DICKINSON WRIGHT PLLC

150 E. GAY STREET, 24TH FLOOR
COLUMBUS, OH 43215-3192
TELEPHONE: (614) 591-5461
FACSIMILE: (844) 670-6009
http://www.dickinsonwright.com

CHRISTINE M.T. PIRIK
CPirik@dickinsonwright.com

March 5, 2021

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3797

Re: Application
Case No. 21-36-EL-BGN
In the Matter of the Application of Marion County Solar Project, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Marion County, Ohio.

Dear Ms. Troupe:

Accompanying this letter is an application filed by Marion County Solar Project, LLC ("Applicant") for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Marion County, Ohio ("Facility"). The original application was electronically filed, and the required number of copies both in hard copy and electronic have been provided to the Docketing Division.

Along with this filing, we also provided the Docketing Division copies of the unredacted portions of the application, and have filed a Motion for Protective Order and Memorandum in Support requesting protective treatment of the confidential information contained therein.

The Applicant further notes that the information presented in the preapplication notification letter has not been revised by the Applicant since the filing of the preapplication letter.

In accordance with Ohio Administrative Code Rule 4906-2-04, we make the following declarations:

Name of the Applicant:

Marion County Solar Project, LLC
422 Admiral Boulevard
Kansas City, Missouri 64106

Name and location of the facility:

Marion County Solar Project, LLC
Marion Township
Marion County, Ohio

Name of authorized representative:

Christine M.T. Pirik
Dickinson Wright PLLC
150 East Gay Street, Suite 2400
Columbus, Ohio, 43215
(614) 591-5461
cpirik@dickinsonwright.com

Notarized Statement:

See attached Affidavit of Scott Zeimetz,
Vice President of Marion County Solar Project, LLC

Respectfully submitted,

/s/ *Christine M.T. Pirik*
Christine M.T. Pirik (0029759)
(Counsel of Record)
William V. Vorys (0093479)
Dickinson Wright PLLC
150 East Gay Street, Suite 2400
Columbus, Ohio 43215
Phone: (614) 591-5461
Email: cpirik@dickinsonwright.com
wvorys@dickinsonwright.com
(*Counsel agree to receive service by email.*)

Attorneys for Marion County Solar Project, LLC

CMTP:AP
Enclosures

4825-6313-8014 v2 [88534-4]

BEFORE THE
OHIO POWER SITING BOARD

In the Matter of the Application of Marion County Solar Project, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Marion County, Ohio.	)))))	Case No: 21-36-EL-BGN

AFFIDAVIT OF
MARION COUNTY SOLAR PROJECT, LLC

STATE OF MISSOURI :
: ss
COUNTY OF JACKSON :

I, Scott Zeimetz, being duly sworn and cautioned, state that I am over 18 years of age and competent to testify to the matters stated in this affidavit and further state the following based on my personal knowledge:

1. I am the Vice President of Marion County Solar Project, LLC, which is the applicant under this Application.

2. I have reviewed Marion County Solar Project, LLC's Application for a Certificate to Construct a Solar-Powered Electric Generation Facility in Marion County, Ohio.

3. To the best of my knowledge, information, and belief, the information and materials contained in the above-referenced Application are true and accurate.

4. To the best of my knowledge, information, and belief, the above-referenced Application is complete.

Scott Zeimetz, Vice President of
Marion County Solar Project, LLC

Sworn to before and signed in my presence this 26 day of February 2021.

KYLE SMITH
NOTARY SEAL
NOTARY PUBLIC
Commission # 20377790
STATE OF MISSOURI

Notary Public

Application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need for the Marion County Solar Project, LLC

Case No: 21-36-EL-BGN

Table of Contents

List of Tables

List of Figures

List of Exhibits

List of Abbreviations and Acronyms

AC	alternating current
ANSI	American National Standards Institute
Applicant	Marion County Solar Project, LLC
ATSI	American Transmission System Inc.
BESS	battery energy storage system
BMP	Best Management Practice
B&M	Burns & McDonnell
DC	direct current
Certificate	Certificate of Environmental Compatibility and Public Need
CIA	Critical Issues Analysis
COD	Commercial Operation Date
CWA	Clean Water Act
dBA	A-weighted decibels
EMFs	electromagnetic fields
Epsilon	Epsilon Associates, Inc.
FAA	Federal Aviation Administration
Frac Out Plan	Standard Horizontal Directional Drilling Construction Inadvertent Return Control Plan
gen-tie	generation tie-line
HDD	horizontal directional drilling
IEEE	Institute of Electrical and Engineers
IMPLAN	Impact Analysis for Planning
IPaC	Information for Planning and Construction
JEDI	Jobs and Economic Development Impacts
KOP	Key Observation Point
kV	kilovolt
kWac	kilowatts AC

kWac/year	kilowatt alternating current per year
L_{eq}	equivalent sound level
MET	meteorological
module	solar panel
MV	medium voltage
MVA	megavolt ampere
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NEC	National Electrical Code
NESC	National Electrical Safety Code
NPDES	National Pollutant Discharge Elimination System
NPV	net present value
NRHP	National Register of Historic Places
NREL	U.S. Department of Energy National Renewable Energy Laboratory
O&M	operation and maintenance
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
OEPA	Ohio Environmental Protection Agency
OPSB	Ohio Power Siting Board
PA	Programmatic Agreement
PEM	Palustrine Emergent Wetland
PILOT	Payment in lieu of taxes
PJM	PJM Interconnection, LLC
POI	Point of Interconnection
PPA	power purchase agreement
Project	Marion County Solar Project
PV	photovoltaic
QHEI	Qualitative Habitat Evaluation Index
RUMA	Road Use Maintenance Agreement
Savion	Savion, LLC

SHPO	State Historic Preservation Office
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
T/E	threatened and endangered
UL	Underwriters Laboratories
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WOUS	Waters of the U.S.

4906-4-01 PURPOSE AND SCOPE

(A) GENERAL

This application is intended to satisfy the requirements of the Ohio Administrative Code (OAC) Rule 4906-4 for issuance by the Ohio Power Siting Board (OPSB) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the Marion County Solar Project (Project) as submitted by Marion County Solar Project, LLC (Applicant).

(B) WAIVERS

The Applicant is not requesting any waivers at this time.

4906-4-02 PROJECT SUMMARY AND APPLICANT INFORMATION

(A) PROJECT SUMMARY AND APPLICANT INFORMATION

The Applicant, a wholly owned subsidiary of Savion, LLC (Savion), proposes to construct and operate the Project, a utility-scale solar-powered electric generation facility in Marion County, Ohio, with a nameplate capacity of 100-megawatts (MW) alternating current (AC), (hereinafter referred to as MW). The Project will connect to the regional transmission grid via a switchyard to be constructed at the site. A battery energy storage system (BESS) will be part of the Project as well. The Project is anticipated to operate for 30 to 40 years. A conservative approach was taken for the studies included in the application that consider the lifespan of the Project to ensure that benefits are not overestimated. An estimated 30-year Project lifespan was utilized for these evaluations (e.g. Economic Impact and Land Use Analysis, payment in lieu of taxes (PILOT)).

(1) General Purpose of the Facility

The purpose of the Project is to provide 100-MW of clean, cost-effective, renewable energy to the PJM Interconnection, LLC (PJM) transmission grid. The Project will generate electricity using virtually no fuels or water and with effectively zero air emissions and waste generation.

This Project is intended to fill the need for a more diverse national energy portfolio that will include a higher percentage of energy generated through use of renewable resources.

(2) General Location, Size, and Operating Characteristics of the Proposed Facility

The Project is in Marion County, Ohio, approximately 4 miles north of downtown Marion in an unincorporated area east of the biorefinery and adjacent to State Route (SR) 423. The Project will be located entirely on privately owned parcels where the Applicant has secured long-term leases with the landowner. In addition to SR 423 (Marion-Upper Sandusky Road), which makes up the majority of the Project Area's easternmost boundary, Marion-Williamsport Road makes up the southernmost boundary of the Project Area. The total Project Area encompasses 970 acres. The Applicant is proposing to permit the entirety of the Project Area. Based on the current Project design, the Facility, which is composed of all components and infrastructure necessary for solar energy generation, will occupy approximately 724 acres of the Project Area. The 724-acre Facility is also referred to as the Project footprint. The Applicant has made considerable effort to depict the Facility layout in its final form to the extent possible at this stage of development. However, the exact placement of the Facility components is subject to change prior to construction. The additional permitted area will allow for any adjustments to the Facility design that may be necessary in the future. The studies included in this application were completed for all 970 acres of the Project Area or within the Project footprint as applicable based on the individual resource.

The Project will have a generating capacity of 100-MW and will include photovoltaic (PV) solar panels (modules) mounted on a tracker to maximize solar energy capture and electric generation of the array. Additionally, the site will incorporate a 20.3-MW battery energy storage system using power generated by the PV solar panels and will supply the energy to the regional transmission grid through a new Project substation. Electricity generated by the modules is sent to inverters located throughout the array that would convert the electricity from direct current (DC) to AC. A series of medium voltage (MV) underground and/or overhead electric collection lines will transfer the electricity from the inverters to a new Project substation; and a short (less than 1,000 feet) overhead generation tie-line (gen-tie) will deliver electricity to a new point of

interconnection (POI) switchyard that connects to the regional transmission grid. A detailed description of each Project component can be found in Section 4906-4-03(B) in this application.

(3) Suitability of the Site for the Proposed Facility

The Applicant has determined the Project Area to be suitable for utility-scale solar facility development based on the following factors: proximity to available transmission capacity, landowner and community interest, economic analysis, and evaluation of site conditions. A detailed description of the Applicant's siting process and the Project Area's suitability is included in Section 4906-4-04 of this application.

(4) Project Schedule

The Project has been under development since 2016 and, during that time, multiple transmission, environmental, engineering, and cultural resource studies have been completed. Interconnection studies with PJM commenced in the first quarter of 2017. In accordance with Rule 4906-3-03, the Applicant posted a virtual public information presentation about the Project and held one live virtual public meeting in February 2021. The virtual public information presentation was made available to the public on February 11, 2021. The live virtual public meeting was held on February 17, 2021 and allowed participants to either phone-in or log-in on their computers and ask questions and provide comments on the Project both to the Applicant's team as well as the OPSB staff. Project construction is expected to begin as early as the fourth quarter of 2022, with commercial operations beginning in the fourth quarter of 2023. Additional information regarding Project schedule can be found in Section 4906-4-03(C) of this application.

(B) Future Plans for Additional Generation Units or Facilities in the Region

(1) Description of any plans for future additions of electric power generation units

The Applicant is seeking an OPSB Certificate to construct a 100-MW solar energy project located within the Project Area included within this application. Currently, there are no plans to add additional electric power generation units to the Project.

(2) Description of the Applicant's history, affiliate relationships and current operations

The Applicant is a wholly owned subsidiary of Savion and was formed specifically for the purpose of developing the Project. Founded in 2019, the Savion team is comprised of utility-scale solar and energy storage experts that have developed over 10 gigawatts of solar projects across 28 states that are either in operation, under construction, or in development. Savion has over 100 employees and is headquartered in Kansas City, Missouri. Savion develops projects and secures power purchase agreements (PPA) that are ultimately transferred to other entities. The Project will be constructed, operated, and maintained by the Applicant.

4906-4-03 PROJECT DESCRIPTION IN DETAIL AND PROJECT SCHEDULE IN DETAIL

(A) DESCRIPTION OF THE PROJECT AREA'S GEOGRAPHY, TOPOGRAPHY, POPULATION CENTERS, MAJOR INDUSTRIES, AND LANDMARKS

(1) Project Area Map

Figure 3-1 shows the geographic features of the proposed Project Area, at a scale of 1:24,000, as well as those features within a 2-mile radius. The proposed features specifically include:

(a) The proposed Facility;
(b) Population centers and administrative boundaries;
(c) Transportation routes and gas and electric transmission corridors;
(d) Named rivers, streams, lakes, and reservoirs; and
(e) Major institutions, parks, cemeteries, and recreational areas.

The Project layout depicted in Figure 3-1, and all subsequent figures, represents the current design of the Project. The Applicant has made considerable effort to depict the layout in its final form to the extent possible at this stage of development. However, the exact placement of the Project components is subject to change prior to construction but will remain within the limits of

the Project Area. Final engineering will depend on various considerations including the exact make and model of the equipment procured for the Project. Given the time length of the OPSB certification process and market realities for utility-scale solar facilities it is not economically feasible (in the application) to identify the equipment models to be used and give the precise location within the fence of the various components. Because of rapidly advancing technology (both as to cost and performance) and dynamic markets, the final model selections must occur closer to the start of construction. Further, the financing for procurement and construction of a project will be attracted by, and based on, the final model choices and final engineering and design based on those models. Only after the models have been selected and final design and engineering is completed can the precise locations of the key components be identified. Those locations, in turn, will drive those of the ancillary components, including the piles, collection lines, and roads. Requiring the submission of the final site plan with the application would result in procurement decisions and final design and engineering that are obsolete by the time of financing and construction start. In fact, they could likely be obsolete before a certificate is issued for the Project.

The final layout will remain within the Project Area that has been studied for environmental, engineering, sound, and visual impacts. The cultural resource surveys will encompass nearly all the Project Area, however if development expands beyond what has been surveyed, then additional cultural resource surveys will be completed for any portion of the final layout that extends into unsurveyed areas. Any final adjustments to the layout will not cause additional impacts beyond what is discussed in this application. The final layout will be provided to OPSB no later than 30 days prior to the start of construction.

(2) Project Area, in acres, of all Owned and Leased Properties

The Facility will occupy approximately 724 acres within the Project Area, entirely on private land secured under agreements with the landowners. The 9 individual parcels that comprise the Project Area are depicted in the preliminary site plan included as Exhibit A and in Figure 3-1. The additional land in the Project Area was secured to allow flexibility for the Project design to be optimized. Project infrastructure may not be constructed on all the parcels.

(B) DESCRIPTION OF THE GENERATION FACILITY

The Project is a 100-MW solar facility capable of providing clean, renewable electricity. Solar modules convert sunlight into DC electricity which is then converted to AC electricity through inverters. Transformers step up the AC electricity to a higher voltage so that it can connect to the regional transmission grid.

Project components will include PV solar modules mounted on a single-axis tracker racking system supported by steel posts. Other components of the PV system include combiner boxes, inverters, high voltage transformers, junction boxes, DC and AC electrical collection systems, a Project substation, a BESS, and a gen-tie line. Project components for the BESS will include the batteries stored in container boxes, inverters, and Project switchgear. In addition, the Project will include an operation and maintenance (O&M) trailer, POI switchyard, meteorological (MET) towers, access roads, and fencing. During construction, the Project will include temporary laydown yards, temporary construction management trailers, and stormwater management features. The locations of these features have not yet been determined but will be provided to OPSB as part of the final site plans. Project components are discussed in more detail in Section 4906-4-03(B)(1) in this application and are depicted in the preliminary site plan included as Exhibit A.

Approximately 28,512 feet (8,690.5 meters) of new access roads will be constructed within the Facility with all-weather gravel. Roads will not exceed 16 feet (4.9 meters) in width, except for turning radii, which will not exceed 50 feet (15.2 meters) in radius. The Project solar arrays will be secured with approximately 31,400 feet (9,570.7 meters) of perimeter fence, which will not exceed 7 feet (2.1 meters) in height.

PV solar modules will be mounted on a tracker racking system and oriented in rows running from north to south, angled at a degree that maximizes solar resource efficiency. To improve efficiency, a tracker system rotates approximately +/- 60-degrees east-west to track the sun as it moves through the sky each day. The racking system will be supported by approximately 43,000 steel posts installed with a pile-driving machine. The center height of the racking structures will be approximately 4 feet (1.2 meters) to 6.8 feet (2.1 meters) above the ground. When the

modules are tilted at their maximum angle, the highest point of each module will be approximately 9 feet (2.7 meters) to 15 feet (4.5 meters) above the ground. The modules will be connected using DC cables that can either be buried in a trench or attached to the racking system. The DC cables gather at the end of racking systems to combiner boxes which are connected to cables routing to an inverter.

Approximately 22 inverters would be installed throughout the Project to convert the DC power from the 1,500-volt DC collection system to AC power, which will then be transmitted to a Project substation via the 34.5-kilovolt (kV) AC collection system. The AC collection system will include underground and/or overhead segments. Underground segments of the AC collection system will be buried a minimum of 3 feet (0.9 meters) below grade; and overhead portions will not exceed a maximum height of 30 feet (9.1 meters) above grade. The AC collection system will be composed of MV cable that will transfer electricity to the Project substation. Approximately 1,980,000 feet (603,504 meters) of DC collection system cables and 105,600 feet (32,186.9 meters) of AC collection cables would be installed throughout the Project. Collection cables are often congregated into common trenches and run adjacent to one another.

The Project will require one substation that will include one 125-megavolt ampere (MVA) transformer and all necessary equipment to step up incoming MV electricity to the high voltage electricity necessary to interconnect via a gen-tie line into a new 138-kV three ring bus POI switchyard that will be owned and operated by American Transmission System Inc. (ATSI). The gen-tie line will be no more than 1,000 feet in length and will be constructed by the Applicant. The proposed gen-tie line location is depicted in Figure 3-2. It is anticipated that the gen-tie poles and substation components will not exceed 110 feet (33.5 meters) above grade.

(1) Description of the Generation Equipment

Project generation equipment includes PV solar modules that will convert sunlight directly to electricity. Bi-facial modules are being considered for this Project that will convert both direct sunlight and reflected sunlight to electrical power. The remaining Project equipment either transmits, converts, or transforms electricity generated by the solar modules.

(a) Type, Number of Units, Estimated Net Demonstrated Capacity, Heat Rate, Annual Capacity Factor, and Hours of Annual Generation

PV solar modules have not been procured for the Project as explained in Section 4906-4-03(A)(1); however, it is anticipated that the Facility will be composed of 370-watt to 540-watt panels, provided by Risen, Jinko, Trina, Longi, or other similar Tier 1 module suppliers. Table 3-1 below summarizes the potential module type, technology, wattage, and the approximate number of panels needed for the Facility. Regardless of the specific model, the solar modules will be approximately 3 to 3.5 feet (0.9 to 1.1 meters) wide by 6 to 7.5 feet (1.8 to 2.3 meters) tall and approximately 1 to 2 inches (2.5 to 5 centimeters) deep. Manufacturer specifications for Risen, Trina, Longi, and Jinko modules are provided in Exhibit B. In addition, manufacturer specifications for potential tracking systems and inverter models that may be used by the Project are also included in Exhibit B. As discussed in Section 4906-4-08(A)(1)(c), all equipment procured for the Project will be compliant with applicable Underwriters Laboratories (UL), Institute of Electrical and Engineers (IEEE), National Electrical Code (NEC), National Electrical Safety Code (NESC), and American National Standards Institute (ANSI) listings. If the Applicant uses a technology other than those included in Exhibit B, the appropriate manufacturer specification will be provided to the OPSB no later than 30 days prior to the start of construction.

