

**Petition of C-Tec Solar, LLC for a Declaratory Ruling that
no Certificate of Environmental Compatibility and Public
Need is Required for the Proposed Construction,
Operation and Maintenance of a Solar-Based Electric
Generating Facility to be Located at 186 Foster Street,
South Windsor, Connecticut**

**Prepared for The Connecticut Siting Council
March 2024**

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1 Introduction

Pursuant to Conn. Gen. Stat. §§ 4-176 and 16-50k(a) and Regs. Conn. State Agencies § 16-50j-38 *et seq.*, C-Tec Solar, LLC (the “Petitioner”; or “C-Tec”) respectfully requests that the Connecticut Siting Council (the “Council”) approve, by declaratory ruling, C-Tec’s proposed installation and development of a solar-based electric generating facility, with an output of approximately 1.66 megawatts¹ (“MW”) (the “Project”), located in the Town of South Windsor, Connecticut (“Town”).

Conn. Gen. Stat. § 16-50k(a) provides,

“Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling. . . (B) the construction or location of any. . . grid-side distributed resources project or facility with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Energy and Environmental Protection[.]”

The proposed Project will comply with the Connecticut Department of Energy and Environmental Protection’s (“DEEP”) air and water quality standards and will not have an undue adverse effect on the existing environment and ecology. Further, the proposed Project is neither defined as an “affecting facility”² nor located within an “environmental justice community”³ under Connecticut General Statutes § 22a-20a.

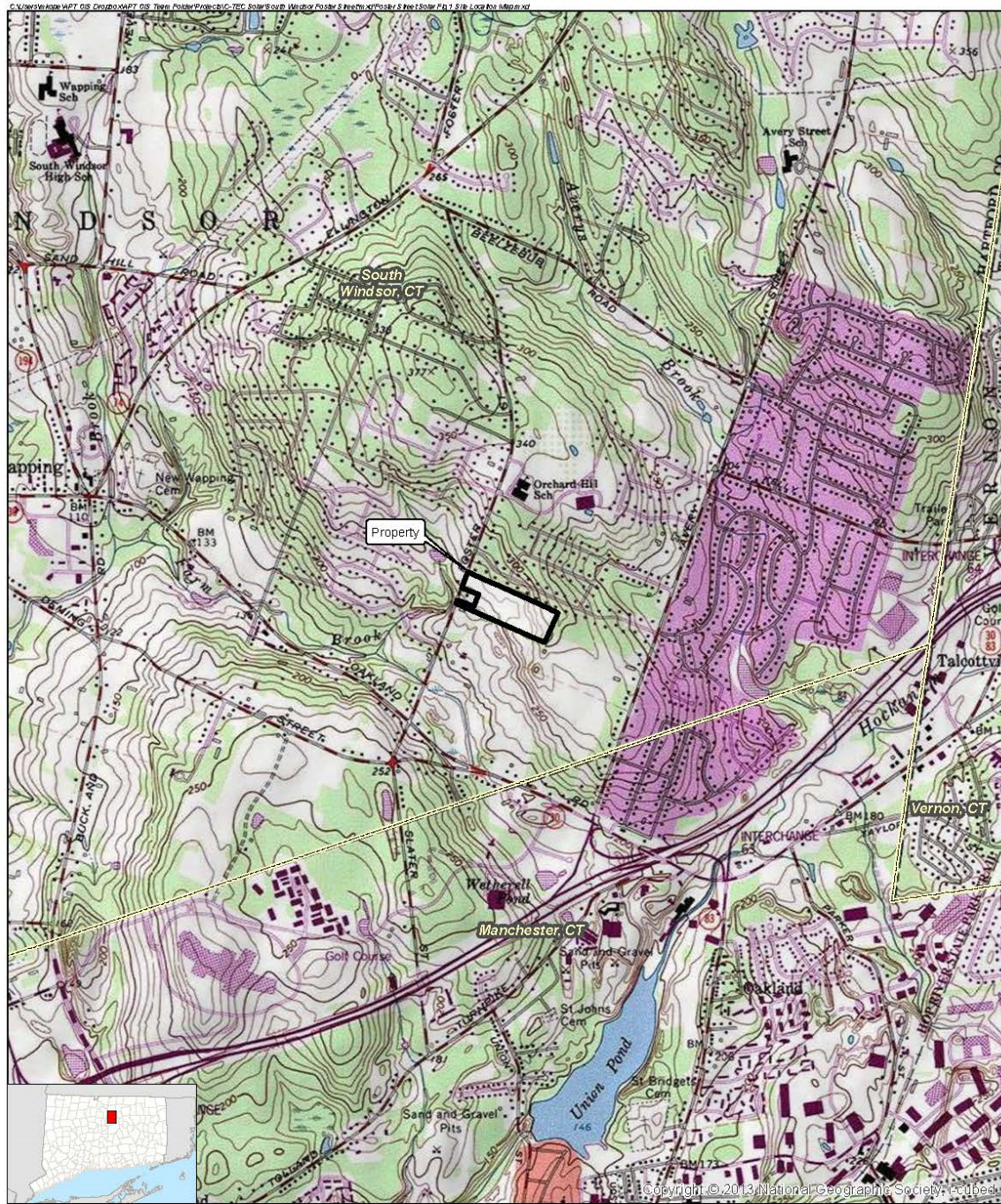
The Project will be located at 186 Foster Street in South Windsor, Connecticut (“Property”). The Property is a parcel of approximately 16.47 acres. It is largely cleared, with a single, barn-type structure located in the southwestern portion of the Property. Narrow wooded areas are found along the northern, eastern, and southern boundaries. The Property is privately owned and zoned Rural Residential (RR).

¹ The output referenced is Alternating Current (AC).

² “Affecting facility” is defined, in part, as any electric generating facility with a capacity of more than ten megawatts.

³ “Environmental justice community” means (A) a United States census block group, as determined in accordance with the most recent United States census, for which thirty per cent or more of the population consists of low income persons who are not institutionalized and have an income below two hundred per cent of the federal poverty level, or (B) a distressed municipality, as defined in subsection (b) of § 32-9p.

Figure 1, *Location Map*, depicts the location of the Property and surrounding area.



