant to connect the project inverter(s) to the project substation and public utility substation off site from the utility-scale solar energy system on the property, all of which may be above ground.	The Project complies with this requirement.	Refer to Section 3.1.3
15. Height	Superseded by Part 29		
16. Glare	All utility-scale solar energy system location/tilt components and parts shall be designed and operated to avoid glare and reflection of sunlight and other artificial lighting which may affect navigation by air, water, and roadway. Utility-scale solar energy system designs shall comply with all Federal Aviation Administration siting requirements.	The Project complies with this requirement.	Refer to Sections 3.1 and 4.6 and the Glare Analysis Memorandum in Appendix G
17. Noise	Superseded by Part 29		
18. Lighting	Superseded by Part 29		
19. Advertising	No advertising or non-project graphics shall be permitted on any part of the utility-scale solar energy system or other components or parts. This exclusion does not apply to entrance gate signage or notifications containing solar energy system contacts, or any and all other information that may be required by authorities	The Project complies with this requirement.	Refer to Section 4.9

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	having jurisdiction for electrical operations. This provision shall not limit the use of signage as otherwise permitted in this Ordinance, except that billboards advertising products or services off-premises shall not be permitted on the parcel or lot with the solar energy system.		
20. Roads	Access driveways from public roads shall be subject to the Muskegon County Road Commission review and approval. Any material damages to a public road located within the Township resulting from the construction, maintenance, use or operation of a utility-scale solar energy system shall be repaired at the applicant's expense. In addition, the applicant shall submit to the appropriate county agency a description of the routes to be used by construction and delivery vehicles and any road improvement that will be necessary to accommodate construction vehicles, equipment, or other deliveries. The applicant shall abide by all County requirements regarding the use and/or repair of County roads. The Township may require that the applicant post a surety bond with the Township to cover estimated costs related to anticipated road damage or repair as recommended by the County Road Commission.	The Project complies with this requirement.	Refer to Section 1.4, 1.4.3 and Appendix D
21. Additional Submittal Materials	In addition to the general requirements of a special land use and site plan application, a utility-scale solar energy system special use application shall include:		

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
a.	A detailed site plan which clearly and accurately depicts the property boundary surveys, setbacks, installation and location of all devices and supporting building structures, fencing, modeled sound isolines, drains, wetlands, bodies of water, and landscaping.	The Project complies with this requirement. The Civil Design Site Plan and Detailed Project Layout in Appendix B depict the information required by Item 21(a). The modeled sound isolines are depicted in Appendix I of the Sound Modeling Assessment provided as Appendix K of the SUP Application package.	Appendix B and Appendix K
b.	A USGS based topographic depiction of all adjacent and neighboring property parcels showing the location and type of all buildings within one-thousand (1,000) feet of the lot or parcel on which the proposed utility-scale solar energy system will be located. This depiction shall include the locations and elevations of all proposed utility-scale solar energy system components and parts.	The Project complies with this requirement.	Refer to Map 3 in Appendix E
c.	A list that contains the location and a brief description of all other existing and planned utility-scale solar energy systems within three (3) miles of the lot or parcel on which the proposed utility-scale solar energy system will be located.	The Project complies with this requirement. The application provides the location and brief description of existing and planned utility-scale solar energy systems within 3 miles of the Project.	Refer to Section 5.3

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
d. Construction Waste Management Plan	The applicant shall submit a Construction Waste Management Plan describing the methods of waste disposal of the large quantities of cardboard, wood, scrap metal, and scrap wire. The Township may require an interim Waste Management bond or other security to ensure that the site(s) are clean after initial construction.	The Project complies with this requirement.	Refer to Section 5.4 and Appendix G
e. Maintenance Plan	The applicant shall provide a written description of the maintenance program to be used for the utility-scale solar energy system. The description shall include typical maintenance schedules, the types of maintenance to be performed, and the removal procedures and schedules should solar energy system components become broken, obsolete or abandoned. Solar panels shall be maintained in good repair and condition at all times. Broken solar panels shall either be repaired or removed from the site promptly. There shall be no on-site storage or disposal of broken or malfunctioning solar panels or other components or parts.	The Project complies with this requirement.	Refer to Section 3.9
f. Decommissioning Plan	The applicant shall provide a detailed Decommissioning Plan with the application which will describe the proposed process for decommissioning the site and restoring the property to its previous condition prior to the installation of the utility-scale solar energy system and structures. It shall state the	The Project complies with this requirement.	Refer to Sections 3.10 and 5.6 and Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	estimated usable life of the utility-scale solar energy system and conditions for decommissioning; the estimated costs in current dollars; and, the process and timeframe to remove all components and structures from the site. The Decommissioning Plan shall be recorded with the Muskegon County Register of Deeds on all properties developed for a utility-scale solar energy system.		
g.	The application shall be accompanied with the applicable fees, escrow amount and bond as established by the Township Board.	The Project complies with this requirement. The application will be accompanied by the appropriate application fee (2020 White River Township Fee Schedule). Any escrow/bond requirements will be established during the SUP review process by the Township Board. Payment is a separate Attachment to the Special Land Use Permit Application Submittal Package	Refer to Section 5.6
22. Emergency Personnel	The applicant shall provide informational materials up to and including training for responding local emergency and fire department services, and all fire departments that provide mutual aid, prior to the start of any utility-scale solar energy system operations. On-site emergency access and contacts and equipment protocols shall be provided to local emergency services and fire departments in the event of a fire or other emergency. Local	Lakeside will meet this requirement for the solar facility.	Refer to Section 3.11 and the Operations and Emergency Management Plan and Emergency Response Questionnaire in Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	emergency service and fire department training or materials will be held or provided thereafter at the expense of the owner and/or operator, as requested by the emergency services and/or fire department(s) not more than once per calendar year or as reasonably necessary. If specific firefighting chemicals or materials are needed to extinguish utility-scale solar energy system equipment fires, local emergency services and the fire department shall be provided with the proper training to handle, contain, and clean-up the chemicals or materials by the applicant.		
23. Inspection	The Township shall have the right upon approving any utility-scale solar energy system special land use to inspect the premises on which the utility-scale solar energy system is located at all reasonable times. The Township may hire a consultant to assist with any inspections at the applicant/system owner/operator or property owners' expense. If the Township determines that any part of the utility-scale solar energy system fails to comply with the Special Land Use approval, site plan approval, any applicable code, or the Zoning Ordinance, the utility-scale solar energy system shall be repaired or modified promptly. Failure to do so will constitute a material and significant violation of this Ordinance and the Special Land Use and site plan approval. Furthermore, if it is determined	Lakeside will meet this requirement for the solar facility.	Refer to Sections 3.9 and 3.12