Table 3-1 Solar Module Specifications

Solar Module Manufacturer	Module Type	Module Technology	Module Wattage	Approximate Number of Panels
Longi	Polycrystalline/ Monocrystalline	Mono-Facial, Bi-Facial, PERC, Half Cut Cells	520W – 540W	217,000 – 209,000
Jinko	Polycrystalline/ Monocrystalline	Mono-Facial, Bi-Facial, PERC, Half Cut Cells	455W – 475W	248,000 – 237,000
Risen	Polycrystalline/ Monocrystalline	Mono-Facial, Bi-Facial, PERC, Half Cut Cells	370W – 390W	47,900 – 45,500
Trina	Polycrystalline/ Monocrystalline	Mono-Facial, Bi-Facial, PERC, Half Cut Cells	475W – 505W	237,000 – 223,000

Key:
W = watt

Racking system technology has not been procured for the Project; however, it is anticipated that the Facility will include a NEXTracker, Array Technologies, or similar racking system. Manufacturer specifications for NEXTracker and Array Technologies racking systems being

considered are included in Exhibit B. If the Applicant uses a racking technology other than those included in Exhibit B, the appropriate manufacturer specification will be provided to the OPSB no later than 30 days prior to the start of construction.

Inverters have not been procured for the Project; however, it is anticipated that the Facility will include TMEIC or similar inverters. Manufacturer specifications for the TMEIC inverters being considered are included in Exhibit B. If the Applicant uses an inverter technology other than those included in Exhibit B, the appropriate manufacturer specification will be provided to the OPSB no later than 30 days prior to the start of construction.

The site will incorporate a 20.3MW BESS using power generated by the PV solar panels and will supply the energy to the regional transmission grid through the Project substation. A battery has not been selected; however, it is anticipated that the Facility will include a Samsung or similar battery. Inverters for the BESS have also not been procured for the Project; however, it is anticipated that the Facility will include Sungrow, Power Electronics, or similar inverters for the BESS. If the Applicant uses BESS technology other than those included in Exhibit B, the appropriate manufacturer specification will be provided to the OPSB no later than 30 days prior to the start of construction.

Based on the annual predicted sunlight hours for the Project location and the generation capacity of the Project, the annual net capacity factor for the Facility is expected to be approximately 25.15% and the hours of annual generation is expected to be 224,799 megawatt hours. Net demonstrated capacity will be 100-MW delivered to the regional transmission grid. Heat rate is not applicable to solar facilities.

(b) For Wind Farms, Turbine Size

This section is not applicable for solar facilities.

(c) Fuel Quantity and Quality

Fuel quantity and quality are not applicable for solar facilities.

(d) Pollutant Emissions and Estimated Quantities

The Project will generate electricity without producing pollutant emissions. Therefore, this section is not applicable to solar facilities.

(e) Water Volume Requirement, Source, Treatment, and Discharge

The Project will not require any cooling water during operation and, therefore, will not need to treat or discharge water. However, the Project will include an O&M trailer that will require a water source and sanitary sewer capacity. In addition, Project modules may require occasional cleaning. Water can be obtained from an on-site well or brought in from off site. The Project will either connect to the public sanitary sewer or a septic system could be installed. The Applicant will coordinate with local authorities to determine the availability of public utility infrastructure in the vicinity of the Project and will obtain all necessary permits prior to construction.

(2) Construction Method, Site Preparation and Reclamation Method, Materials, Color and Texture of Surfaces, and Dimensions of Facility Components

In general, the Project construction process will include securing the land leases and easements, installation of stormwater detention basins and other erosion control plans, clearing vegetation (Project anticipates minimal clearing), grading (Project anticipates minimal grading), installation of temporary power, and construction of temporary laydown yards and access roads. Further detail on each component is provided below.

(a) Electric power generation plant or wind-powered electric generation turbines, including towers and foundations

Solar modules are installed on steel posts that are approximately 6 inches by 7 inches (15.2 by 17.8 centimeters). Posts are typically 10 to 15 feet (3.0 to 4.6 meters) long and are driven 7 to 11 feet (2.1 to 3.4 meters) below grade, depending on soil conditions. Posts are primarily installed by pile drivers. The Project as designed would require installing approximately 43,000 steel posts. Modules are supported on posts with the help of a racking mechanism. Forklifts are used to deliver the steel frame required for the racking structures. Once the posts are driven in the

ground, racking mechanisms are installed primarily by hand and modules are then bolted to the frame.

The 20.3 MW BESS will include batteries stored in container boxes, inverters, and switchgear and will encompass an area of approximately 5 acres. The lithium batteries will be stored in container boxes that are approximately 10 feet by 8 feet and 8.5 feet tall. The foundations for the BESS components will be shallow cast in place pillar concrete foundations. The BESS containers will be located on top of the concrete pillars and will be placed by small mobile crane. Each container will be connected to an inverter by underground cabling which then will be connected to the switchgear via underground cabling. The switchgear will be connected to the Project substation that will be fed by the PV modules.

(b) Fuel, waste, water, and other storage facilities

There will be no fuel, waste, water, and other storage facilities on site during operations. Diesel fuel for construction vehicles and equipment will be stored in appropriate containment in the temporary laydown yards located away from any stream or wetland areas.

(c) Fuel, waste, water, and other processing facilities

There will be no fuel, waste, water, or other processing facilities associated with the Project.

(d) Water supply, effluent, and sewage lines

The Project will include an O&M trailer that will require a water source and sanitary sewer capacity. Water can be obtained from an on-site well or brought in from off site. The Project will either connect to the public sanitary sewer or a septic system could be installed. The Applicant will coordinate with local authorities to determine the availability of public utility infrastructure in the vicinity of the Project and will obtain all necessary permits prior to construction.

(e) Associated electric transmission and distribution lines and gas pipelines.

No new gas pipelines will be needed for the Project. One short overhead gen-tie line will be constructed to deliver electricity from the Project substation to the new POI switchyard that will connect to the regional transmission grid.

(f) Electric collection lines

There are two types of collection system (also called collection circuits or collection lines) for a solar project: AC collection and DC collection.

DC collection lines (1,500 volt) connect the modules to the inverter electrically. Modules are connected electrically above ground on the rear side and at the end of each row. Collection lines are trenched underground or hung over the racking systems by using a cable system which feeds to the combiner box. The DC collection from the combiner boxes to the inverters is run underground. Approximately 1,980,000 linear feet of DC collection system cables would be installed throughout the Project. Collection cables are often congregated into common trenches and run adjacent to one another.

AC collection lines (34.5kV) will connect the inverters to the Project substation. The collection lines connected to the inverters create circuits generally loaded up to 30MW. The number and loading of circuits are determined by electrical, geotechnical, and equipment parameters. The AC collection system will be installed underground via open cut trench or plowed methods or overhead via self-supporting or guyed poles. Horizontal directional drilling (HDD) may also be used. Approximately 105,600 linear feet of AC collection cables would be installed throughout the Project. Collection cables are often congregated into common trenches and run adjacent to one another.

(g) Substations, switching substations, and transformers

Preliminary design includes one Project substation with one 125-MVA transformer and all necessary equipment to step up incoming MV electricity to the high voltage electricity necessary to interconnect via a gen-tie line into a new 138-kV three ring bus POI switchyard that will be owned and operated by ATSI. The location of the substation/switchyard complex is depicted in all Facility mapping and will encompass approximately 11 acres.

A common control enclosure will be installed on site that will house the protection, communication, and supervisory control and data acquisition equipment necessary to safely

operate the substation. The substation and POI switchyard will be located adjacent to each other and will be approximately two acres total in area. The substation/switchyard complex will be fenced in and protected according to the NESC.

(h) Temporary and permanent meteorological towers

The Project will include four permanent MET towers that will be approximately 14 feet (4.3 meters) tall and installed on a concrete base adjacent to inverters. MET stations consist of a pyranometer to measure the solar irradiance, an anemometer to measure the wind speed and direction, and a thermometer. The location of the MET towers will be determined during the final design stage.

(i) Transportation facilities, access roads, and crane paths

Approximately 28,512 linear feet of new access roads will be constructed for the Project. These roads will be private, constructed of aggregate gravel, and will not exceed 16 feet (4.9 meters) in width, except for turning radii, which will not exceed 50 feet (15.2 meters) in radius. Access roads will be constructed to support the site and weight of vehicle traffic on site.

The highest traffic volume will occur during peak construction periods, when racking systems are being installed and PV solar modules are being assembled concurrently. Except for the transformer deliveries, construction traffic is not expected to include oversize or overweight loads.

The construction of the solar array will not utilize large cranes and, therefore, crane paths are not necessary throughout the Project footprint. A crawler-type crane will be used to erect the BESS, substation, and switchyard. The crane will be positioned just off the substation access road which will eliminate the need for a designed crane path.

(j) Construction laydown areas

The Project will include one laydown area throughout construction that will be no more than four acres in size. The location of the laydown area is depicted in the Facility figures. The laydown area will include construction contractor trailers, equipment storage containers, diesel fuel

storage for construction equipment, a laydown area for materials and supplies, including solar modules and racking equipment, and an employee parking area. The laydown area will be restored once construction is complete, provided it is not used for other Project components.

(k) Security, operations, and maintenance facilities or buildings

The Project will include an O&M trailer that will house administrative, operation, and maintenance equipment and an office space for Project personnel. The O&M trailer and associated infrastructure would occupy approximately two acres. The Facility will be surrounded by approximately 31,400 feet of 7-foot (2.1-meter) perimeter fencing.

(l) Other pertinent installations

After construction, temporarily disturbed areas will be restored. The Facility will be graded to natural contours where possible and prepared for final seeding. Once construction is complete, the permanent access roads will be dressed as necessary to ensure their long-term function. Erosion control methods during and after construction will depend on the contours of the land, as well as requirements of relevant permits.

(3) New Electric Transmission Line

The only new transmission lines associated with the Project will be the gen-tie line delivering electricity from the new Project substation into a new 138-kV three ring bus POI switchyard that will be owned and operated by ATSI. The gen-tie line would be no more than 1,000 feet (304.8 meters) in length and will not exceed 110 feet (33.5 meters) above grade. The proposed location of the gen-tie line is depicted in Figure 3-2.

(4) Project Area Aerial Map

Figure 3-2 depicts the proposed Facility and its nearby roads and property lines at a scale of at least 1:12,000 and includes the following features:

(a) An aerial photograph;

(b) The proposed Facility, including all components listed in paragraph (B)(2) of this rule;

(c) Road names; and

(d) Property lines.

(C) PROJECT SCHEDULE

(1) Project schedule in Gantt Format

The Project schedule is provided in Figure 3-3 and includes the following milestones:

(a) Acquisition of land and land rights

The Project will be built on private land under lease and easement to the Applicant. Section 4906-4-06(A) in this application details the acquisition of land and land rights for the Project.

(b) Wildlife, environmental, and cultural surveys/studies

Wildlife, environmental, and cultural surveys/studies began in October 2017 and are ongoing. They include the following:

- Construction route study (Exhibit J);
- Geotechnical engineering report (Exhibit L);
- Glare analysis (Exhibit O);
- Sound level assessment (Exhibit Q);
- Wetland and waterbody delineation field survey (Exhibit S);
- Threatened and endangered (T/E) species habitat field survey (Exhibit T);
- Critical issues analysis (CIA; Exhibit V);
- Hydrology Assessment (Exhibit N);
- Desktop cultural resources review (Exhibit W);
- Architectural history survey;
- Archaeological field survey; and
- Visual resources assessment (Exhibit Y).

The results of these surveys are summarized in Section 4906-4-06 and -08 in this application.

(c) Receipt of grid interconnection studies and other critical path milestones for project construction

Interconnection studies commenced in the first quarter of 2017 and are continuing through the first quarter of 2021. A signed interconnection agreement is expected in the first quarter of 2021.

(d) Preparation of the application

Development of the application commenced in the first quarter of 2021 and has been ongoing since then.

(e) Submittal of the application for certificate

This application will be submitted in the first quarter of 2021.

(f) Issuance of the certificate

The Applicant anticipates that OPSB will issue a Certificate by the first quarter of 2022.

(g) Preparation of the final design

The Applicant anticipates that preparation of the final design will commence shortly after receipt of a Certificate in the second quarter of 2022 and be completed during the fourth quarter of 2022.

(h) Construction of the facility

Construction of the Project is planned to commence as early as the fourth quarter of 2022 and be completed by the fourth quarter of 2023.

(i) Placement of the facility in service

The Project is expected to be in service by the fourth quarter of 2023.

(2) Proposed construction sequence

An engineering procurement and construction contractor will be selected prior to construction. Construction will begin after the necessary permits are received and the electrical interconnection process is finalized. Project construction will begin with workforce mobilization and the initial site preparation work including grading, placement of erosion control measures, and any necessary vegetation and tree removal. Localized site grading is expected to be required over smooth areas of rolling terrain within the array to accommodate the racking system. Minimal grading may be required for the Project substation, switchyard, BESS, and the O&M trailer, but access roads will be constructed at grade when possible.

Next, general site improvements will be made such as access improvements and preparation of the construction laydown area. The Facility components (racking system, PV solar modules, collection system, and inverters) will be installed next along with access roads. The Project will be constructed in blocks, and multiple blocks will be constructed simultaneously. The Project substation, switchyard, and BESS will be constructed concurrently with the PV array sites. Commissioning of electrical equipment will be conducted prior to placement of the Facility in service. As portions of the Project near completion, temporary laydown areas will be vacated and disturbed areas will be reseeded and re-vegetated consistent with the vegetation management plan (Exhibit C). Once installation is complete, the O&M trailer and associated permanent infrastructure (storage, lighting, etc.) will be completed. All temporary restroom facilities will be removed upon completion of the O&M trailer.

After construction, temporarily disturbed areas, including the construction laydown area, will be restored. While only minimal grading of the site is anticipated, if applicable the Facility will be graded to natural contours where possible and prepared for final seeding. Once construction is complete, the permanent access roads will be dressed as necessary to ensure their long-term function. Erosion control methods during and after construction will depend on the contours of the land, as well as requirements of relevant permits.

(3) Impact of Critical Delays on the In-Service Date

Due to the complexity of preparing a utility-scale solar facility for permitting, construction, financing, off-takes, etc., impacts of any delays can vary widely. Critical delays may have material impacts and adverse effects on Project financing, including the Applicant's ability to procure PV solar modules and other Facility components. Such delays may push the in-service date back, which would cause significant financial burden to the Applicant, as discussed in OAC Section 4906-4-06(D) of this application.

4906-4-04 PROJECT AREA SELECTION AND SITE DESIGN

(A) SELECTION OF THE PROJECT AREA

(1) Description of the Study Area or Geographic Boundaries of the Area Considered for Development and Rationale for Selection

The Project is in Marion Township, Marion County, Ohio north of the City of Marion. The Applicant chose to develop in this area because the Marion economic development organizations have targeted this location as a prime area for development and it is adjacent to an existing ATSI, 138 kV transmission line that distributes power to the PJM grid.

(2) Map of the Study Area and General Sites Evaluated

A map of the Project Area (Study Area) is provided as Figure 3-2. The Applicant evaluated land within Marion County to determine whether it was suitable for solar development.

(3) Qualitative and Quantitative Siting Criteria Utilized

From a qualitative perspective, open, flat ground, access to transmission lines, and interested landowners were key to identifying the site. Quantitative siting criteria is based upon estimates of solar resource from data collected on-site, required transmission upgrades and interconnection costs, and project size.

(4) Description of the Process and how the Siting Criteria were Utilized

Savion's solar siting selection process is comprised of four primary components: transmission proximity, geophysical and environmental review, landowner and community interest, and competition research.

The process begins with identifying areas with access to nearby transmission line facilities. Once a point of interconnection onto the grid is identified, large areas of open ground are analyzed to determine suitability based on land use and environmental concerns. Areas with large concentrations of wetlands, sloped terrain, or undisturbed forested areas are generally avoided, narrowing the number of potential project areas considerably. Research into county parcel data is then completed in order to identify land ownership. Several potential landowners are contacted in order to determine interest and to refine the initial site boundary. Research into the community and any potential competitor's actions may then be completed in order to determine if a site is likely to be successful. A project only moves into advanced development if there is landowner support, it is competitive from an economic perspective, and positive results from initial environmental and transmission studies.

(5) Description of the Project Area(s) Selected for Evaluation

The Applicant selected the subject site for further development because of interest and positive feedback from landowners and local officials, and positive results from initial transmission studies. In addition, due to the nature of the site (i.e., previously disturbed cultivated cropland), solar development construction and operations will not have a significant impact on natural resources.

(B) DESIGNING THE FACILITY LAYOUT

(1) Constraint Map

Figure 4-1 presents a map of the Project Area with the setbacks and other constraints.

(2) Criteria Used to Determine the Facility Layout and Site Design

The layout of the Project has been optimized to utilize available land and still provide environmental and visual setbacks to achieve a minimal impact to natural resources and adjacent residents' viewshed. All of these setbacks have been made proactively by the Applicant in order to limit impacts to the various resources. The ground coverage ratio was selected to obtain the most efficient energy production. In the current Project design, the solar modules have been set back a minimum of 225 feet (68.6 meters) from the adjacent residences. Upon final design, all residences will be a minimum of 300 feet (91.4 meters) from the nearest panel. The solar modules have also been set back a minimum of 50 feet (15.2 meters) from public road centerlines and 50 feet (15.2 meters) from the existing transmission line that bisects the Project Area. The Project has been designed such that all wetlands and streams have been avoided. Should it become necessary to impact wetlands or streams in the final design, the Applicant will coordinate with U.S. Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (OEPA) to obtain the required permits.

(3) Description of Number and Type of Comments Received

The public information meeting was held virtually on February 17, 2021 from 5:00 pm to 7:00 pm. For members of the public who could not join the virtual meeting, a presentation about the Project was recorded and posted online February 11, 2021. The presentation was just over 30 minutes in length and included a combination of slides and narrative from subject matter experts providing an overview of the Project. The presentation concluded with information on the many avenues to ask questions and provide comments on the Project to both the development team and the OPSB staff. The February 17, 2021 public information meeting was held via a video conference that allowed participants to either phone-in or log-in on their computers. The live presentation starting at 5:00 pm was similar to what was recorded and posted on the Project website on February 11, 2021. The remaining time was used as a question-and-answer session.

The public information meeting was well-attended with active participation from the community. Approximately 55 participants attended the video conference. A list of questions asked during the meeting is provided in Exhibit D.

The Applicant's responses to the inquiries are consistent with the information provided in this application. In addition, the Applicant launched a Facebook page (https://www.facebook.com/marioncountysolarproject/) and website (https://www.marioncountysolarproject.com/) to provide interested individuals a way to seek Project related information and connect with Project representatives. The Applicant's social media campaign has proven to be an effective communication tool. Facebook page messaging has resulted in 2,562 interactions with the page, of which 96% were indicative of support for the Project, as indicated in the third-party Facebook Metrics report included in Exhibit E. Since launching the social media campaign, several residents have reached out directly to Project representatives to inquire about the Project. These inquiries have resulted in several email exchanges to answer questions and discuss the Project in further detail.

4906-4-05 ELECTRIC GRID INTERCONNECTION

(A) CONNECTION TO THE REGIONAL ELECTRIC GRID

PJM is the Regional Transmission Operator that coordinates the movement of wholesale electricity throughout 13 states and the District of Columbia in the Midwest and Mid-Atlantic, including Ohio. The Applicant will be connecting the Project to ASTI's existing Galion – Roberts South 138 kV line that connects to the PJM grid.