Legend
 [Black Outline] Property
 [Yellow Outline] Municipal Boundary

Map Notes:
 Base Map Source: USGS 7.5 Minute Topographic
 Quadrangle Map, Manchester, CT (1992)
 Map Scale: 1:24,000
 Map Date: Revised per 2023

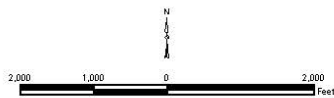


Figure 1
Location Map
 Proposed Solar Facility
 186 Foster Street
 South Windsor, Connecticut



2 Proposed Project

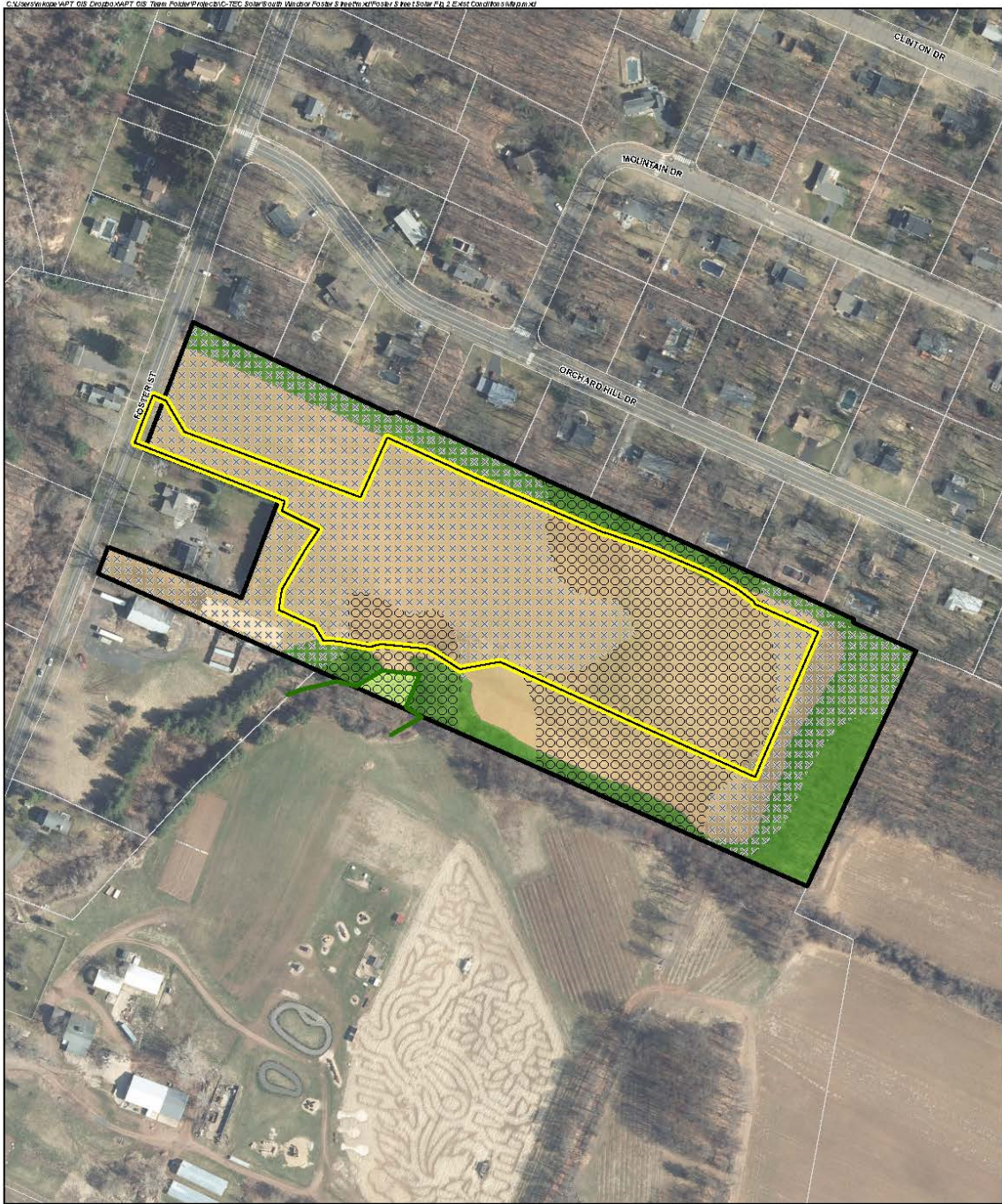
2.1 Project Setting

The Property is located on the eastern side of Foster Street, in the southeastern section of South Windsor. The Project will be located within the central and eastern portion of the Property. Access will be via a proposed gravel drive extending from Foster Street. The interconnect route will follow the access drive. The Project in its entirety will occupy approximately 7.91 acres of the Property ("Site" or "Project Area").

The Property's existing topography ranges from approximately 229 feet above mean sea level ("AMSL") in the southwestern corner to 313 feet AMSL at the northeastern corner. Grades within the Project Area generally slope downward from the northeastern portion to the south and west.

Figure 2, *Existing Conditions*, depicts the Site and current conditions on the Property.

The surrounding land use is characterized primarily by residential development to the north, east, and west, and residential development and agricultural use to the south. The Green Ridge Open Space, which appears to be Town open space designated as a result of subdivision development is located to the northwest across Foster Street; it consists of a mix of cleared and wooded land.



- Legend**
- | | | |
|-----------------------------|------------------|------------------------------------|
| Property | Habitat | Farmland Soils |
| Site | Edge Forest | Prime Farmland Soils |
| Approximate Parcel Boundary | Forested Wetland | Statewide Important Farmland Soils |
| Wetland Area | Open Field | |
| Delineated Wetland Boundary | | |

Map Notes:
 Base Map Source: CTECO 2019 Aerial Photograph
 Map Scale: 1 inch = 250 feet
 Map Date: Review Dec. 2023

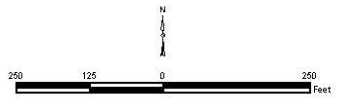


Figure 2
Existing Conditions Map
 Proposed Solar Facility
 186 Foster Street
 South Windsor, Connecticut



2.2 Project Development and Operation

2.2.1 The Site

Upon its completion, the solar electric energy generating Project will consist of a total of 3,680 photovoltaic modules ("panels"); 13 inverters; pad mounted switchgear and one 1000-kVA transformer on a concrete pad ("Facility"). A ground-mounted racking system will be used to secure the panel arrays. The perimeter of the Facility will be surrounded by a seven-foot chain link fence.

The Facility will be accessed via a new gravel access drive extending east from Foster Street to the western fence line. The access drive will be approximately 448 feet long and 15 feet wide, ending at a chain-link fence on the western side of the Facility.

The Project will require one electrical service interconnection that will require the installation of five new utility poles. The interconnection route will extend overhead from the existing Eversource distribution system along Foster Street to utility poles on the north side of the access drive to pad-mounted electrical equipment, and from there, underground within the Facility.