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	that the utility-scale solar energy system has been expanded or modified without the prior approval of the Township, that shall also constitute a material and significant violation of the Special Land Use and site plan approvals and this Ordinance.		
24. Escrows and Security Bond			
a.	Prior to the start of construction or installation of a utility-scale solar energy system, the applicant/system owner/operator or property owner shall post with the Township a Decommissioning Security in the form of cash, a letter of credit, surety bond, or similar financial guarantee for an amount necessary to accomplish the work specified in the Decommissioning Plan, as agreed upon by the Township and the applicant/ system owner/operator or property owner. The amount shall be reasonably sufficient to restore the property to its previous condition prior to the initial construction and operation of the utility-scale solar energy system. The amount necessary to cover the cost of decommissioning and reclamation shall be presumed to be the greater of (i) the net salvage value calculated at 125% of the cost to decommission the project less the salvage value or (ii) an amount equal to $20/kw AC at the time of construction; $40/kw AC at the end of year ten; $80/kw AC at the end of year 20.	Lakeside will meet this requirement for the solar facility.	Refer to Sections 5.6 and the Decommissioning Plan in Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	The net salvage value calculation shall be performed by a third-party professional engineer approved by the Township every 5 years during operations and 12 months prior to the expiration of the project's power purchase agreements with the applicant or landowner. An escalation factor for inflation shall be included for determining the amount of the estimated cost of decommissioning. The Planning Commission may require a larger bond if conditions and circumstances reasonably require it.		
b.	Such financial security shall be kept in full force and effect during the entire time that the utility-scale solar energy system exists or is in place, and such financial security shall be irrevocable and non-cancelable by the applicant/system owner/operator or property owner. The Township shall be the beneficiary of such financial security documents. Where the applicant takes out the security, it may be assigned to the property owner or system owner/operator with notice to the Township.	Lakeside will meet this financial security requirement for the solar facility.	Refer to Sections 5.6 and the Decommissioning Plan in Appendix G
c.	On, or prior to, the end of a period of 5 years of operation of a utility-scale solar energy system, the estimated costs of decommissioning less the amounts reserved, if any, will be reassessed by the Township and an amount equal to the balance of such updated estimated cost of	Lakeside will meet this requirement for the solar facility.	Refer to Sections 5.6 and the Decommissioning Plan in Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	decommissioning, if any, will be reserved for decommissioning and site restoration.		
d.	Failure to keep any required financial security in full force and effect at all times while the utility-scale solar energy system exists, or is in place, shall constitute a material and significant violation of the special land use approval and this Ordinance, and shall subject the applicant/system owner/operator or property owner to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the special land use approval.	Lakeside will meet this requirement for the solar facility.	Refer to Sections 5.6 and the Decommissioning Plan in Appendix G
e.	The financial security will be released to the applicant/system owner/operator or property owner when the Township has determined that it is no longer required.	Lakeside will meet this requirement for the solar facility.	Refer to Sections 5.6 and the Decommissioning Plan in Appendix G
25. Compliance, Maintenance and Repair			
a.	The utility-scale solar energy system must be maintained in good repair and condition and also in accordance with industry standards, at all times. The applicant/system owner/operator and property owner have the joint responsibility to perform the maintenance and repairs in accordance with the Maintenance Plan and the prescribed schedules in a timely manner. All sites with a utility-scale solar energy system shall be kept free of refuse, waste, or hazardous or unsanitary conditions.	Lakeside will meet this requirement for the solar facility.	Refer to Section 3.9