(B) INFORMATION ON INTERCONNECTION OF THE FACILITY TO THE REGIONAL ELECTRIC POWER GRID

(1) Generation Interconnection Request Information

The Applicant has submitted two transmission filings with PJM for the Project under Marion County Solar Project, LLC. The first queue position is AC2-195, which is for a solar generation facility with the total capability of 99.96 MW. The second queue position is AE2-324, which is a non-additive storage generating facility, and would increase the gross capability of AC2-195 by 20.3 MW. However, the total plan output will remain limited to 99.96 MW. AC2-195 and AE2-324 will have separate In-Service Agreements due to the timing of their applications. The PJM

assigned queue positions can be found at the following website: https://pjm.com/planning/services-requests/interconnection-queues.

To date, the Feasibility Study, System Impact Study, and Facilities Study have been completed for the AC2-195 queue position. Network upgrades identified in the Facilities Study include the construction of a 138 kV three ring bus interconnect switchyard and connections to the ATSI-owned Galion-Roberts South 138 kV circuit. Estimates from the Facilities Study issued in July 2020 show the total cost of the AC2-195 network upgrades to be $9.097 million. The Interconnection Service Agreement draft has been issued and is anticipated to be executed in the first quarter of 2021. The completed PJM studies for queue position AC2-195 are attached in Exhibit F to the application.

A Feasibility Study and System Impact Study have been completed for AE2-324. Since interconnection of AE2-324 (non-additive BESS) will be connected via AC2-195, the only network upgrades identified in the System Impact Study include non-direct connection upgrades at the First Energy Galion and Roberts substations. A Facilities Study is anticipated to be issued in Q1 2021. The completed studies for queue position AE2-324 are attached in Exhibit F to the application.

(2) System Studies on Generation Interconnection Request

The Project queue position AC2-195 received its Feasibility Study in July 2017; System Impact Study in June 2018; and Facility Study Report in June 2020. Copies of the completed studies are contained in Exhibit F to the application.

The Project queue position AE2-324 received its Feasibility Study in July 2019 and System Impact Study Report in February 2020. A Facilities Study is anticipated to be issued in the third quarter of 2021. Copies of the completed studies are contained in Exhibit F to the application.

The outstanding Interconnection Agreement for queue position AC2-195 and Facilities Study for queue position AE2-324 will be filed with the OPSB upon receipt.

4906-4-06 ECONOMIC IMPACT AND PUBLIC INTERACTION

(A) CURRENT AND PROPOSED OWNERSHIP OF THE PROPOSED FACILITY

The Applicant is a wholly owned subsidiary of Savion. Savion develops projects and secures PPAs that are ultimately transferred to other entities. The Project will be constructed, operated, and maintained by the Applicant.

The Applicant holds all landowner agreements. These agreements will not change the ownership status of the private lands within the Project Area. All landowner agreements are summarized in Table 6-1 below.

Table 6-1 Participating Landowners

Parcel Number	Owner	Status	Approximate Size (Acres)	Acreage within Project Area	Acreage within Facility Footprint
190040011300	KEPFORD GOTTFRIED INC	Leased	136.6	136.5	125.9
190040011400	KEPFORD GOTTFRIED	Leased	0.4	0.3	0.0
190040011600	KEPFORD GOTTFRIED INC	Leased	267.2	266.9	98.4
190040011800	KEPFORD GOTTFRIED INC	Leased	18.3	17.7	0.0
190040011900	KEPFORD GOTTFRIED INC	Leased	76.5	76.4	70.8
190040012000	KEPFORD GOTTFRIED INC	Leased	158.8	155.8	150.6
190040011500	KEPFORD GOTTFRIED INC	Leased	5.3	5.0	0.5
190040012100	KEPFORD GOTTFRIED INC	Leased	72.9	72.9	67.1
190040004600	KEPFORD GOTTFRIED INC	Leased	237.8	237.7	211.0
			Total	969.3	724.3

(B) CAPITAL AND INTANGIBLE COSTS

(1) Estimates of Capital and Intangible Costs for the Various Alternatives

The Applicant will invest approximately [redacted] to develop the Project with capital costs totaling [redacted] for equipment, onsite labor, etc. and intangible costs including permitting, other development costs, and business overhead totaling approximately [redacted]

Alternative project areas were ruled out, as explained in Section 4906-4-04, prior to conducting detailed cost analyses.

(2) Cost Comparison with Similar Facilities

Based on the current estimated cost per kilowatt of [redacted] kilowatts AC (kWac), which has some variability based on things like discount rates, the Project's costs are consistent with costs for other solar facilities in the Midwest and with others developed by Savion. The U.S. Energy Information Administration provides cost data for solar energy facilities installed during 2018, which is the most recent year available. Installed costs for solar across the U.S. are estimated at $1,848/kWac, although this estimate includes projects of varying sizes, technologies, and location (USEIA 2020). Costs for the Project are much less than the national average.

(3) Present Value and Annualized Cost for Capital Costs

Capital costs spent through the first quarter of 2021 are accounted for and all additional capital costs will be incurred through construction, culminating with the Project's commercial operation date (COD) in the fourth quarter of 2023. Because of the short timeline to the Project's COD, the present value and annualized capital costs will be similar to the costs presented above.

As no other Project location alternatives were considered, no additional present value or annualized cost estimates for capital costs are provided.

(C) Operation and Maintenance Expenses

(1) Estimated Annual Operation and Maintenance Expenses

The O&M costs for the Project during the first two years of commercial operation are estimated to be approximately [redacted] annually, for a total of [redacted] for the first two years combined (excluding costs associated with tax and lease payments or increases due to inflation).

(2) Operation and Maintenance Cost Comparison

The Applicant expects the annual O&M cost of the Project, including labor, to be approximately [redacted] (excluding taxes, land leases, and inflation) or [redacted] per kilowatt alternating current per year (kWac/year). The U.S. Department of Energy, National Renewable Energy Laboratory, issued a report benchmarking the cost of installed solar energy in the first quarter of 2018 across the U.S. and found that annual O&M costs for utility-scale, fixed-tilt PV solar was approximately $9.10 per kWac/year and $10.40 per kWac/year when using tracking systems (NREL 2018). These costs exclude inverter replacements. Based on this national average, the Project is below the national average cost for annual O&M costs.

(3) Present value and Annualized Expenditures for Operating and Maintenance Costs

The present value of the total annual O&M cost (excluding taxes, land leases, and inflation) can be calculated using a nominal 9% discount rate and 2% escalation over the approximate 30-year lifespan of the Project. Based on these assumptions, the net present value (NPV) of the O&M costs over the life of the Project is approximately [redacted]

(D) Estimated Cost for a Delay

Due to the complexity of preparing a modern solar energy facility for permitting, construction, financing, off-takes, etc., impacts of any delays can vary widely. Critical delays may have material, adverse effects on Project financing, including the Applicant's ability to procure PV solar modules and other Project components. Such delays may push the in-service date back. A monthly delay in the in-service date is estimated to have an NPV loss of [redacted] per month. In

addition, any delay will postpone revenues to the County and the local school district that will result from the Project.

(E) ECONOMIC IMPACT OF THE PROJECT

The Project will have a positive impact on the local economy primarily through construction spending and jobs, and related tax revenue benefits for the local governments and school districts as described below. Strategic Economic Research, LLC conducted a thorough economic impact and land use analysis of the Project and the resulting report is provided in Exhibit G. To quantify the potential impact on the local economy, the Jobs and Economic Development Impacts (JEDI) PV Model developed by the National Renewable Energy Laboratory (NREL) was utilized in the economic assessment. The JEDI PV Model is an input-output model that measures the spending patterns and location-specific economic structures that reflect expenditures supporting varying levels of employment, income, and output. For this Project, three types of expenditures were considered: direct impacts (development and onsite jobs), indirect impacts (module and supply chain), and induced impacts. In order to determine construction impacts, final demand multipliers were used to estimate the total economic outputs at the county and state levels. The JEDI model utilizes state and Marion County-specific industry multipliers obtained from IMPLAN (Impact Analysis for Planning) to determine jobs and economic output from the Project at the County and State level.

The Project's total economic output impact in Marion County for the construction phase, of which the majority will be construction payroll expenses, are estimated to total nearly $19.7 million and a total of nearly $45.4 million in the state of Ohio. This includes the development and onsite labor job impacts, module and supply chain impacts, and induced impacts. The Applicant estimated that construction of the Project would create approximately 168 jobs in Marion County and a total of 332 within the state of Ohio when considering development and onsite labor, module and supply chain, and induced jobs.

The Applicant has estimated that the operation and maintenance of the Project will require approximately two onsite employees and another approximately eight jobs will be created within the state of Ohio through supply chain and induced impacts. Payrolls for those jobs during

operation are estimated to total nearly $120,000 in Marion County and a total of approximately $234,000 annually in the state of Ohio. When supply chain and induced impacts are included, new long-term earnings are estimated to total nearly $321,000 within Marion County and $635,000 within the state of Ohio.

As part of the economic impact and land use analysis conducted for the Project, Strategic Economic Research, LLC analyzed the estimated value of land use in Marion County for a solar lease versus crop production. The detailed results of this comprehensive analysis are available in Sections IV and V of the Economic Impact and Land Use Analysis (Exhibit G) and show that the land use value of solar far exceeds the value of crop production over the projected 30-year life of the Project. The analysis utilized a "real options" model to consider the critical factors affecting the decision to execute a solar lease on agricultural land. The model estimated the expected returns from crop production, taking into account market price of crops and average yields. Based on the analysis, a solar lease would provide the landowner with higher monetary returns than crop production in all 500 simulations included in the analysis. The economic impact and land use analysis of the Project also discusses the "market forces" and leasing specifics that landowners may consider when allowing their land to be used for solar; noting it differs from residential or commercial development, where the land is often owned in fee without decommissioning requirements or financial surety. At the end of the solar lease term, land may be restored to the original condition and likely returned to crop production or another agricultural use.

(1) Annual Total and Present value of Construction and Operation Payroll

Per the JEDI model, the Project will create employment opportunities primarily during the approximate 12 to 18 month construction period, and it is estimated that the total value of payroll for development and onsite labor, supply chain, and induced jobs will equal approximately $23.6 million in the state of Ohio.

O&M earnings are expected to total approximately $635,000 annually over the 30-year life of the Project when considering development and onsite labor, supply chain, and induced impacts

for the state of Ohio. Assuming an 9% discount rate and 2% escalation, the present value of the annual O&M payroll is approximately $6.5 million.

(2) Construction and Operation Employment and Estimates

As a result of the construction and operation of the Project, both short- and long-term jobs will be created as a result of the Project. During construction, Project development staff and on-site labor are anticipated to include 100 workers from Marion County and another approximately 47 workers from across Ohio, bringing the total number of direct jobs from the Project to approximately 147 workers statewide. Further, it is predicted with the JEDI model that more than 184 supply chain and induced jobs would be created within the state of Ohio, including 68 in Marion County, as a result of an increased need for jobs related to truck transportation, manufacturing, and food and beverage stores, etc. In total, approximately 332 new development and onsite labor, supply chain, and induced jobs will be created in the state of Ohio as a result of Project construction, which includes 168 new jobs in Marion County.

Estimating the portion of projected employment that would come directly from the region is difficult. While many positions can be filled utilizing local labor, such as equipment operators, truck drivers, laborers, and electricians, there will also be some specialized skilled positions required for construction of the Project. It is anticipated that some of these specialized positions will need to be filled using non-regional workers, due to the specialized training required for each position.

The local housing market would not be impacted during construction of the Project for two reasons: 1) most of the construction positions will be filled by laborers from the local community, and 2) construction workers not from the local community would only temporarily relocate to the area and it is anticipated that they would return home after construction is complete. Thus, there is no anticipated impact on supply in the local housing market.

During the operational phase of the Project, the Applicant expects that approximately two full time equivalent positions would be required for operations and maintenance of the Project and an

additional approximately eight supply chain and induced jobs would be created within the state of Ohio during operations.

(3) Estimated County, Township, and Municipal Tax Revenue

The Applicant anticipates entering into a payment in lieu of taxes (PILOT) agreement with Marion County, whereby real property and tangible personal property taxes will be abated, however a fixed payment will be made based on the nameplate capacity of the Project. The PILOT is estimated to be an annual payment of $7,000/MW to the local taxing district. This agreement would result in annual local government revenues of approximately $700,000, and approximately $21.0 million over the 30-year life of the Project. The tax abatement structure is currently being discussed with the County and will be finalized after application submission. Local school districts would receive the largest portion of the PILOT payments, with an estimated $350,000 provided annually while Marion Township would receive approximately $140,000 each year. The remaining approximately $210,000 annually would be provided to Marion County millage recipients. Over the life of the Project this results in more than $10.5 million in payments to the local school districts, $4.2 million to the township, and $6.3 million to Marion County millage recipients. The economic impact and land use analysis of the Project and resulting report, provided as Exhibit G, was prepared with these, more conservative, numbers to consider this payment as well as potential upfront payments negotiated with Marion County to achieve optimal implementation for both the County and the Applicant.

(4) Estimated Economic Impact of the Proposed Facility on Local Commercial and Industrial Activities

The Project will result in a positive overall economic impact on the local economy, including local commercial and industrial activities. There will be development and onsite labor, supply chain, and induced "multiplier effects" from the construction and operation of the Project. These effects can create supply chain impacts, such as employment created in producing and transporting solar modules, and induced impacts resulting from the increase in the employees' income and spending (i.e., local restaurants hiring additional staff to accommodate construction laborers spending their wages on meals). The total output (value of production) from the construction of the Project is anticipated to be nearly $19.7 million in Marion County and $45.4

million in the State of Ohio. Annual operations of the Project are expected to result in approximately $831,000 in output for Marion County and over $1.6 million for the state of Ohio as a result of operation and maintenance of the Project.

Additional value to local economies will result from the increased diversification of the county and state economic bases. Economic diversification ensures greater stability of the economy by minimizing the effects of business cycles associated with specific industry.

(F) PUBLIC RESPONSIBILITY

(1) Public Interaction

Representatives of the Applicant have conducted meetings with the local government and the general public to gather support for the Project and assure that, to the extent possible, their comments and suggestions have been incorporated into the construction and design of the Project. The Project is located within Marion Township in Marion County and does not encompass any municipalities.

The Project has been under development since 2016. Since that time, Project representatives have met with landowners and residents to discuss the Project. In addition, Project representatives have formed strong relationships with the following local organizations:

- Marion CanDo – Marion's economic development organization
- Marion County Regional Planning
- The Marion County Engineer
- Marion Township Trustees
- Marion County Commissioners
- Ridgedale Local School District

The Applicant's involvement in the local community has included presentations for the Marion CanDo board and at local rotary organizations. Additionally, the Applicant intends to support the Marion County Fair and 4-H projects for the 2021 fair season.

The Applicant launched a Facebook page and created a Project website to engage the public, provide Project information, answer questions, and solicit feedback from the local community. Social media has proven to be an effective communication tool for the Project, as the Facebook page has resulted in over 2,562 interactions and additionally, has been used to conduct opinion polls. These interactions have given the Applicant valuable insights into community interests and allowed Project representatives to respond to questions. The Project Facebook page is monitored and maintained by a third party and a recent Facebook Page Metrics Report for the Project is included in Exhibit E.

During the construction period, the Applicant's construction contractor will establish a 24 hour a day, seven day a week "hot line" for emergency and complaint notices. During operations, site staff will be qualified to attend to requests and complaints with the necessary corporate support. Surrounding landowners will be provided with contact information for site staff. Additionally, emergency contact numbers will be on posted placards at Project entrances that will allow anyone from the public to contact operations staff. The Applicant has also developed a Complaint Resolution Plan to address how complaints will be handled and potential mitigation techniques to be implemented for the Project.

No less than seven days prior to commencing construction, the Applicant will distribute this Complaint Resolution Plan to the affected property owners and tenants via first class mail. A copy of the Complaint Resolution Plan and the notification letter are included in Exhibit H.

(2) Insurance

Liability insurance will be maintained at all times during development, construction, and operation of the Project. The Applicant, a wholly owned subsidiary of Savion, has general liability and excess liability policies on the development phase of the Project.

All solar modules will be installed on property under lease or easement or owned by the Applicant. Terms of the leases or easements include requirements for the Applicant to pay annual rent; to pay for all tax-related payments resulting from the solar installation; to minimize impacts on the landowner's current use of the property; and to remove the solar modules upon termination of the land agreement. In addition, the terms of the leases require the Applicant to provide insurance for all Project components and to indemnify the landowner and other third parties from liability claims resulting from the construction and operation of the Project. The Applicant will carry insurance during development, construction, operation, and decommissioning that will ensure proper indemnification for the landowner and other third parties and for the interests of the Applicant.

A Certificate of Development Liability Insurance is provided as Exhibit I, a portion of which has been filed under seal.

(3) Road and Bridge Impacts

Burns & McDonnell (B&M) conducted a construction route study to identify road surface type and conditions, bridge and culvert locations and conditions, road and bridge posted load restrictions, and potential overhead clearance issues along the roads that will be used during construction of the Project. The findings of the construction route study are summarized below, and the complete report is contained in Exhibit J.

It is anticipated that there will be three access points to the Facility that will be utilized during construction, with all three located along SR 423 (Marion-Upper Sandusky Road). It is anticipated that the concentrated construction traffic will be limited to SR 4 (Marion-Bucyrus Road) and County Road (CR) 162 (Marion-Williamsport Road). Construction equipment, supplies, and general construction traffic will enter the Facility along those access roads. Based on those access points, B&M evaluated the roadways immediately surrounding the Project Area for their use as potential construction routes (Exhibit 2 within Exhibit J).

B&M obtained annual average daily traffic volumes for the state and county roads along the construction routes, combined with field observations, it was determined that the roadways have

adequate sight distance and do not carry high traffic volumes. The report found that the intersection of SR 4 (Marion-Bucyrus Road) and SR 423 (Marion-Upper Sandusky Road) has a narrow turning radius and may require permanent right-of-way improvements if high volumes of construction traffic are anticipated.

The field survey found that there are six bridges along the construction routes. All bridges appear to be in good condition, and none are weight-restricted. All the roads along the construction routes are asphalt, and none are temporarily or permanently load restricted. However, through trucks are prohibited on CR 94 (Hillman-Ford Road) north of Pleasant Hill Road. Two roads, CR 94 (Hillman-Ford Road) and CR 66 (Kenton-Gallion Road), are in fair condition. The remaining roads are in good or great condition. To the maximum extent possible, construction traffic should utilize SR 4 (Marion-Bucyrus Road), State Route 423 (Marion-Upper Sandusky Road), and CR 162 (Marion-Williamsport Road). CR 94 (Hillman-Ford Road) should be avoided due to the one-lane underpass, potential for flooding, and narrow roadway. Township Road T-219 (Barford Road) is a narrow, residential road and should not be used during construction.