Once complete, the fenced Facility will occupy approximately 5.24 acres of the Site with an additional ± 2.67 acres of improvements beyond the fenced limits, for a total Project Area of ± 7.91 acres. Proposed development drawings are provided in Appendix A of Exhibit A, *Project Plans*.

The leading edge of the panels will be approximately thirty-six (36) inches above the existing ground surface, which will provide adequate room for any accumulating snow to "sheet" off the panels. Any production degradation due to snow build-up has already been modeled into the annual system output and performance calculations. No need for snow removal operations is anticipated; rather, the snow will be allowed to melt or slide off.

The Facility will be unstaffed; after construction is complete and the Project is operable, traffic at the Site will be minimal. It is anticipated that the Facility will require routine inspection/maintenance of the electrical equipment one time per year. Annual maintenance will typically involve two technicians for a day. Repairs will be made on an as-needed basis.

It is anticipated that construction hours will be from 7am to 4pm, Monday through Saturday. It is anticipated that the Facility will be completed in accordance with the schedule listed below. It

should be noted, however, that while this schedule is a reasonable approximation of construction activities given current knowledge, it is possible that the schedule may change somewhat depending on continuing supply chain and/or labor issues.

- Receive Siting Council Declaratory Ruling - on or before September 2024
- Complete Procurement of Long Lead Equipment - March 2024
- Site mobilization – beginning October 2024
- Delivery of racking and PV modules – October 2024 through November 2024
- Racking installation completion – November 2024
- PV module installation completion – December 2024
- DC electrical installation completion –January 2025
- AC electrical installation completion – February 2025
- Cold commissioning – February 2025
- Mechanical completion – March 2025
- Hot commissioning – March 2025
- Commercial operation date – April 2025
- Final punch list and site demobilization – from April 2025 through May 2025

2.2.2 Public Health and Safety

The Project will meet applicable local, state, national and industry health and safety standards and requirements related to electric power generation. The Facility will not consume any raw materials, will not produce any by-products and will be unstaffed during normal operating conditions.

The Facility array will be fenced and entrance to the Facility will be gated, limiting access to authorized personnel only. All Town emergency response personnel will be provided access via a

Knox padlock. The Facility will be remotely monitored and will have the ability to remotely de-energize in the case of an emergency.

2.2.3 Land Use Plans

The Project is consistent with state and federal policies and will support the state's energy goals by developing a renewable energy resource while not having a substantial adverse environmental effect. The Project will benefit the local community by improving electrical service for existing and future development through the availability of enhanced local generating capacity that does not rely solely on the congested regional electrical transmission network.

The Town's Zoning Regulations include a section on large scale solar energy systems, the intent of which is to "promote the use of large scale solar collectors and provide for the regulation of the construction and operation of Large Scale Solar Energy Systems, subject to reasonable conditions that will protect the environment, public health, safety, and welfare." Zoning Regulations, Section 7.21 Large Scale Solar Energy System.

The Town's 2013 Plan of Conservation and Development ("POCD") identifies a strategy to plan for alternative energy, specifically noting solar energy. POCD, Section 14.D.

2.2.4 Community Relations

C-Tec has been in communication with and has had informal interactions with Town officials regarding the design and development of the Project. C-Tec also contacted Town officials regarding the Petition both by mail and by telephone immediately before the Petition was filed. In addition, C-Tec drafted letters to the abutters to the Facility informing those abutters about the Petition and the Facility. Documentation of these contacts may be found in Exhibit B.

2.3 Petitioner Information

The legal name of the Petitioner is C-Tec Solar, LLC. C-Tec Solar, LLC is a Connecticut limited liability company with its principal place of business at 1 Griffin Road South, Suite 200, Bloomfield, Connecticut 06002. C-Tec Solar, LLC has successfully developed over 100 MW of commercial solar projects in the Northeast. C-Tec's portfolio of projects range from rooftop to ground-mounted power plants, and several notable projects of C-Tec include:

1. **The Agawam Corporate Center** (Agawam, MA): Ballasted Roof Mount using Ecolibrium and DCE racking, 456,28 kW;
1. **Thompson Farm** (Thompson, CT): Virtual Net Metering Driven Post Ground Mount Project, which sells power to the Town of West Hartford and the City of Hartford through Power Purchase Agreements (“PPA”), 3.74 MW;
2. **All Granite Charlton** (Charlton, MA): Ballasted Roof Mounted Solar Array under SREC 2, 108.2 kW;
3. **Hartford Distributors, Inc.** (Manchester, CT): Metal Roof Mount - Financed as PPA through Connecticut Green Bank, 748 kW;
5. **Brewport** (Bridgeport, CT): Roof Mount, 105 kW;
6. **Klingberg** (New Britain, CT): Roof Mount, 129 kW;
7. **Board of Education** (Bloomfield, CT): The first project under Connecticut’s Shared Clean Energy Facility Pilot Program, 2 MW;
8. **Voluntown Road** (Griswold, CT): a Virtual Net Metering (“VNM”) facility, providing power to municipalities throughout Connecticut, 2.4 MW;
9. **Bilton Road** (Somers, CT): VNM facility, providing power to municipalities throughout Connecticut, 3.6 MW;
10. **Lesro Industries** (Bloomfield, CT): Ballasted Roof Mount, 998 kW;
11. **NE Tool** (Manchester, CT): Solar Carport, 100 kW; and
12. **Mitchell** (Simsbury, CT): Installation at the Mitchell Automotive Group’s Simsbury location, 130kW.

C-Tec is also regarded as a leader in Solar-Plus-Storage, currently developing several battery-powered projects in the states of Connecticut and Massachusetts, while also being awarded one of the first Solar Massachusetts Renewable Target Program (“SMART”) projects in the State of Massachusetts.

As a fully integrated solar development company, C-Tec manages all aspects of the solar development and implementation process—including design and engineering to procurement and installation. C-Tec brings its years of industry knowledge and experience to bear on every project pursued.

Correspondence and other communications concerning the Project are to be addressed to, and notices, orders and other papers may be served upon, the following:

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C-Tec Solar, LLC
1 Griffin Road South, Suite 200
Bloomfield, CT 06002
michael.morrison@ctecsolar.com
(860) 580-7174 ext. 121

Lee D. Hoffman
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702
lhoffman@pullcom.com
(860) 424-4315

Both individuals consent to electronic mailings of all Council and Petition-related correspondence.