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
b.	If the Zoning Administrator/Compliance Officer determines that a utility-scale solar energy system fails to meet the requirements of this Ordinance and the special land use or site plan approval, or that it poses a safety hazard or unsafe condition, the Zoning Administrator/ Compliance Officer shall provide notice to the applicant/system owner/operator or property owner of the safety or condition. If the maintenance, repair, or safety hazard(s) are not corrected or remedied after a reasonable period (not to exceed 30 days), which may be reduced depending upon the immediacy of the problem or extended as documented by active corrections as determined by the Zoning Administrator/Compliance Officer in consultation with the Township Supervisor, then the Township may take such actions as it deems appropriate including making the repairs (and charging the costs back to the applicant or land owner) or where public safety or emergency conditions warrant, shutting down the utility-scale solar energy system or portions thereof until the correction is made.	Lakeside will meet this requirement for the solar facility.	Refer to Section 3.9

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
c.	The Township may assess all costs to the applicant/system owner/operator or property owner for such enforcement actions and use a portion of any security bond or escrow being held.	Lakeside will meet this requirement for the solar facility.	Refer to Section 3.9
d.	In addition to repairing or replacing components to maintain the system, a utility-scale solar energy facility may at any time be repowered, without the need to apply for a special land use permit, by reconfiguring, renovating, or replacing the utility-scale solar energy system to increase the power rating within the existing project footprint and with solar energy collector surfaces of identical or smaller size. A proposal to change the footprint of the existing utility-scale solar energy system or replace existing panels with new panels having a larger solar energy collector surface shall be considered a new application, subject to the Ordinance standards at the time of the request.	Lakeside will meet this requirement for the solar facility.	Refer to Section 5.5 and the Decommissioning Plan in Appendix G
e.	The applicant, system owner or operator and property owner are all jointly and severally liable and responsible for complying with this Ordinance, the special land use and site plan approval and all laws at all times.	Lakeside will meet this requirement for the solar facility.	Refer to Section 1.1 and 1.2
26. Abandonment or Decommissioning			
a.	Prior to decommissioning a utility-scale solar energy system, the applicant or property owner shall submit an updated Decommissioning Plan	Lakeside will meet this requirement for the solar facility.	Refer to Section 5.5 and the Decommissioning Plan in Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	to the Zoning Administrator/ Compliance Officer for review and approval. Under such plan, all structures, concrete, piping, facilities and other project related materials above grade and any structures up to three (3) feet below grade shall be removed and properly disposed of offsite. Access drives and roadbeds shall be removed at the option of the property owner. It will be up to the Township Board or Township Supervisor whether to allow certain aspects of a former utility-scale solar energy system to remain such as roadways or building structures.		
b.	The decommissioning shall be complete, and the ground restored fully to its prior condition, within one (1) year from the date of abandonment or cessation, which time may be extended by the Zoning Administrator/Compliance Officer for up to one (1) additional year.	The Project meets this requirement for the solar facility.	Refer to Section 5.5 and the Decommissioning Plan in Appendix G
c.	Failure by the applicant or property owner to complete removal and reclamation within the one (1) year time period (or after a time extension as described above) may result in the Township hiring a contractor to complete decommissioning and reclamation, with all of the expenses thereof being charged to the applicant and the property owner and becoming a lien against the property. That shall	The Project meets this requirement for the solar facility.	Refer to Section 5.5 and the Decommissioning Plan in Appendix G

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	be in addition to all the other remedies available to the Township at law and in equity.		
27.	Any utility-scale solar energy system that is not operated for a continuous period of twelve (12) consecutive months shall be considered abandoned and the special land use and site plan approval revoked.	The Project will comply with this requirement for the solar facility. In the case of abandonment, Lakeside / owner will coordinate with White River Township regarding abandonment terms to be specified in the Decommissioning Plan.	Refer to Section 5.5 and the Decommissioning Plan in Appendix G
28. Insurance:	Liability insurance in the amount of at least two million dollars ($2,000,000) shall cover every utility-scale solar energy system at all times, which insurance shall be adjusted every 5 years pursuant to the federal Consumer Price Index (or equivalent index). The Township shall be provided with written proof of such insurance upon a 30-day prior written request by the Township.	Lakeside will meet this insurance requirement for the solar facility.	Refer to Section 5.6
29. Utility-Scale Solar Energy Systems under PA 233.	A new subsection 29 is added to Section 16.06(MM) of the White River Township Zoning Ordinance and reads in its entirety as follows: On or after November 29, 2024, once PA 233 of 2023 is in effect, then the following provisions apply to Utility-Scale Solar Energy Systems with a nameplate capacity of 50 megawatts or more. Utility Scale Solar Energy Systems with a nameplate capacity of 50 megawatts or more shall only be permitted as a special land use in the Renewable Energy Overlay District. To the extent the following provisions conflict with the provisions in subsections 1 through 28 above, these provisions control as to Utility-Scale Solar Energy Systems with a nameplate capacity of 50 megawatts or more. All provisions in subsections 1 through 28 above that do not conflict with this subsection remain in full force and effect and shall be applicable to all Utility-Scale 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 Utility-Scale Solar Energy Systems with a nameplate capacity of less than 50 megawatts.		