There is one clearance issue on the one-lane underpass on CR 94 (Hillman-Ford Road). However, this road should not be used as a haul road during construction. No anticipated clearance issues with overhead electric crossings and tree overhang locations were identified by B&M. During construction, local drivers may experience minor delays as a result of waiting for safe passage on the construction routes when construction and delivery vehicles enter and exit the Facility. Road closures, lane closures, or access restrictions are not anticipated during construction or operation of the Facility. The Facility will not generate a significant volume of traffic during construction or operation, so any additional future traffic associated with the Facility will be negligible.

Roadway damage could occur during construction as a result of the additional traffic and drivers using the road shoulder, resulting in rutting on the shoulder and rutting or heaving of the pavement on the edges. Impacts to road pavement could be exacerbated if winter construction occurs as a result of the cold and wet conditions. In order to ensure that a corrective action process is established to address any damaged elements of the roadway caused by vehicle trips

generated by construction, a Road Use Maintenance Agreement (RUMA) between the Applicant and Marion County will be executed. The RUMA will also address implementation of work zone measures to ensure the safety of the public as well as the construction team.

(4) Transportation Permits

The Marion County Engineer is responsible for maintaining CR 162 (Marion-Williamsport Road) and CR 66 (Kenton-Gallion Road). SR 4 (Marion-Bucyrus Road) and SR 423 (Marion-Upper Sandusky Road) are maintained by the Ohio Department of Transportation (ODOT). All necessary permits will be coordinated with the applicable entities prior to the start of construction. In addition to the RUMA executed with Marion County, the Project will require Construction Access Drive Permits from Marion County for each of the access points to the Facility. No special hauling permits are anticipated for the Project, with the exception of an overweight permit that will be required for delivery of the transformers. There is no plan to utilize public rights-of-way for the Project, however if needed, right-of-way permits will be obtained from the entity responsible for the affected roadway. All permits will be obtained at least 30 days prior to the start of construction.

Any necessary traffic controls will be implemented in accordance with ODOT standards and specifications.

(5) Decommissioning

At the end of the life of the Project, expected to be a minimum of 30 years, the Applicant will decommission the Project following the Decommissioning Plan prepared for the Project by Environmental Consulting & Technology, Inc., included in Exhibit K. The Project will have only modest impacts to the land and will be relatively easy to decommission. Decommissioning the Project should not require any soil or groundwater remediation as operation of the Project will not generate hazardous waste or wastewater. All aboveground features and buried structures up to a depth of 36 inches (0.6 meters) will be removed and disposed of offsite. The only materials that may be left in place at the Facility are access roads requested by landowners and switchyard, interconnection facilities, and similar utility facilities that are not owned by the Applicant.

Buried structures greater than 36 inches (0.6 meters) below grade (e.g. collection lines, foundations, etc.) will remain in place. Project restoration efforts will return the land to substantially its original topography. Restoration shall include returning the soil to its pre-development state, including de-compaction and/or revegetation if needed, to allow any prior agricultural use to resume if the landowner so chooses.

Decommissioning costs for the Project will be recalculated prior to commencing construction and will consider salvage of the solar components (Net Decommissioning Cost). If the decommissioning cost exceeds the salvage value of the solar components and therefore, the Net Decommissioning Cost is a positive value, then the Applicant will post decommissioning funds in the form of a performance bond where the company is the Principal, the insurance company is the Surety, and the OPSB is the Obligee. The Decommissioning Plan and financial assurance will be reviewed again in year 10 of Project operations and every five years thereafter to assess the value of the financial assurance per the current Net Decommissioning Cost estimate.

4906-4-07 COMPLIANCE WITH AIR, WATER, SOLID WASTE, AND AVIATION REGULATIONS

(A) REGULATION CONTEXT

The Project will be constructed and operated in compliance with all federal, state, and local regulations for air and water pollution, solid and hazardous wastes, and aviation.

(B) AIR QUALITY REGULATIONS

(1) Preconstruction Air Quality and Permits

(a) Ambient Air Quality of the Proposed Project Area

Air quality within a geographic area is classified by the U.S. Environmental Protection Agency (USEPA) based on National Ambient Air Quality Standards (NAAQS). Areas with pollutant levels below the NAAQS are considered to be in attainment, whereas areas with persistent air quality problems are designated as nonattainment areas. Marion County is in attainment for all criteria pollutants regulated by the USEPA: Particulate Matter <10 μm and <2.5 μm (PM_{10} and

$PM_{2.5}$), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen oxide (NO_2) and ozone (O_3). The USEPA also administers the Regional Haze Program to reduce air pollution that causes visibility impairment. There are no areas in the state of Ohio protected by the Regional Haze Program as listed under 40 CFR § 51.300 (OEPA 2015).

The OEPA conducts air quality monitoring to identify exceedances of criteria pollutants in the atmosphere. An air monitoring network is maintained by the OEPA that includes 135 monitoring sites within the State of Ohio. To provide a general characterization of ambient air quality in the Project Area, the most recent data collection from the nearest monitoring sites was reviewed. Table 7-1 provides mean and maximum measurements of criteria pollutants at the closest available monitoring sites, including Columbus in Franklin County (within 40 miles of the Project Area) and Delaware in Delaware County (within 20 miles of the Project Area) (OEPA 2019).

Table 7-1 Ambient Air Quality Monitoring Measurements Nearest to the Project Area

Pollutant	Closest Monitoring Site ID	City/ County	Averaging Period	NAAQS Standard[1]	Mean	Highest Maximum Reading
PM_{10}	39-049-0034	Columbus/ Franklin	24-hour	150 µg/m^3	17.3	68
$PM_{2.5}$**	39-049-0038	Columbus/ Franklin	24-hour	35 µg/m^3	9.90	26.3
Sulfur dioxide	39-049-0034	Columbus/ Franklin	1-hour	75 ppb	0.04	4.0
Carbon monoxide	39-049-0038	Columbus/ Franklin	8-hour	9 ppm	Not reported	1.1
			1-hour	35 ppm	Not reported	2.0
Nitrogen dioxide	39-049-0038	Columbus/ Franklin	1-hour	100 ppb	9.67	48.0
Ozone***	39-041-0002	Delaware/ Delaware	8-hour	0.070 ppm	0.063***	0.065

[1] USEPA 2016

* Violation only occurs when the 98th percentile, averaged over 3 years exceeds the standard.

**Violation only occurs when the annual 4th highest daily maximum 8-hour concentration averaged over three years exceeds the standard.

***Annual 4th highest daily maximum 8-hour concentration averaged over three years.

Source: OEPA 2019a.

Key:

Table 7-1 Ambient Air Quality Monitoring Measurements Nearest to the Project Area

Pollutant	Closest Monitoring Site ID	City/ County	Averaging Period	NAAQS Standard[1]	Mean	Highest Maximum Reading

$\mu g/m^3$ = micrograms per cubic meter
NAAQS = National Ambient Air Quality Standards
PM_{10} = Particulate Matter ≤10µm
$PM_{2.5}$ = Particulate Matter ≤2.5µm
ppb = Parts per billion
ppm = Parts per million.

(b) Air Pollution Control Equipment for the Proposed Facility

No air pollutants are associated with the operation of the Project. Therefore, no air pollution control equipment is needed.

(c) Applicable Federal and/or Ohio Air Quality Standards and Limitations

There are no federal or state regulations related to New Source Performance Standards, applicable air quality limitations, NAAQS, or Prevention of Significant Deterioration increments that are applicable to the Project as there are no emissions associated with the operation of the Project.

(d) Required Permits to Install and Operate Air Pollution Sources

No air pollutants are associated with the operation of the Project. Therefore, no air permits are required.

(e) Air Monitoring Station Locations and Major Pollution Point Sources

There are no emissions associated with the Project, therefore, the location of air monitoring stations and other current or anticipated point source locations are not provided.

(f) Compliance with Permits and Standards

As described above, no air pollutants are associated with the operation of the Project. Therefore, no federal or state regulations apply, and no air permits are required.

(2) Plan for Emissions and Fugitive Dust Control During Construction

The operation of heavy construction equipment and vehicles will produce some particulate emissions from engine exhaust and fugitive dust generation during travel on unpaved roads and construction activities. These operations will be temporary and limited to active areas of construction and, therefore, will not result in significant impacts on air quality.

Best management practices will be followed during site preparation and construction to control fugitive dust emissions, including using water to wet down open soil surfaces to limit fugitive dust. Water will be used only in periods of high heat and when the soil is deemed dry enough so as not to reach saturation during normal travel.

(3) Air Quality for the Operation of the Proposed Facility

(a) Ambient Air Quality Monitoring Plans

No air pollutants are associated with the operation of the Project. Therefore, no air quality monitoring plan is needed.

(b) Map of Estimated Concentrations in Excess of Significant Emission Rates

There are no air emissions from operation of the Project, therefore, a map of the estimated concentrations in excess of USEPA "Significant Emission Rates" is not applicable to the Project.

(c) Air Pollution Control Equipment Failure

No air pollutants are associated with the operation of the Project. Therefore, no air pollution control equipment is needed and there is no potential for equipment failure.

(C) WATER QUALITY

(1) Preconstruction Water Quality and Permits

(a) List of Water Quality Permits

Based on the final Project layout, the following water quality permits will be obtained, as necessary, for the Project. All permits will be obtained by the Applicant prior to Project construction:

- An Ohio National Pollutant Discharge Elimination System (NPDES) construction stormwater general permit, OEPA Permit No. OHC000005.
- A USACE permit under Section 404 of the Clean Water Act (CWA) for disturbances to waters of the United States (as necessary for intermittent and perennial stream and wetland crossings, although not required based on the current preliminary design and construction methodologies).
- An OEPA Water Quality Certification under Section 401 of the CWA (as necessary for disturbance to streams and wetlands, although not required based on the current preliminary design and construction methodologies).
- An OEPA Isolated Wetland/Ephemeral Stream Permit under Section 6111.021 and 6111.03 (J) of the Ohio Revised Code (as necessary for disturbance to streams and wetlands, although not required based on the current preliminary design and construction methodologies).

(b) Map of Water Monitoring and Gauging Stations

There will be no point source water discharge into streams or waterbodies from the Facility; therefore, no mapping of water monitoring and gauging stations are provided for the Project.

(c) Monitoring and Gauging Station Information

No point source water discharge will occur from the site; therefore, no monitoring and gauging station information is provided for the Project.

(d) Existing Water Quality of the Receiving Stream

No point source water discharge will occur from the site; therefore, there will be no receiving streams and no water quality information is provided for those streams.

(e) Water Discharge Permit Application Data

No point source water discharge will occur from the site; therefore, no data for a water discharge permit is provided for the Project.

(2) Water Quality During Construction

(a) Map of Water Monitoring and Gauging Stations

No point source water discharge will occur from the site; therefore, no mapping of monitoring and gauging stations are provided for the Project.

(b) Estimated Quality and Quantity of Aquatic Discharges

Aquatic discharges to streams or wetlands are not anticipated to occur during construction of the Project. However, a Spill Prevention, Control, and Countermeasure (SPCC) Plan will be developed to manage hazardous material storage on site to prevent accidental releases and will address the proper methods to contain and mitigate a spill, and the agencies to notify, in the rare event that a spill occurs. The Applicant will follow all measures indicated in the SPCC Plan and monitor for aquatic discharges draining from the site, such as an oily sheen on storm water, etc. to ensure that the water resources are not at-risk during construction.

There is the potential for erosion and sedimentation to occur within the nearby streams and wetlands as a result of ground disturbance during construction. However, the Applicant will implement a Stormwater Pollution Prevention Plan (SWPPP) to limit erosion from stormwater within the Project Area and minimize sedimentation of nearby streams and wetlands.

In the geotechnical soil test borings and test pit explorations conducted by Mott MacDonald, groundwater was observed to exist as shallow as 3.5 feet below grade. Across the Project Area, groundwater elevation was approximately 8.5 feet below grade (see Exhibit L). The best

management practices (BMPs) implemented as part of the SWPPP and SPCC Plan will also protect groundwater resources within the Project Area by limiting the potential for spills and if they do occur, limiting flow and infiltration across the site.

(c) Mitigation Plans

While storm water discharges during construction of the Project are not expected to be significant and would only be temporary in nature, several measures will be implemented to ensure surface water quality protection, including a SWPPP and SPCC Plan. The SWPPP and SPCC will be provided to the OPSB no later than 30 days prior to construction.

The SPCC Plan, as required by the USEPA, will address methods to prevent the potential release of hazardous substances during construction of the Project. If any spills do occur during construction, the SPCC Plan will also detail the proper methods to address the spill and agencies to notify. Hazardous materials stored on site during construction will be stored in accordance with the SPCC Plan to prevent a release. If a spill were to occur during construction and inadvertently reaches a waterway, it is only expected to result in a limited quantity of hazardous materials over a short timeframe. A minor increase for a short duration is unlikely to cause a serious threat to the drinking water quality of the particular waterbody in which the spill occurs.

The SWPPP, required by OEPA as part of the NPDES Construction Storm Water General Permit Number OHC000005, will require the use of sediment and erosion control measures and BMPs during construction to implement storm water pollution prevention measures. BMPs that will be used during construction to prevent excess stormwater runoff from the construction areas will be defined in the SWPPP, when developed. Any increase in stormwater discharges resulting directly from the construction of the Project will be documented in the SWPPP and permitted through the NPDES Construction Storm Water General Permit, OEPA Permit Number OHC000005. Furthermore, measures will be taken to maintain the site with BMPs for post-construction runoff control, as required, to ensure that all new facilities consistent with the operation of the Project do not create any additional storm water runoff than was generated during pre-construction conditions. The Applicant will implement OEPA Guidance on Post-Construction Storm Water Controls for Solar Panel Arrays to further ensure that stormwater runoff is minimized at the site.

Groundwater impacts will be minimized through SWPPP implementation. However, should shallow groundwater be encountered during excavation, it may be pumped out and discharged into a designated upland area (approved by the landowner) to temporarily retain the water until it can infiltrate back into the ground. Specific details relating to the pumping of groundwater from an excavation area will be included in the SWPPP. Temporary sediment traps or the controlled release of water over vegetated upland areas will be utilized during construction to intercept and manage sediment-laden runoff from any dewatering activities that are necessary, allowing sediment to settle prior to discharge.

Direct impacts to streams and wetlands have been avoided in the preliminary Project design; however, if it becomes necessary to impact a stream or wetland to construct the Project infrastructure, the crossing(s) will be coordinated and permitted with USACE and the OEPA.

There is the potential for erosion and sedimentation to occur within the nearby streams and wetlands during construction. To mitigate any potential impacts that may occur to these aquatic resources, appropriate erosion and sediment control measures (e.g., silt fences or straw bale dikes or other stormwater control measures) will be used to limit the area of impact to surface waters. Further, the construction corridors and any clearing of vegetation in or near these features will be minimized to reduce potential impacts. These specific measures will be outlined in more detail once the SWPPP has been developed.

If necessary, the Project intends to employ HDD techniques to install cables underneath roads and streams (if applicable). Based on the current preliminary design and construction methodologies, HDD will not be required. If the final site design does require HDD, it will be conducted per local codes, OEPA guidelines, and a Standard Horizontal Directional Drilling Construction Inadvertent Return Control Plan (Frac Out Plan; Exhibit M) will be implemented should an inadvertent drilling fluid release occur during construction. Before any drilling operations begin, all erosion and sedimentation controls included in the SWPPP will be installed and inspected by a qualified environmental inspector. The SWPPP, federal and state permit(s),

landowner restriction list, and any other applicable documents will be reviewed before any ground disturbance occurs on the Project.

In order to mitigate any potential impacts from HDD inadvertent drilling fluid releases, the Frac Out Plan (Exhibit M) provides a framework for HDD efforts and steps to take should a release occur. The areas that present the highest potential for fluid release are the drill entry and exit points where the overburden depth is minimal. A pit will be constructed, in the upland areas away from streams and wetlands, at the entrance and exit points to provide temporary storage for the drilling fluid seepage until it can be removed. The pits will be lined with geotextile and be sized to accommodate the maximum volume of drilling fluid that may need to be contained within the pits. A secondary containment around the pits will be created with straw bales and silt fencing to contain any seepage and minimize any migration of the mud to the work area. If any fluid releases occur, a containment structure will be placed at the affected area to prevent migration of the release. If the release is large enough for collection, the drilling mud will be collected and disposed of per the HDD Fluid / Cutting Disposal procedures. If the release is not large enough for collection, the affected area will be diluted with fresh water and restored as necessary. Proper steps will be taken to prevent silt-laden water from entering nearby wetlands or streams. If the release occurs in a stream, the contractor will attempt to place containment structures to prevent the spread. If public health and safety are threatened due to the release, drilling operations will be shut down until the threat is eliminated and appropriate agencies notified. All disturbed areas will be stabilized and restored per specifications in the SWPPP. The construction environmental manager will be contacted immediately if the release is returned to a stream, wetland, or other waterbody.

These mitigation measures will ensure that impacts to groundwater, surface waters, and wetlands are avoided or minimized to the maximum extent practicable during the construction of the Project.

(d) Changes in Flow Patterns and Erosion

Given the BMPs and mitigation measures that will be implemented during construction of the Project as specified in the SWPPP, it is not expected that the flow patterns in the Project Area

will be significantly changed from pre-construction conditions. This was confirmed as part of the Hydrology and Scour Study completed by Mott MacDonald and provided in Exhibit N. Impacts to streams and wetlands have been avoided with the current design which minimizes the potential for flow pattern changes and erosion. Once final design of the Project is complete, potential impacts to streams and wetlands will be evaluated to determine if any permits are required for the Project.

Steep slopes have been avoided that would exacerbate erosion. The majority of the Project has been sited on agricultural land and, therefore, only minimal clearing and grading will be required. The Applicant has attempted to identify drain tiles through landowner coordination and aerial imagery review within the Project Area so that the site design can include avoidance and onsite drainage is not affected by construction of the Project. If agricultural drain tiles are damaged during construction of the Project, the Applicant will work with the landowner to fix the drain tile and implement measures so that any offsite water flow to adjacent landowners' properties is avoided. Any drain tile damaged as a result of the Project would be repaired promptly, so long as it could be determined that the damage was a direct result of the Project and any requested repair methods are not outside reasonable requirements to remedy the issue. The affected landowner may agree to not having the damaged drain tile repaired only if the drain tile system of adjacent landowners remain unaffected by the non-repair of the landowner's drain tile system. Additionally, the BMPs that will be implemented during construction will control erosion and sediment that may result from site clearing and grading and would also control water flow and erosion if a drain tile were to be damaged during construction.

(e) Equipment Proposed for Control of Effluents

There will be no point source water effluent associated with construction of the Project. Therefore, no equipment is needed for control of effluent discharge and no impacts on water resources are expected from the Project.

(3) Water Quality During Operation of the Facility

(a) Map of Water Monitoring and Gauging Stations

No point source water discharge will occur from the site; therefore, no water monitoring and gauging station information is provided for the Project.

(b) Water Pollution Control Equipment and Treatment Processes

No pollutants will be associated with the operation of the Project that would be released into surface water. Furthermore, the proposed Project will have minimal staffing requirements. Therefore, the O&M trailer is not expected to consume significant amounts of water or generate large amounts of sanitary waste. The O&M trailer will have a wastewater source for onsite restrooms.

(c) Schedule for Receipt of NPDES Permit

There is no expected discharge of water related to the operation of the Project. As such, no NPDES permits will be necessary for operations.