3 Environmental Conditions

This section provides an overview of the current environmental conditions at the Site and an evaluation of the Project's potential impacts on the environment. The Project will comply with the DEEP air and water quality standards and will not have an undue adverse effect on the existing environment and ecology.

Please refer to Figure 3, *Proposed Conditions* for a depiction of the Project and its compatibility with the Site resources discussed herein.



- Legend**
- Property
 - Approximate Parcel Boundary
 - Delineated Wetland Boundary
 - Utility Pole
 - Fence
 - Grass Berm
 - Stormwater Swale
 - Interconnection Path
 - Underground Electrical Utility
 - Contour
 - Stone Trench
 - Solar Modules
 - Concrete Equipment Pad
 - Gravel Access Drive
 - Stormwater Structure
 - Wetland Area
 - Limit of Disturbance

Map Notes:
 Base Map Source: CTECO 2019 Aerial Photograph
 Map Scale: 1 inch = 250 feet
 Map Date: December 2023

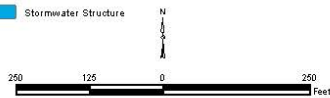


Figure 3
Proposed Conditions Map
 Proposed Solar Facility
 186 Foster Street
 South Windsor, Connecticut



3.1 Air Quality

The Site is primarily undeveloped land, with a single uninhabited structure. Due to the nature of a solar energy generating facility, no air emissions will be generated during operations and, therefore, the operation of the Project will have no adverse effects on air quality and no permit is required.

Temporary, potential, construction-related mobile source emissions will include those associated with construction vehicles and equipment. Any potential air quality impacts related to construction activities can be considered de minimis. Such emissions will, nonetheless, be mitigated using available measures, including, inter alia, limiting idling times of equipment; proper maintenance of all vehicles and equipment; and watering/spraying to minimize dust and particulate releases. In addition, all on-site and off-road equipment will meet the latest standards for diesel emissions, as prescribed by the United States Environmental Protection Agency.

3.2 Water Resources

3.2.1 Wetlands and Watercourses

Registered Soil Scientists conducted a review of publicly available data and client provided resources associated with the Property. A field inspection and wetland investigation were completed on October 27, 2022; a portion of one (1) wetland was delineated on the Property. The results of the wetland delineation are summarized below. The location of this resource is depicted on Figure 2, *Existing Conditions*; it is included in Forested Wetland habitat.

The delineated wetland is a seasonally saturated wetland system resulting from hillside seepage and anthropogenic influences related to the historic agricultural use of the Property. The majority of the wetland complex is located outside the Property as it drains in a southwesterly direction. This narrow wetland complex contains a variety of vegetative communities including emergent scrub/shrub and forest habitats. Beginning at the northernmost point, emergent vegetation dominated by reed canary grass, soft rush, and broad-leaf cattail dominates the cover type, then transitions to a more scrub-shrub dominant area with native and invasive species including elderberry, silky dogwood, and multiflora rose in the wetland's central portion. The interior southern extents of this system, on the abutting property, are forested with red maple and silver maple as the dominant tree species. A discontinuous intermittent watercourse is located within

the wetland interior. This channel is less than one foot wide, contains a silty bottom and is highly ephemeral, with hydrology driven primarily by runoff from the adjacent agricultural field. Evidence of varying degrees of historic alteration to the wetland is present with cut/fill areas, field stone that reinforces the interior watercourse channel and deposition of woody debris.

3.2.2 Wetland Impacts

The Project avoids direct impact to the delineated wetland resource. Installation of solar panels and perimeter fencing will generally maintain a 100-foot buffer from the wetland. The southeast corner of the grass-lined stormwater management basin will be located ± 58 feet from the limit of grading to the nearest wetland area; the limit of disturbance to install this feature, consisting of the associated erosion controls, is ± 50 feet from the wetland. A proposed 12-inch culvert outfall at the southern end of the stormwater basin will be located ± 100 feet from the wetland and will both protect and recharge hydrology to this resource. These indirect Project wetland impacts in proximity to the wetland resource (50 to 100 feet) occur entirely in areas of existing dense, primarily herbaceous vegetation with low erodibility potential and limited need for removal of mature woody vegetation. In addition, the Project’s erosion control and stormwater plans have been designed in accordance with both the *Connecticut Guidelines for Soil Erosion and Sediment Control* and the *Connecticut Stormwater Quality Manual*, both effective as of March 30, 2024. As such, the Project is not anticipated to result in a likely adverse impact to the nearby wetland. Any potential secondary wetland impacts will be further mitigated through the implementation of a Resource Protection Plan during Site construction. The detailed Resource Protection Plan is contained in the Project Plans, Appendix A of Exhibit A.

Table 1, Wetland Impacts provides the approximate impacts and distances from the Project to wetland resources located on the Property.

Table 1: Wetland Impacts		
Site Proximity to Wetlands (from limit of disturbance)	Distance (\pm ft.)	Direction (of wetland from LOD)
Site Proximity to the wetland	50	SE

3.2.3 Floodplain Areas

The United States Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map ("FIRM") is the official map of a community on which FEMA has delineated both the special hazard areas and risk premium zones applicable to the community. The area of the Property is mapped on FIRM PANEL #09003C 0383 F, dated September 26, 2008, and FIRM PANEL #09003C 0384 F, dated September 26, 2008. The majority of the Property and all but the western portion of the access road are located within FIRM PANEL #09003C 0384 F, with the remainder of the Property and the access drive within FIRM PANEL #09003C 0383 F. Based upon the reviewed FIRM Maps, the Property and proposed Site are located in an area designated as Area of Minimal Flood Hazard – Zone X.

The Site is not located within a 100- and 500-year flood zone and as such, no special considerations or precautions relative to flooding are required for the Project.

3.3 Water Quality

Once operative, the Facility will be unstaffed, and no potable water uses or sanitary discharges are planned. No liquid fuels are associated with the operation of the Facility. Stormwater generated by the proposed development will be properly handled and treated in accordance with the *Connecticut Stormwater Quality Manual*, effective as of March 30, 2024, and Appendix I, Stormwater Management at Solar Array Construction Projects ("Appendix I") of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("Stormwater General Permit").

3.3.1 Groundwater

Groundwater underlying the Property is classified by DEEP as "GA".⁴ This classification indicates groundwater within the area is presumed to be suitable for human consumption without treatment. Based upon reviewed DEEP mapping, the Property is not located within a preliminary or final mapped DEEP Aquifer Protection Area ("APA").

The Project will have no adverse environmental effect on ground water quality.