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
a. 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			
	Occupied community buildings and dwellings on nonparticipating properties: 300 feet from the nearest point on the outer wall	The Project meets this setback requirement for the solar facility.	Refer to Section 3.7 and Appendix B
	Public road right-of-way: 50 feet measured from the nearest edge of a public road right-of-way	The Project meets this setback requirement for the solar facility.	Refer to Section 3.7 and Appendix B
	Nonparticipating parties: 50 feet measured from the nearest shared property line	The Project meets this setback requirement for the solar facility.	Refer to Section 3.7 and Appendix B
b. Fencing	Fencing for Utility-Scale Solar Energy Systems must comply with the latest version of the National Electric Code as November 29, 2024, or as subsequently amended.	The Project meets this fencing requirement for the solar facility.	Refer to Section 3.5 and Appendix B
c. Height	Solar panel components must not exceed a maximum height of 25 feet above ground when the arrays are at full tilt.	The Project meets this height requirement for the solar facility.	Refer to Section 3.1 and Appendix B
d. 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.	The Project will meet this noise requirement for the solar facility.	Refer to Section 4.7 and Appendix K

Table 6.0-2: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06MM: Utility-Scale Solar Energy Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
e. Lighting	The Utility-Scale Solar Energy System must implement dark sky friendly lighting solutions.	The Project meets this dark sky friendly lighting solution requirement for the solar facility.	Refer to Sections 3.5 and 4.8
f. Environmental regulations.	The Utility-Scale Solar Energy System must comply with applicable state or federal environmental regulations.	The Project will comply with applicable state or federal environmental regulations.	Refer to Sections 1.4, 1.5, and 1.6
g. Host community agreement	The applicant for a land use permit for a Utility Scale 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 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.	Lakeside will meet this host community agreement requirement for the solar facility upon approval of the SUP.	Refer to Section 2.3.1

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
16.06 NN. Utility-Scale Battery Energy Storage Systems			
2. General Provisions.	All UBESS are subject to the following requirements:	Refer to 2.a.- c. below	NA
a.	All UBESS must conform to the provisions of this Ordinance and all county, state, and federal regulations and safety requirements, including applicable building codes, applicable industry standards, and NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems."	The Project will comply with federal state and local (county and township) regulatory requirements, including applicable building codes, applicable industry standards, and National Fire Protection Association (NFPA) 855 "Standard for the Installation of Stationary Energy Storage Systems."	Refer to Sections 1.4 and 3.2
b.	The Township may enforce any remedy or enforcement, including but not limited to the removal of any UBESS pursuant to the White River Township Zoning Ordinance or as otherwise authorized by law if the UBESS does not comply with this Section.	Lakeside will comply with this requirement.	NA
c.	UBESS are permitted in the Township only as a special land use in the Renewable Energy Overlay District.	The Project, including the proposed UBESS, is compliant with the standards and requirements set forth in Public Act 233 of 2023. Specifically, the Project complies with the requirements of Section 226(8) of PA 233.	Refer to Section 1.0 and Appendix F
3. Application Requirements	UBESS are permitted as a special land use and require a special land use permit under Chapter 16. In addition to the requirements of Chapter 16, applicants shall provide the Township with all of the following:		

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
a.	Application fee in an amount set by resolution of the Township Board.	A fee of $330.00 has been provided to the Zoning Administer which includes the administrative review fee and the special land use permit fee (2020 White River Township Fee Schedule).	Payment is a separate attachment to the Special Land Use Permit Application Submittal Package
b.	A deposit for an escrow account in an amount set by resolution or fee schedule approved by the Township Board. The escrow account is used to cover all costs and expenses associated with the special land use review and/or approval process, which costs can include, but are not limited to, review fees of the Township Attorney, Township Planner, and Township Engineer, as well as any reports or studies which the Township anticipates will be required during the review and/or approval process for the application. At any point during the review process, the Township may require that the applicant place additional monies into escrow with the Township if the existing escrowed funds on account with the Township will be insufficient, in the determination of the Township, to cover any remaining costs or expenses with the review and/or approval process. If additional funds are required by the Township to be placed in escrow and the applicant refuses to do so within 14 days after receiving notice, the Township will cease the zoning review and/or approval process until and unless the applicant makes the required escrow deposit. Any escrow amounts in	The Project will comply with this requirement. Lakeside will deposit in an escrow account an amount set by resolution or fee schedule approved by White River Township Board.	Refer to Section 5.6