The Applicant will apply OEPA Guidance on Post-Construction Storm Water Controls for Solar Panel Arrays to further ensure that stormwater runoff is minimized at the site.

(d) Flow Diagram for Water and Water-borne Wastes

No water or water-borne waste discharge will occur from the site; therefore, a quantitative flow diagram is not provided for the Project.

(e)Water Conservation Practices

Minimal water may be required to clean solar modules if necessary. In addition, the O&M trailer will include a water source. Given the low volume of water anticipated for Project operations, water conservation practices will not be necessary for the Project.

(D) SOLID WASTE

(1) Preconstruction Solid Waste

(a) Nature and Amount of Debris and Solid Waste

Construction of the Project is not expected to result in the removal of any structures that are currently present in the Project Area. Limited amounts of vegetation debris may be generated during the pre-construction site clearing and grubbing activities described in 4906-4-03(B)(2).

(b) Plans to Deal with Waste

Woody debris generated during construction will be chipped and either used or composted within the Project Area. However, if that is not feasible, then a private contractor will be hired to properly dispose of the debris at an authorized solid waste disposal facility.

(2) Solid Waste During Construction

(a) Nature and Amounts of Debris and Solid Waste Generated During Construction

Construction of the Project will generate minimal non-hazardous solid waste. This material will consist primarily of plastic, wood, cardboard, metal packing/packaging materials, construction scrap, and general refuse.

(b) Storage and Disposal of Wastes

The solid waste generated will be collected from the construction sites and other work areas and disposed of in dumpsters located at the construction laydown areas. In addition, multiple dumpsters will be located at construction office trailers, restrooms, and parking areas during construction. On an as-needed basis, a private contractor will empty the dumpsters and dispose of the refuse at an authorized solid waste disposal facility.

(3) Solid Waste During Operation

(a) Amount, nature, and composition of Solid Waste Generated During Operation

The Project will generate a small amount of non-hazardous waste from the O&M trailer that will be recycled or disposed of properly.

(b) Storage, Treatment, Transport, and Disposal of Solid Waste

Generation of solid waste by the O&M trailer is expected to be minimal and will be monitored by O&M staff members who will coordinate removal with local waste disposal services, as needed.

(4) Waste Permits

Operation of the Project will not require acquisition of licenses or permits for the generation, storage, treatment, transportation, and/or disposal of waste.

(E) AVIATION

(1) Aviation Facilities

Sherriff's Heliport, owned by the Marion County Sherriff's Office, is the closest aviation facility, located approximately 1.5 miles east of the Project Area (Figure 7-1). Three other aviation facilities are located within a 5-mile radius of the Project area. Marion Municipal Airport is located approximately 3 miles east of the Project Area, and Marion General Hospital Heliport and Medcenter Hospital Heliport are each approximately 3 miles south of the Project Area.

(2) FAA Filing Status

Stantec completed a glare analysis study to evaluate potential Project impacts to Federal Aviation Administration (FAA) regulated airports, residents and activities in the vicinity of the Project. The analysis predicted no impacts of glare from the Project to aviation, roads, railroads, and nearby residents. The Glare Hazard Analysis is provided in Exhibit O.

In addition, the Applicant hired Spohnheimer Consulting Airspace Systems, LLC to identify any potential Project impacts to the operation of the nearest airport. The analysis examined the potential for PV panels to reflect the airport's Very High Frequency Omnirange which provides en route navigational aid to aircraft. The findings of the analysis indicated that the Project is not

predicted to pose any risk to the operation of Marion Municipal Airport or nearby aircraft. The complete memo is contained in Exhibit P.

4906-4-08 HEALTH AND SAFETY, LAND USE AND ECOLOGICAL INFORMATION

(A) HEALTH AND SAFETY

Consistent with OAC Rule 4906-4-08(A), the following details the Applicant's commitment to comply with health and safety regulations.

(1) Safety and Reliability of Equipment

(a) Major Public Safety Equipment

Measures to prevent unauthorized site entry and unsafe practices will be implemented during Project construction and operation. During the construction phase, temporary, highly visible, plastic mesh fencing will be erected around equipment and spare part storage yards, laydown areas, and other potential construction hazards. The temporary fencing will be supplemented by signs cautioning the public of potential dangers, and providing 24-hour emergency numbers, operator contact information, and instructions for emergency personnel.

During the construction phase, the Applicant will coordinate with local emergency responders to discuss proper rescue techniques and other items specific to on-site equipment safety. The Applicant will ensure all local emergency responders will be trained to address Project specific emergencies should they arise. On-site construction workers will adhere to industrial safety standards to avoid injury. Regulations set forth by the national Occupational Safety and Health Administration cover safety issues associated with electricity, construction equipment operation, and other hazards that may be encountered at the Project during construction.

(b) Equipment Reliability

The proposed solar PV modules are designed to have a typical lifespan of 30 to 35 years and will conform to all UL, IEEE, NEC, NESC, and ANSI listings. A licensed professional engineer will

certify the electrical system design. The Applicant will ensure that inspections of all components are completed regularly to provide safe and reliable operation.

(c) Generation Equipment Manufacturer's Safety Standards

Generation equipment manufacturer's safety standards will be provided after PV solar module and BESS technology has been selected for the Project. All Project equipment will be compliant with applicable UL, IEEE, NEC, NESC, and ANSI listings.

(d) Measures to Restrict Public Access

The Project will be enclosed with perimeter fencing that complies with the NESC. The fence will either be a 6-foot (1.8-meter) chain link fence topped with 1-foot (0.3-meter) of three strand barbed wire or a 7-foot (2.1-meter) chain link fence. A decision regarding fence type will be made with final design. Access will be controlled by gates.

(e) Fire Protection, Safety, and Medical Emergency Plan(s)

An Emergency Response Plan will be prepared for the Project. Construction and maintenance personnel will be trained and will have the equipment to deal with emergency situations that could occur at the Facility. In addition, the Applicant will ensure all local emergency responders will be trained prior to commissioning of the Project on how to respond to any emergencies related to the Project.

(2) Impact of Air Pollution Control Equipment Failure

As described previously, no air pollutants will be associated with the operation of the Project. Therefore, no on-site air pollution control equipment will be necessary.

(3) Sound from Construction and Operation of the Facility

(a) Construction Sound Levels at the Nearest Property Boundary

Epsilon Associates, Inc. (Epsilon) conducted a sound level assessment to establish existing sound levels in the Project Area and evaluate potential sound impacts from the construction of the Project on nearby residences and other sensitive receptors. Epsilon's Sound Level Assessment

Report is included in Exhibit Q. Epsilon utilized the Federal Highway Administration's Roadway Construction Noise Model software to predict the sound levels associated with construction of the Project. Depending on the phase of construction, primary noise-producing equipment could include backhoes, bulldozers, dump trucks, impact pile drivers, cranes, and flatbed trucks. Sound levels during each phase of construction were predicted assuming that the equipment was located at the closest solar module to a property line and at the closest receptor, which were 80 feet and 266 feet, respectively. The sound level modeling for the different aspects of Project construction is detailed below.

(i) Blasting Activities

Blasting activities will not be necessary for the Project and, therefore, will not result in sound impacts.

(ii) Operation of Earth Moving Equipment

Earthmoving equipment anticipated to be used during construction include a dump truck, bulldozer, and backhoe. The operation of this equipment could range in sound level from 76 A-weighted decibels (dBA) to 78 dBA at a distance of 80 feet (24.4 meters) (closest property line), and 65 dBA to 67 dBA at a distance of 266 feet (81.1 meters) (closest monitoring receptor). The sound resulting from these operations reflects the worst-case sound levels and will occur infrequently and over a short duration at each location. Such levels would not generally be considered acceptable on a permanent basis, but as a temporary, daytime occurrence (approximately 7am to 7pm), and with the setbacks implemented by the Applicant, operation of earth moving equipment should not pose undue quality of life concerns for residents near the Project Area.

(iii) Driving of Piles, Rock Breaking or Hammering, and Horizontal Directional Drilling

The solar modules are mounted on racks which are supported by posts. There are approximately 43,000 posts that will need to be driven to support the racks. The posts will be embedded at a depth between 7 and 11 feet (2.1 to 3.4 meters) below grade, depending on soil conditions. The operation of an impact pile driver used to drive the posts could result in sound levels ranging from 90 dBA to 97 dBA at a distance of 80 feet (24.4 meters) and 80 dBA to 87 dBA at a

distance of 266 feet (81.1 meters). The sound resulting from these pile driving activities reflects the worst-case sound levels and will occur infrequently and over a short duration at each location. Such levels would not generally be considered acceptable on a permanent basis, but as a temporary, daytime occurrence, and with the setbacks implemented by the Applicant, operation of the impact pile drivers should not pose undue quality of life concerns for residents near the Project Area.

(iv) Erection of Structures

The erection of solar PV modules and inverters will require the use of cranes and flatbed trucks. The predicted sounds levels for this equipment range from 71 dBA to 77 dBA at a distance of 80 feet (24.4 meters) and 60 dBA to 66 dBA at 266 feet (81.1 meters). The sound resulting from these operations will occur infrequently and over a short duration at each location. Such levels would not generally be considered acceptable on a permanent basis, but as a temporary, daytime occurrence, and with the setbacks implemented by the Applicant, erection of structures should not pose undue quality of life concerns for residents near the Project Area.

(v) Truck Traffic

The use of dump trucks and flatbed trucks will be necessary during construction of the Project in order to transport materials and equipment throughout the Project Area. Predicted sound levels for truck traffic is included as part of the operation of earth moving equipment and erection of structures activities detailed above. The sound resulting from these operations will occur infrequently and over a short duration at each location. Such levels would not generally be considered acceptable on a permanent basis, but as a temporary, daytime occurrence, and with the setbacks implemented by the Applicant, truck traffic should not pose undue quality of life concerns for residents near the Project Area.

(vi) Installation of Equipment

Installation of the equipment for the Project will primarily be related to the use of cranes and flatbed trucks as detailed in the erection of structures activities detailed above. The sound resulting from these operations will occur infrequently and over a short duration at each location. Such levels would not generally be considered acceptable on a permanent basis, but as a

temporary, daytime occurrence, and with the setbacks implemented by the Applicant, installation of equipment should not pose undue quality of life concerns for residents near the Project Area.

(b) Operational Sound Levels at the Nearest Property Boundary

(i) Operational Sound from Generation Equipment

In order to assess the impact of sound that will result from operation of the Project, Epsilon conducted field surveys to establish the ambient sound levels in the Project Area and then utilized Cadna/A modeling software to predict the sound levels that will result from operation of the Project at nearby residences. Operational sound at the Project will result from the Project inverters, BESS, and substation.

Epsilon conducted field sampling surveys at five different sound monitoring locations throughout the Project Area (see locations in Figure 5-1 in Exhibit Q) in order to establish the background (equivalent sound level [L_{eq}]) sound levels within the Project Area. Background sound monitoring in the Project Area indicated that the average daytime L_{eq} for the area ranged from 55 to 63 dBA while the average nighttime L_{eq} ranged from 47 to 57 dBA. While there are no existing federal, state, or local regulations applicable to the Project, operational sound predicted for the Project was evaluated against the 5 dBA increase over ambient sound level used by OPSB to evaluate wind energy facilities, which would establish limits of 60 to 68 dBA during the day and 52 to 62 dBA at nighttime based on ambient sound levels within the Project Area. The predicted operational Project sound levels at the nearest residence to an inverter (approximately 455 feet from) is 42 dBA, which is below the 52 dBA ambient threshold used to evaluate wind energy facilities when ambient nighttime sound levels are 47 dBA as measured at this receptor. The closest receptor to the substation is approximately 822 feet away and under the worst-case nighttime scenario has ambient sound levels of 49 dBA with modeled sound levels of 42 dBA which is below the 54 dBA limit allowed for wind energy facilities. The closest receptor to the BESS is 647 feet away and has a nighttime ambient sound level of 49 dBA at this location. The worst-case cumulative Project sound level at this location is 43 dBA which is under the worst-case nighttime scenario limit of 54 dBA. Because the Project only generates electricity during daylight hours when the sun is shining, the nighttime sound levels are a worst-case sound scenario on which to base operational sound levels.

(i) Operational Sound from Generation Equipment

Epsilon modeled a total of 22 inverters conservatively operating at full load, eight BESS inverters, 32 battery containers each with two heating, ventilation, and air conditioning units, and the Project substation with one transformer. Broadband L_{eq} sound levels produced by the inverters and Project substation range from 18 to 43 dBA and represent the worst-case sound levels associated with the Project. At all receptor locations using this worst-case scenario sound levels are still at or below the nighttime wind energy limit. Upon procuring inverter technology for the Project, the Applicant will provide inverter noise data and the modeled worst-case noise impact at a non-participating residence based on noise data on the selected inverter.

(ii) Processing Equipment

Processing equipment is not associated with the Project and, therefore, will not result in sound impacts.

(iii) Associated Road Traffic

Vehicle traffic to access the Project will not significantly contribute to route road traffic sound. Road traffic associated with construction of the Project is addressed above in OAC Section 4906-4-08(A)(3) of this application.

(c) Sound-sensitive Areas within One Mile

The sensitive receptors identified in the Project Area or within a 1-mile buffer around the Project Area are depicted in Figure 8-1. There are 787 residences, eight churches, two cemeteries and two school buildings within a 1-mile radius of the Project Area. Of the identified sensitive receptors, 64 residences, one church and six commercial/industrial structures are within 1,500 feet of Project facilities, and three of those are within 250 feet. Upon final design, all residences will be a minimum of 300 feet from nearest solar panel.

The Applicant does not anticipate major sound impacts at these locations as the Project worst-case sound levels are below the 5 dBA increase over L_{eq} limit for wind energy projects applied to the sound evaluation for this Project.

(d) Mitigation of Sound Emissions During Construction and Operation

The Project is not expected to have significant sound impacts at any residences or other sensitive receptors during construction or operation of the Project as minimization and mitigation measures have been included in the Project design.

The Applicant maximized Project setbacks from property lines to the extent practical to minimize impact to adjacent residences. In addition, the following sound minimization and mitigation procedures will be implemented during construction:

- General construction activity shall be limited to the hours of 7 a.m. to 7 p.m., or until dusk when sunset occurs after 7 p.m. If noise-generating construction needs to occur outside of 7 a.m. to 7 p.m., or until dusk when sunset occurs after 7 p.m., then neighbors adjacent to the sound generating construction will be notified prior to conducting those construction activities.
- During the construction period, the Applicant's contractor will establish a 24 hour a day, seven day a week "hot line" for emergency and complaint notices. During operations, site staff will be qualified to attend to requests and complaints with the necessary corporate support. Surrounding landowners will be provided with contact information for site staff. The Applicant has also developed a Complaint Resolution Procedure Plan to address how complaints will be handled and potential mitigation techniques to be implemented for the Project (Exhibit H).

(e) Preconstruction Background Sound Study

Epsilon conducted a sound level assessment to establish existing sound levels in the Project Area and evaluate potential sound impacts from the construction and operation of the Project on nearby residences and other sensitive receptors. Epsilon's Sound Level Assessment Report is included in Exhibit Q.

(4) Water Impacts

(a) Impacts to Public and Private Water Supplies from Construction and Operation

Groundwater well information for the Project Area and surrounding vicinity was obtained from the Ohio Department of Natural Resources (ODNR) and are depicted in Figure 8-2. There are 124 water wells within a 1-mile radius of the Project Area, including two that occur within the Project Area. Given that minimal excavation is associated with the Project and pile driving will only occur to depths of 7 to 11 feet (2.1 to 3.4 meters) below grade, the Applicant does not anticipate impacts to the water supply.

Five drinking water source protection areas are located within 1-mile of the Project Area, including Aqua Ohio – Marion, Ridgedale Elementary School, Ridgedale Jr./Sr. High School, Enterprise Baptist Church, and Valero – Marion, all of which are depicted on Figure 8-2. Aqua Ohio – Marion is listed under the OEPA "Public Water Systems with Endorsed Drinking Water Source Protection Plans" (OEPA 2021a) and Ridgedale Elementary School and Ridgedale Jr./Sr. High School protection areas have a joint water source protection plan developed in December 2004 (OEPA 2004). No publicly available water source protection plans were found for the remaining two water source protection areas. A small portion of the Enterprise Baptist Church source water protection area overlaps the Project Area. Given that minimal excavation is associated with the Project, it is not expected that construction of the Project would affect groundwater at that location. Given the distance and location to Aqua Ohio – Marion, Ridgedale Elementary School, Ridgedale Jr./Sr. High School and Valero – Marion water source protection areas, it is not expected that construction of the Project would affect groundwater at these locations. However, upon final Facility design, the Applicant will coordinate with OEPA's Division of Drinking and Groundwater to identify any potential notification requirements and additional measures that might need to be implemented during construction. In addition, to provide protection for water resources within the Project Area and the surrounding area, a SWPPP and SPCC Plan will be implemented during construction to minimize and prevent the potential for discharges to surface waters, which can also protect groundwater resources through the implementation of BMPs to limit the extent of any spills. The potential exists for aquatic discharges (e.g., sediment, oil, etc.) to occur during Project construction. If discharges do occur, they are anticipated to be limited in quality and duration, resulting in minor changes to water

quality of the particular waterbody in which the aquatic discharge occurs and impacts to water supplies would be minor.

(b) Impacts to Public and Private Water Supplies Due to Pollution Control Equipment Failures

As described above, no water pollutants will be associated with the operation of the Project. Therefore, no on-site water pollution control equipment will be necessary and no impacts to public and private water supplies will occur.

(c) Aquifers, Water Wells, and Drinking Water Source Protection Areas Directly Affected by the Proposed Facility

The Project Area is underlain by the Galion Thin Upland Aquifer, which is an unconsolidated aquifer. Seven other aquifers occur within 1-mile of the Project Area, including Big Island Lacustrine Aquifer, Galion Ground Moraine Aquifer, Killdeer Plains Ground Moraine Aquifer, Lima End Moraine Aquifer, Lima Ground Moraine Aquifer, NA NA Aquifer and Scioto Alluvial Aquifer, all of which are unconsolidated aquifers, and are depicted on Figure 8-2 (ODNR 2000). There are 124 water wells and five drinking water source protection areas located within 1-mile of the Project Area as depicted in Figure 8-2. However, no impacts to these water sources are anticipated as described above.

(d) Compliance with Drinking Water Source Protection Plans

The Project does not pose any compliance issues for the five water source protection areas found within a one-mile radius of the Project Area, as described above. However, upon final Facility design, the Applicant will coordinate with OEPA's Division of Drinking and Groundwater to identify any potential notification requirements and additional measures that might need to be implemented during construction.

(e) Flood Potential and Mitigation

A small portion of the Project Area falls within a FEMA-designated 100-year floodplain associated with the Little Scioto River, as depicted in Figure 8-2. Project Facility siting and design have minimized impacts to the FEMA-designated 100-year floodplain to the extent

possible while meeting the Project purpose. The Facility overlaps with approximately 33.7 acres of FEMA-designated 100-year floodplain. The Applicant will coordinate with the Marion County Sanitary Engineer to obtain a Floodplain Permit, prior to any construction, for the Facility development occurring within the FEMA-designated 100-year floodplain. It is not expected that construction of the Project will result in any change to drainage within the Facility that would result in an increase in flood elevations upstream or increases in impervious surface that result in additional runoff downstream of the Project.