⁴ Designated uses in GA classified areas include existing private and potential public or private supplies of drinking water and base flow for hydraulically connected surface water bodies.

3.3.2 Surface Water

Based upon DEEP mapping, the majority of the Site is located in Major Drainage Basin 4 (Connecticut River), Regional Drainage Basin 40 (Connecticut River), Subregional Drainage Basin 4004 (Podunk River), and Local Drainage Basin 4004-02 (Farm Brook above Unnamed Brook 4004-03-1). The remainder of the Site is located in Major Drainage Basin 4 (Connecticut River), Regional Drainage Basin 45 (Hockanum River), Subregional Drainage Basin 4500 (Hockanum River), and Local Drainage Basin 4500-09 (Averys Brook above Unnamed Brook 4500-10-1). The nearest mapped waterbody is Farm Brook located on the opposite (west) side of Foster Street from the Property. Farm Brook flows southward with the closest portion located downgradient and approximately 500 feet from the closest limits of disturbance associated with the Project. Farm Brook is classified as a Class A surface waterbody by the DEEP⁵. The Site will have no effect on this surface waterbody. Based upon DEEP mapping, the Property is not located within a mapped Public Drinking Supply Watershed.

The Project will be sufficiently set back from water resources proximate to the Site and will have no adverse environmental effect on surface water quality. During construction, E&S controls will be installed and maintained in accordance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, effective March 30, 2024. Once operative, stormwater will be managed in accordance with the *Connecticut Stormwater Quality Manual*, effective as of March 30, 2024.

3.3.1 Stormwater Management

In addition to the Connecticut Stormwater Quality Manual and Connecticut Guidelines for Soil Erosion and Sediment Control, both effective March 30, 2024, the Project has been designed to meet Appendix I of the Stormwater General Permit. Combined, these documents address three (3) main concerns: stormwater runoff peak attenuation, water quality volume treatment, and E&S control during construction. The Applicant will apply for a Stormwater General Permit from DEEP. Technical details, mapping, and HydroCAD modeling results are provided in a Stormwater Management Report to be provided to DEEP and are included as Appendix B to Exhibit A. A summary of these results is provided below.

⁵ Designated uses for A classified waterbodies include fish and other aquatic life and wildlife habitat, potential drinking water supply, recreational use, navigation, and water supply for industry and agriculture.

Stormwater Runoff Peak Attenuation

The potential for changes in runoff from the Site as a result of Project construction has been evaluated and addressed in compliance with Appendix I. The Project will require the installation of underground utilities and overhead interconnection, an access drive and multiple stormwater management features. A ½ step reduction is required for the entire solar array to account for the compaction of soils that result from extensive machinery traffic over the course of the construction of the array. The full step reduction is required where grading exceeds a two (2) foot difference between existing and proposed grades. These reductions result in an increase in runoff.

To manage the increase in post-development runoff, one (1) grass-lined stormwater management basin with associated diversion with rip-rap lined overflow and one (1) rock lined stormwater infiltration trench are proposed. The stormwater management basin will collect surface runoff from within the Facility, while the stormwater infiltration trench will collect surface runoff from the 448-foot gravel access road thus managing the timing and release of flow from the Project Area.

The stormwater calculations for the Project predict that the post-development peak discharges to the waters of the State of Connecticut for the 2-, 25-, 50- and 100- year storm events are less than the pre-development peak discharges. Therefore, the Project is not anticipated to result in any adverse conditions to the surrounding areas and properties.

Water Quality Volume Treatment

The Project design also provides for adequate treatment of water quality volume associated with effective impervious cover, which includes the proposed gravel access drive and concrete equipment pads. The proposed basin is designed to provide the requisite treatment volume associated with these features.

Erosion and Sediment Control During Construction

To safeguard water resources from potential impacts during construction, the Petitioner is committed to implementing protective measures in the form of a Stormwater Pollution Control Plan ("SWPCP"), to be finalized and submitted to the Council, subject to approval by DEEP Stormwater Management. The SWPCP will include monitoring of established E&S controls that are to be installed and maintained in accordance with the *Connecticut Guidelines for Soil Erosion*

and Sediment Control, effective March 30, 2024, the Stormwater General Permit, and Appendix I.

To meet the requirement of the Stormwater General Permit, one (1) temporary sediment basin will be installed prior to the start of Facility construction. Perimeter erosion controls, including a compost filter sock and silt fence will encircle the Project Area to capture sediment potentially mobilized during site work. The basin will be cleaned of deposited sediment as needed during construction to maintain sufficient sediment storage capacity. Upon final site stabilization, the temporary sediment basin will be converted to a permanent stormwater management basin by removing any accumulated sediments, removal of sediment baffles if applicable, and installation of permanent outlet control structures.

Open areas will be temporarily stabilized with quick growing annual seed during construction. The Project Area will subsequently be seeded with a permanent Ernst Pollinator-friendly Solar Farm Seed Mix (ERNMX-147 Fuzz & Buzz) upon completion of construction. The phased erosion control plan and details are provided in Appendix A of Exhibit A, *Project Plans*.

With the incorporation of these protective measures, stormwater runoff from Project development is not anticipated to result in an adverse impact to water quality associated with nearby surface water bodies.

3.4 Habitat and Wildlife

Three (3) distinct habitat types (vegetative communities) separated by transitional ecotones are located on the Property; two (2) of them are found within the Site. These habitats were assessed using remote sensing and publicly available datasets and were physically inspected during the October 27, 2022 field evaluation.

The habitats occupying the Property are as follows:

- Open Field
- Edge Forest; and
- Wetland Forest

Open Field and Edge Forest habitats are found within the Site.

Habitat Types

Open Field

Open Field habitat dominates a majority of the Property with a narrow band of Edge Forest along the northern, eastern and southern boundaries. This habitat type consists of a large open field segregated into two distinct agricultural uses: the eastern end of the field consists of maintained cool season grasses for the production of hay; the central and western portions of the field extending out to Foster Street are cultivated for crop production. A minor transitional ecotone of goldenrod, orchard grass, and multiflora rose divides this habitat from the bordering Edge Forest to the north, south, and east. Additionally, an existing access road leading to the Open Field habitat has been included within this functional habitat type due to the unimproved nature of the farm road surface. A majority of the Project's footprint will occur within Open Field. The Project will not result in a significant adverse impact to the existing Open Field from a wildlife habitat perspective due to the existing high level of human activity, disturbed nature of these areas from agricultural practices, limited wildlife habitat values, and minimal species utilization. The Project will actually result in some improvement to wildlife habitat utilization with the planting of native pollinator-friendly meadow species within and around the perimeter of the fenced solar Facility.