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	excess of actual cost will be returned to the applicant. An itemized billing of all expenses will be provided to the applicant upon request.		
c.	A list of all parcel numbers that will be used by the UBESS; documentation establishing ownership of each parcel; and any lease agreements, easements, or purchase agreements for the subject parcels.	The Project complies with this requirement. The BESS is located entirely on a single parcel, owned by Guter Farms LLC, which has entered into a Solar and Storage Land Purchase Option Agreement with Lakeside Solar, LLC.	Refer to Sections 3.2
d.	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.	The Project complies with this requirement. An Operations and Emergency Action Plan is included as part of this application.	Refer to Section 3.11 and Appendix G
e.	Current photographs, videos, and topography maps of the subject property.	The Project complies with this requirement. The application includes visual renderings and topographic maps of the proposed Project.	Section 4.1, Map 3 in Appendix E, and Appendix I
f.	A conceptual plan that consists of a graphical computer-generated depiction of how the UBESS will appear from all directions.	The Project complies with this requirement. The visual renderings of how the BESS will appear are included in the application.	Refer to Section 4.1 and Appendix I.

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
g.	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 UBESS will be connected to the power grid.	The Project complies with this requirement. Civil Permitting Plans and Detailed Site Plan that include 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 are provided with the Application.	Refer to Appendix B
h.	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 UBESS.	The Project complies with this requirement. Lakeside has two active MISO queue positions, 100 MW each for surplus storage, currently pending start of the surplus study.	Refer to Sections 1.0 and 2.1
i.	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.	The Project complies with this requirement. Maintenance procedures and schedule are provided in the Application. Lakeside is coordinating with Muskegon County Water Resources Commission to maintain drainage patterns and to develop appropriate stormwater controls.	Refer to Sections 3.9 and 4.4.3.5

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
j.	A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the UBESS, 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.	The Project complies with this requirement. Lakeside has prepared a Decommissioning Plan for the Project which includes the decommissioning of the BESS.	Refer to Sections 3.10 and 5.5 the Decommissioning Plan in Appendix G
k.	Financial security that meets the requirements of this Section, which is subject to the Township's review and approval.	Lakeside will provide financial security for the life of the Project.	Refer to Section 5.6 and the Decommissioning Plan in Appendix G
l.	A plan for resolving complaints from the public or other property owners concerning the construction and operation of the UBESS, which is subject to the Township's review and approval.	The Project complies with this requirement.	Refer to Appendix D
m.	A plan for managing any hazardous waste, which is subject to the Township's review and approval.	The Project will comply with this requirement.	Refer to Section 4.10.2 and the Decommissioning Plan in Appendix G
n.	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,	The Project complies with this requirement. Lakeside has prepared an Operations and Emergency Action Plan for the Project which will include the BESS.	Refer to Section 3.11 and the Operations and Emergency Action Plan in Appendix G

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	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.		
o.	A fire protection plan, which identifies the fire risks associated with the UBESS; 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.	The Project complies with this requirement. An Operations and Emergency Action plan has been prepared for the Project and includes a fire protection plan.	Refer to Section 3.11 and the Operations and Emergency Action Plan in Appendix G
p.	A written description of specialized training and/or equipment necessary for handling fires and/or other emergencies at the UBESS 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.	The Project complies with this requirement. An Operations and Emergency Action Plan has been prepared for the Project.	Refer to Section 3.11 and the Operations and Emergency Action Plan in Appendix G

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
q.	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.	The Project will comply with this requirement. Lakeside is coordinating with Muskegon County Road Commission, Michigan Department of Transportation and White River Township, as applicable. A Road Use Maintenance Agreement will be finalized prior to construction.	Refer to Sections 1.4 and 3.4
r.	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.	The Project will comply with this requirement. Lakeside 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 BESS.	Refer to Section 3.13
s.	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.	The Project will comply with this requirement. Lakeside will obtain all county, state, and federal permits, licenses and / or approvals that are required for the Project.	Refer to Section 1.4 and Appendix D

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
t.	A ground cover vegetation establishment and management plan.	The Project will comply with this requirement. A Vegetation Management Plan has been prepared and will be updated during final design.	Refer to Section 4.2 and the Vegetation Management Plan in Appendix G
u.	Proof of the owner/operator's insurance as required by this ordinance.	The Project will comply with this requirement. Lakeside will provide proof of insurance for the Project, including the BESS.	Refer to Section 3.13
v.	Compliance with the Michigan Uniform Building Code and National Electric Safety Code. Construction of Utility-Scale Battery Energy Storage Facilities 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.	The Project will comply with this requirement. Lakeside will be in compliance with State of Michigan Construction Code and the National Electric Code (NEC).	Refer to Sections 2.2 and 3.2
w.	Any additional information or documentation requested by the Planning Commission, Township Board, or other Township representative.	The Project will comply with this requirement. Lakeside will work with White River Township and will meet this requirement.	NA
4. Site Plan Requirements	UBESS are permitted as a special land use and require site plan approval under Chapter 15. In addition to the requirements of Chapter 15, applicants site plans shall include all of the following:		
a.	Location of all proposed structures and buildings, including equipment, transformers, and substations.	The Project complies with this requirement. Civil Permitting Plans and Detailed Site Plan are provided with the Application to illustrate the location of	Refer to Appendix B