(5) Geological Features, Topographic Contours, and Wells

(a) Site Geology Suitability

The Applicant hired Mott MacDonald to conduct a geotechnical investigation for the Project Area. The findings of the Mott MacDonald geotechnical engineering study are contained in Exhibit L and briefly summarized below.

The geotechnical investigation consisted of six exploratory test pits, 22 soil borings, three percolation tests, 17 pile load testing locations as well as laboratory thermal resistivity testing of soil samples collected from three widely spaced, representative locations, and in-situ electrical resistivity testing at six locations. This geotechnical investigation supports evaluation of the strength, compressibility, stiffness, and density characteristics of the soil in the Project Area, as well as evaluates the general suitability of the Project equipment proposed.

In general, the geotechnical investigation results indicated the Project Area soils are suitable for support of the proposed project infrastructure. Obstructions associated with shallow bedrock were frequently identified during subsurface investigations and should be expected during construction. However, blasting of bedrock is not expected to be needed for this Project. The bedrock will be removable using conventional excavation, ripping or line drilling techniques. Further, the study recommended that the access roads and additional infrastructure such as substation and switchyard locations should utilize structural fill and can be designed using typical best practices, which are summarized in Exhibit L.

(b) Site Soil Suitability

The geotechnical investigation found that the predominate soil type is a silty clay, clay, clayey gravel, and gravel, with limestone conglomerate bedrock present in areas below 13 feet. In general, the results of Mott MacDonald's geotechnical engineering study indicate that Project Area soils are suitable for support of the proposed Project infrastructure.

(c) Test Borings

As indicated above, 22 test borings were conducted by Mott MacDonald within the Project Area in November 2020. All test borings were completed in accordance with American Society for Testing and Materials standards and were analyzed at a qualified laboratory for moisture content, particle-size, Atterberg limits, unconfined and consolidation tests, and other tests, as required. Test boring logs are provided in Appendix C of Exhibit L.

(6) Wind Velocity

Climate data from the Ohio State University College of Food, Agricultural and Environmental Sciences was reviewed to characterize wind velocities in the vicinity of the Project. Table 8-1 summarizes daily average wind speeds recorded in 2019 at the closest weather station to the Project Area, located in Columbus, Ohio (OSU 2020).

Data provided in Table 8-1 indicates that wind speeds were most commonly observed in the range of 2 to 6 miles per hour with 81 percent of daily average measurements within this range. Wind effects at these speeds are generally described as light breezes, where wind is felt on the face (RMetS 2018).

Table 8-1 Daily Average Wind Speeds in Columbus, Ohio in 2020

Average Daily Wind Speed (mph)	Number of Days	Percent of Total Days
0 to 0.5	0	0.0%
0.6 to 1	1	0.3%
1.1 to 1.5	5	1.4%
1.6 to 2	12	3.3%

Table 8-1 Daily Average Wind Speeds in Columbus, Ohio in 2020

Average Daily Wind Speed (mph)	Number of Days	Percent of Total Days
2 to 2.5	34	9.3%
2.6 to 3	39	10.7%
3.1 to 3.5	52	14.2%
3.6 to 4	47	12.8%
4.1 to 4.5	44	12.0%
4.6 to 5	31	8.5%
5.1 to 5.5	29	7.9%
5.6 to 6	22	6.0%
6.1 to 6.5	13	3.6%
6.6 to 7	10	2.7%
7.1 to 7.5	7	1.9%
7.6 to 8	6	1.6%
8.1 to 8.5	5	1.4%
8.6 to 9	4	1.1%
9.1 to 9.5	1	0.3%
9.6 to 10	0	0.0%
10.1 to 10.5	2	0.5%
10.6 to 11	1	0.3%
11.1+	1	0.3%
Total	**365**	**100.0%**

Source: OSU 2020
mph = miles per hour

(7) Blade Shear

The Project is not a wind facility; therefore, there is no potential impact from blade shear for the Project.

(8) Ice Throw

The Project is not a wind facility; therefore, there is no potential impact from ice throw for the Project.

(9) Shadow Flicker

The Project is not a wind facility; therefore, there is no potential impact from shadow flicker for the Project.

(10) Radio and TV Reception

The maximum height of solar modules will be 15 feet (4.6 meters) and, therefore, interference with radio and TV reception is not anticipated as the Project will lack tall structures, exposed moving parts, and will only generate very weak electromagnetic fields (EMFs) that dissipate rapidly over short distances.

(11) Radar Interference

The maximum height of solar modules will be 15 feet (4.6 meters) and, therefore, interference with military or civilian radar systems is not anticipated as the Project will lack tall structures, exposed moving parts, and will only generate very weak EMFs that dissipate rapidly over short distances.

(12) Navigable Airspace Interference

There is one public airport and two private heliports within five miles of the Project Area (see Figure 7-1) as discussed in Section 4906-4-07(E). The closest heliport is approximately 1.4 miles from the Project Area and the public airport, Marion Municipal Airport, is approximately 3.8 miles from the Project Area. Given the distance to the airports, no interference is anticipated. The Applicant hired Stantec to conduct a glare analysis to identify any potential Project impacts to pilots, roads, railroads, and nearby residents. The findings of the analysis indicated that no glare from the Project is predicted to impact airports or heliports. The complete glare analysis report is contained in Exhibit O.

(13) Communication Interference

The maximum height of solar modules will be 15 feet (4.6 meters) and, therefore, interference with any microwave communication paths or systems is not anticipated as the Project will lack tall structures, exposed moving parts, and will only generate very weak EMFs that dissipate rapidly over short distances. In general, the magnetic effects from utility-scale solar projects, which could disrupt communication systems, are expected and known to be negligible beyond 330 feet from the source (Exhibit R). The Project is setback from property lines and the components that generate electromagnetic fields (i.e. inverters) are located on the interior of the facility, at least 580 feet from the closest structure. Therefore, amateur radio system disruption is not expected as a result of the Project.

(B) ECOLOGICAL RESOURCES

(1) Ecological Resources in the Project Area

(a) Ecological Resources Map

Figure 8-4 is a map at 1:24,000 scale of the Project Area and a 0.5-mile radius from the Project Area and contains the following information:

(i) The proposed Facility and Project Area;
(ii) Undeveloped or abandoned land such as wood lots or vacant fields;
(iii) Wildlife areas, nature preserves, and other conservation areas;
(iv) Surface bodies of water, including wetlands, ditches, streams, lakes, reservoirs, and ponds; and
(v) Highly erodible soils and slopes of twelve percent or greater.

(b) Field Survey Map of Vegetation and Surface Waters

Figure 8-5 provides a map at a scale of 1:12,000 of the area within 100 feet (30.5 meters) of the potential construction impact area of the Facility and all field-delineated features, including vegetation, wetlands, and streams.

Stantec conducted wetland delineation and T/E species habitat field surveys to assess the vegetative communities as well as delineate and characterize surface water and wetland resources in the Project Area. The results of the survey were used to inform the Project design and minimize impacts to wetlands, streams, and native vegetative communities. Stantec conducted field surveys on September 9 – 11, 2020 and the results are provided in the Wetland and Waterbody Delineation report included in Exhibit S, and the Threatened and Endangered Species Habitat Survey Report included in Exhibit T.

Habitat within the Project Area is predominately composed of cultivated agricultural cropland totaling 865.7 acres and composes 89.3% of the Project Area. At the time of the surveys the fields were planted with soybean (*Glycine max*). Grassland habitat is present and composed of big bluestem (*Andropogon gerardii*), yellow Indian grass (*Sorghastrum nutans*), Canadian goldenrod (*Solidago canadedsis*), blackberry (*Rubus* sp.) raspberry (*Rubus* sp.) and spreading dogbane (*Apocynum cannabinum*), totaling 41.7 acres and representing approximately 4.3% of the Project Area. Areas of second growth deciduous forest are present in the Project Area and are composed of overstory species dominated by honey locust (*Gleditsia triacanthos*), box elder (*Acer negundo*), silver maple (*Acer saccharium*), and common hackberry (*Celtis occidentalis*), with an herbaceous layer dominated by wingstem (*Verbesina alternifolia*), Canadian goldenrod, and sunflower (*Helianthus* sp.). Second growth deciduous forest habitat totals approximately 17.0 acres and composes 1.8% of the Project Area. Areas of old field are present and have a sapling-shrub layer dominated by amur honeysuckle (*Lonicera maackii*), Japanese honeysuckle (*Lonicera japonica*), and box elder, and a herbaceous layer dominated by Canadian goldenrod, wingstem, perennial ryegrass (*Lolium perenne*), farewell-summer aster (*Symphyotrichum lateriflorum*), yellow bristle grass (*Setaria pumila*), yellow Indian grass, great ragweed (*Ambrosia trifida*), crab grass (*Digitaria* sp.), blue mistflower (*Conoclinium coelestinum*), Kentucky bluegrass (*Poa pratensis*) red clover (*Trifolium pratense*), and Queen Anne's lace (*Daucus carota*). Approximately 15.7 acres, representing 1.6% of the Project Area, was documented as old field. Areas of new field are present and composed of an herbaceous layer dominated by poison ivy (*Toxicodendron radicans*), Canada thistle (*Crisium arvense*), Kentucky bluegrass, field bindweed (*Convolculus arvensis*), Japanese bristle grass (*Setaria faberi*), reed canary grass (*Phalaris arundinacea*), red clover, Queen Anne's Lace, and spreading dogbane.

New field habitat totals 15.7 acres and comprise 1.6% of the Project Area. Areas of wetlands were documented within the Project Area totaling 3.6 acres. Vegetation within the wetland areas was composed of overstory species dominated by silver maple, with a scrub-shrub layer dominated by green hawthorne (*Crataegus virdis*) with an herbaceous layer dominated by common panic grass (*Panicum capillare*), creeping-jenny (*Lysimachia nummuaria*), barnyard grass (*Echinochloa crusgalli*), reed canary grass, yellow bristle grass, devils pitchfork (*Bidens frondosa*), Canadian clearweed (*Pilea pumila*), farewell-summer aster, and dotted smartweed (*Persicaria punctata*) total 3.6 acres and compose 0.4.% of the Project Area. Existing roadways total 2.9 acres and represent 0.3% of the Project Area. The remainder of the site is composed of developed, residential maintained lawn, planted with several trees including box elder and sugar maple, with an herbaceous layer dominated by alsike clover (*Trifolium hybridum*), great plantain (*Plantago major*), common dandelion (*Taraxacum officinale*), Kentucky bluegrass and yellow bristle grass. These developed residential areas total 1.4 acres and are approximately 0.1% of the Project Area. Table 8-2 provides a summary of the acreages of vegetative communities delineated within the Project Area.

Table 8-2 Habitat Types Identified within the Marion County Solar Project Area

Habitat Category	Acres	Land Use (%)
Agriculture	865.7	89.3%
Grassland	41.7	4.3%
Second Growth Deciduous Forest	17.0	1.8%
Old Field	15.7	1.6%
New Field	15.7	1.6%
Wetlands	3.6	0.4%
Developed, Existing Roadway	2.9	0.3%
Developed Open Space, Residential	1.4	0.1%
Total	**963.7***	**100.0%**

* Note: Total acreage does not reflect the Project Area acreage due to the stream acreage that is not included as a habitat type

Four wetlands were delineated during field surveys within the Project Area, totaling approximately 3.6 acres. Figure 8-5 depicts the locations of the delineated wetlands and streams within the Project Area.

The function and values of these wetlands were assessed using Ohio Rapid Assessment Methods for Wetlands. The categorization of wetlands was conducted in accordance with OAC Rule 3745-1-54. Three wetlands totaling approximately 1.008 acres are considered to be potentially jurisdictional by the USACE. This total includes an approximately 0.76 acre Category 1 palustrine emergent (PEM) wetland, an 0.008 acre Category 2 PEM wetland, and a 0.24 acre Category 2 palustrine forested wetland. Wetland 4, which is approximately 2.62 acres in size, is a combination of a Category 2 PEM and palustrine scrub/shrub wetland. This wetland is potentially isolated and would be under the jurisdiction of the OEPA as it has no direct connection to other potentially jurisdictional Waters of the U.S. (WOUS) features.

Three streams were delineated during the field survey, totaling 10,442 linear feet within the Project Area. One intermittent stream, Stream 3, totals 1,395 linear feet, and two perennial streams, Stream 1 (Little Scioto River) and Stream 2 (Rock Swale), total 9,047 linear feet.

The functional assessment of the streams was completed using the OEPA Qualitative Habitat Evaluation Index (QHEI). The classification of the streams, ephemeral, intermittent, or perennial, were determined per the definition in the 22250 Federal Register/Vol. 85, No. 77 (effective June 22, 2020). Stream 1, Little Scioto River, and Stream 2, Rock Swale, were classified as perennial streams and Stream 3 was classified as an intermittent stream, all potentially WOUS and therefore likely USACE-jurisdictional streams.

An Approved Jurisdictional Determination request was submitted to the USACE Huntington District on February 23, 2021 in order to gain confirmation on the jurisdictional status of the delineated streams and wetlands. This request was logged as request LRH-2021-168.

(c) Literature Survey of Plant and Animal Life

Stantec conducted a desktop literature review and corresponding field habitat assessment for federally and state-listed T/E species for Marion County to assess their potential occurrence within the Project Area (Exhibit T). The U.S. Fish and Wildlife Service (USFWS) information for Planning and Construction (IPaC) screening tool was used to evaluate federal T/E species that might be potentially present in the Project Area (USFWS 2020). Three federally endangered

species and three federally threatened species were identified during the IPaC review to be potentially present in the Project Area. Further correspondence with USFWS on October 9, 2020 (provided in Exhibit U) reduced the number of species with the potential to be present within the Project Area to just two, the Indiana bat (*Myotis sodalis*; federal and state-listed endangered) and northern long-eared bat (*Myotis septentrionalis*; federal and state-listed threatened). There is no designated critical habitat for any of the federally listed T/E species that overlaps with the Project Area.

The ODNR does not have a publicly available state-maintained screening tool for specific project sites; therefore, the list of potential state-listed T/E species within the Project Area was generated based on the comprehensive list for Marion County (ODNR 2016). The ODNR reports nine state-listed endangered species and seven state-listed threatened species that occur in Marion County. To refine the potential state-listed T/E species within the Project Area, ODNR was consulted and in their response received November 24, 2020, a list of 19 state-listed T/E or special concern bird, reptile, mammal, and mussel species were provided, as listed in Table 8-3. Both federally listed T/E species were also included within the ODNR correspondence.

Table 8-3 List of Potential State Threatened and Endangered Species Within or Near the Project Area

Common Name	Scientific Name	Status	Habitat
Birds			
Northern Harrier	*Circus hudsonius*	SE	Grasslands, lightly grazed meadows, old fields, dry, upland prairies, shrub-steppe, and marshes with low, thick vegetation.
American Bittern	*Botaurus lentiginosus*	SE	Large wetlands with scattered small pools, bogs, large wet meadows, and dense shrubby swamps.
Black-crowned Night-heron	*Nycticorax nycticorax*	ST	Thick vegetation along streams, lakes, and wetlands.
King Rail	*Rallus elegans*	SE	Freshwater marshes, upland-wetland marsh edges, rice fields, or similar flooded farmlands, and shrub swamps.
Least Bittern	*Ixobrychus exilis*	ST	Marshes or swamps with dense emergent vegetation.

Common Name	Scientific Name	Status	Habitat
Sandhill Crane	*Grus canadensis*	ST	Wetlands including shallow marshes, bogs, or wet meadows and agricultural fields during the winter.
Trumpeter Swan	*Cygnus buccinator*	ST	Large marshes and lakes with shallow water and emergent and aquatic vegetation.
Upland Sandpiper	*Bartramia longicauda*	SE	Native prairie, cropland, pastureland, mountain meadows, dry tundra, and other grassy environments.
Reptile			
Eastern Massasauga	*Sistrurus catenatus*	FT, SE	Wet habitats in fall, winter and spring, including bogs, fens, scrub-shrub wetlands, marshes, wet grasslands and floodplain forests. Forest, old field, agricultural field and prairies during the summer.
Mammals			
Indiana Bat	*Myotis sodalis*	FE, SE	Forests, riparian corridors, and wetlands for summer roosting and foraging. Caves or abandoned underground mines for hibernacula.
Northern Long-eared Bat	*Myotis septentrionalis*	FT, SE	Forests, riparian corridors, wetlands and buildings for summer roosting and foraging. Caves or abandoned underground mines for hibernacula.
Easter Tri-colored Bat	*Perimyotis subflavus*	SE	Forests, riparian corridors, caves, mines and rock crevices for foraging and roosting.
Little Brown Bat	*Myotis lucifugus*	SE	Man-made structures, hollow trees for roosting. Forging over open water. Caves, tunnels, and abandoned mines for hibernacula.
American Badger	*Taxidea taxus*	SOC	Open areas, such as cropland, hedgerows, grasslands, savannah, or desert or brushlands with little ground cover.
Mussels			
Snuffbox	*Epioblasma triquetra*	FE, SE	Streams with swift shallow riffles with sand and gravel.
Clubshell	*Pleurobema clava*	FE, SE	Small to medium rivers with coarse sand and gravel in runs.
Rabbitsfoot	*Quadrula cylindrica cylindrica*	FT, SE	Small to medium rivers with swift currents and gravel and cobble. Medium to large rivers in sand and gravel.
Rayed Bean	*Villosa fabalis*	FE, SE	Smaller, headwater creeks with gravely or sandy substrates.

Common Name	Scientific Name	Status	Habitat
Pondhorn	*Uniomerus tetralasmus*	ST	Quiet slow-moving shallow waters of sloughs, borrow pits, ponds, ditches, and meandering streams,

Source: Cornell University 2021 and NatureServe 2021

(d) Plant and Animal Field Survey Results

To supplement the desktop review, Stantec assessed potential habitat availability for federally and state listed T/E species in the Project Area during the field surveys detailed in Exhibit T. During the field surveys, the vast majority of the Project Area was delineated as agriculture land (89.3%), with minimal areas of higher-quality natural habitat that could provide potentially suitable habitat for T/E species. The habitat assessment concluded that second growth deciduous forest habitat may provide potential suitable habitat for federal and state listed species including: Indiana bat, northern long-eared bat, eastern tri-colored bat, and little brown bat. Grassland habitat was also determined to potentially provide suitable habitat for federal and state listed species including northern harrier, upland sandpiper and American badger, while wetlands may provide potentially suitable habitat for American bittern, black-crowned night-heron, king rail, least bittern, sandhill crane, and eastern massasauga. In addition, Little Scioto River (Stream 1) may provide potential suitable habitat for the state-listed freshwater mussel species within the Project Area.

(e) Additional Ecological Studies

In November 2017, E & E conducted a preliminary desktop critical issues analysis (CIA) of the Project Area. The CIA document did not identify significant development constraints that could potentially impact the proposed Project, including potential impacts to ecological resources. The desktop CIA report is provided as Exhibit V.