Edge Forest

Edge Forest habitat occupies the northern, eastern, and southern boundaries of the Property and consists of a narrow, predominantly upland, forest margin. The upland Edge Forest differs from the small area of Wetland Forest by occurring entirely within upland soils and consisting of significantly different vegetative species indicative of well-drained soils. Tree species within this habitat are dominated by even aged red maple, red oak, eastern white pine, quaking aspen, and black cherry. Invasive species autumn olive and multiflora rose dominate the understory with pockets of staghorn sumac in complex with fox grape along forest edges.

Minimal clearing of Edge Forest is proposed along the northern and southern portions of the Project Area. Any potential secondary short-term impacts to this forested area during construction of the Project will be minimized through the proper stabilization of soils through strict adherence to the *Connecticut Guidelines for Soil Erosion and Sediment Control*, effective as of March 30, 2024. While Site development necessitates removal of a limited area of forest for shading purposes, the proposed clearing will be isolated to the outside margin of Edge Forest. This limited

clearing to the north is located within close proximity to a residential development and the Open Field, which experiences routine maintenance and a high level of human activity. Similar narrow forested habitat occurs along the eastern boundary with a larger continuation of Edge Forest extending east off the Property. As such, the Project is not anticipated to result in a significant impact to the Edge Forest habitat type.

Wetland Forest

Wetland Forest habitat occurs in the southcentral portion of the Property and in complex with a portion of the Upland Forest habitat which serves as a buffer between the Wetland Forest and the Open Field. The Wetland Forest is dominated by red and silver maple in the overstory with honeysuckle and gray dogwood dominating the shrub layer. Native herbaceous species observed consist of soft rush and skunk cabbage. Native shrub species include elderberry and silky dogwood in complex with herbaceous vegetation. A small pocket of emergent and scrub-shrub habitat is present within the northern limits of the wetland complex, likely due to historic maintenance that suppressed vegetation growth. This embedded vegetative community was discussed in Section 3.2.1 and is included within the Wetland Forest habitat type. Wetland Forest differs from other forest habitat on the Property by occurring entirely within poorly drained wetland soils and consisting of significantly different vegetative species.

Project impacts will not encroach into this habitat and are therefore not anticipated to result in a negative impact to the Wetland Forest habitat. Any potential short-term impacts to this habitat will be minimized through the proper stabilization of soils during construction through strict adherence to the *Connecticut Guidelines for Soil Erosion and Sediment Control*, effective March 30, 2024 and the Resource Protection Plan.

Table 2, Habitat Areas provides the total acreages of each habitat type located on the Property and within the Site, and the changes resulting from development of the Project.

Table 2: Habitat Areas		
Habitat Type	Total Area On-Property (±ac.)	Area Displaced by Project (±ac.)
Open Field	12.40	7.82
Edge Forest	3.94	<0.10
Wetland Forest	0.12	0.00

3.4.1 Wildlife

Development of the Site will primarily occur within the Open Field habitat, with limited impacts to Edge Forest. The roughly 12.40-acre Open Field provides limited value from a wildlife utilization standpoint as a result of historic and current routine agricultural management of these areas, small habitat block size, lack of diverse vegetative communities and/or structure and a high level of human activity. The limited Edge Forest area offers higher quality forested habitat, but will be minimally affected by the Project, and extends to the east off the Property.

Based on the surrounding land uses, the adjacent disturbed areas located in proximity to the Property are likely utilized by species that are more tolerant of human disturbance and habitat fragmentation. Generalist wildlife species common to the region, including several resident and migrant song birds and mammals such as raccoon, striped skunk, grey squirrel, Virginia opossum, white-tailed deer, and eastern chipmunk could be expected to use this area. Due to the limited removal of Edge Forest habitat within the Property, and given the abundance of more suitable habitat for these common species surrounding the Property, the Project is not anticipated to result in a likely adverse impact to wildlife.

Noise and associated human activities during construction may result in limited, temporary disruption to wildlife using the Property. Any possible wildlife displaced during construction would be expected to temporarily disperse deeper into the nearby Wetland Forest and Edge Forest habitats. Post-construction, operation of the Facility will likely not result in an adverse effect to wildlife using these habitats due to its unoccupied nature and lack of significant noise, traffic, or high level of human activity.

3.4.2 Core Forest Determination

The DEEP's *Forestland Habitat Impact Mapping*, does not depict an area mapped as core forest on the Property. Therefore, the Project will not affect core forest resources.

3.5 Rare Species

Publicly available information was reviewed to determine the potential presence of state/federally listed species and critical habitat on or proximate to the Site. A discussion is provided in the following sections.

3.5.1 Natural Diversity Data Base

The DEEP Natural Diversity Data Base (“NDDB”) program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state-listed species and to help landowners conserve the state’s biodiversity. In furtherance of this endeavor, DEEP also developed maps to serve as a pre-screening tool to help determine if there is the potential for project-related impact to state-listed species.

The NDDB maps represent approximate locations of (i) endangered, threatened and special concern species and (ii) significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by DEEP staff, scientists, conservation groups, and landowners. In some cases, an occurrence represents a location derived from literature, museum records and/or specimens. This data is compiled and maintained in the NDDB. The general locations of species and communities are symbolized as shaded (or cross-hatched) polygons on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowners’ rights whenever species occur on private property.

The most recent DEEP NDDB mapping, updated as of June 2023, revealed that no known areas of state-listed species are located within or adjacent to the Property. The nearest NDDB polygon exists ±0.63-miles south of the Property. Since the proposed Site and Property are not located within an NDDB buffer area, consultation with DEEP is not required in accordance with DEEP’s review policy.⁶

3.5.2 USFWS Consultation

Federal consultation was completed in accordance with Section 7 of the Endangered Species Act (“ESA”) through the U.S. Fish and Wildlife Service’s (“USFWS”) Information, Planning, and Conservation System (“IPaC”). Based on the results of the IPaC review, the federally-listed⁷ Endangered species northern long-eared bat (“NLEB”; *Myotis septentrionalis*) habitat range includes the Property. The NLEB’s range encompasses the entire State of Connecticut and suitable

⁶ DEEP Requests for NDDB State Listed Species Reviews.

http://www.ct.gov/deep/cwp/view.asp?a=2702&q=323466&deepNav_GID=1628%20

⁷ Listing under the federal Endangered Species Act

NLEB roost habitat includes trees (live, dying, dead, or snag) with a diameter at breast height of three (3) inches or greater.