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
		equipment, transformers, and the substation.	
b.	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.	The Project complies with this requirement. The 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 Project are provided.	Refer to Map 3 in Appendix E
c.	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.	The Project complies with this requirement. Civil Permitting Plans and Detailed Site Plan are provided with the Application to illustrate setbacks, property lines, fences, signs, greenbelts, screening, drains, easements, flood plains, bodies of water, proposed access routes, and road rights of way.	Refer to Appendix B and Appendix E
d.	Indication of how and where the system will be connected to the power grid.	The Project complies with this requirement. The interconnection of the Project is described in the Application.	Refer to Sections 1.0 and 2.2 and Appendix B
e.	Plan for any land clearing and grading required for the installation and operation of the system.	The Project complies with this requirement.	Refer to Section 3.8 and Appendix B

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
f.	Plan for any ground cover establishment and management.	The Project complies with this requirement. A Vegetation Management Plan is provided with the Application and will be updated during final design.	Refer to Section 4.2 and the Vegetation Management Plan in Appendix G
g.	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.	The Project complies with this requirement.	Refer to Sections 1.3 and 3.8
h.	Sound modeling study including sound isolines extending from the sound sources to the property lines.	The Project complies with this requirement. Lakeside completed a Sound Study, including a depiction of isolines extending from sound sources to the property lines.	Refer to Section 4.7, the Detailed Site Plan in Appendix B and Appendix K
i.	Any additional studies requested by the Planning Commission, including but not limited to the following:		
(1) 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.	The Project complies with this requirement. Sample visual renderings for the Project and an assessment of visual impacts are provided with the Application.	Refer to Section 4.1 and Appendix I

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
(2) 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.	The Project complies with this requirement. Lakeside has addressed potential impacts upon the natural environment as well as appropriate measures to mitigate adverse impacts due to the proposed Project.	Refer to Section 4.4, Appendix B, and the Maps in Appendix E
(3) Stormwater Study.	(An analysis by a third-party qualified professional studying the proposed layout of the UBESS 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.	The Project will comply with this requirement. A National Pollutant Discharge Elimination System (NPDES) approval and Soil Erosion and Sedimentation Control permit and a Part 91 Soil Erosion and Sedimentation Control Permit (SESC) will be obtained prior to construction.	Refer to Sections 1.4
(4) 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.	The Project complies with this requirement. The BESS does not include solar panels, but a Glare Analysis for the Solar Facility is provided.	Refer to Section 4.6 and the Glare Analysis Memorandum in Appendix G
j. Conceptual Layout Plan.	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	The Project complies with this requirement.	Special Land Use Permit Application Submittal Package

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	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.		
k. Approvals from Other Agencies	Final site plan approval may be granted only after the applicant receives all required federal, state, and local approvals, including any applicable approval by the state historic preservation office. Applicant shall provide copies of all review letters, final approved plans, and reports issued by any other governing agencies to the Township.	The Project will comply with this requirement. Prior to construction, Lakeside will obtain required federal, state, and local agency approvals and provide support documentation from other governing agencies to the Township.	Refer to Section 1.4
l.	The site plan must show the existing topographical grades in two-foot intervals and conditions of all Participating Property at the time of application.	The Project complies with this requirement. The Civil Permitting Plans and Detailed Site Plan show topographical grades in two-foot intervals and conditions of all Participating Property at the time of application.	Refer to Appendix B
m.	A baseline soil test including Cation Exchange Capacity (CEC) shall be provided to the Township prior to any construction.	The Project will comply with this requirement. A preliminary Geotechnical Engineering Report was prepared to help guide the Project design. The final Geotechnical Engineering Report will be shared with the township when complete.	Refer to Sections 3.8 and 4.4.1

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
n.	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.	The Project will comply with this requirement. Best management practices that will be used during construction to control fugitive dust are described in the Application	Refer to Section 4.4.1.1
5. System and Location Requirements.	The site development requirements shall meet or exceed all of the requirements in the underlying zoning district, the Renewable Energy Overlay District, and all of the following:		
a. Lighting	Lighting of the UBESS 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 UBESS. The UBESS must not produce any glare that is visible to neighboring lots or to persons traveling on public or private roads. Flashing or intermittent lights are prohibited.	The Project complies with this requirement. Lakeside has prepared a Dark Skies Plan, which includes the BESS.	Refer to Section 4.8
b. Security Fencing	Security fencing must be installed around all electrical equipment related to the UBESS. Appropriate warning signs must be posted at safe intervals at the entrance and around the perimeter of the UBESS.	The Project complies with this requirement. Permanent security fencing will be installed around all electrical equipment related to the BESS in compliance with NEC and NESC.	Refer to Section 3.5 and Appendix B
c. Screening	Greenbelt screening is required around any UBESS and around any equipment associated with the system to obscure, to the greatest extent possible, the UBESS from all sides.	The Project complies with this requirement. Visual screening for the Project will comply with this requirement.	Refer to Section 4.1 Appendix B
(1)	Screening shall be installed to obscure the UBESS and shall contain two rows of staggered evergreen trees planted not greater than twelve (12) feet apart trunk to trunk, and the two rows shall be no greater than ten (10)	The Project complies with this requirement. The Civil Permitting Plans include information regarding visual	Refer to Section 4.1 and Appendix B