(2) Potential Impacts to Ecological Resources During Construction

(a) Construction Impacts on Ecological Resources

The development of the Project is not likely to result in significant impacts to ecological resources that may potentially occur within the Project Area or surrounding vicinity as a result of

micro-siting efforts to avoid impacts to potentially suitable habitat or construction outside of critical periods.

No impacts to state-listed T/E mussel species, American bittern, black-crowned night-heron, king rail, least bittern, sandhill crane, or eastern massasauga will occur within the Project Area as infrastructure has been sited to avoid streams and wetlands so no instream work or wetland disturbance will occur. Similarly, no impacts from the Project are expected for the northern harrier, upland sandpiper, and American badger since the Facility has been sited outside of grassland habitat so no disturbance to grassland habitat will occur.

Second growth deciduous forest is located within the Facility, however all infrastructure has been sited to avoid the approximately 4.6 acres of woodlot within the Project fence line so no disturbance to this habitat will occur. Coupled with no removal of man-made structures, the Indiana bat, northern long-eared bat, eastern tri-colored bat, and little brown bat will not be adversely affected by the Project construction or operation since the forested habitat in the Facility has been avoided. No tree clearing is expected for construction of the Project, however if the site design changes and clearing needs to occur, the Applicant is committed to limiting tree-clearing activities outside of the active bat season (October 1 through March 31). In addition, to further minimize removal of woody vegetation, whenever possible, tress, and brush will be manually pruned or trimmed rather than removed entirely.

The remainder of the Project will be constructed exclusively in agricultural or developed land, which provides minimal habitat for wildlife and is not preferred habitat for any of the other identified federal or state-listed T/E species.

The Applicant undertook an extensive siting process to avoid impacts to wetlands and streams. Therefore, the Applicant anticipates that no CWA 404 or 401 permits will be required from the OEPA or USACE. Avoidance of wetland and stream habitat during the Project construction will avoid potential impacts to reptile and mussel species identified during the desktop or field-based T/E habitat review.

(b) Mitigation Procedures for Construction Impacts

In addition to the extensive micro-siting efforts mentioned above, the Applicant will work to avoid, minimize and, if necessary, mitigate ecological construction impacts. These include specific efforts to minimize disturbance to soils, a Frac Out Plan (Exhibit M), delineation and marking of avoided surface waters and wetlands, prepare procedures for inspection and repair of erosion control measures, and methods to protect vegetation in proximity to the Project.

(i) Restoration and Stabilization of Disturbed Soils

After construction, temporarily disturbed areas will be restored. The Facility will be graded to natural contours where possible and prepared for final seeding. Once construction is complete, the permanent access roads will be dressed as necessary to ensure their long-term function. Erosion control methods during and after construction will be specified within the SWPPP and will depend on the contours of the land, as well as requirements of relevant permits.

Permanent stabilization seeding will be completed immediately following the completion of construction. To the extent possible, the Applicant will implement the pollinator habitat recommendations provided by ODNR Division of Wildlife pertaining to the Ohio Pollinator Habitat Initiative. This could include reseeding areas disturbed during construction with a low-growth, native grass seed mix or native prairie grasses, under the solar modules and a native species, pollinator-friendly seed mix in select open areas outside of the array and within the Project perimeter fence line. Agricultural areas will be seeded with a temporary cover crop as specified by the landowner after construction. Natural areas will be seeded with an appropriate seed mixture to control erosion and allow revegetation to the pre-construction vegetative community.

The Project is considered to be permanently stabilized when all soil disturbed activities have been completed and a uniform perennial vegetative cover with a density of 70% has been achieved in all areas of the site not covered by other permanent ground covers. Any seed, straw, and/or matting used within the Project Area will meet Ohio stormwater standards (OEPA 2021b).

(ii) Frac Out Contingency Plan

Where necessary, the Project will employ HDD techniques to install cables underneath roads and streams, although none have been identified within the proposed site layout. The Frac Out Plan has been prepared for the Project by the Timmons Group and is included in Exhibit M. If the final site design requires HDD methods, it will be conducted per local codes and guidelines of authorities having jurisdiction. Before any drilling operations begin, all erosion and sedimentation controls included in the SWPPP will be installed and inspected by a qualified environmental inspector. The SWPPP, state permit(s), landowner restriction list, and any other applicable documents will be reviewed before any disturbance occurs.

HDD has the potential for surface disturbance through an inadvertent drilling fluid release. The areas that present the highest potential for fluid release are the drill entry and exit points where the overburden depth is minimal. A pit will be constructed at the entrance and exit points to provide temporary storage for the drilling fluid seepage until it can be removed. The pits will be lined with geotextile and be sized to accommodate the maximum volume of drilling fluid that may need to be contained within the pits. A secondary containment around the pits will be created with straw bales and silt fencing to contain any seepage and minimize any migration of the mud to the work area. If any fluid releases occur, a containment structure will be placed at the affected area to prevent migration of the release. If the release is large enough for collection, the drilling mud will be collected and disposed of per the HDD Fluid / Cutting Disposal procedures. If the release is not large enough for collection, the affected area will be diluted with fresh water and restored as necessary. Proper steps will be taken to prevent silt-laden water from entering a wetland or waterbody. If the release occurs in a waterbody, the contractor will attempt to place containment structures to prevent the spread. If public health and safety are threatened due to the release, drilling operations will be shut down until the threat is eliminated. All disturbed areas will be stabilized and restored per specifications in the SWPPP. The construction environmental manager will be contacted immediately if the release is returned to a stream, wetland, or other waterbody.

(iii) Demarcation of Surface Waters and Wetlands

Wetlands and streams within the Project Area were identified during a field survey and will be flagged in advance of the start of construction to ensure that construction teams are aware of their location. Impacts to surface water and wetlands during construction will be minimized through the implementation of a SWPPP to prevent erosion and sedimentation into nearby waterbodies under OEPA's NPDES General Permit for Construction Activities. Silt fencing will be installed along the construction right-of-way in all areas adjacent to wetlands and streams, in accordance with the SWPPP. Further, areas disturbed during construction will be restored to preconstruction conditions as soon as possible in order to further minimize the impact of construction.

(iv) Procedures for Inspection and Repair of Erosion Control Measures

A SWPPP will be prepared prior to construction as a condition of OEPA's NPDES General Permit for Construction Activities that is required for the Project. The SWPPP will prescribe specific erosion and sediment control measures to be used and the location in which these measures will be implemented. Generally, structural erosion control devices such as straw bales, berms, and check dams will be implemented to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff from exposed areas of the site. Silt fences will be installed immediately before completing each phase of work to effectively retain sediment where erosion would occur in the form of sheet and rill erosion (e.g., clearing and grubbing, excavation, embankment, and grading).

Mott MacDonald conducted a hydrology analysis and scour evaluation for the Project. Reports for this study are included in Exhibit N. Construction of the Project will result in minimal grading and a small increase of impervious area (e.g., driveways, electrical equipment, and substation), however there will be very little change to the existing characteristics of the drainage areas. As the flow depth and velocities increase due to these changes so will the potential of scour. The potential for scour to occur is only likely in areas where the flow velocities are greater than 2.0 feet per second, which were limited to the areas immediately adjacent to the streams within the Project Area. Potential for ponding at depths greater than 2 feet (0.6 meters) was only identified in proposed development areas in the south portion of the Project Area, along Rock

Swale. Standard stormwater BMPs should be sufficient to control stormwater flow during construction. There is a minor increase in impervious surface from the Project, however the land use change from agricultural land with row crop production to meadow conditions when herbaceous vegetation is reestablished will result in an overall decrease in peak stormwater flows.

(v) Methods to Protect Vegetation

Tree clearing has been avoided with the site design and vegetation surveys conducted for the Project did not identify any sensitive vegetative communities or plant types, therefore, no specific vegetation protection methods are needed. Additional details regarding vegetative management during construction are presented in Exhibit C.

(vi) Disposing of Downed Trees, Brush, and Other Vegetation

Any vegetation removed during construction will be segregated, stockpiled, and hauled off site by a waste disposal service.

(vii) Avoidance Measures for State and Federally Listed and Protected Species and Habitat

To minimize impacts to federally and state-listed T/E species, the Project has been sited, to the extent practicable, within previously disturbed areas, such as agricultural fields and along existing farm roads and forest edges. No tree clearing is proposed as part of Project construction, and if it were to be needed, the Applicant has committed to conducting it outside the active season for bats (October 1-March 31) to avoid potential impacts to federal and state-listed T/E bat species that may utilize the trees for roosting.

(3) Potential Impact to Ecological Resources During Operation and Maintenance

(a) Evaluation of the Impact of Operation and Maintenance on Undeveloped Areas and Animals

Adverse impacts to ecological resources during operation and maintenance of the Facility, including undeveloped areas, are not anticipated. O&M activities will include site visits for firmware updates, fixing faulty equipment, cleaning solar modules, standard test procedures and

a security patrol. A light-duty vehicle will be used for the maintenance. Gravel roads will be installed to provide site and inter-row access with the Project.

(b) Procedures to Avoid, Minimize, and Mitigate Impacts of Operation and Maintenance

Once the Project is in operation and site restoration of the Project Area is complete, no additional impacts to wetlands or streams, trees, or natural habitats, are expected. Operation of the Project will not involve the discharge of water or wastewater into streams or water bodies, nor will Project operation require the use of water for cooling or other activities. Therefore, no measurable impacts on the quality and quantity of surrounding water resources (including wetlands, surface waters, and groundwater) are anticipated. Grasses and other invasive plant species will be managed through mowing and spot applications of herbicides. Additional details regarding vegetative management during O&M are presented in Exhibit C.

(c) Post-construction Monitoring of Wildlife Impacts

Post-construction monitoring of wildlife is not anticipated as no adverse impacts to wildlife species are expected.

(C) LAND USE AND COMMUNITY DEVELOPMENT

(1) Land Use in the Region and Potential Impacts of the Facility

(a) Land Use Map

Figure 8-6 is a 1:24,000 scale map depicting the following features within 1-mile of the Project Area:

(a) The proposed Project Area;

(b) Land use;

(c) Structures; and

(d) Incorporated areas and population centers.

(b) Structures Near the Facility

Table 8-4 provides additional detail related to the proximity of identified structures to Project facilities, specifically:

(i) Structures within 1,500 feet (457.2 meters) of the generation equipment, the distance between the structure or property line and the equipment;
(ii) Structures within 250 feet (76.2 meters) of a collection line, access road, or other associated components, the distance between both the structure and the property line and the associated facility; and
(iii) Lease status of the property.

Residences in the vicinity of the Project Area were identified by the Applicant using a combination of publicly available data sets. This included identifying initial structure geometry from the Microsoft Building Footprint Program (Microsoft 2021) and then classifying each structure as Residential, Non-Residential (Commercial, Industrial etc.), or Other (Sheds, Outbuildings, Garages, etc.) using aerial imagery from Bing and Marion County 2019 Ohio Statewide Imagery Program Aerial Imagery (OGRIP 2021). Lastly, residential structures were checked against the Property Report Cards from the Marion County Auditor website, verifying Land Use and Dwelling Notes (Marion County Auditor's Office 2021). While every effort was made to thoroughly and accurately identify residences in the vicinity of the Project, given the number of residences in the vicinity and limitations of desktop data there is the potential for omissions or incorrect classifications of structures. The Applicant will work with landowners in close proximity to the Project to ensure that correct identification and classification of their home has been completed.

There are sixty-four residences, one place of worship, and six commercial/industrial structures within 1,500 feet (457.2 meters) of generation equipment (e.g., solar modules, inverters, or substations), three of which are located within 250 feet of generation equipment.

Table 8-4 Structures Near Project Facilities

Structure Type	Facility Type	Distance (feet)	Lease Status
Residence	Switchyard	127	Not Leased
Residence	Switchyard	207	Not Leased
Residence	Switchyard	219	Not Leased
Residence	Solar Array	274	Not Leased

Table 8-4 Structures Near Project Facilities

Structure Type	Facility Type	Distance (feet)	Lease Status
Residence	Solar Array	284	Not Leased
Residence	Solar Array	297	Not Leased
Residence	Solar Array	298	Not Leased
Commercial	Solar Array	302	Not Leased
Residence	Solar Array	340	Not Leased
Residence	Solar Array	346	Not Leased
Residence	Solar Array	402	Not Leased
Commercial	Switchyard	414	Not Leased
Residence	Solar Array	443	Not Leased
Residence	Solar Array	464	Not Leased
Residence	Solar Array	500	Not Leased
Residence	Switchyard	508	Not Leased
Residence	Switchyard	510	Not Leased
Residence	Switchyard	511	Not Leased
Residence	Switchyard	511	Not Leased
Residence	Solar Array	514	Not Leased
Residence	Solar Array	602	Not Leased
Industrial	Solar Array	618	Not Leased
Residence	Switchyard	626	Not Leased
Residence	Switchyard	632	Not Leased
Residence	Switchyard	633	Not Leased
Residence	Switchyard	643	Not Leased
Residence	Solar Array	649	Not Leased
Residence	Solar Array	661	Not Leased
Residence	Switchyard	673	Not Leased
Residence	Switchyard	706	Not Leased
Industrial	Switchyard	715	Not Leased
Residence	Switchyard	728	Not Leased
Residence	Switchyard	733	Not Leased
Residence	Switchyard	776	Not Leased
Commercial	Switchyard	785	Not Leased
Residence	Solar Array	788	Not Leased
Residence	Solar Array	791	Not Leased
Residence	Switchyard	792	Not Leased
Residence	Switchyard	795	Not Leased
Residence	Switchyard	801	Not Leased
Residence	Solar Array	870	Not Leased
Residence	Solar Array	875	Not Leased
Residence	Solar Array	882	Not Leased
Residence	Solar Array	884	Not Leased

Table 8-4 Structures Near Project Facilities

Structure Type	Facility Type	Distance (feet)	Lease Status
Residence	Switchyard	908	Not Leased
Residence	Switchyard	911	Not Leased
Residence	Switchyard	912	Not Leased
Residence	Switchyard	932	Not Leased
Residence	Solar Array	956	Not Leased
Residence	Solar Array	971	Not Leased
Residence	Solar Array	986	Not Leased
Residence	Solar Array	994	Not Leased
Residence	Switchyard	1003	Not Leased
Residence	Switchyard	1007	Not Leased
Residence	Switchyard	1013	Not Leased
Residence	Switchyard	1014	Not Leased
Residence	Solar Array	1034	Not Leased
Residence	Solar Array	1035	Not Leased
Residence	Solar Array	1050	Not Leased
Place of Worship	Switchyard	1056	Not Leased
Residence	Solar Array	1104	Not Leased
Residence	Solar Array	1146	Not Leased
Residence	Switchyard	1147	Not Leased
Residence	Switchyard	1152	Not Leased
Residence	Solar Array	1179	Not Leased
Residence	Solar Array	1236	Not Leased
Residence	BESS Building	1262	Not Leased
Residence	Switchyard	1383	Not Leased
Residence	BESS Building	1440	Not Leased
Industrial	Switchyard	1485	Not Leased
Residence	Solar Array	1499	Not Leased

(c) Evaluation of the Land Use Impacts

Approximately 89.3% of the land use within the Project Area is active agriculture land. The remainder of the Project Area (10.7%) includes natural areas (i.e. grassland, second growth deciduous forest, old field, new field, and wetlands) and developed land uses (see Table 8-2).

The Applicant took a conservative approach to calculating the land use impact of the Facility by assuming that all disturbance and land use impacts during construction would be permanent. Permanent impacts include all areas inside the perimeter fence of the Facility and the space in between the Facility components (i.e. solar modules, inverter pads, access roads, construction

laydown areas, O&M building, substation, and POI switchyard) and access roads outside the perimeter fence. The one exception in assuming all areas within the security fence are disturbed are the areas delineated as forest, wetlands, and streams as the Applicant has sited all Project infrastructure to avoid disturbance to these features and they will not be disturbed as part of construction or operation of the Project. Using this conservative assumption, approximately 709.6 acres of agricultural land, 9.5 acres of new field, and <0.1 acres of existing roadway/residential will be impacted by the Facility. Table 8-5 presents permanent land use impacts anticipated for each Project component.

Table 8-5 Project Land Use Impacts by Project Component

Project Component	Permanent Disturbance (acres)
Agricultural	
Solar Field[1]	709.6
New Field	
Solar Field[1]	9.5
Existing Roadway/Residential	
Solar Field[1]	<0.1

[1] Includes all Project infrastructure within the fence line including construction laydown areas, O&M building, BESS, substation, and POI switchyard as well as access roads outside perimeter fence

(d) Structures to be Removed or Relocated

The Applicant does not anticipate removing structures to accommodate the Project.

(2) Wind Farm Map

The Project is not a wind farm; therefore, this section is not applicable to the Project.

(3) Setback Waivers

No setback waivers are applicable to this Project as it is not a wind farm.

(4) Land Use Plans

(a) Formally Adopted Plans for Future Use of the Project Area and Surrounding Lands

The Marion County 2011 Land Use Plan does not propose changes to future land use of the Project Area or the vicinity, which is currently zoned for agricultural/low density residential (Marion County 2011). Development of the Project is consistent with Marion County's Land Use Plan as the current agricultural land use can continue on portions of the Project Area outside of the security fence. Additionally, the Project would not hinder development in adjacent areas if changes in land use are proposed in the future.

(b) Applicant's Plans for Concurrent or Secondary Uses of the Site

The Applicant has no plans for concurrent or secondary uses of the site.

(c) Impact on Regional Development

The Project is expected to aid regional development by increasing local tax revenues and contributing to the local economy, as shown in Exhibit G, the Economic Impact and Land Use Analysis, and discussed in Section 4906-4-06(C) of this Application. Aside from these benefits, including a significant increase in funding to schools, the Project is not expected to negatively impact housing, transportation system development, or other public services and facilities.

(d) Compatibility with Current Regional Plans

Solar facilities are compatible with rural landscapes in that they will not significantly impact schools, housing, and transportation; and upon decommissioning of the Project, the land can return to agriculture use. In addition, solar facilities provide supplemental income to rural property owners and increase local tax revenues and contribute to the local economy. Increased local tax revenue may be used on township infrastructure and roads. Construction and operation of the Project will not interfere with future proposed development.

(e) Current Population Counts and 10-year Population Projections

The population of Marion County from the 2010 U.S. Census was 66,505. The most recent estimated population count for Marion County in 2019 was 65,093, an annualized percentage

change of - 0.2%. The current population density of Marion County is approximately 161.1 persons per square mile. The projected population for Marion County is 63,840 in 2020 and 62,400 in 2030 (Ohio Office of Research 2020a, b). The population of Marion Township from the 2010 Census was 44,749 and was estimated to be 43,510 in 2019, an annual decrease of -0.3%. The only populated place within 5 miles of the Project Area is the City of Marion which had a recorded population of 36,828 during the 2010 Census and was estimated to be 35,883 in 2019, an annual decrease of -0.3%. (Ohio Office of Research 2020b). Using the average annual rate of change since the 2010 U.S. Census, the population for Marion Township and the City of Marion are expected to be approximately 36,695 and 33,514, respectively in 2030.

(D) CULTURAL AND ARCHAEOLOGICAL RESOURCES

(1) Recreation Areas and Registered Landmarks

Figure 8-7 depicts all recreation areas and registered landmarks of cultural significance within a 10-mile radius of the Project Area.