The DEEP's publicly available *Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance* map, updated as of February 1, 2016, was reviewed to determine the locations of any known maternity roost trees or hibernacula in the state. This map reveals that there are currently no known NLEB maternity roost trees in Connecticut. The nearest NLEB habitat resource to the Site is located in East Granby, approximately 13.4 miles to the northwest.

Effective March 31, 2023, the NLEB is classified as Endangered under the ESA. The reclassification eliminates use of the previous 4(d) rule for the NLEB, which is applicable only to Threatened species. An NLEB Interim Consultation Framework has been developed by USFWS to facilitate transition from the 4(d) rule to typical Endangered species consultation procedures for activities that are reasonably certain to occur before April 1, 2024, which is the date the NLEB Interim Consultation Framework expires. The new NLEB Determination Key for this Project revealed the Project will likely not result in an adverse effect or incidental take of NLEB and does not require a permit from USFWS. A USFWS letter dated July 21, 2023 confirmed the "No Effect" determination.

A full review of the *Endangered Species Act (ESA) Compliance Determination* and USFWS's Response Letter is provided in Appendix C of Exhibit A, *USFWS and NDDB Compliance Statement*.

3.6 Soils and Geology

Construction of the water quality basin and swales and grading within the Project Area will generate excess material. To the extent feasible, that will be redistributed on Site. Topsoil will be segregated from underlying soil, stockpiled, and spread over disturbed areas being seeded. Any excess materials will be removed from the Site in accordance with appropriate regulations and guidelines.

All exposed soils resulting from construction activities will be properly and promptly treated in accordance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*, effective as of March 30, 2024.

Surficial materials on the Property are predominantly thin deposits of glacial till, as well as coarse deposits of sand and gravel. Bedrock beneath the Property is identified as Portland Arkose. Portland Arkose is described as a reddish-brown to maroon micaceous arkose and siltstone and red to black fissile silty shale which grades eastward into coarse conglomerate (fanglomerate).

The Petitioner does not anticipate encountering bedrock during Project development.

3.6.1 Prime Farmland Soils

In accordance with the Code of Federal Regulations, CFR Title 7, part 657, farmland soils include land that is defined as prime, unique, or farmlands of statewide or local importance based on soil type. They represent the most suitable land for producing food, feed, fiber, forage, and oilseed crops.

According to the Connecticut Environmental Conditions Online Resource Guide⁸, approximately 9.52 acres of the Site contain Prime Farmland Soils (See Figure 2, *Existing Conditions Map*), with approximately 4.56 acres located within the Project Area. The Site encompasses areas currently under cultivation for agricultural purposes. The Site has been designed to maximize the areas remaining for cultivation while meeting the requirements of Appendix I.

Excavation and regrading activities are necessary, along with some tree removal, within areas mapped as Prime Farmland Soils to facilitate Project development. Topsoil removed from these areas will be segregated from underlying horizons, temporarily stockpiled and used as top dressing for reestablishing vegetation (with a pollinator-friendly seed mix). No topsoil will leave the Site.

After its useful life, the Facility will be decommissioned and all of the disturbed areas will be reseeded with the same (or approved equivalent) blend as established within the rest of the Project Area, ultimately creating additional available cleared areas for agricultural use. Therefore, the Project will not materially affect Prime Farmland Soils and will serve as an optimal site for agrivoltatics.

⁸ Connecticut Environmental Conditions Online (CTECO) Resource Guide, www.cteco.uconn.edu.

3.7 Historic and Archaeological Resources

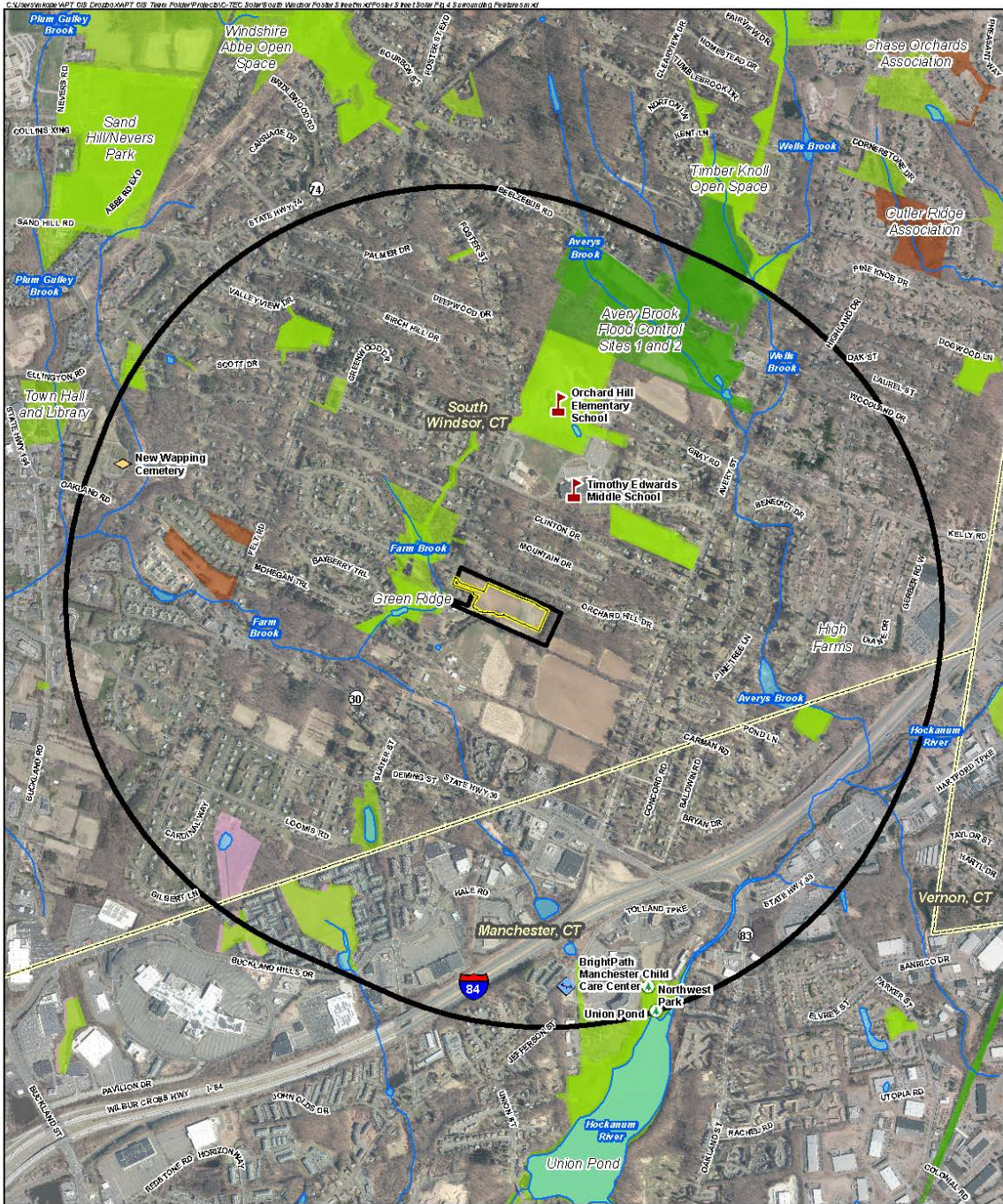
On behalf of the Petitioner, Heritage Consultants LLC (“Heritage”) reviewed relevant historic and archaeological information to determine whether the Site holds potential historic or cultural resource significance. Heritage’s review of historic maps and aerial images of the Site, examination of files maintained by the Connecticut State Historic Preservation Office (“SHPO”), and a pedestrian survey of the Site revealed that there is a pre-contact era archeological site near the southeast corner of the Property and 14 historic or potentially historic structures within half a mile of the Project, including for that are located on or in the immediate vicinity of the Property. As a result of these findings, the Petition intends to have a Phase 1B investigation performed prior to construction. Additional information can be found in Appendix D of Exhibit A, *Cultural Resources Reconnaissance Survey Report*.