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	feet apart. Any substitution shall be approved in advance by the Planning Commission. No species of any Arborvitae shall be permitted.	screening that complies with this requirement.	
(2)	Planting shall be at least eight (8) feet tall at time of planting, measured from the top of the root ball to the base of the leader (not including the height of the leader) and reasonably expected to reach a height of ten (10) feet within three (3) growing seasons.	The Project complies with this requirement. The Civil Permitting Plans include information regarding visual screening that complies with this requirement.	Refer to Section 4.1 and Appendix B
(3)	The trees may be trimmed but shall maintain a height of at least eighteen (18) feet.	The Project complies with this requirement. The Civil Permitting Plans include information regarding visual screening that complies with this requirement.	Refer to Section 4.1 and Appendix B
(4)	Evergreen trees shall be Norway Spruce.	The Project complies with this requirement. The Civil Permitting Plans include information regarding visual screening that complies with this requirement.	Refer to Section 4.1 and Appendix B
(5)	Good arboricultural techniques shall be followed with respect to vegetation, including but not limited to, proper pruning, proper fertilizing, and proper mulching, so that the vegetation will reach maturity as soon as practical and will have maximum density in foliage. Dead or diseased vegetation shall be removed and shall be replanted in a manner consistent with this Section at the next appropriate planting time. Each dead or diseased vegetation shall be completely replaced at 50%	The Project complies with this requirement. The Civil Permitting Plans include information regarding visual screening that complies with this requirement.	Refer to Section 4.1 and Appendix B

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	as determined by the Zoning Administrator. Annual review by a Professional Arborist, paid for by the owner/operator, shall be performed to determine any plant/vegetation replacement necessary to remain in compliance with the ordinance.		
(6)	UBESS also shall comply with the landscaping standards in Sections 3.14 and 3.15.	The Project complies with this requirement. The Project, including the UBESS will comply with the landscaping standards in Sections 3.14 and 3.15.	Refer to Section 4.1 and Appendix B
(7)	Front, side, and rear yard screening is required if the UBESS is adjacent to a non-participating property.	The Project complies with this requirement. Proposed screening for the UBESS is provided as required for adjacent a non-participating properties.	Refer to Section 4.1 and Appendix B
d. Noise	All noise measurements are to be instantaneous and shall not be averaged. The noise generated by a UBESS must not exceed the following limits, as measured at the property line of any adjacent parcel:	The Project complies with this requirement. Lakeside completed a sound study to guide the Project design, including the BESS.	Refer to Section 4.7 and Appendix K
(1)	40 dBA Lmax between the hours of 7:00 a.m. and 9:00 p.m.		
(2)	35 dBA Lmax between the hours of 9:00 p.m. and 7:00 a.m.		
(3)	The owner/operator of the UBESS shall annually provide for a sound analysis or modeling, conducted by an auditory expert chosen by the Township, at the expense of the applicant.	Lakeside will comply with this requirement.	NA

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
e. Underground Transmission.	All power transmission or other lines, wires, or conduits from a UBESS 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.	The Project complies with this requirement. The Project will meet the National Electric Code standards for underground cable.	Refer to Section 3.2, 3.8.2.6, and 3.8.2.7 and Civil Permitting Plans in Appendix B
f. Drain Tile Inspections.	The UBESS 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 two years by means of robotic camera, with the first inspection occurring before the UBESS 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.	The Project complies with this requirement. The Project will be maintained in working condition at all times while in operation and Lakeside will comply with drain tile inspection requirements.	Refer to Section 3.9
g. Fire Protection.			
(1)	Before any construction of the UBESS 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 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 fire or explosion incidents. If the fire chief determines that the plan is adequate, then the fire chief will notify the Township Supervisor of that determination. If the fire chief determines that the plan	The Project complies with this requirement. Lakeside has prepared an Operation and Emergency Action Plan for the Project, which includes a fire protection plan.	Refer to Section 3.11 and the Operation and Emergency Action Plan in Appendix G

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	is inadequate, then the fire chief may propose modifications to the plan, which the applicant or operator of the UBESS must implement. The fire chief's decision may be appealed to the Township Board, and the Township Board will hear the appeal at an open meeting. The Township Board may affirm, reverse, or modify the fire chief's determination. The Township Board's decision is final, subject to any appellate rights available under applicable law.		
(2)	(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 (a).	Lakeside will comply with the amendment process for the Operation and Emergency Action Plan.	NA
(3)	The UBESS must comply with the fire protection plan as approved by the fire chief (or as approved by the Township Board in the event of an appeal).	Lakeside will comply with the approved Operation and Emergency Action Plan, which includes a fire protection plan.	Refer to Section 3.11 and the Operation and Emergency Action Plan in Appendix G
h. 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. The Township shall be listed as an additional insured on each policy.	Lakeside will secure the required insurance prior to construction.	Refer to Section 3.13
i. Permits	All required county, state, and federal permits must be obtained before the UBESS begins operating. A building permit is required for construction of a UBESS, regardless of whether the applicant or operator is otherwise exempt under state law.	Lakeside will acquire federal, state and local permits and approvals prior to construction.	Refer to Section 1.4