(2) Impacts on Registered Landmarks

Stantec conducted a Desktop Cultural Resources Review within the Project Area and a 10-mile buffer of the Project Area (see Exhibit W) to identify any previously known historic resources that could be impacted by the Project. To identify these known resources, Stantec reviewed GIS data obtained from the National Parks Service's website for National Register of Historic places (NRHP) and National Historic Landmarks listings, as well as known archaeological sites, historic aboveground structures, cemeteries, and survey data information from the Ohio Online Mapping System, which is maintained by the Ohio State Historic Preservation Office (SHPO). Based on the review there is one known archaeological site located within the Project Area that is not eligible for listing in the NRHP and one known above-ground historic resource that is found directly east of the Project Area that is eligible for listing on the NRHP. Per the Programmatic Agreement (PA) discussed below, further studies will be completed and coordination with SHPO will occur.

The Applicant and Commonwealth Heritage Group, Inc. worked with SHPO to develop work plans to complete archaeology and historic/architectural field surveys within an 899-acre portion of the Project Area, defined as the Area of Potential Effect. The work plans and subsequent correspondence with SHPO is provided in Exhibit X. Archaeological surveys were initiated in December 2020 and approximately 6% of the APE was surveyed, however the remaining area could not be completed during the 2020 survey window due insufficient ground visibility. Because of the wet field conditions, landowners were unable to disc the fields to provide for better visibility. The Applicant intends to complete field surveys of the Project Area during Spring 2021 when ground is dry and can be disced to allow for surface collection as part of the archaeological surveys. The historic/architectural surveys could not be completed due to snow cover which prevented clear visual architectural observations. The Applicant intends to enter into a PA with SHPO outlining the commitments to complete the surveys, evaluate the landmarks, and develop a plan for avoiding, minimizing, or mitigating adverse effects to landmarks identified. The Applicant anticipates submitting the executed PA to the OPSB within 30 days of the submittal of the application.

(3) Impacts on Recreational Areas

Stantec identified recreational areas within 10 miles of the Project Area using publicly available GIS data sources which are depicted in Figure 8-7. Twenty-four recreational areas were identified that include state wildlife areas, local parks, natural areas and preserves, state recreation areas, and agricultural easements related to the Wetland Reserve, and Clean Ohio Fund Farmland Preservation programs. While 24 recreational areas are within 10 miles, only one, Quarry Park II Acquisition and Improvements, is within a 0.5 mile and the remaining 23 are located more than 2 miles outside the Project Area. Based on distance from the Project Area, it is not expected that the Project will have any effects on recreational areas.

Stantec conducted a visual resources assessment within the Project Area, and within a 2-mile (3.2 kilometers) and 10-mile (16.0 kilometers) radius. The findings of the Stantec visual resources assessment are summarized below and the complete report is contained in Exhibit Y.

(4) Visual Impact

(a) Visibility and Viewshed Analysis

A viewshed analysis was conducted by Stantec using GIS software to determine locations within 10 miles of the Project that could potentially have views of the Project. A viewshed analysis is a GIS raster model output that shows a project's theoretical visibility in its surrounding vicinity based on topography and the dimension of project components. Stantec created a digital elevation model based on available topographical data and assuming the maximum height of Project components would be 15 feet, which is the maximum height of the solar modules under consideration by the Applicant for the Project. A Visual Resources Technical Report is provided as Exhibit Y that describes the methods and assumptions used for the viewshed analysis in more detail.

A graphical representation of the results of the viewshed analysis is provided in Figure 2 of Exhibit Y and is shaded to show the ranges of visibility of the Project, from full view to partial views. Because the viewshed model does not account for intervening vegetation or structures, and because of the flat terrain upon which the model was based, potential visibility of the Project appears to be high, and there are few areas within a 10-mile radius of the Project Area that would not theoretically have visibility of the Project. However, as a result of factors such as vegetation, structures, atmospheric conditions, and distance decay associated with the declining visibility of 15-foot-tall solar modules over long distances, and the results of the simulations at distances of approximately 2 miles, it is unlikely that the Project would actually be visible at those distances, so the analysis therefore focused on views within 2 miles of the Project. There are 39 sites within 2 miles of the Project valued for scenic quality and other potentially sensitive receptors, including two cemeteries, 26 places of worship, five schools, four structures listed on the NRHP, the Norfolk Southern Corporation Railroad, and the CSX Transportation Railroad. The Visual Resources Technical Report provided as Exhibit Y includes the locations of these resources, as well as other scenic resources within 10 miles of the Project (see Figure 8-7 and Exhibit Y, Figure 3).

(b) Existing Landscape and Scenic Quality

The Project Area is within an agricultural portion of Marion Township in Marion County. The City of Marion is adjacent to the southern boundary of the Project Area. Outside the City of Marion, this portion of Marion County is largely rural and agricultural with some industrial facilities, of which the POET Biorefining facility ("POET plant") is the most visually prominent. The visual character of this part of Marion County is relatively level stretches of farmland that are interspersed with wooded areas, residences, and farm structures.

The Project footprint is mostly fields utilized for row-crop agriculture. The properties surrounding the Project Area are primarily used as cropland or rural residential; however, there are some churches and commercial warehouse buildings adjacent to the southeast portion of the Project Area and other commercial facilities to the south and north.

The Marion County 2011 Land Use Plan does not identify specific scenic resources or protected views within Marion County (Marion County 2011). Additionally, there are no scenic and recreational rivers designated by ODNR, or scenic byways designated by ODOT within 10 miles of the Project Area.

Though located entirely within Marion County, the Project footprint's 10-mile radius includes portions of Wyandot, Crawford, Morrow, and Union counties.

(c) Landscape Alterations and Impacts

The presence of the Project would be visually unique within the Project Area but would be viewed within a rural agricultural area that already contains mechanized structures through the broader landscape. The Project would be evident to varying degrees by those travelling along the surrounding roadway network. Views of mechanical structures associated with the POET plant are already prevalent throughout the Project Area, particularly in the southern and eastern portions of the Project Area along SR 423 and Marion-Williamsport Road. In close view of the Project (within approximately 0.3 miles) the Project would increase the presence of mechanized structures but would visually relate to the industrial character of the POET plant. However, in areas where the POET plant is not prominently visible, the Project would somewhat contrast with the existing visual character as it is predominantly rural residential. Visibility of the Project

decreases with distance and would be mostly absorbed into the existing agriculture landscape at distances of approximately 0.4 mile. This decrease in visibility defines the outer extent of the Project's actual viewshed, and it affirms the decision to focus this evaluation on views no further than 2 miles from the Project footprint. As such, the Project's effects to sensitive receptors greater than 1 mile away but still within the 2-mile radius would likely be minimal.

(d) Visual Impacts to Cultural and Archaeological Resources

As discussed in Section 4906-4-08(D)(2) of this application, the Applicant intends to complete history/architecture and archaeology field surveys of the Project Area during Spring 2021 in order to identify cultural resources and determine the Project's impact on those resources, if they are present. The Applicant intends to enter into a PA with SHPO outlining the commitments to complete the surveys, evaluate the landmarks, and develop a plan for avoiding, minimizing, or mitigating adverse effects to landmarks identified. The Applicant anticipates submitting the PA to the OPSB within 30 days of the submittal of the application.

(e) Photographic Simulations

Stantec visual resources specialists reviewed Project plans, aerial imagery, and other data to identify potential viewpoints in the vicinity of the Project to be used in creating photographic visual simulations. Photographs were taken in January 2021. The view from each viewpoint was photographed at eye level using a 35-millimeter, 18-megapixel, single lens reflex camera with a crop factor of 1.6x, equipped with a 18-55-millimeter focal length lens set to 31 millimeters. This configuration allows for a 50-millimeter focal length, the industry-accepted standard for approximating the field of vision in a static view of the human eye. The time at which each viewpoint was photographed was documented to allow for accurate matching between the sun's position in the sky and the orientation of the tracking modules in the simulations.

Stantec, in coordination with the Applicant, selected a representative subset of photographed viewpoints for use as Key Observation Points (KOPs). The location of the four KOPs in relation to the Project footprint are shown on Figure 1 in Exhibit Y. The photographs from the KOPs were used to generate photo-realistic simulations of the Project in order to compare the existing and proposed conditions. The simulations were developed through a three-dimensional computer

model using a combination of AutoCAD files and GIS layers and exported to Autodesk's 3-dimensional Studio Max for production and incorporating the Project facility specifications.

The simulations generated for the Project at the four KOPs are shown in Figures 5 - 8 in Exhibit Y. A more detailed description of existing and proposed conditions for each of the KOPs is provided in Exhibit Y, but overall while a development of this type and size would be unique to the local landscape, at distances of approximately 0.4 mile the Project visibility decreases and is mostly absorbed into the agricultural landscape.

(f) Visual Impact Minimization

Photo simulations developed to evaluate visual impacts established that the Project would be highly visible from locations 0.1 to 0.3 miles away, but at distances of 0.4 mile, would appear mostly absorbed into the existing agricultural landscape. As part of its stakeholder outreach efforts, the Applicant has mapped all residences within 0.5 mile of the Project footprint and residences located on a parcel that is within 0.5 mile of the Project footprint and prepared aerial imagery to show the degree to which existing built or natural features may partially to fully block residential views toward the Project. This information is included in the Visual Impact Mitigation Plan provided as Exhibit Z. While such a measure would not reduce the effects to visual resources it would likely further the understanding of the limited locations throughout the local landscape where the entirety of the proposed Project would be visible without obstruction. Where necessary, the Applicant will work with adjacent landowners to analyze the impact to their viewshed and determine the best mitigation options.

(E) AGRICULTURAL DISTRICTS AND IMPACTS TO AGRICULTURAL LAND

(1) Mapping of Agricultural Land

Figure 8-8 depicts all agricultural land within the Project Area. Eight of the nine parcels that comprise the Project Area, totaling 732 acres, are enrolled in the Agricultural District Program based on information provided by Marion County Auditor's Office (via GIS data received on February 9, 2021).

There are no Concentrated Animal Feeding Operations within the Project Area or Marion County (OEPA 2021c).

(2) Agricultural Information

(a) Acreage Impacted

Land use in the Project Area is primarily agricultural with approximately 866 acres, or 89% of the total Project Area, dedicated to corn and soybean cultivation. For the life of the Project, approximately 710 acres of agricultural land will be converted to accommodate the Project facilities. Of the agricultural land utilized for the Project Facility, approximately 513 acres is currently enrolled in the Agricultural District Program.

(b) Evaluation of the Impact of Construction, Operation, and Maintenance of the Proposed Facility

(i) Field Operations

The Project will occupy approximately 710 acres of land currently utilized for agricultural production. Field operations will cease prior to commencing construction. However, following decommissioning of the Project, the land can be reverted to agricultural production.

(ii) Irrigation

The land used for agriculture within the Project Area is not currently irrigated, therefore there are no proposed impacts to irrigation usage as a result of construction, operation, or maintenance of the Project.

(iii) Field drainage systems

The Applicant conducted a Project Drainage Tile Assessment and Construction Impact Report for the Project that is included as Exhibit AA. The known drain tile locations within the Project Area are depicted in Figure 8-8. The purpose of the assessment was to identify the location of subsurface drain tiles within the Project Area and develop mitigation for potential impacts. The Applicant was able to use publicly available GIS data and drain tile layout maps provided by the landowners, when available, to prepare a schematic of the drain tile system within the Project

Area. The majority of the drain tiles within the Project Area are lateral tiles that provide localized drainage – damage to these lateral tiles would rarely affect adjacent landowners. Lateral tiles feed to larger main tiles. Damage to a larger main could cause drainage issues on adjacent properties if impacted and will therefore be avoided with the Project design or repaired or rerouted if unavoidable.

The Applicant has determined that spacing between lateral tiles within the Project Area is between 30 and 50 feet. This spacing does not impose a significant constraint on the Project design, as project components, such as the solar modules, can be placed between the drain tiles. However, there is potential for impacts to the drain tile system from steel posts and transmission line poles driven into the ground and cutting trenches to install underground collection systems. The final site layout will be completed taking the drain tile locations into consideration to minimize potential impacts. The Applicant plans to avoid impacts to all main tiles and lateral tiles will be avoided to the extent practicable. Procedures will be developed to identify locations where tiles have been damaged and repairs performed, as necessary, as part of the overall construction and site restoration (post-construction) process. During operations, facility personnel will monitor the site for signs of damaged tile (i.e. saturated soils or areas of ponding). A local contractor who specializes in the installation and repair of agricultural drain tiles will be hired to perform any necessary repairs.

(iv) Structures used for Agricultural Operations

No agricultural-related structures will be impacted by Project construction, operation, or maintenance.

(v) Viability as Agricultural District Land

Figure 8-8 depicts Project parcels that are enrolled in an Agricultural District Program. Once the Project is operational, these parcels will no longer be eligible for inclusion in the program. Once the Project is decommissioned, the parcels could be re-enrolled in the program.

(c) Avoidance and Mitigation Procedures During Construction, Operation, and Maintenance to Reduce Impacts to Agricultural Land, Structures, and Practices

The Project has been designed to minimize its impact and reduce its overall footprint to the extent practicable, reducing the amount of agricultural land removed from production during the life of the Project. However, agricultural production within the perimeter fence line will cease prior to construction activities commencing. The Applicant will compensate the landowner for destruction or loss of any crops caused by the Project.

(i) Avoidance or Minimization of Damage to Field Tile Drainage Systems and Soils

The Applicant has prepared a Project Drain Tile Assessment and Construction Impact Report for the Project that is included as Exhibit AA. The known drain tile locations within the Project Area are depicted in Figure 8-8. The assessment involved the use of publicly available GIS data and maps provided by the landowner, when available, to map the locations of drain tiles, both lateral and main tiles, within the Project Area. The Applicant will take the mapped drain tile system into consideration when preparing the final site layout to minimize potential impacts. The Applicant plans to avoid impacts to all main tiles and lateral tiles will be avoided to the extent practicable. Procedures will be developed to identify locations where tiles have been damaged and repairs performed, as necessary, as part of the overall construction and site restoration (post-construction) process. During operations, facility personnel will monitor the site for signs of damaged tile (i.e. saturated soils or areas of ponding). A local contractor who specializes in the installation and repair of agricultural drain tiles will likely be hired to perform any necessary repairs.

(ii) Timely repair of Damaged Field Tile Systems

The Applicant will use commercially reasonable efforts during construction to promptly repair any drain tile that is noticeably damaged. This means that any drain tile damaged as a result of the Project would be repaired promptly, so long as it could be determined that the damage was a direct result of the Project and any requested repair methods are not outside reasonable requirements to remedy the issue. The affected landowner may agree to not having the damaged drain tile repaired only if the drain tile system of adjacent landowners remain unaffected by the non-repair of the landowner's drain tile system.

(iii) Segregation of Excavated Topsoil Decompaction and Restoration of Topsoil

The Applicant will segregate excavated topsoil, and de-compact and restore all topsoil to original conditions unless otherwise agreed to by the landowner. Topsoil will not be significantly compacted during the laying of the substation foundation or racking posts. Additionally, areas below the solar arrays will be planted with low-growth native grass seed mix to promote precipitation infiltration and reduce stormwater run-off and soil erosion.

4906-4-09 REGULATIONS ASSOCIATED WITH WIND FARMS

The Project is not a wind farm; therefore, these regulations are not applicable.

References

Cornell Lab of Ornithology. 2020. All about birds. Available at https://www.allaboutbirds.org/news. Accessed January 2020.

Marion County. 2011. Marion County 2011 Land Use Plan. Accessed at: https://www.marionohioplanning.org/index.php/marion-county-2011-land-use-plan

Marion County Auditor's Office. 2021. Parcel Search. Accessed at: https://propertysearch.co.marion.oh.us/Search.aspx

Microsoft Corporation. 2021. US Building Footprints. Accessed at: https://github.com/Microsoft/USBuildingFootprints

NatureServe. 2021. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, VA. U.S.A. Available at http://explorer.natureserve.org. Accessed January 2021.

Ohio Department of Natural Resources (ODNR). 2000. Aquifer – Unconsolidated Aquifers of Ohio. Accessed at https://ohiodnr.gov/wps/portal/gov/odnr-core/home/resources/metadata-downloads.

ODNR. 2020a. State Listed Wildlife and Plant Species by County. Division of Wildlife. Available at https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-odnr/wildlife/documents-publications/wildlife-plants-county. Accessed December 2020.

OEPA 2021a. Public Water Systems with Endorsed Drinking Water Source Protection Plans. Accessed at: https://epa.ohio.gov/Portals/28/documents/swap/Endorsed-Plans-Jan2021.pdf

OEPA 2021b. Ohio's Standards for Stormwater Management, Land Development and Urban Stream Protection. Accessed at:

https://www.epa.ohio.gov/dsw/storm/rainwater#:~:text=Ohio%E2%80%99s%20Standards%20for%20Stormwater%20Management,%20Land%20Development%20and,environmental%20features%20and%20are%20extremely%20sensitive%20to%20urbanization.

OEPA. 2021c. Concentrated Animal Feeding Operations. Accessed at: https://www.epa.state.oh.us/dsw/cafo/index#126567134-cafo-npdes-permits-in-ohio.

OEPA. 2019. Ohio Air Quality 2018. Division of Air Pollution Control. Available at https://www.epa.state.oh.us/Portals/27/ams/Ohio_Air_Quality_2018_final.pdf.

OEPA. 2015. Regional Haze State Implementation Plan for Ohio. Division of Air Pollution Control. Available at https://epa.ohio.gov/Portals/27/sip/regional/Regional_Haze_SIP_2015-FINAL.pdf. Accessed December 2020.

OEPA 2004. Drinking Water Source Assessment for Ridgedale Elementary/Junior/Senior High Schools. Accessed at: http://wwwapp.epa.ohio.gov/gis/swpa/OH5134412.pdf

Ohio Geographically Referenced Information Program. 2021. OSIP Data Downloads. Accessed at: https://ogrip.oit.ohio.gov/projectsinitiatives/osipdatadownloads.aspx

Ohio Office of Research. 2020a. Ohio County Profile: Marion County. Accessed February 2021. Available online: https://development.ohio.gov/files/research/C1052.pdf

Ohio Office of Research. 2020b. 2019 Population Estimates: Cities, Villages and Townships by County. May 2020. Accessed February 2021. Available online: https://www.development.ohio.gov/files/research/P5027.pdf

The Ohio State University (OSU). 2020. CFAES Weather System, Northeast Station. The Ohio State University, College of Food, Agricultural, and Environmental Studies. Available at: https://www.oardc.ohio-state.edu/weather1/dailyinfo_B.asp

Royal Meteorological Society (RMetS). 2018. The Beaufort Scale: How is Wind Speed Measured? Royal Meteorological Society. Available at https://www.rmets.org/resource/beaufort-scale. Accessed February 2021.

U.S. Fish and Wildlife Service (USFWS). 2020. Information for Planning and Consultation. Available at https://ecos.fws.gov/ipac/. Accessed February 2020.

Summary: Application - 1 of 30 (Cover, Affidavit, and Narrative) electronically filed by Christine M.T. Pirik on behalf of Marion County Solar Project, LLC