3.8 Scenic and Recreational Areas

No state or local designated scenic roads or scenic areas are located near the Site and therefore none will be physically or visually impacted by development of the Project. The nearest designated scenic road is a portion of State Route 74, approximately 6.2 miles to the northeast. Additionally, there are no Connecticut Blue Blaze Hiking Trails located proximate to the Site.

The nearest existing recreational area to the Site is Green Ridge Open Space, which is west of the Property across Foster Street. No impacts are anticipated to this resource.

See Figure 4, *Surrounding Features Map*, for this and other resources located within one mile of the Site.



- Legend**
- Property
 - Site
 - 1 Mile Radius
 - Municipal Boundary
 - Surrounding Features
 - Cemetery
 - Daycare
 - Park / Recreation / Open Space
 - School
 - Open Space Property (CTDEEP)
 - Land Trust
 - Municipal
 - Private
 - State
 - Watercourse (CTDEEP)
 - Open Water (CTDEEP)

Map Notes:
 Base Map Source: 2019 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 1,900 feet
 Map Date: December 2023

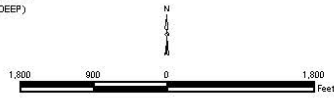


Figure 4
Surrounding Features Map
 Proposed Solar Facility
 186 Foster Street
 South Windsor, Connecticut



3.9 Visibility

Portions of the Facility are predicted to be visible from the immediately surrounding area to the north and west. The interconnection poles could be visible in areas extending to the south. Visibility in these areas will be primarily seasonal, when the leaves are off the deciduous trees, with year-round visibility limited to the Property and a limited area within 0.25 miles to the south.

See Appendix E of Exhibit A, *Viewshed Maps and Photo-Simulations*, for additional information.

3.10 Noise

The bulk of the noise associated with the Project will be the result of construction activity, which is exempt from regulation under Connecticut law. Once the Project is operational, there will be minimal noise associated with the Project, mostly emanating from the Project's inverter and transformer.

The Site is bounded by single-family residences to the north, west, and east and by agricultural properties to the south and southeast. The Site is located 0.8 miles away from interstate highway I-84 to the southeast and 10 miles from Bradley International Airport's eastern approach corridor. The Site is also immediately north of the Foster Family Farm, located at 90 Foster Street, which operates as a historic traditional farm during the planting season and as a corn maze attraction during October.

The nearest property to the proposed Project equipment is the residence located at 178 Foster Street, with a property line approximately 150 feet from this equipment. The existing sound levels at this property are currently measured at approximately 39.5 dBA. It is anticipated that the Project equipment would generate sound levels between 33.6-34.3 dBA at a distance of 150 feet away during the daytime when the Facility would be generating electricity, and that this would increase the current noise levels by 1.0-1.1 dBA, which is significantly below DEEP's allowable 61 dBA for daytime noise limits for Class A noise receptors.

See Appendix F to Exhibit A, *Noise Study*, for additional information.

3.11 Lighting

No exterior lighting is planned for the Project. There will be some small, non-intrusive lighting fixtures within the equipment to aid in maintenance. It is not anticipated that this lighting will be used when maintenance is not required. Given the existing ambient lighting within the area of the Property, any incremental effect of Project lighting will be minimal.

3.12 FAA Determination

Relevant Project information has been submitted to the Federal Aviation Administration ("FAA") for an aeronautical study to evaluate potential hazards to air navigation. The FAA provided a Determination of No Hazard to Air Navigation on December 11, 2023. See Appendix G to Exhibit A, *FAA Determination*.

The nearest airport is Bancroft Airport, located approximate 4.75 miles northwest of the Site in the East Windsor Hill section of East Windsor, Connecticut.

4 Conclusion

As demonstrated in this Petition, the Project will comply with the DEEP air and water quality standards. Further, it will not have an undue adverse effect on the existing environment and ecology; nor will it affect the scenic, historic and recreational resources in the vicinity of the Project. Once operative, the Facility will be unstaffed and generate minimal traffic.

The Site will be developed on an approximately 16.47-acre Property located east of Foster Street in South Windsor and will occupy approximately 7.91 acres of the Property.

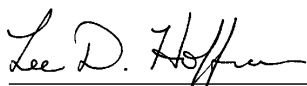
No wetlands or watercourses will be directly or indirectly impacted by the Project. The nearest point of the Project to wetlands, the stormwater management basin, will maintain a setback of 50 feet from this resource.

No core forest is located on the Site. No prime farmland will be affected; topsoils will be retained on the Property and the Site will be reseeded and available for return to agricultural cultivation upon decommissioning of the Project.

The Facility is anticipated to be visible within the immediately surrounding area, primarily on a seasonal basis. The Facility is expected to comply with all DEEP and local noise regulations.

As demonstrated by the foregoing, the Project satisfies the standards set forth in C.G.S. § 16-50k(a) and in light of its anticipated benefits, C-Tec Solar, LLC respectfully requests that the Siting Council approve this Petition for the Project, as it is currently designed.

Respectfully Submitted,
C-Tec Solar, LLC

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