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
j. Decommissioning	If a UBESS 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 top soil and restored to a state compatible with the surrounding vegetation. The requirements of this subsection also apply to a UBESS that is never fully completed or operational if construction has been halted for a period of one (1) year.	The Project will comply with this requirement. Lakeside is providing a Decommissioning Plan with the Application that meets these requirements. The Decommissioning Plan will be updated as Project design is finalized and updates will be provided to the township.	Refer to Section 5. and the Decommissioning Plan in Appendix G
k. Financial Security	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 Project will comply with this requirement. Lakeside is providing a Decommissioning Plan with the Application that meets these requirements. The Decommissioning Plan will be updated as Project design is finalized and updates will be provided to the township.	Refer to Section 5. and the Decommissioning Plan in Appendix G
1. Extraordinary Events	If the UBESS 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.	The Project will comply with this requirement. Lakeside will comply in notifying White River Township if an extraordinary event occurs.	NA

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
m. Annual Report	The applicant or operator must submit a report on or before January 1 of each year that includes all of the following	Lakeside will comply with reporting requirements.	NA
(1)	Current proof of insurance;		
(2)	Verification of financial security; and		
(3)	A summary of all complaints, complaint resolutions, and extraordinary events.		
n. Inspections	The Township may inspect a UBESS at any time by providing 24 hours advance notice to the applicant or operator.	The Project will comply with this requirement. Lakeside recognizes the right for the Township, or a representative of the Township, to perform inspections of the BESS.	Refer to Section 3.12
o. Transferability	A special use permit for a UBESS 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.	Lakeside will comply with permit transfer process.	NA
p. Remedies	If an applicant or operator fails to comply with this Ordinance, the Township, may pursue any remedy or enforcement, including but not limited to the removal of any UBESS pursuant to this Ordinance or as otherwise authorized by law. 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	Lakeside will comply with the White River Township UBESS Ordinance.	NA
6. Utility-Scale Battery Energy Storage Systems under PA 233.	On or after November 29, 2024, once PA 233 of 2023 is in effect, the following provisions apply to UBESS with a nameplate capacity of 50 megawatts or more and an	The Project, including the proposed UBESS, is compliant with the standards and	Refer to Section 1.0 and Appendix F

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	energy discharge capability of 200 megawatt hours or more. UBESS with a nameplate capacity of 50 megawatts or more and an energy discharge capability of 200 megawatt hours of more shall only be permitted as a special land use in the Renewable Energy Overlay District.	requirements set forth in Public Act 233 of 2023. Specifically, the Project complies with the requirements of Section 226(8) of PA 233.	
	To the extent these provisions conflict with the provisions in subsection 1 through 5 above, these provisions control as to such UBESS. This subsection does not apply if PA 233 of 2023 is repealed, enjoined, or otherwise not in effect, and does not apply to Battery Energy Storage Systems with a nameplate capacity of less than 50 megawatts. All provisions in subsection 1 through 5 above that do not conflict with this subsection remain in full force and effect.	Refer to the Special Land Use Permit Application.	Refer to the Special Land Use Permit Application package
a. Setbacks.	UBESS must comply with the following minimum setback requirements, with setback distances measured from the nearest edge of the perimeter fencing of the facility:	The Project complies with the UBESS setback requirements.	Refer to Section 3.7 and Appendix B
	Occupied community buildings and dwelling - 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		
b. Installation	The UBESS must comply with the version of NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems" in effect on the effective date of the	The Project complies with this requirement. The BESS will be installed in compliance with NFPA 855 “Standard for the	Refer to Sections 3.2, 3.8.2.7, and 3.11 and Appendix B

Table 6.0-3: Compliance with White River Township Zoning Ordinance Chapter 16 Subsection 16.06NN: Utility-Scale Battery Energy Storage Systems			
Requirement Number	**Requirement**	**Lakeside's Response in Fulfilling Requirement**	**Application Section**
	amendatory act that added this section or any applicable successor standard.	Installation of Stationary Energy Storage Systems."	
c. Noise	The UBESS 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.	The Project complies with this requirement. The BESS complies with White River Township requirements for noise.	Refer to Section 4.7 and Appendix K
d. Lighting	The UBESS must implement dark sky-friendly lighting solutions.	The Project complies with this requirement. Lakeside prepared and will implement a Dark Skies Plan for the Project, which will include the BESS.	Refer to Section 4.8
e. Environmental Regulations	The UBESS must comply with applicable state or federal environmental regulations.	The Project complies with this requirement. Lakeside will obtain and comply with all county, state, and federal permits, licenses and/or approvals required for the Project.	Refer to Section 1.4
f. 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 UBESS 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.	The Project complies with this requirement. Lakeside will enter into a host community agreement with White River Township upon authorization of the SUP.	Refer to Section 2.3.1

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